



INTERNATIONAL FEDERATION FOR THE SURGERY
OF OBESITY AND METABOLIC DISORDERS

22nd World Congress

29 August - 2 September 2017
QEII Centre, London



Organised by:



www.ifso2017.com



A Message from Dr Kelvin D. Higa, MD, FACS, FASMBS, President IFSO

I am delighted to invite you to IFSO 2017 in London bringing together world leaders in metabolic and bariatric surgery to educate, discuss and collaborate. Our hosts, **the British Obesity and Metabolic Surgical Society**, are planning a superb scientific programme that promises a unique opportunity for all those interested in obesity and metabolic surgery to share their experiences, expertise and knowledge and seek practical solutions in their search to eradicate and manage this epidemic. With an emphasis on integrated health and on surgical treatment strategies, participants can look forward to 10 postgraduate courses, multiple symposia and numerous oral, video and live operating sessions. This is set to be a great meeting.

Please join me and our hosts in London for the IFSO 2017 Annual Congress.

A Message from Richard Welbourn, MD, FRCS, Congress President, LOC, Scientific Co-Chair IFSO 2017

Dear Colleagues,

We cordially invite you to the 22nd World Congress of the International Federation for the Surgery of Obesity and Metabolic Disorders, to be held in the QEII Centre, London from 29 August – 2 September 2017.

London is a fantastic destination! The conference centre is located at the heart of the Westminster area directly adjacent to the Houses of Parliament. The Meeting promises to be the largest ever IFSO Congress and we look forward to welcoming professionals with an interest in the surgical treatment of obesity and type 2 diabetes.

We are focusing on all aspects of multidisciplinary care. We will be demonstrating live operating from around the world with the latest techniques, as well as state-of-the-art lectures from invited world leaders.

We look forward to seeing you in London!

INFORMATION

► Important Dates

29th August –
30th August 2017

6th International Conference on Sleeve
Gastrectomy

30th August 2017

Postgraduate Courses

30th August 2017

Welcome Reception and Opening of the Congress
Exhibition Opening

31st August – 2nd
September 2017

Main Congress

1st September 2017

Exhibition Closes

1st September 2017

Congress Dinner

2nd September 2017

Congress Closes

► **Congress President**

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► **IFSO Chief Operating Officer**

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► **IFSO Executive Board**

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► **Scientific Committee**

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Cynthia-Michelle Borg
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Mary O'Kane
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Christopher Pring
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► **Local Organising Committee**

Richard Welbourn
Shaw Somers
Roger Ackroyd
Marco Adamo
Ahmed R Ahmed
Cynthia-Michelle Borg
James Byrne
Chandra VN Cheruvu
Kesava Reddy Mannur
Vinod S Menon
Peter Small

► Congress Venue

A wide-angle photograph of a large, modern conference hall filled with people. The stage is illuminated with blue light and features a large screen displaying a classical building facade. The ceiling is high with a grid of recessed lights.

Broad Sanctuary, London SW1P

► Registration

DAY	TIME
Tuesday 29 th August	07.30 – 15.30
Wednesday 30 th August	07.30 – 20.00
Thursday 31 st August	07.00 – 16.30
Friday 1 st September	07.00 – 16.30
Saturday 2 nd September	07.30 – 11.00

► Language

The official language of the Congress is **English**.

LONDON

London is one of the most important political, financial and cultural centres in the world, making a significant impact on education, entertainment, media and the arts across the globe.

► Capital of Britain

London is the political, economic and cultural capital of Britain. You can visit the Queen's official residence at Buckingham Palace and tour the Houses of Parliament, historic home of the UK government.



▶ **Connectivity**

London is incredibly well-connected, with five international airports and the high-speed Eurostar rail link. More than 50 countries are within a three-hour flight time and upwards of 300 international destinations have direct links to London.

▶ **Diversity**

London is a city at the centre of the world – and a world in one city. Around 230 languages are spoken here and you'll find a wealth of different cultures and communities throughout the capital.

▶ **History**

London's history stretches back over thousands of years, and the city boasts four World Heritage Sites: the Palace of Westminster and Westminster Abbey, the Tower of London, Maritime Greenwich and the Royal Botanic Gardens, Kew.

▶ **Business Hub**

The city is the hub of business for many domestic and international companies. The headquarters of more than half of the UK's top 100 companies and over 100 of Europe's 500 largest companies are based in the capital.

▶ **World-renowned Life Sciences Ecosystem**

London's cutting edge facilities include 5 world class medical schools, over 8,000 healthcare companies and 18 medical research councils, 50+ research centres, 1,904 life sciences companies and 1,300 biomedical researchers. The city's 'Knowledge Quarter' of King's Cross, Euston and Bloomsbury is home to its connected life sciences ecosystem.



► **Attractions**

London's world-class tourist attractions are renowned across the globe. Many of the most famous attractions are free to visit, for example: Tate Modern, the National Gallery and the Victoria and Albert Museum.

► **River Thames**

The River Thames runs through the heart of London, from Richmond in the west, through the central London borough of Westminster, to Greenwich in the east. London river cruises and river buses are a great way to see the city.

► **Outdoor Spaces**

About one third of London is devoted to parks and open spaces, so there are plenty of places to relax on fine days. Make sure you visit the Royal Parks as well as Hampstead Heath in North London, which offers amazing views over the city.

► **Transport**

London's fantastic transport system with its Tube, red buses and black taxis, will enable you to get around the city quickly and easily. Why not buy an Oyster Card in advance and download a free Tube map to help you to plan your days out?

► **Accessibility**

London's facilities for disabled visitors are constantly improving, with more accessible attractions, restaurants, tours and transport. For more details visit the **DisabledGo website**.

► **Leisure Activities and Tours**

To find out more about London's best attractions and famous landmarks, please refer to Visit London's official website: **www.visitlondon.com**, or visit the Info Desk in the Registration Area for assistance in planning your leisure activities and tours of this fantastic city!

USEFUL INFORMATION

► **Currency**

In the United Kingdom, the currency is the GBP pound sterling (£). Foreign currencies can be exchanged for GBP at banks, travel agencies and Post Offices, as well as at London's airports and major train stations.

£1 = 100 pence (p).

Coins. £1, £2 and 1p, 2p, 5p, 10p, 20p and 50p.

Notes. £5, £10, £20, £50.

Credit cards – especially Visa and Mastercard – are widely accepted in London's restaurants, bars, cafés and shops. American Express and Diners Club cards are less commonly accepted.



▶ **Weather**

London and the South East have one of the mildest climates in the UK, but the weather can be unpredictable. Late summer can be very pleasant with temperatures averaging 18°C (64°F) and often into the low 20s. In recent years London has experienced heatwaves with temperatures well above 30°C (86°F). Please be advised that overall rainfall is highest in August. Londoners get used to carrying both an umbrella and sunglasses to be prepared for all eventualities!

▶ **Phone and Internet on Your Smartphone**

The UK dialling code is **+44** (which replaces the 0). Please remember to check your own country's code before you travel.

Complimentary open Wi-Fi connection for general browsing purposes will be available throughout the Congress Venue. Persons wishing to use the internet would need to connect to QEll Guest on their device; no password required.

If you're using a smartphone to browse the internet and receive emails, be aware that your network will charge you to access this data while you are in London. Many cafes, venues and selected tube stations are Wi-Fi-enabled.

Be aware that while some hotels provide free Wi-Fi, others will charge for this service.

▶ **Useful Numbers**

Emergency Services (Police, Fire and Ambulance). **112 or 999**

To report non-urgent crime, call the police on **101** from within the UK. The National Health Service (NHS) is the main healthcare provider in the UK. Comprehensive information can be found [here](#).

► Insurance

Please note that registration fees do not include insurance of any kind.

NHS treatment is free for UK residents. Overseas nationals are not eligible for free NHS treatment except if they need emergency treatment while in the UK. You are strongly advised to take out **travel insurance** to cover any medical expenses.

If you come from a country that holds a UK healthcare agreement, you are entitled to free or reduced-cost medical treatment if needed immediately for a condition that started after your arrival in the UK.

If you are visiting from the EU, you need to carry a valid EHIC (European Health Insurance Card) in case you need immediate and necessary medical treatment in an NHS hospital. Without this you can be charged for treatment.

Find out more on the [Department of Health website](#).

► Embassies in London

The Foreign & Commonwealth Office (FCO) keeps an up to date list of embassies, high commissions and official representatives in London and the rest of the UK. Find out more on the [FCO website](#).

► Plug, Socket and Voltage in The UK

UK appliances are fitted with three-pin plugs that can be connected to the UK mains supply through wall sockets. UK power sockets deliver an average voltage of 230v. Unlike the sockets in many other countries, these have a switch to turn the power supply on and off – make sure you've turned it on if you're trying to charge your appliance!

▶ Time Zone

London is on British Summer Time (BST), which has an offset from the Coordinated Universal Time (UTC + 1).

▶ VISA

You may need a VISA to come into the UK, depending on your nationality. Information on visitor visas and how to apply for one can be found on the **UK Border Agency website**.

Following the recent referendum vote for the UK to leave the European Union, visa-free travel is still in place for citizens of member states of the European Union, including to and from the UK. Any changes to visa-free travel are unlikely to take place in the immediate future.

Delegates must be registered and have paid in full for the event before applying for a VISA letter. Invitation letters are available on request during the registration process. For further assistance, please email **registration.ifso2017@tfigroup.com**.

NETWORKING

▶ **Welcome Reception, Wednesday 30th August, 18.00 – 20.00**

The Welcome Reception will be held in the **Exhibition Hall, Level 3, QEII Centre**, with traditional British entertainment and flavours.

▶ **Congress Dinner, Friday 1st September 2017, 19.00 - 24.00**



You are cordially invited to join us for the Congress Dinner on Friday 1st September for a special evening of networking at the **National Maritime Museum**, located within the heart of the UNESCO World Heritage site in Greenwich.

We will travel down to Greenwich by boat along the river Thames passing some of London's most famous landmarks, including Big Ben, the London Eye, the Tower of London, St. Paul's Cathedral and The O2.

A special sit-down dinner will follow in the Neptune Court.

Please note that availability is limited, so we would recommend that you **book your place during the registration process.**

Ticket price. £99 + VAT

INSTITUTIONAL MEETINGS

▶ **Board of Trustees Meeting**

Date: Tuesday 29th August 2017

Time: 9.00 – 10.30

Room: Rutherford

▶ **Executive Board Meeting**

Date: Tuesday 29th August 2017

Time: 10.30 – 14.00

Room: Rutherford

▶ **General Council Meeting**

Date: Tuesday 29th August 2017

Time: 14.30 – 16.30

Room: Westminster

▶ **General Council Dinner**

Date: Tuesday 29th August 2017

Time: 19.00 – 23.00

Venue: One Whitehall Place



PROGRAMME AT A GLANCE

	Tuesday 29th August	Wednesday 30th August	Thursday 31st August	Friday 1st September	Saturday 2nd September
From 7.00	7:30	Registration/ Tea & Coffee	Registration/ Tea & Coffee	Registration/ Tea & Coffee	7:30
8.00 - 8.30	Registration/ Tea & Coffee	Postgraduate courses	Session 1	Session 1	Registration/ Tea & Coffee
8.30 – 9.30					Session 1
9.30 – 10.00					
10.00 - 10.30	6 th International Conference on Sleeve Gastrectomy (Day 1)	6 th International Conference on Sleeve Gastrectomy (Day 2)	Tea, Coffee, Posters and Exhibition	Tea, Coffee, Posters and Exhibition	
10.30 - 12.30			Session 2	Presidential address	10:30 – 11:00 Tea & Coffee
12.30 - 14.00			Lunch/ sponsored meetings/ networking	Lunch/ sponsored meetings/ networking	11:00 – 13:00 Session 2 13:00 – 13:30 Closing Ceremony
14.00 - 16.00			Session 3	Session 3	
16.00 - 16.30			Tea, Coffee, Posters and Exhibition	Tea, Coffee, Posters and Exhibition	
16.30 - 17.00					
17:00 – 18.00			Session 4	Session 4	
18.00 - 20.00		Opening Ceremony		19:00 Congress	
21.00 – 24.00				Dinner	

REGISTRATION FEES

The Whole Congress Registration includes access to the main Congress from Thursday 31st August to Saturday 2nd September, and to the Welcome Reception on Wednesday 30th August from 18.00.

► Congress Registration

Category	Whole congress	1 day (Thu 31 st , Fri 1 st)
Members		
Standard	£450	£275
Onsite	£600	£350
Non-members		
Standard	£550	£300
Onsite	£700	£400
Integrated Health Professional		
Standard	£300	£150
Onsite	£300	£200
Resident/Fellow/Student/Trainee		
Standard	£300	£150
Onsite	£300	£200

► **Post-graduate Courses, Tuesday 29th & Wednesday 30th August 2017**

Course	Surgeon	Integrated Health	Resident/Fellow/Student/Trainee
6th International Conference on Sleeve Gastrectomy (two days)			
Standard	£400	£250	£250
Onsite	£500	£300	£300
<ol style="list-style-type: none"> 1. Primary Care and Integrated Health Professionals Course 2. One Anastomosis/Mini Gastric Bypass Course and Consensus Meeting 3. Postgraduate Course for Metabolic Surgery 4. Essentials in Bariatric Surgery Emergencies 5. Bariatric Surgery Research. From Concept to Publication and presentation 6. Bariatric/ Metabolic Revisional Advanced Surgery Update 			
Standard	£250	£150	£150
Onsite	£300	£200	£200
Bariatric Endoscopy Course			
Standard	£450	£450	£450
Onsite	£500	£500	£500
Key Issues in Obesity Peri-operative Care course			
Standard	£225	£150	£150
Onsite	£300	£200	£200
Enhancing Weight Loss and Weight Loss Maintenance with Banded Gastric Bypass, Banded Sleeve Gastrectomy and Banded Gastric Plication			
Standard	£150	£85	£85
Onsite	£225	£100	£100

6th International Conference on Sleeve Gastrectomy

Tuesday 29th August 2017

Live surgery session

Room: Churchill Auditorium

Tentative Operative Procedures depending on available clinical material at the time of surgery

Transmitting from international centres

How I do it

- Lap sleeve gastrectomy in high risk groups – super obese, elderly, adolescents, bridge to transplantation – tips and tricks
- Reduced port sleeve gastrectomy
- Lap sleeve gastrectomy with hiatal repair
- Banded sleeve gastrectomy
- Lap sleeve gastrectomy with fundoplication - Nissen sleeve
- Lap sleeve gastrectomy with Linx
- Endoscopic gastric plication

Revisions

- Laparoscopic Re-sleeve
- Stretta procedure after sleeve gastrectomy
- Endoscopic treatment of sleeve complications

Conversions

- Sleeve gastrectomy to RYGB
- Sleeve gastrectomy to MGB/OAGB
- Sleeve gastrectomy to SADI
- Sleeve gastrectomy to DS
- Gastric bipartition (ileo-gastrostomy)
- Bypass to sleeve gastrectomy
- Band to sleeve gastrectomy
- Plication to sleeve gastrectomy

Wednesday 30th August 2017

Room: Churchill Auditorium

Session 1

Will LSG survive as a stand-alone operation? Long-term results

08.00 - 08.10 Long-term outcomes for weight loss

08.10 - 08.20 Long-term outcome for weight loss and co-morbidity resolution

08.20 - 08.30 Why do some patients respond poorly to LSG?

Debate: What is the best revisional procedure for weight regain after LSG?

08.30 - 08.35 Introduction

08.35 - 08.45 OAGB/MGB

08.45 - 08.55 SADI/SIPS

08.55 - 09.05 RYGB

09.05 - 09.15 Re-sleeve

09.15 - 09.25 Duodenal Switch

09.25 - 09.45 Panel discussion

09.45 – 10.00 Tea, Coffee & Exhibition

Session 2

	Prevention and management of early complications
10.00 - 10.15	Reducing the overall complications after sleeve gastrectomy
10.15 - 10.30	Does buttressing help?
10.30 - 10.45	Management of sleeve leaks
10.45 - 11.00	Update about endoluminal vacuum therapy
11.00 - 11.15	The role of endoscopic septotomy
11.15 - 11.30	Outcomes of fistula-jejunostomy
11.15 - 11.30	Management of sleeve strictures
11.45 - 12.00	Portal vein thrombosis
12.00 - 12.10	Nutritional problems after LSG
12.10 - 12.30	Sleeve in special patient groups
12.10 - 12.20	The role of sleeve gastrectomy in high risk patients
12.20 - 12.30	Sleeve gastrectomy in adolescents
12.30 - 12.45	Discussion
<i>12.45 - 13.30</i>	<i>Lunch & Exhibition</i>

Session 3

	Reflux after LSG – myth or reality?
13.30 - 13.50	Reflux is inevitable after sleeve
13.50 - 14.10	Reflux may be preventable with attention to operative and anatomical details
14.10 - 14.25	The role of concomitant hiatal hernia repair
14.25 - 14.35	RNYGB for reflux after LSG
14.35 - 14.45	Radiofrequency ablation
14.45 - 14.55	Linx
14.55 - 15.05	EndoStim

15.05 - 15.15	Anterior fundoplication
15.15 - 15.25	The Nissen sleeve
15.25 - 15.45	Discussion and questions

15.45 - 16.00 Tea, Coffee & Exhibition

Session 4

16.00 – 17.00	Consensus questionnaire
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Essentials in Bariatric Surgery Emergencies

Room: Albert

09.10– 09.15	Welcome and introduction
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Session 1

09.15 - 09.30	How to avoid post-operative complications intra-operatively
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09.30 - 09.45	Early complications of laparoscopic Gastric bypass (including mini-bypass) – managing complications
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09.45 - 10.00	Late complications of laparoscopic Gastric bypass – presentation and detection
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10.00 - 10.15	Laparoscopic Sleeve gastrectomy – managing complications
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10.15 - 10.30	Laparoscopic Duodenal switch and malabsorptive operations – managing complications
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10.30 - 10.45	Panel discussion and questions
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10.45 - 11.00 Tea, Coffee & Exhibition

Session 2

11.00 - 11.15	Long term problems with gastric bands – presentation of cases and management
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11.15 - 11.30	Endoscopic bariatric procedures (gastric balloon & duodeno-jejunal sleeve) - managing complications
11.30 - 11.45	Novel procedures – who should be dealing with complications?
11.45 - 12.00	Cholelithiasis after bariatric surgery – prevention and management
12.00 - 12.15	Management of anastomotic and remnant ulcers
12.15 - 12.30	Management of bowel obstruction after bariatric surgery
12.30 - 12.45	Management of leaks
<i>12.45 - 13.45</i>	<i>Lunch & Exhibition</i>

Session 3

13.45 - 14.00	Prevention and management of anaesthetic complications in morbidly obese patients
14.00 - 14.15	Nutritional complications after bariatric surgery
14.15 - 14.30	Psychological illness after bariatric surgery
14.30 - 14.45	Pregnancy and the bariatric patient
<i>14.45 - 15.00</i>	<i>Tea, Coffee & Exhibition</i>

Session 4

15.00 - 15.15	Abdominal pain after bariatric surgery - presentation of cases and management
15.15 - 15.30	Medical emergencies in bariatric surgery patients
15.30 - 16.15	Video presentations
16.15 - 16.30	Q&A session to panel
16.30	Closing remarks

One Anastomosis/Mini Gastric Bypass Course and Consensus Meeting

Room: Mountbatten

08.50 – 09.00 Welcome

Session 1 **The Journey so far**

09.00 - 09.20 Review of the Literature on OAGB/MGB

09.20 - 09.40 Randomised Controlled Trials on OAGB/MGB

09.40 - 10.00 My Views on OAGB/MGB

10.00 - 10.20 Role of OAGB/MGB for Revisions after Sleeve Gastrectomy

10.20 - 10.40 Does OAGB/MGB cause less early dumping than RYGB?

10.40 - 11.00 Role of OAGB/MGB as a metabolic procedure

11.00 - 11.20 Tea, Coffee & Exhibition

Session 2 **Controversies Surrounding OAGB/MGB**

11.20 - 11.40 History of the OAGB/MGB. An Overview of its International Performance

11.40 - 12.00 Why I believe Banded RYGB is superior to OAGB/MGB?

12.00 - 12.20 Why I believe SADI is superior to OAGB/MGB?

12.20 - 12.40 SAGI. The less invasive malabsorptive procedure.

12.40 - 13.00 My Concerns with OAGB/MGB

13.00 - 13.20 OAGB/MGB. My Objections/Suggestions

13.20 - 14.00 Lunch & Exhibition

Session 3

Key Technical Aspects of OAGB/MGB

14.00 - 14.20	Key Technical Aspects in the performance of OAGB/MGB
14.20 - 14.40	An ideal OAGB/MGB pouch
14.40 - 15.00	Optimum Bilio-Pancreatic Limb length in OAGB/MGB
15.00 - 15.20	Complications of OAGB/MGB and how to prevent them?
15.20 - 15.40	Esophageal and gastric potential damage following OAGB/MGB. Is a follow up needed?
<i>15.40 - 16.00</i>	<i>Tea, Coffee & Exhibition</i>

Session 4

OAGB/MGB. Latest Updates

16.00 - 16.15	Bile reflux after OAGB/MGB. clinical and experimental data
16.15 - 16.30	OAGB/MGB. An Update from Asia
16.30 - 16.45	OAGB/MGB. Perspectives of a Cancer Surgeon
16.45 - 17.00	I said I'll never perform OAGB/MGB and then I did!
17.00 - 17.15	What are the objections to OAGB/MGB?
17.15 - 17.30	Survey of OAGB/MGB Surgeons
17.30 - 17.50	Consensus Findings on OAGB/MGB
17.50 - 18.00	Closing remarks

Enhancing weight loss and weight loss maintenance with banded Gastric Bypass, banded Sleeve Gastrectomy and banded Gastric Plication

Room: Wesley

Part 1

13.30 - 13.45 Introduction to course - mechanism of action for weight loss and maintenance

Rationale for banding the pouch in the GBP, Sleeve and Plication Operations

13.45 - 14.00 Banding the Gastric bypass - comparison to LGBP

14.00 - 14.15 Banding the Sleeve Gastrectomy, Comparison to LSG

14.15 - 14.30 Banding the OAGBP (MGB)

14.30 - 14.45 Banding the gastric plication - comparison to LSG

14.45 - 15.00 Long-term outcome of banding the gastric bypass

15.00 - 15.15 Systematic Review and Meta Analysis of Primary Banded Gastric Bypass

15.15 - 15.30 Panel Discussion

15.30 - 15.50 Tea, Coffee & Exhibition

Part 2

15.50 - 16.00 Video of primary BGBP

16.00 - 16.10 Video of primary banded sleeve gastrectomy

16.10 - 16.20 Video of primary banded gastric plication

16.20 - 16.30 Video of primary banded OAGBP

16.30 - 16.40 Video - Band over Bypass: Adjustable band on a gastric bypass for weight regain

16.40 - 16.50 Video - Revision of gastric bypass to banded gastric bypass for non-responders

16.50 - 17.00 Video of Revision of LAGB to BGBP

17.00 - 17.10 Video of Revision of Sleeve to BGBP

17.10 - 17.20 Video, Management of Band migration or erosion

17.20 - 17.40 Panel Discussion. Questions and answers.

Key Issues in Obesity Peri-operative Care

Room: Victoria

Jointly organised with:



Endorsed by



08.45 - 08.50 Welcome & Introduction

Session 1a Introduction and Background

08.50 - 09.00 Anaesthetic disasters and obesity. Why we run this course...

09.00 - 09.10 Epidemiology and Anthropology of Obesity

09.10 - 09.25 BMI, Fat Distribution & Relevance to Drug Dosing

09.25 - 09.35 Inflammation & Metabolic Syndrome

09.35 - 09.50 Cardiovascular effects of Obesity

09.50 - 10.05 Pulmonary effects of Obesity

10.05 - 10.10 Panel discussion

10.10 - 10.30 Tea, Coffee & Exhibition

Session 1b The Co-morbidities

10.30 - 10.45 Sleep Apnoea. Pathophysiology and Mechanisms

10.45 - 11.00 Sleep Apnoea. Screening and Management

11.00 - 11.10 Assessment of Cardiopulmonary Reserve

11.10 - 11.20 The role of the MDT - Risk-benefit assessments

11.20 - 11.25 Panel discussion

11.30 - 11.45 Tea, Coffee & Exhibition

Session 2 **Airway Issues in the Obese**

11.45 - 12.00	Apnoeic desaturation and airway disasters
12.00 - 12.15	Difficult Airway prediction and management
12.15 - 12.30	Videolaryngoscopy and advanced airway techniques
12.30 - 12.40	Reflux and the RSI myth
12.40 - 12.55	The Ideal Induction – a pro-con debate
12.55 - 13.00	Discussion

13.00 - 13.45 Lunch & Exhibition

Session 3 **Intra-operative Care**

13.45 - 14.00	Ventilation in the obese. What really matters.
14.00 - 14.15	The Pneumoperitoneum. When to focus, how to fix it.
14.15 - 14.35	Analgesia and Opioid-sparing strategies
14.35 - 14.50	The Ideal Anaesthetic technique
14.50 - 15.00	Panel discussion

15.00 - 15.30 Tea, Coffee & Exhibition

Session 4 **Post-operative Management**

15.30 - 15.45	Thromboprophylaxis. The essential knowledge.
15.45 - 16.00	Post-op care. Which patient needs ICU?
16.00 - 16.15	Surgery & complications the non-surgeon must know
16.15 - 16.25	Panel discussion
16.25 - 16.30	Summing up & closing remarks
16.30	Adjourn

Postgraduate Course for Metabolic Surgery

Room: St James

08.25 - 08.30 Welcome remarks

Session 1 Physiology & Mechanisms

08.30 - 09.00 Evidence for the anti-incretin factor

09.00 - 09.30 The role of bile acids

09.30 - 10.00 The role of endocrine gut factors

Evidence for the anti-incretin factor

10.00 - 10.30 Tea, Coffee & Exhibition

Session 2 Glycaemia and brain

10.30 - 11.00 Diabetes and glycemia after Metabolic surgery

11.00 - 11.30 Behaviours that improve glycaemia after surgery

11.30 - 12.00 Brain imaging that explains the behaviours of patients after surgery

12.00 - 13.00 Lunch

Session 3 Kidney & Liver

13.00 - 13.30 NASH after surgery

13.30 - 14.00 Diabetic kidney disease in humans after surgery

14.00 - 14.30 Diabetic kidney disease in rats after surgery

14.30 - 15.00 Tea, Coffee & Exhibition

Session 4 The future of Metabolic Surgery

15.00 - 15.30	The medical bypass - reality or myth?
15.30 - 16.00	Interdisciplinary metabolic boards – lessons learned from the tumour boards
16.00 - 16.30	Questions and discussion
16.30 - 16.45	Closing remarks

Primary care and Integrated Health Professionals

Session 1

Room: Rutherford + Abbey

Audience: Primary Care, Dietician, Psychology, Nurse, Physician

09.30 - 10.00 Key note lecture. Bariatric surgery and type 2 diabetes

10.00 - 10.15 Comments and questions

10.15 - 10.30 Tea, Coffee & Exhibition

Session 2 Breakout sessions

	Primary Care (GP)	Dietitian (D)	Psychology (P)	Nurses (N)
			Joint meeting of Network of Psychology work on obesity and bariatric surgery	
10.30 - 11.00	All you need to know about a bariatric service-The patient pathway	The nutritional aspects of SADIs	Mindful eating. Evidence base and practice.	The Role of the Bariatric nurse in America
11.00 - 11.30	Models of Shared Care	Nutritional aspects of MGB/OAGB	Compassion and act with severe obesity	Red Flags for referral to psychology and overview of CBT or using mindfulness as an intervention to improve eating behaviour
11.30 - 12.00	Raising the subject of weight in a primary care consultation	Managing weight maintenance and weight regain	Integrating mindfulness into group interventions. Dietetics and psychology working together.	Improving health by using technology
12.00 - 12.30	Traffic light system to deal with bariatric emergencies	Evaluating the success of bariatric surgery. Key outcomes to consider	Using mindfulness and compassion-based practice post-operatively. Outcomes, anecdotes and group discussion	Recognising post-operative complications and preventing avoidable admissions

12.30 - 13.30 *Lunch & Exhibition*

Session 3

Room: Rutherford + Abbey

Audience: Primary Care, Dietician, Psychology, Nurse, Physician

13.30 - 14.00 Patient focus - patient support group - what patients need to know (patient delivered)

14.00 - 15.00 Reactive hypoglycaemia - case studies with explanation and management

15.00 - 16.00 Contraception and pregnancy post bariatric surgery - case studies and management

16.00 - 16.15 Tea, Coffee & Exhibition

16.15 - 17.00 Nutritional deficiencies - case studies and management

Room: Westminster

09.30 Welcome and Introduction

Module 1 The science behind poor weight loss outcomes

09.35 - 09.55 How to define success

09.55 - 10.15 What constitutes poor response?

10.15 - 10.30 Genetics and poor response

10.30 - 11.00 Panel discussion

11.00 - 11.15 Tea, Coffee & Exhibition

Module 2 Optimisation of current management pathways

11.15 - 11.30 Dietary amelioration

11.30 - 11.45 Psychological evaluation prior to revisional surgery

11.45 - 12.00 Medical optimisation / assessment

12.00 - 12.15 Endoscopic options for revisional weight loss

12.15 - 12.45 Panel discussion

12.45 - 13.15 Lunch & Exhibition

Module 3 Revision surgery pathway - best practice (literature reviews)

13.15 - 13.30 Investigations and surgical assessment

13.30 - 13.45 Revising bands

13.45 - 14.00 Revising sleeves

14.00 - 14.15 Revising bypass

14.15 - 14.30 Revising DS

14.30 - 14.45	Revising OAGB
14.45 - 15.15	Panel discussion
15.15 - 15.30	<i>Tea, Coffee & Exhibition</i>



**Module 4 Technical aspects of revision surgery —How I do it
(Videos)**

15.30 - 15.45	LAGB revision
15.45 - 16.00	Sleeve revision
16.00 - 16.15	RYGB revision
16.15 - 16.30	OAGB revision
16.30 - 16.45	What to do with the unhappy DS patient?
16.45 - 17.15	Revisional potpourri videos– VBG, plications, gastroplasty
17.15 - 17.30	Panel discussion
17.30 – 17.45	Summary and Conclusions

Room: Windsor

08.30 - 08.40 Course introduction and highlights

Module 1 BE for surgical complications module

Gastric Band BE

08.40 - 09.00 Endoscopic treatment of band erosion and the interface with its other complications – technical aspects and results

09.00 - 09.15 Discussion

RYGB BE

09.15 - 09.35 Endoscopic treatment of RYGB complications

09.35 - 09.50 Discussion

Sleeve Gastrectomy BE

09.50 - 10.10 Sleeve Gastrectomy complications - Endoscopic treatment

10.10 - 10.30 Discussion

10.30 - 10.50 Tea, Coffee & Exhibition

Module 2 Practical

10.50 - 12.50 Bariatric endoscopy – practical session

12.50 - 13.30 Lunch & Exhibition

Module 3 BE as obesity treatment

Endoscopy treatment of obesity and metabolic comorbidities

13.30 - 13.45 What to expect from BE as a primary treatment option for obesity - present and future perspectives

13.45 - 14.00	Intragastric balloons as space occupying devices - Overview and results
14.00 - 14.15	Gastric endoscopic plication
14.30 - 14.45	Gastric aspiration therapy
14.45 - 15.00	Endoscopic endolumenal tissue remodeling and endolumenal magnetic bowel diversion
15.00 - 15.15	Endoscopic endolumenal bowel diversions
15.15 - 15.30	Evidence base analysis of endoscopic treatment of obesity and diabetes
15.30 - 15.45	Interaction / Questions
<i>15.45 - 16.00</i>	<i>Tea, Coffee & Exhibition</i>

Module 4 **BE for poor weight loss and GERD**
Endoscopy treatment on weight regain post bariatric surgery

16.00 - 16.15	Defining post-op weight regain
16.15 - 16.30	RYGB endoscopic revisions
16.30 - 16.45	LSG endoscopic revisions
16.45 - 17.00	Discussion

Endoscopy treatment post bariatric GERD

17.00 - 17.15	Non-Ablative Radio Frequency
17.15 - 17.30	Discussion and adjourn

Bariatric Surgery Research: From Concept to Publication and Presentation

Room: Wordsworth

Session 1 Developing a Research Project

08.00 - 08.20 Overview of Study Designs

08.20 - 08.40 How to do a Thorough Literature Search

08.40 - 09.00 Facing the IRB

09.00 - 09.20 Obtaining Funding

09.20 - 09.40 Critical Paper Review # 1

09.40 - 10.00 Tea, Coffee & Exhibition

Session 2 Overview of Statistics for the Novice Researcher

10.00 - 10.20 Why do We Need Statistics?

10.20 - 10.40 Power Analysis - Determining the Size of the N

10.40 - 11.00 Overview of Medical Statistics

11.00 - 11.20 How to Pick the Correct Statistical Analysis

11.20 - 11.40 Critical Paper Review # 2

11.40 - 12.00 Panel Discussion Q & A

12.00 - 13.30 Lunch & Exhibition

Session 3 Writing a Manuscript

13.30 - 13.50 Overview of Manuscript Components

13.50 - 14.10 Tables and Figures, Friend or Foes?

14.10 - 14.30 Ethics in Research and Publishing

14.30 - 14.50 Critical Paper Review # 3

14.50 - 15.20 Tea, Coffee & Exhibition

Session 4 Getting Your Work Published

15.20 - 15.40 How to Create a PowerPoint Presentation

15.40 - 16.00 What do You do When your Paper is Rejected?

16.00 - 16.20 Selecting the Most Appropriate Journal

16.20 - 16.40 Critical Paper Review # 4

16.40 - 17.00 Panel Discussion Q & A

Thursday 31th August

Session: A1

Room: Great Hall

Track: oral abstracts presentations

Title: Top paper session

- | | |
|---------------------|--|
| A1.1: 08.00 - 08.20 | O.001 A Large Multicenter Brazilian Study: The Experience in High Volume of Patients Centers |
| A1.2: 08.20 - 08.40 | O.002 Pre-operative liver shrinking diets can alter collagen gene expression in wound healing: A Randomised Controlled Trial |
| A1.3: 08.40 - 09.00 | O.003 Long-term weight change and behaviour: is there a relationship? |
| A1.4: 09.00 - 09.20 | O.004 Occurrence or Remission of Antidiabetic Treatment Six Years After Bariatric Surgery: A Nationwide Matched Cohort Study |
| A1.5: 09.20 - 09.40 | O.005 Laparoscopic Sleeve Gastrectomy or Roux-Y-Gastric Bypass. 5-Year Results of the prospective randomized Swiss Multicenter Bypass or Sleeve Study (SM-BOSS) |
| A1.6: 09.40 - 10.00 | O.006 In search of a better Bypass: 4 year results of an RCT on Biliopancreatic Limb Length in RYGB |

Session: A2
Room: Churchill
Track: video presentations

Title: Bariatric surgery - tips and tricks – technical aspects

A2.1: 08.00 - 08.12	V.001 Bikini Line Port Access Sleeve Gastrectomy: A Novel Approach
A2.2: 08.12 - 08.24	V.002 Bariatric Surgery After Nissen´s Fundoplication -
A2.3: 08.24 - 08.36	V.002 The 15cm Roux limb: A technical misadventure
A2.4: 08.36 - 08.48	V.004 Conversion Of Prior Nissen Fundoplication To Roux-En-Y Gastric Bypass: A Safe Technique
A2.5: 08.48 - 09.00	V.005 Taming the Anaconda: laparoscopic strategies for the treatment of an incarcerated anastomotic retrograde intussusception after RNY gastric bypass
A2.6: 09.00 - 09.12	V.006 Reversal of Omega Loop Bypass - Practical Steps
A2.7: 09.12 - 09.24	V.007 Laparoscopic Conversion of One Anastomosis Gastric Bypass to a Standard Roux-en-Y Gastric Bypass
A2.8: 09.24 - 09.36	Video: Tips and tricks when performing MGB/OAGB
A2.9: 09.36 - 09.48	Video: Low pneumoperitoneum bariatric surgery
A2.10: 09.48 - 10.00	Video: Ways to cosmetically but effectively retract the liver in bariatric surgery

Session: A3

Room: Victoria

Track: oral abstracts and invited presentations

Title: Early complications of bariatric surgery - prevention & management session

- A3.1: 08.00 - 08.15 **O.007** Risk assessment tool for venous thromboembolism after bariatric surgery: results from the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program
-
- A3.2: 08.15 - 08.30 **O.008** Diagnostic value of Computed Tomography for detecting anastomotic or staple line leakage after bariatric surgery
-
- A3.3: 08.30 - 08.45 **O.009** Pre-operatively Planning for High Risk Bariatric Surgical Patients – Can We Predict HDU Admissions?
-
- A3.4: 08.45 - 09.00 **O.010** Large Bariatrics-specific Stents and Over-the-Scope Clips in the Management of Post-bariatric Surgery Leaks (with video)
-
- A3.5: 09.00 - 09.15 **O.011** In-hospital postoperative complications following different bariatric procedures: Results from the Israeli bariatric surgery registry
-
- A3.6: 09.15 - 09.30 **O.012** Portomesenteric Vein Thrombosis Following Sleeve Gastrectomy: A Multi-Center Case-Control Study
-
- A3.7: 09.30 - 09.45 **O.013** C-Reactive protein on postoperative day one: a significant predictive marker for early deep surgical site infections after elective bariatric surgery
-
- A3.8: 09.45 - 10.00 Edmonton Obesity Staging Score: Practical Applications

Session: A4

Room: St James

Track: Symposium

Title: Medical and Metabolic Symposium in collaboration with EASO (Part 1) - State of the art management of adolescents and adults with severe obesity in the real-world setting of limited access to surgery

A4.1: 08.00 - 08.30 State of the art surgery. Indications for surgical treatment (primary and revisional)

A4.2: 08.30 - 09.00 State of the art medical management (pre-surgery and weight regain post-surgery)

A4.3: 09.00 - 09.30 State of the art management of adolescents

A4.4: 09.30 - 10.00 Panel discussion: Polymodal approach: Is there a role for revisional surgery at all?

Session: A5

Room: Westminster

Track: oral abstracts and invited presentations

Title: Bariatric Surgery and Mental Health – pre and post-op challenges

A5.1: 08.00 - 08.15 **O.014** Improvement in quality of life and depression after bariatric surgery is not related to excess weight lost

A5.2: 08.15 - 08.30 **O.015** Impulsivity predicts weight loss after obesity surgery

A5.3: 08.30 - 08.45 **O.016** Identification of Sub-Types of Binge Eaters in a Bariatric Surgery Population

A5.4: 08.45 - 09.00 **O.017** Unreal expectations and risk-acceptation in bariatric surgery

A5.5: 09.00 - 09.15 Are there any psychological contraindications for bariatric surgery?

A5.6: 09.15 - 09.30 Do psychological evaluations and interventions before bariatric surgery influence post-operative results?

A5.7: 09.30 - 09.45 Does bariatric surgery increase suicide risk? The evidence

A5.8: 09.45 - 10.00 Discussion

Session: A6

Room: Moore

Track: oral abstracts and invited presentations

Title: Gastric banding

A6.1. 08.00 - 08.15	O.018 Late Complications of Laparoscopic adjustable gastric banding (LAGB)
A6.2. 08.15 - 08.30	O.019 Laparoscopic Adjustable Gastric Banding (LAGB). Results after 3736 patients
A6.3. 08.30 - 08.45	O.020 Weight loss after laparoscopic adjustable gastric band and resolution of the metabolic syndrome and its components
A6.4. 08.45 - 09.00	O.021 Short-Term Weight Loss results In Western Europeans Versus South Asian Patients After Laparoscopic Adjustable Gastric Banding: a 1:2 Matched Control Cohort Study
A6.5. 09.00 - 09.15	O.022 Removal of gastric band does not necessarily lead to significant weight gain
A6.6. 09.15 - 09.30	O.023 Patient Centred Gastric Band Clinic Yields High Quality Outcomes: Results From 293 Consecutive Patients
A6.7. 09.30 - 09.50	Is there a role for adjustable gastric banding in 2017?
A6.8. 09.50 - 10.00	Discussion

Session: A7

Room: Abbey

Track: oral abstracts and invited presentations

Title: Pre-operative care

A7.1. 08.00 - 08.15	O.024 Cardiac risk stratification in bariatric patients: a screening tool
A7.2. 08.15 - 08.30	O.025 Can Pharmacotherapy be superior to Diet for Preoperative Bariatric Surgery Preparation?
A7.3. 08.30 - 08.45	O.026 Advanced NAFLD is Common in Patients Undergoing Bariatric Surgery and Poorly Staged Preoperatively by Existing Non-Invasive Biomarkers
A7.4. 08.45 - 09.00	O.027 Preoperative prediction of cirrhosis in bariatric patients: a proposed model
A7.5. 09.00 - 09.15	O.028 The impact of preoperative investigations on the management of bariatric patients; results of a cohort of more than 1100 cases
A7.6. 09.15 - 09.30	tbc
A7.7. 09.30 - 09.50	The role of the bariatric nurse specialist in a busy bariatric program
A7.8. 09.50 - 10.00	Discussion

Session: A8
Room: Windsor
Track: symposium

Title: Robotic symposium - part 1

A8.1. 08.00 - 08.15	How is technology impacting our world. Is surgery being left behind?
A8.2. 08.15 - 08.30	Postgraduate training, accreditation and certification in the robotics era
A8.3. 08.30 - 08.45	Economic, healthcare policy and reimbursement issues impacting robotic adoption in Europe
A8.4. 08.45 - 09.00	Panel Discussion
A8.5. 09.00 - 09.15	RYGB: Technique and Literature Review
A8.6. 09.15 - 09.30	Sleeve Gastrectomy: Totally Robotic technique using robotic stapler: Advantages and Limitations
A8.7. 09.30 - 09.45	Revisional Surgery: Maximizing the advantages of robotics
A8.8. 09.45 - 10.00	Panel discussion

Session: A9
Room: Mountbatten
Track: symposium

Title: Joint EAES-IFSO symposium

A9.1. 08.00 - 08.20	Is endoluminal the right approach?
A9.2. 08.20 - 08.40	Can we better control po bleeding in bariatric surgery?
A9.3. 08.40 - 09.00	Solutions for chronic fistulas after sleeve gastrectomy
A9.4. 09.00 - 09.20	Tips and tricks for proper bowel positioning in bypass procedures
A9.5. 09.20 - 09.40	Portal vein thrombosis after bariatric surgery
A9.6. 09.40 - 10.00	Is Robotics a better tool for revisional surgery?

Session: A10

Room: Albert
Track: oral abstracts presentations

Title: Outcomes of bariatric procedures abstracts

A10.1. 08.00 - 08.15	O.030 Incontinence surgery or bariatric surgery for morbidly obese women with urinary incontinence?
A10.2. 08.15 - 08.30	O.031 The Impact of Bariatric Surgery on the Resolution of Obstructive Sleep Apnoea: a Single-Centre Study
A10.3. 08.30 - 08.45	O.032 Hedonic hunger and weight loss trends in a population of patients with severe obesity following Roux-en-Y Gastric Bypass or Sleeve gastrectomy
A10.4. 08.45 - 09.00	O.033 Endosleeve- Endoscopic Sleeve Gastroplasty With Apollo Overstich: A New Procedure for Endoluminal Bariatric Surgery In High Risk And Super-Obese Patients

A10.5. 09.00 - 09.15	O.034 Setting realistic expectations for weight loss after Laparoscopic Sleeve Gastrectomy – Predict BMI calculator
A10.6. 09.15 - 09.30	O.035 Efficacy and safety of the duodenal-jejunal bypass liner: a prospective cohort study with two years implantation duration
A10.7. 09.30 - 09.45	O.036 Positive outcomes for hypertensive and non-hypertensive patients following bariatric surgery
A10.8. 09.45 - 10.00	O.037 Improvement in physical functioning after Bariatric Surgery: A two-year prospective study at a single center

Session: B1
Room: Great Hall
Track: invited presentations

Title: Royal Flush: Best of British

B1.1. 10.30 - 10.45	Why does society find it so hard to accept interventions for obesity as mainstream treatments?
B1.2. 10.45 - 10.55	Questions
B1.3. 10.55 - 11.10	Obesity as a biological condition; not a moral failing
B1.4. 11.10 - 11.20	Questions
B1.5. 11.20 - 11.35	How close are we to a medical bypass?
B1.6. 11.35 - 11.45	Questions
B1.7. 11.45 - 12.00	What our genes tell us and what does surgery have to do to become a mainstream treatment for obesity?
B1.8. 12.00 - 12.10	Questions
B1.9. 12.10 - 12.30	Panel discussion: What it is that we need to do now to move forward in the face of better evidence and declining numbers of bariatric surgery operations?

Session: B2

Room: Churchill

Track: video presentations

Title: Top video session

B2.1. 10.30 - 10.42	V.008 Duodenal Switch Reversal For Hyperinsulinemic Hypoglycemia
B2.2. 10.42 - 10.54	V.009 Problematic Open VBG and Gastric Band to Laparoscopic Gastric Bypass After 20yrs - Technical Aspects and Outcome
B2.3. 10.54 - 11.06	V.010 Duodenal ileal interposition with sleeve gastrectomy and selective intra-abdominal denervation for Type 2 Diabetes Mellitus
B2.4. 11.06 - 11.18	V.011 Successful delayed surgical treatment of staple line leak after laparoscopic sleeve gastrectomy
B2.5. 11.18 - 11.30	V.012 Laparoscopic Conversion of Single Anastomosis Duodenal Switch to Mini Gastric Bypass for Duodeno-ileostomy Leak
B2.6. 11.30 - 11.42	V.013 Laparoscopic total gastrectomy with Roux en-y esophago-jejunostomy for a chronic gastro-colic fistula after Laparoscopic Sleeve Gastrectomy
B2.7. 11.42 - 11.54	V.014 Small bowel obstruction caused by migrated Intra-gastric balloon. Laparoscopic resolution
B2.8. 11.54 - 12.06	V.015 RNY Gastric Bypass to SADI-S with repair of hiatus hernia and cholecystectomy for weight gain & symptomatic gallstones
B2.9. 12.06 - 12.18	V.016 Robotic Assisted Bariatric Surgery: Single Anastomosis Duodenal Switch
B2.10. 12.18 - 12.30	V.017 Intraoperative Complications of Laparoscopic Duodenal Switch

Session: B3
Room: Victoria
Track: oral abstracts presentations

Title: Late complications of bariatric surgery - prevention and management session – abstracts

- | | |
|---------------------|--|
| B3.1. 10.30 - 10.45 | O.038 Surgical management of Gastro-Gastric Fistula after Laparoscopic Roux-en-Y-Gastric Bypass |
| B3.2. 10.45 - 11.00 | O.039 CT findings in patients with internal herniation after Roux-en-Y gastric bypass surgery |
| B3.3. 11.00 - 11.15 | O.040 A study on the risk factors of hair loss following bariatric surgery |
| B3.4. 11.15 - 11.30 | O.041 Inversion technique for the removal of partially covered self-expandable metallic stents |
| B3.5. 11.30 - 11.45 | O.042 Incidence of Cholecystectomy After Bariatric Surgery |
| B3.6. 11.45 - 12.00 | O.043 Evidence of Objective Endoscopic Gastroesophageal Reflux Post Sleeve Gastrectomy |
| B3.7. 12.00 - 12.15 | O.044 Reflux disease after Sleeve gastrectomy – a quality of life assessment |
| B3.8. 12.15 - 12.30 | O.045 Bidirectional jejunojejunostomy prevents the kinking of the anastomosis after closure of the mesenteric defect in Lönroth's Roux-en-Y laparoscopic gastric bypass |

Session: B4

Room: St James

Track: symposium

Title: Medical and Metabolic Symposium in collaboration with EASO (Part 2) - Mechanisms contributing to the beneficial effect of bariatric surgery in engendering sustained weight reduction and improvement in glycaemic control

B4.1. 10.30 - 10.50 Altered GI signals

B4.2. 10.50 - 11.10 Alter glucose transport

B4.3. 11.10 - 11.30 Altered reward: Bile acids and microbiota

B4.4. 11.30 - 11.50 Altered energy expenditure

B4.5. 11.50 - 12.10 Modulating gut biology

B4.6. 12.10 - 12.30 Panel discussion

Session: B5

Room: Westminster

Track: oral abstracts and invited presentations

Title: Multidisciplinary management

B5.1. 10.30 - 10.45	It's all in how you say it - bad words in bariatric and metabolic surgery
B5.2. 10.45 - 11.00	Are probiotics beneficial after bariatric surgery?
B5.3. 11.00 - 11.15	Outcome reporting in bariatric and metabolic surgery
B5.4. 11.15 - 11.30	Discussion
B5.5. 11.30 - 11.45	O.046 Evaluation of Carbohydrate Restriction as Primary Treatment for Post-Gastric Bypass Hypoglycemia
B5.6. 11.45 - 12.00	O.047 Could pre-probiotic usage enhance metabolic effects of Roux-en-Y Gastric Bypass Surgery and prevent from nutritional deficiency?: A prospective randomized trial
B5.7. 12.00 - 12.15	O.048 Medium Term Results Following Laparoscopic Gastric Bypass (LRYGB) in the NHS. Does bariatric surgery lead to sustained reductions in medications?
B5.8. 12.15 - 12.30	O.049 Public hospital admissions and emergency department presentations for patients wait-listed for bariatric surgery in Tasmania, Australia: a state-wide cohort study

Session: B6
Room: Moore
Track: oral abstracts and debate

Title: Sleeve Gastrectomy - Session 1

B6.1. 10.30 - 10.45	O.050 Laparoscopic Greater Curvature Plication Versus Laparoscopic Sleeve Gastrectomy: Long-Term Results of Prospective Randomized Trial
B6.2. 10.45 - 11.00	O.051 Resolution of Diabetes Mellitus type 2 after Sleeve Gastrectomy: a two steps Hypothesis
B6.3. 11.00 - 11.15	O.052 Comparing Sleeve Gastrectomy to Single Stage Band Removal and Concomittant Sleeve Gastrectomy, Analyses of 98,298 patients nts
B6.4. 11.15 - 11.30	O.053 Sleeve gastrectomy in the era of robotic surgery: a meta-analysis
B6.5. 11.30 - 11.45	O.054 The effect of Bougie size on the outcome of laparoscopic sleeve gastrectomy – Mid-term follow up results
B6.6. 11.45 - 12.00	O.055 Sleeve gastrectomy plus jejunaljejunum bypass for the treatment of obesity: Short-term Outcomes
B6.7. 12.00 - 12.30	Debate: Sleeve gastrectomy is currently the 'gold standard' bariatric operation
B6.7a	Pro - 7 minutes
B6.7b	Against - 7 minutes
B6.7c	Rebuttal Pro - 3 minutes
B6.7d	Rebuttal Against - 3 minutes
B6.7e	Audience vote and discussion – 10 minutes

Session: B7

Room: Abbey

Track: oral abstracts and invited presentations

Title: Bariatric surgery in older individuals

- | | |
|---------------------|--|
| B7.1. 10.30 - 10.50 | Managing the older bariatric patients – special considerations in the over 65s |
| B7.2. 10.50 - 11.00 | Discussion |
| B7.3. 11.00 - 11.15 | O.056 Age-related effects of bariatric surgery on early atherosclerosis and cardiovascular risk reduction |
| B7.4. 11.15 - 11.30 | O.057 Laparoscopic Sleeve Gastrectomy In The Elderly |
| B7.5. 11.30 - 11.45 | O.058 Safety and efficiency of sleeve gastrectomy in elderly patients |
| B7.6. 11.45 - 12.00 | O.059 Incidence and risk factors for intensive care unit admission after laparoscopic sleeve gastrectomy in high risk elderly: safety and feasibility |
| B7.7. 12.00 - 12.15 | O.060 Comparative Outcomes of Totally Robotic Roux-en-Y Gastric bypass (TR-RYGB) in Matched Patients Aged ≥ 65 versus ≤ 50 years |
| B7.8. 12.15 - 12.30 | O.061 Outcomes of bariatric surgery in the 65+ years old patients: experience of a bariatric centre of excellence |

Session: B8

Room: Windsor

Track: symposium

Title: Robotic symposium - part 2

B8.1. 10.30 - 10.45	ICG Fluorescence: Role of routine use in primary cases versus selected complex cases
B8.2. 10.45 - 11.00	Does the robot offer an advantage in the presence of challenging hiatal and paraoesophageal hernias?
B8.3. 11.00 - 11.15	Converting prior funduplications to the proper anti-reflux operation in the morbidly obese. robotic approach to fundoplication conversion to gastric bypass
B8.4. 11.15 - 11.30	Evolution of why the robot for ventral hernia and advantages of robotic approach
B8.5. 11.30 - 11.45	Robotic IPOM with closure of defect versus robotic preperitoneal approach
B8.6. 11.45 - 11.55	Panel discussion
B8.7. 11.55 - 12.10	Xi, SP, Integrated Table, Robotic Staplers: What are the added advantages?
B8.8. 12.10 - 12.30	Panel Discussion: What do surgeons want in the next robotic platform?

Session: B9

Room: Mountbatten

Track: symposium

Title: Pan-Arab Symposium

B9.1. 10.30 - 10.35 Introduction and Remarks

Part 1 - Current Middle East Experience

B9.2. 10.35 - 10.45 Trends of peri-operative bariatric surgery practice in the Middle East.

B9.3. 10.45 - 10.55 Is sleeve gastrectomy really suitable as a primary bariatric procedures? What we have learned from >3000 LSG.

B9.4. 10.55 - 11.05 What have we learned about OAGB/MGB after more than 3000 OAGB/MGB patients?

B9.5. 11.05 - 11.15 The largest adolescent experience in the world: LSG is the ideal procedure.

B9.6. 11.15 - 11.25 Laparoscopic hand sewn RYGB multi center experience of 1500 patients

Part 2 - Re-operative Bariatric surgery in the Middle East

B9.7. 11.25 - 11.35 LAGB to LRYGB

B9.8. 11.35 - 11.45 LAGB to LSG

B9.9. 11.45 - 11.55 LAGB to OAGB/MGB

B9.10. 11.55 - 12.05 Role of CT volumetry after sleeve gastrectomy

B9.11. 12.05 - 12.15 Options for insufficient weight loss/weight regain after LRYGB

B9.12. 12.15 - 12.30 Discussion & Questions

Session: B10
Room: Albert
Track: oral abstract presentations

Title: Peri-operative care abstracts

B10.1. 10.30 - 10.45	O.062 The effect of obesity on anti/Xa concentrations in bariatric
B10.2. 10.45 - 11.00	O.063 Validity of a simple sleep monitor for diagnosing OSA in bariatric surgery patients
B10.3. 11.00 - 11.15	O.064 23hr/next day discharge rate after Laparoscopic Roux-en-Y Gastric Bypass (LRYGB). Can we do even better?
B10.4. 11.15 - 11.30	O.065 Factors predictive of day one discharge after bariatric surgery
B10.5. 11.30 - 11.45	O.066 Does Intra-Peritoneal Local Anesthetic improve outcomes in ERABS-A Double Blind RCT
B10.6. 11.45 - 12.00	O.067 Risk factors for prolonged length of hospital stay and readmissions after laparoscopic sleeve gastrectomy and laparoscopic Roux-en-Y gastric bypass
B10.7. 12.00 - 12.15	O.068 Large Experience and Impact of Early Discharge of 4894 Patients in Four Years at A Src Bariatric Credited Center
B10.8. 12.15 - 12.30	O.069 Enhanced Recovery After Bariatric Surgery in a Single High-Volume Center

Session: C1

Room: Great Hall
Track: symposium

Title: **New technologies symposium**

C1.1. **Debate: Gastric aspiration technology is beneficial**

C1.1a. 14.00 - 14.07 Pro

C1.1b. 14.07 - 14.14 Against

C1.1c. 14:14 - 14.20 Rebuttal

C1.1d. 14.20 - 14.30 Discussion

C1.2. 14.30 - 14.45 The role of virtual reality in surgical training

C1.3. 14.45 - 15.00 The vagus nerve as a target for bariatric and metabolic interventions – is there a future?

C1.4. 15.00 - 15.15 Endoscopic metabolic procedures – targeting the duodenum

C1.5. 15.15 - 15.30 What's new in balloon technology?

C1.6. 15.30 - 16.00 **Do new technologies have a role in the management of reflux after bariatric surgery?**

C1.6a. 15.30 - 15.37 Yes - Linx

C1.6b. 15.37 - 15.44 Yes - Endoscopic Radiofrequency Treatment

C1.6c. 15.44 - 15.51 No - Revisional surgery is best

C1.6d. 15.51 -16:00 Discussion

Session: C2
Room: Churchill
Track: video presentations

Title: Bad day in the OR (video session)

C2.1. 14.00 - 14.12	V.018 Laparoscopic management of early perforation after intragastric balloon insertion causing gastric ischaemia
C2.2. 14.12 - 14.24	V.019 Symptomatic hiatal hernia in elderly obese patient: laparoscopic repair, hiatoplasty and Roux-en-Y gastric bypass
C2.3. 14.24 - 14.36	V.020 Gastro-gastric fistula after endoscopic dilatation of a gastro-jejunostricture
C2.4. 14.36 - 14.48	V.021 An unusual cause of internal hernia following gastric bypass
C2.5. 14.48 - 15.00	V.022 Jejunal Diverticula Complicating Laparoscopic RYGB
C2.6. 15.00 - 15.12	V.023 Perforation of Marginal Ulcer post Laparoscopic Roux-en-Y Gastric Bypass
C2.7. 15.12 - 15.24	V.024 Alimentary Limb Ischemia and Bougie perforation During RYGB
C2.8. 15.24 - 15.36	V.025 Laparoscopic Adjustable Gastric Band Erosion and Gastrojejunal Fistula
C2.9. 15.36 - 15.48	V.026 Reducing Surprises After Bariatric Medical Tourism: The Importance of Careful Preoperative Investigation
C2.10. 15.48 – 16.00	Video TBC

Session: C3

Room: Victoria

Track: oral abstract and invited presentations

Title: Training in obesity and bariatric surgery

C3.1. 14.00 - 14.15 **0.070** AIS Channel: Learning Bariatric Surgery With The Latest Technologies

C3.2. 14.15 - 14.30 The role of journal clubs in 2017

C3.3. 14.30 - 14.45 The role of social media

C3.4. 14.45 - 15.00 Training surgical trainees to become competent bariatric surgeons

C3.5. 15.00 - 15.15 Training in bariatric endoscopy

C3.6. 15.15 - 15.30 Training allied health professionals

C3.7. 15.30 - 15.45 Maintaining knowledge and skills in established bariatric surgeons

C3.8. 15.45 - 16.00 Discussion

Session: C4

Room: St James

Track: symposium

Title: Metabolic symposium Part 3 - Comparing metabolic operations

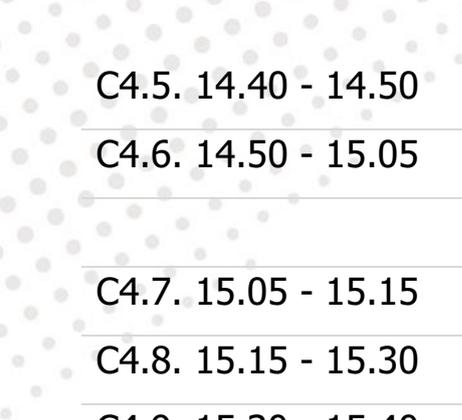
Which is the best metabolic operation?

C4.1. 14.00 - 14.10 RYGB

C4.2. 14.10 - 14.20 MGB/OAGB

C4.3. 14.20 - 14.30 Sleeve gastrectomy +/- duodenal switch

C4.4. 14.30 - 14.40 SADI



C4.5. 14.40 - 14.50	Ileal interposition
C4.6. 14.50 - 15.05	Panel discussion, questions from floor and audience vote
Complications of metabolic surgery	
C4.7. 15.05 - 15.15	Internal hernias after RYGB
C4.8. 15.15 - 15.30	Mineral and vitamin deficiency after metabolic surgery
C4.9. 15.30 - 15.40	Reflux after sleeve - is it preventable? What are the long term consequences?
C4.10. 15.40 - 15.50	Chronic abdominal pain after bariatric surgery
C4.11. 15.50 - 16.00	Discussion

Session: C5

Room: Westminster

Track: oral abstracts and invited presentations

Title: Nutrition and bariatric surgery

- | | |
|---------------------|--|
| C5.1. 14.00 - 14.15 | Nutritional follow-up of patients undergoing bariatric surgery |
| C5.2. 14.15 - 14.30 | Emotions, food and obesity |
| C5.3. 14.30 - 14.45 | Discussion |
| C5.4. 14.45 - 15.00 | 0.071 Investigating nutritional deficiencies pre and post laparoscopic sleeve gastrectomy |
| C5.5. 15.00 - 15.15 | 0.072 Efficacy of oral versus intramuscular vitamin B12 supplementation following Roux-en-Y Gastric Bypass, a randomized controlled trial |
| C5.6. 15.15 - 15.30 | 0.073 Metabolic deficiencies during the first year after a restrictive bariatric operation- a single centre experience |
| C5.7. 15.30 - 15.45 | 0.074 Long-term nutritional deficiencies following sleeve gastrectomy – Five year outcomes in 108 cases |
| C5.8. 15.45 - 16.00 | 0.075 High incidence of Vitamin D deficiency in morbidly obese Irish patients undergoing bariatric surgery |

Session: C6
Room: Moore
Track: symposium

Title: IFSO Bariatric Surgery National Registries

C6.1.	14.00 - 14.15	Introduction, Review of goals of registries and what should be common elements between all national registries, update on consensus statement
C6.2.	14.15 - 14.30	USA - MBSAQIP
C6.3.	14.30 - 14.42	Sweden - SOREG
C6.4.	14.42 - 14.54	Dutch registry
C6.5.	14.54 - 15.06	UK registry
C6.6.	15.06 - 15.18	Canadian registry
C6.7.	15.18 - 15.30	Australian registry
C6.8.	15.30 - 15.42	Germany
C6.9.	15.42 - 16.00	Panel discussion and consensus discussion

Session: C7
Room: Abbey
Track: symposium

Title: Bariatric Anaesthesia Symposium in conjunction with SOBA.

Part 1 - Sleep Apnoea and the Surgeon

C7.1.	14.00 - 14.15	Fundamentals of sleep apnoea: what everyone must know
C7.2.	14.15 - 14.30	Screening and investigating sleep apnoea
C7.3.	14.30 - 14.40	Questions and Discussion 1
C7.4.	14.40 - 14.55	When and who to defer for treatment

C7.5. 14.55 - 15.10 Safe peri-operative management

C7.6. 15.10 - 15.20 Questions and Discussion

Debate: "My patient can walk up a flight of stairs easily. He doesn't need a sleep study"

C7.7. 15.20 - 15:35 Pro

C7.8. 15:35 - 15:50 Con

C7.9. 15.50 - 16.00 Questions and Discussion

Session: C8
Room: Windsor
Track: symposium

Title: The Adolescent with severe and complex obesity - Part 1. Is Bariatric Surgery the Only Option?

C8.1. 14.00 - 14.20 Prevention strategy – Does it work or is it destined for failure?

C8.2. 14.20 - 14.40 Medical management of obesity in adolescents

C8.3. 14.45 - 15.15 Preparing young people for surgery – what are the key differences?

C8.4. 15.15 - 15.30 Panel Discussion

C8.5. 15.30 - 15.45 **0.076** Long-term (5-year) bone health in adolescents following Roux-en-Y gastric bypass

C8.6. 15.45 - 16.00 **0.077** Bariatric Surgery in adolescents: Which surgery is better?

Session: C9
Room: Mountbatten
Track: symposium

Title: IFSO Latin American Chapter Symposium

Part 1. Revisional surgery (*this part of the program will be in Spanish*)

C9.1. 14.00 - 14.10	Revisional surgery – when is it worthwhile?
C9.2. 14.10 - 14.20	Which is the best procedure for gastric banding poor responders?
C9.3. 14.20 - 14.30	Which is the best procedure for gastric sleeve poor responders?
C9.4. 14.30 - 14.40	Which is the best procedure for gastric bypass poor responders?
C9.5. 14.50 - 15.00	Can the multidisciplinary team avoid a revisional surgery?
C9.6. 15.00 - 15.10	State of the Art in Revisional Surgery
C9.7. 15.10 - 15.20	Discussion

Part 2. Metabolic surgery (*this part of the program will be in English*)

C9.8. 15.20 - 15.30	Metabolic Surgery - How does it work? Mechanisms.
C9.9. 15.30 - 15.40	Metabolic Surgery - Results in patients BMI 30-35
C9.10. 15.40 - 15.50	Metabolic Surgery guidelines
C9.11. 15.50 - 16.00	Discussion

Session: C10

Room: Albert

Track: oral abstract and invited presentations

Title: Weight regain after bariatric surgery - the role of the multidisciplinary team

C10.1. 14.00 - 14.15	Role of medication
C10.2. 14.15 - 14.30	Dietetic assessment and optimisation of patients with weight regain
C10.3. 14.30 - 14.45	Psychological evaluation in patients with weight regain
C10.4. 14.45 - 15.00	What are the surgical options?
C10.5. 15.00 - 15.15	Discussion
C10.6. 15.15 - 15.30	O.078 Liraglutide Use In Patients Who Have Regained Weight After Bariatric Surgery: The First Australian Experience
C10.7. 15.30 - 15.45	O.079 Early Weight Regain Following Roux-en-Y Gastric Bypass
C10.8. 15.45 - 16.00	O.080 Transoral Outlet Reduction Post Roux-en-Y Gastric Bypass: Evaluation of a Treatment Algorithm Using Two-fold Running Sutures

Session: D1
Room: Great Hall
Track: invited presentations

Title: Medium and long-term outcomes of bariatric surgery

- | | |
|---------------------|--|
| D1.1. 16.30 - 16.45 | Utah Obesity Study 12-year data |
| D1.2. 16.45 - 17.00 | Swedish Obese Subjects Study 20-year data |
| D1.3. 17.00 - 17.15 | STAMPEDE trial 5-year results |
| D1.4. 17.15 - 17.30 | Long-term outcomes after bariatric surgery including 20 year data on gastric banding |
| D1.5. 17.30 - 18.00 | Discussion |

Session: D2
Room: Churchill
Track: video presentations

Title: Even worse day in the OR (video session)

- | | |
|---------------------|--|
| D2.1. 16.30 - 16.42 | V.027 Staged Management of an Early Sleeve Gastrectomy Leak: Laparoscopic Use of a Roux Limb as Remedial Surgery For a Sleeve Gastrectomy Fistula |
| D2.2. 16.42 - 16.54 | V.028 Thoracic Esophageal Injury During LSG, Lesson Learnt & How I managed it |
| D2.3. 16.54 - 17.06 | V.029 Partial Splenectomy during Laparoscopic Revisional Vertical Banded Gastroplasty |
| D2.4. 17.06 - 17.18 | V.030 Post Sleeve Gastrectomy chronic fistula complicated with mid-sleeve perforation due to stenting: Subtotal gastrectomy& Roux-en-Y esophgo-jejunostomyn-y |
| D2.5. 17.18 - 17.30 | V.031 Laparoscopic Roux-en-Y fistulo-jejenostomy for leak from sleeve gastrectomy |

D2.6. 17.30 - 17.42	V.032 Proximal Gastrectomy & Roux-en-Y Esophgo-jejunostomy for a Complicated Gastro-gastric Fistula post Roux-en-Y Gastric bypass
D2.7. 17.42 - 17.54	V.033 Iatrogenic Low Leak Post-Laparoscopic Sleeve Gastrectomy Successfully Repaired With Laparoscopic Internal Drainage and Roux-en-Y Reconstruction
D2.8. 17.54 - 18.00	Questions

Session: D3

Room: Victoria

Track: oral abstracts and invited presentations

Title: Technology, obesity and bariatric surgery

D3.1. 16.30 - 16.45	O.081 Digital Support Group (DSG) better than actual in postoperative management after bariatric surgery
D3.2. 16.45 - 17.00	O.082 Care4Today Bariatric Solution- Outcomes from a large Centre
D3.3. 17.00 - 17.15	O.083 A randomised trial of text message support for reducing weight regain following sleeve gastrectomy
D3.4. 17.15 - 17.30	O.084 Variation in exhaled volatile organic compounds in patients undergoing bariatric surgery
D3.5. 17.30 - 17.45	The role of patient apps in the bariatric surgery journey
D3.6. 17.45 - 18.00	Discussion

Session: D4
Room: St James
Track: symposium

Title: Medical and Metabolic Symposium Part 4. State of the art management of overweight and obese people with type 2 diabetes

- D4.1. 16.30 - 16.50 How do we address the translation gap between guidelines and implementation?
-
- D4.2. 16.50 - 17.10 When should surgery be recommended as first line therapy and when should it be reserved for rescue therapy?
-
- D4.3. 17.10 - 17.30 When should surgery be recommended in people with lower BMI?
-
- D4.4. 17.30 - 17.50 What evidence is needed for new procedures to be used in people with obesity and T2D?
-
- D4.5. 17.50 - 18.00 Discussion

Session: D5

Room: Westminster

Track: oral abstract presentations

Title: Multidisciplinary post-operative management

- D5.1. 16.30 - 16.45 **O.085** Two-year nutrition data in terms of albumin and vitamin D after bariatric surgery and long-term fracture data compared with conservatively treated obese patients
-
- D5.2. 16.45 - 17.00 **O.086** How to improve the patient safety in case of early home return?
-
- D5.3. 17.00 - 17.15 **O.087** Is there a 'weekend effect' in bariatric surgery?
-
- D5.4. 17.15 - 17.30 **O.088** Optimization of iron supplementation after Roux-en-Y gastric bypass
-
- D5.5. 17.30 - 17.45 **O.089** The Dutch Obesity Clinic Group Realizes Improvements in Cardiorespiratory Fitness and Physical Activity through a Comprehensive Bariatric Care Program
-
- D5.6. 17.45 - 18.00 **O.090** Safety of post-operative continuous positive airway pressure (CPAP) use following sleeve gastrectomy

Session: D6

Room: Moore

Track: oral abstracts and invited presentations

Title: Malabsorptive bariatric operations - abstracts

- D6.1. 16.30 - 16.45 **O.091** Duodenal Switch For The Patients With A BMI Below 45. Complications And Deficiency
-
- D6.2. 16.45 - 17.00 **O.092** Multicentric Prospective Randomized Trial Comparing Sadi-S Vs. Duodenal Switch
-
- D6.3. 17.00 - 17.15 **O.093** Is routine cholecystectomy, during laparoscopic biliopancreatic diversion with duodenal switch, necessary?
-
- D6.4. 17.15 - 17.30 **O.094** 3 years' experience on Modified Duodenal Switch (MDS) – A multi-center study throughout 36 month
-
- D6.5. 17.30 - 17.45 Single anastomosis DS - experimental or standard of care?
-
- D6.6. 17.45 - 18.00 Discussion

Session: D7
Room: Abbey
Track: symposium

Title: Bariatric Anaesthesia Symposium in conjunction with SOBA – Part 2 Analgesia after Bariatric Surgery

D7.1. 16.30 - 16.45 How much paracetamol for my 200 kg patient?

D7.2. 16.45 - 17.00 Can we have surgery & anaesthesia without opioids?

D7.3. 17.00 - 17.20 How to refine your enhanced recovery pathway

D7.4. 17.20 - 17.30 Questions and Discussion

Debate “Non-Steroidal drugs should not be given during bariatric surgery”

D7.5. 17.30 - 17.40 Pro

D7.6. 17.40 - 17.50 Con

D7.7. 17.50 - 17.55 Questions and Discussion

D7.8. 17.55 - 18.00 Summing up & closing remarks

Session: D8
Room: Windsor
Track: symposium

**Title: The Adolescent with severe and complex obesity -
Part 2. Bariatric Interventions in adolescents**

D8.1. 16.30 - 16.45 Which non-operative novel therapies / procedures work?

Debate. Which surgical operation is best?

D8.2. 16.45 - 16.55 Bypass

D8.3. 16.55 - 17.05 Sleeve gastrectomy

D8.4. 17.05 - 17.15 Gastric banding

D8.5. 17.15 - 17.30 Panel Discussion

D8.6. 17.30 - 18.00 **Debate. Who should do it?**

D8.6a. Bariatric surgeon

D8.6b. Paediatric Surgeon

D8.6c. Rebuttal

Session. D9

Room. Mountbatten

Track: oral abstract presentations

Title: **IFSO Latin American Chapter Symposium - Part 3**

D9.1. 16.30 - 16.50 Novel endoscopic procedures

D9.2. 16.50 - 17.10 Gastric clip

D9.3. 17.10 - 17.30 Gastric vest

D9.4. 17.30 - 18.00 Discussion

Session: D10

Room: Albert

Track: oral abstract presentations

Title: **Basic science in bariatric and metabolic surgery**

D10.1. 16.30 - 16.45 **O.095** Non-responders after gastric bypass: hormone response and glucose homeostasis during an oral glucose tolerance test

D10.2. 16.45 - 17.00 **O.096** Improvement in renal function following bariatric surgery is most marked in the early stages of chronic kidney disease (CKD)

D10.3. 17.00 - 17.15 **O.097** Effects Of Bariatric Surgery On Change Of Brown Adipocyte Tissue And Energy Metabolism In Obese Mice

D10.4. 17.15 - 17.30 **O.098** Reduction Of Thrombin Generation And Inflammatory State One Year After Bariatric Surgery

D10.5. 17.30 - 17.45 **O.099** Differences of gut microbiota & extracellular vesicles after bariatric/metabolic surgery

D10.6. 17.45 - 18.00 **O.100** Changes in Incretines and Bile Acids after Roux-en-Y Gastric Bypass

Friday 1st September 2017

Session: E1

Room: Great Hall

Track: symposium

Title: Myths or reality - the evidence behind our practice

E1.1. 08.00 - 08.20 Should patients have a defined period of weight management pre-operatively?

E1.2. 08.20 - 08.40 Should all pre-operative bariatric patients stop smoking?

E1.3. 08.40 - 09.00 Expanding the indications for bariatric surgery – should anyone be turned down for surgery?

E1.4. 09.00 - 09.20 Is there a place for a ring in bariatric operations?

E1.5. 09.20 - 09.40 Is there an 'ideal' sleeve gastrectomy?

E1.6. 09.40 - 10.00 Do limb lengths really matter in gastric bypass?

Session: E2

Room: Churchill

Track: video presentations

Title: Revisional surgery video session

E2.1. 08.00 - 08.12	V.034 Laparoscopic conversion of SADI-S to Banded Roux en y gastric bypass
E2.2. 08.12 - 08.24	V.035 Laparoscopic Conversion Of Mini Gastric Bypass To Roux-EN-Y Gastric Bypass
E2.3. 08.24 - 08.36	V.036 MGB To Sleeve Gastrectomy For MGB Complication
E2.4. 08.36 - 08.48	V.037 Laparoscopic Conversion of Gastric Bypass to Single Anastomosis Duodenal Switch in 2 Stages for Weight Recidivism
E2.5. 08.48 - 09.00	V.038 Detective Bariatric Surgeon: Revisional Surgery Of Uncommon Bariatric Procedures
E2.6. 09.00 - 09.12	V.039 One-Anastomosis Jejunal Interposition With Gastric Remnant Resection (Branco-Zorron Switch): Successful Management Of Severe Chronic Hypoglycemia Post Gastric Bypass
E2.7. 09.12 - 09.24	V.040 Laparoscopic Gastric-bypass reversal with concomitant sleeve gastrectomy (SG), for refractory hypoglycemia: an unusual procedure
E2.8. 09.24 - 09.36	V.041 Fluorescence Assisted Laparoscopic Reversal of Roux-en-Y Gastric Bypass
E2.9. 09.36 - 09.48	V.042 Can "Sleeve" solve the problem of an ineffective biliopancreatic diversion?
E2.10. 09.48 - 10.00	Discussion

Session: E3

Room: Victoria

Track: oral abstracts presentations

Title: Robotic and emergent technology - abstracts

- E3.1. 08.00 - 08.15 **O.101** Short-Term Outcomes of Robotic Roux-en- Y Gastric Bypass
-
- E3.2. 08.15 - 08.30 **O.102** Robotic Gastric Bypass Surgery is Safe and Efficient: Results of a propensity score matched analysis
-
- E3.3. 08.30 - 08.45 **O.103** Early experience with intra-operative leak test using a blend of methylene blue and indocyanine green during robotic gastric bypass surgery
-
- E3.4. 08.45 - 09.00 **O.104** A Comparison of Three Types of Sleeve Gastrectomy: Conventional Laparoscopic, SILS and Robotic
-
- E3.5. 09.00 - 09.15 **O.105** Endoscopic Gastric Mucosal Devitalization (GMD) results in a similar reduction in visceral adiposity compared to sleeve gastrectomy (SG): A Randomized Controlled Trial
-
- E3.6. 09.15 - 09.30 **O.106** Long term stability and safety of a novel transgastric intake sensor as part of closed-loop gastric electrical stimulation (CLGES) System
-
- E3.7. 09.30 - 09.45 **O.107** Preliminary Results Of Robotic Roux-En-Y Bypass. 125 Cases
-
- E3.8. 09.45 - 10.00 **O.108** Comparative study of the da Vinci Xi versus the da Vinci Si Surgical System for bariatric bypass surgery

Session: E4
Room: St James
Track: invited presentations

Title: Longitudinal cohort studies versus RCTs to influence practice

Utah Obesity Study 12 year outcomes

E4.1. 08.00 - 08.15	Cardiometabolic outcomes after gastric bypass
E4.2. 08.15 - 08.30	Long-term physical and mental quality-of-life outcomes after gastric bypass
E4.3. 08.30 - 08.45	Resting metabolic rate and cardiorespiratory fitness after gastric bypass
E4.4. 08.45 - 09.00	Long-term retrospective studies of bariatric surgery - completed and in progress

RCT evidence

E4.5. 09.00 - 09.15	RCTs of gastric banding and their influence on practice
E4.6. 09.15 - 09.30	Large, pragmatic RCTs and By-Band-Sleeve - relevance to practice
E4.7. 09.30 - 09.45	Prospective RCT approaches to better data
E4.8. 09.45 - 10.00	Panel discussion

Session: E5
Room: Westminster
Track: symposium

**Title: Fertility and pregnancy after bariatric surgery
symposium**

E5.1.	08.00 - 08.05	Welcome
E5.2.	08.05 - 08.25	Obesity and fertility – an overview
E5.3.	08.25 - 08.45	Fertility in females after bariatric surgery
E5.4.	08.45 - 09.05	Male obesity-related hypogonadism and the effects of bariatric surgery
E5.5.	09.05 - 09.25	AURORA (Bariatric Surgery Registration in Women of Reproductive Age) - an update
E5.6.	09.25 - 09.45	Contraception post-bariatric surgery
E5.7.	09.45 - 10.00	Panel discussion and questions

Session: E6

Room: Moore

Track: oral abstracts presentations

Title: Bypass - RYGB and OAGB abstracts - session 1

- E6.1. 08.00 - 08.15 **O.109** Gastric Bypass-Induced Reduction of Oxidative Stress in Patients with Type 2-Diabetes and Steatohepatitis is Related to Improved Hepatic Oxidative Defense
-
- E6.2. 08.15 - 08.30 **O.110** Tridimensional Tomographic (3DCT) pouch volumetry and scintigraphic Gastric emptying: Influence on long-term weight loss and food toleranc
-
- E6.3. 08.30 - 08.45 **O.111** After 5 years of follow-up: Roux-en-Y gastric bypass is superior to sleeve gastrectomy in super-obese patients
-
- E6.4. 08.45 - 09.00 **O.112** Gastric bypass reduces both liver volume and fibrosis as seen by Acoustic radiation force impulse imaging; a non-invasive liver monitoring technique
-
- E6.5. 09.00 - 09.15 **O.113** Management of an acute fistula after One-anastomosis gastric bypass
-
- E6.6. 09.15 - 09.30 **O.114** Long-term readmission and emergency department visits after Laparoscopic Roux-en-Y Gastric Bypass: a systematic review
-
- E6.7. 09.30 - 09.45 **O.115** Gastric By-Pass : Roux En Y Versus One Anastomosis. Compared Baroscore Over 7 Years
-
- E6.8. 09.45 - 10.00 **O.116** Primary Laparoscopic Roux-en-Y gastric bypass: safety and efficacy outcomes in a single centre series in the UK

Session: E7
Room: Abbey
Track: Political session

Title: Political session

Session to be confirmed

Session: E8
Room: Windsor
Track: symposium

Title: ASMBS symposium - Controversies in UGI surgery

E8.1.	08.00 - 08.15	Gastroparesis – A surgical disease
E8.2.	08.15 - 08.30	Occult motility disorders in bariatric patients
E8.3.	08.30 - 08.45	GERD and Obesity - Does Nissen fundoplication still have a role?
E8.4.	08.45 - 09.00	Sleeve gastrectomy. Are there any pre-operative contraindications?
E8.5.	09.00 - 09.15	Approach to GERD after sleeve - when to operate, when to wait
E8.6.	09.15 - 09.30	Biliary disease in bariatric surgery patients
E8.7.	09.30 - 09.45	Chronic nausea after bariatric surgery - evaluation and treatment
E8.8.	09.45 - 10.00	NASH and advanced liver disease - options for weight loss management

Session: E9

Room: Mountbatten

Track: symposium

Title: IFSO Asia-Pacific Chapter Symposium

I. Revisional surgery - for insufficient weight loss and complications

E9.1. 08.00 - 08.05	Introduction
E9.2. 08.05 - 08.15:	What do I do for poor weight loss with gastric band and sleeve? Gastric bypass
E9.3. 08.15 - 08.25	What do I do for poor weight loss after Roux en Y gastric bypass?
E9.4. 08.25 - 08.35	What do I do for poor weight loss after MGB/OAGB?
E9.5. 08.35 - 08.45	What do I do for poor weight loss after Sleeve-DJB / DS / SADI-S?

II. Metabolic Surgery. Preferred Metabolic surgery option

E9.6. 08.45 - 08.55	Sleeve is my option
E9.7. 08.55 - 09.05	Metabolic surgery. gastric bypass is my option
E9.8. 09.05 - 09.15	Metabolic surgery. single anastomosis gastric bypass is my option
E9.9. 09.15 - 09.25	Metabolic surgery. duodeno-jejunal bypass is my option
E9.10. 09.25 - 09.35	Could Metabolic surgery be performed in patients with BMI less than 28?
E9.11. 09.35 - 09.45	Prediction of diabetes remission after metabolic surgery
E9.12. 09.45 - 10.00	Discussion/Q&A

Session: E10

Room: Albert

Track: oral abstracts and invited presentations

Title: Young IFSO session

E10.1. 08.00 - 08.15	Tips for getting your paper published
E10.2. 08.15 - 08.30	Dealing effectively with major revisions
E10.3. 08.30 - 08.45	Discussion
E10.4. 08.45 - 09.00	Multidisciplinary approach in bariatric surgery
E10.5. 09.00 - 09.15	O.117 Is Economical and/or Educational Status a Predictor of Success in Bariatric Surgery? Our Experience in Argentina
E10.6. 09.15 - 09.30	O.118 One year cross-section demographic data and treatment outcomes of bariatric patients from the largest bariatric and metabolic Center in the Czech Republic
E10.7. 09.30 - 09.45	O.119 Super obese bariatric patients do not have worse early postoperative outcomes – Polish multicenter study
E10.8. 09.45 - 10.00	O.120 Thyroid dysfunction in Chinese obese patients undergoing bariatric surgery

Session: F1
Room: Great Hall

Title: Presidential Session

F1.1. 10.30 - 10.35	Introduction
F1.2. 10.35 - 11.25	Scopinaro Lecture
F1.3. 11.25 - 12.05	Presidential address
F1.4. 12.05 - 12.15	Introduction of the incoming President – Prof Jacques Himpens
F1.5. 12.15 - 12.30	Recognition of Life Member and Honorary Member

Session: G1
Room: Great Hall
Track: Symposium

Title: Metabolic surgery - 2 years beyond the consensus statement

G1.1. 14.00 - 14.15	Who would have thought it? - A history of metabolic surgery
G1.2. 14.15 - 14.30	The joint consensus statement and its impact on diabetes care
G1.3. 14.30 - 14.45	Can we recommend one best metabolic operation?
G1.4. 14.45 - 15.00	Is there a role for metabolic surgery in patients with Grade 1 obesity?
G1.5. 15.00 - 15.15	Metabolic surgery procedures outside of the peritoneal cavity
G1.6. 15.15 - 15.30	Options for management when T2D recurs post-metabolic surgery
G1.7. 15.30 - 15.45	Is there a future for metabolic surgery?
G.1.8 15.45 - 16.00	Panel discussion and questions

Session: G2

Room: Churchill

Track: video presentations

**Title: Emergent, robotic and endoscopic technologies
(video session)**

- G2.1. 14.00 - 14.12 **V.043** What Is The Ideal Therapy For Inoperable Superobese Up To Bmi100? Our Experience With Apollo Endosleeve For High-Risk Superobese Patients
-
- G2.2. 14.12 - 14.24 **V.044** Two Cartridge Sleeve Gastrectomy- Is It Feasible?
-
- G2.3. 14.24 - 14.36 **V.045** Intraabdominal Trocar-free Vacuum Liver Retractor for Sleeve Gastrectomy and RYGB: Preliminary clinical series using the LiVac® System
-
- G2.4. 14.36 - 14.48 **V.046** Indocyanin green test in bariatric surgery
-
- G2.5. 14.48 - 15.00 **V.047** Laparoscopic Robotic-Assisted Revision of Gastrojejunostomy for a Giant Anastomotic Ulcer
-
- G2.6. 15.00 - 15.12 **V.048** Best Trio: Sleeve Gastrectomy with side to side Jejunioileal Anastomosis and Concomitant Giant Hiatal Hernia Repair
-
- G2.7. 15.12 - 15.24 **V.049** Robotic Conversion of Band to Bypass with complex hiatal hernia repair
-
- G2.8. 15.24 - 15.36 **V.050** Laparoscopic Robotic-Assisted Hiatal Hernia Repair, Gastric Band Removal and Conversion to Roux-en-Y Gastric Bypass -
-
- G2.9. 15.36 - 15.48 **V.051** Robotic-Assisted Single Anastomosis Duodeno-Ileal Bypass With Sleeve Gastrectomy
-
- G2.10. 15.48 - 16.00 **Video tbc**

Session: G3
Room: Victoria
Track: invited presentations

Title: Joint BOMSS-SICOB session

G3.1. 14.00 - 14.15 Memorial - Marco Barreca

G3.2. 14.15 - 14.30 Bariatric trends in Italy

G3.3. 14.30 - 14.45 Bariatric trends in UK

G3.4. 14.45 - 15.00 Bariatric surgery training in Italy

G3.5. 15.00 - 15.15 Bariatric training in UK, the fellowship model

G3.6. 15.15 - 15.30 Revisional options in Roux en Y gastric bypass

G3.7. 15.30 - 15.45 Fast track bariatric surgery

G3.8. 15.45 - 16.00 Reflux and sleeve gastrectomy - the Achilles heel?

Session: G4

Room: St James

Track: oral abstracts and invited presentations

Title: Low BMI and metabolic surgery session

G4.1. 14.00 - 14.15	Metabolic surgery in Asian population
G4.2. 14.15 - 14.30	Is BMI an obsolete metric?
G4.3. 14.30 - 14.45	O.121 Bariatric surgery Vs lifestyle modification in Class I obesity: 7 to 10 years results
G4.4. 14.45 - 15.00	O.122 Efficacy of Weight Reduction of Endoscopic Intragastic Balloon (IGB) Vs Oral Sibutramine in Patients with Class I Obesity in an Asian Cohort – A Randomized Control Trial with long term follow up
G4.5. 15.00 - 15.15	O.123 Comparison Of Three Novel Techniques For Type Ii Dm Treatment In Patients With Bmi 28-32 Kg/M2: Single Anastomosis Gastric Bypass, Side To Side Jejunoileal Anastomosis And Transit Gastric Bipartition
G4.6. 15.15 - 15.30	O.124 Intragastic Ellipse Balloon
G4.7. 15.30 - 15.45	Tbc
G4.8. 15.45 - 16.00	Tbc

Session: G5
Room: Westminster
Track: Symposium

Title: Plastic Surgery Symposium in conjunction with BAPRAS Part 1

G5.1. 14.00 - 14.10	UK National Guidelines for Body Contouring surgery after bariatric surgery
G5.2. 14.10 - 14.30	Ensuring adequate patients' nutrition prior to plastic surgery
G5.3. 14.30 - 15.30	Panel case discussion - 4 cases for discussion by faculty and audience
G5.4. 15.30 - 15.45	O.125 Plastic Surgery After Bariatric Procedure: National Study On 23,000 Patients
G5.5. 15.45 - 16.00	O.126 Abdominoplasty After Massive Weight Loss: Standardized Technique & Results of a High Volume Post-Bariatric Center

Session: G6
Room: Moore
Track: oral abstracts and invited presentations

Title: Bypass - OAGB and RYGB abstracts session 2

Debate: Why I prefer:

G6.1. 14.00 - 14.10	The mini-gastric bypass (7 minutes + 3 rebuttal)
G6.2. 14.10 - 14.20	The RYGB (7 minutes + 3 rebuttal)
G6.3. 14.20 - 14.30	Discussion

- G6.4. 14.30 - 14.45 **O.127** Prospective, multicentric, comparative study between sleeve gastrectomy and gastric bypass, 277 patients, 3 years follow-up (ClinicalTrials.gov Identifier : NTC 00722995)
-
- G6.5. 14.45 - 15.00 **O.128** Laparoscopic Roux-en-Y Gastric Bypass: 10-14 years follow up experience
-
- G6.6. 15.00 - 15.15 **O.129** Roux-en-Y gastric bypass in paediatric type 2 diabetes: a systematic review
-
- G6.7. 15.15 - 15.30 **O.130** An extended review of literature comparing Laparoscopic Sleeve Gastrectomy and Roux-en-Y Gastric Bypass in the management of obesity and related co-morbidities
-
- G6.8. 15.30 - 15.45 **O.131** Value of CT-scan for suspected internal herniation in patients following laparoscopic gastric bypass surgery
-
- G6.9. 15.45 - 16.00 **O.132** Is the current Calcium supplementation adequate in patients after gastric bypass? – Comparison between matched cohort of patients who underwent One-anastomosis gastric bypass and Roux-en-Y gastric bypass

Session: G7

Room: Abbey

Track: oral abstracts presentations

Title: Dragon's Den meets Shark Tank

G7.1. 14.00 - 14.30 **O.133** The Teen Bypass Equipoise Sleeve Trial (Teen-BEST): A randomised controlled trial of gastric bypass versus sleeve gastrectomy for adolescents with severe obesity

G7.2. 14.30 - 15.00 **O.134** Single anastomosis duodenal switch (SADI-S) versus Roux-en-Y gastric bypass - defining a new gold standard in metabolic surgery

G7.3. 15.00 - 15.30 **O.135** The effect of improved pre-operative education on the health-related quality of life outcomes following bariatric surgery

G7.4. 15.30 - 16.00 **O.136** Laparoscopic Roux-en-Y gastric bypass versus One anastomosis (Mini) gastric bypass: A prospective randomised controlled clinical trial

Session: G8
Room: Windsor
Track: Symposium

Title: Medico-legal symposium Part 1

G8.1 14.00 - 14.05	Welcome
Medico-legal issues in obesity and bariatric surgery – understanding the extent of the problem	
G8.2. 14.05 - 14.15	UK and European perspective
G8.3. 14.15 - 14.25	US/Canadian perspective
G8.4. 14.25 - 14.35	South American perspective
G8.5. 14.35 - 14.45	Asia-Pacific perspective
G8.6. 14.45 - 14.55	Middle East perspective
G8.7. 14.55 - 15.00	Panel and audience discussion
How to stay out of court!	
G8.8. 15.00 - 15.15	A surgeon's perspective
G8.9. 15.00 - 15.30	The Solicitor's perspective
G8.9. 15.30 - 15.45	The Barrister's perspective
G8.10. 15.45 - 16.00	Panel and audience discussion

Session: G9
Room: Mountbatten
Track: symposium

Title: IFSO North American Chapter Symposium

- G9.1. 14.00 - 14.05 Welcome
-
- G9.2. 14.05 - 14.20 Metabolic and Bariatric Surgery Accreditation Quality Improvement Program (MBSAQIP): Lessons learnt from the World's largest bariatric surgery registry
-
- G9.3. 14.20 - 14.40 Impact of bariatric surgery upon insulin-dependent diabetics: The Canadian experience
-
- G9.4. 14.40 - 15.00 Introduction of the intra-gastric balloon in the US
-
- G9.5. 15.00 - 15.20 Comparison of long-term outcome of duodenal switch in stage 3 versus stage 4 patients
-
- G9.6. 15.20 - 15.40 Enhanced recovery after bariatric surgery: The ENERGY Project
-
- G9.7. 15.40 - 16.00 Perspectives on 10,000 gastric bypasses

Session. G10

Room. Albert

Track: oral abstracts presentations

Title: Metabolic surgery abstracts

- G10.1. 14.00 - 14.15 **O.137** Roux-en-Y Gastric bypass ameliorates albuminuria and podocyte injury in experimental diabetic kidney disease
-
- G10.2. 14.15 - 14.30 **O.138** Type 2 Diabetes resolution in the insulin-dependent patient – which metabolic operation?
-
- G10.3. 14.30 - 14.45 **O.139** Do We Really Know The Consequences Of Bariatric Surgery In The Pancreas? Changing The Concepts Of Regeneration And Hyperplasia
-
- G10.4. 14.45 - 15.00 **O.140** Roux-en-Y gastric bypass with a long biliopancreatic limb with distinctive incretin cell distribution improves diabetes control
-
- G10.5. 15.00 - 15.15 **O.141** Is Bariatric surgery worthwhile in long-standing severe diabetes? The long term outcome analysis
-
- G10.6. 15.15 - 15.30 **O.142** Non-Alcoholic Steatohepatitis: Effect Of Laparoscopic Sleeve Gastrectomy Surgery
-
- G10.7. 15.30 - 15.45 **O.143** Gastric Bypass Improves Hepatic Mitochondrial Function in Patients with Simultaneous Steatohepatitis and Type 2 Diabetes Mellitus
-
- G10.8. 15.45 - 16.00 **O.144** Gastric bypass biliopancreatic limb length influences meal-related hormone response and diabetes remission

Session: H1
Room: Great Hall
Track: Symposium

Title: Complications after bariatric surgery. prevention and management symposium

H1.1. 16.30 - 16.45	Reducing early readmissions after bariatric surgery
H1.2. 16.45 - 17.00	Internal hernias after gastric bypass – can disasters be avoided?
H1.3. 17.00 - 17.15	Nutritional deficiencies after bariatric surgery – can they be predicted pre-op?
H1.4. 17.15 - 17.30	Are VTEs still a problem in a modern bariatric practice?
H1.5. 17.30 - 17.45	Managing psychological issues after bariatric surgery
H1.6. 17.45 - 18.00	Hypoglycaemia after bariatric surgery – recognition and management

Session: H2
Room: Churchill
Track: video presentations

Session to be confirmed

Session: H3

Room: Victoria

Track: oral abstracts and invited presentations

Title: New (non-standard) techniques abstracts session

H3.1. 16.30 - 16.45	When does a novel bariatric procedure become standard care?
H3.2. 16.45 - 17.00	O.145 Low Variance of Weight Loss Outcomes in the Modified Duodenal Switch
H3.3. 17.00 - 17.15	O.146 Laparoscopic Greater Curvature Plication Versus Sleeve Gastrectomy: Long-Term Results In Patients With Bmi More And Less 40 Kg/M2
H3.4. 17.15 - 17.30	O.147 Long-term weight loss between sleeve gastrectomy and sleeve gastrectomy with jejunal bypass. A case-control study
H3.5. 17.30 - 17.45	O.148 Very Long Biliopancreatic Limb Gastric Bypass Is Safe And Very Efficient In Superobese Patients
H3.6. 17.45 - 18.00	O.149 Laparoscopic Sleeve Gastrectomy combined with Rossetti fonduplication (R-Sleeve) for the treatment of morbid obesity and gastroesophageal reflux disease

Session: H4

Room: St James

Track: oral abstracts and invited presentations

Title: Put a ring on it? Banded operations

H4.1. 16.30 - 16.45	Long-term weight loss outcomes of banded procedures
H4.2. 16.45 - 17.00	Technical tips on ring placement
H4.3. 17.00 - 17.15	Ring complications – how big is the problem ?
H4.4. 17.15 - 17.30	O.150 Comparison of Banded Versus Non-Banded Roux-en-Y Gastric Bypass: Is Banding of the Bypass Really Effective?
H4.5. 17.30 - 17.45	O.151 Banded Gastric Bypass VS Standard Gastric Bypass: Weight loss and maintenance after four years
H4.6. 17.45 - 18.00	O.152 Medium-term outcomes of the BoB (Band-on-bypass) procedure to salvage failed Roux-en-Y gastric bypass

Session: H5
Room: Westminster
Track: symposium

Title: Plastic Surgery Symposium in conjunction with BAPRAS Part 2

H5.1. 16.30 - 16.50	Lessons learned in a decade of massive weight loss body contouring
H5.2. 16.50 - 17.05	Does MWL BCS help patients maintain weight loss
H5.3. 17.05 - 17.20	O.153 First results of the BODY-Q; a specific 'Patient Reported Outcome Measures' (PROM) for body contouring surgery
H5.4. 17.20 - 17.35	O.154 Body-contouring surgery and the maintenance of weight-loss following Roux-en-Y gastric bypass: A retrospective study
H5.5. 17.35 - 17.50	O.155 Correction of gynecomastia after massive weight loss: how we do it
H5.6. 17.50 - 18.00	Discussion

Session: H6
Room: Moore
Track: oral abstracts

Title: Revisional procedures abstracts

- H6.1. 16.30 - 16.45 **O.156** Impact of initial response of laparoscopic adjustable gastric banding on outcomes of revisional laparoscopic Roux-en-Y gastric bypass for morbid obesity
-
- H6.2. 16.45 - 17.00 **O.157** Systematic review and meta-analysis of outcomes after revisional bariatric surgery following a failed adjustable gastric band
-
- H6.3. 17.00 - 17.15 **O.158** A longer biliopancreatic limb Roux-en-Y gastric bypass as revisional bariatric procedure results in more weight loss: randomized controlled trial
-
- H6.4. 17.15 - 17.30 **O.159** Endoscopic Versus Laparoscopic Revisional Pouch Reduction Of Longitudinal Sleeve Gastrectomy: 103 Patient Analysis
-
- H6.5. 17.30 - 17.45 **O.160** Gastric Band Conversion To Roux-En-Y Gastric Bypass Shows Greater Weight Loss Than Conversion To Sleeve Gastrectomy
-
- H6.6. 17.45 - 18.00 **O.161** Failed Adjustable Gastric Banding Converted To Laparoscopic Gastric Bypass. A Comparison To Primary Bypass

Session: H7
Room: Abbey
Track: invited presentations

Title: Metabolic surgery - session 2

- H7.1. 16.30 - 16.45 **O.162** Roux-en-Y gastric bypass increases postprandial systemic insulin concentrations by decreasing hepatic insulin uptake in minipigs
-
- H7.2. 16.45 - 17.00 **O.163** Taiwan Diabetes Study (TDS): Metabolic Surgery versus Medical care in obese T2DM patients "A preliminary report of a long-term study"
-
- H7.3. 17.00 - 17.15 **O.164** Changes In The Intra-Abdominal Fat Depots And Associations With Glycemic Parameters In Patients With Type 2 Diabetes Undergoing Bariatric Surgery
-
- H7.4. 17.15 - 17.30 **O.165** Guidelines of pregnancy after bariatric surgery
-
- H7.5. 17.30 - 17.45 **O.166** Intrauterine growth retardation after Roux-en-Y gastric bypass: a report of two cases
-
- H7.6. 17.45 - 18.00 Discussion

Session. H8
Room. Windsor
Track: symposium

Title: Medico-legal symposium Part 2 - You're in the dock

H8.1. 16.30 - 16.45	Medicolegal reports
H8.2. 16.45 - 17.00	Montgomery and consent for bariatric procedures – can we improve our practice?
H8.3. 17.00 – 18.00	Case presentations (or one mock trial).

Session. H9
Room. Mountbatten

Title: Women in bariatric surgery

H9.1. 16.30 - 16.45	Settling goals and objectives
H9.2. 16.45 - 17.00	Choosing the right mentor and becoming the right mentor
H9.3. 17.00 - 17.15	What type of job is right for me?
H9.4. 17.15 - 17.30	Managing the trainee in difficulty
H9.5. 17.30 - 18.00	Panel Discussion: Can we really have it all? Creating the right work-life balance

Title: Outcomes of bariatric procedures 2

- H10.1. 16.30 - 16.45 **O.167** Mid and Long-term outcomes after single anastomosis duodeno-ileal bypass (SADI) as a revisional procedure after sleeve gastrectomy
-
- H10.2. 16.45 - 17.00 **O.168** Vitamin and mineral deficiencies after Sleeve Gastrectomy: four year results of an RCT
-
- H10.3. 17.00 - 17.15 **O.169** Aspiration Therapy as a Tool to Treat Obesity: One to Four Year Results in an 85-Patient Ongoing Multi-Center Post-Market Study
-
- H10.4. 17.15 - 17.30 **O.170** Pregnancy outcomes in women following bariatric surgery
-
- H10.5. 17.30 - 17.45 **O.171** Quality of Life 1 Year after Laparoscopic Sleeve Gastrectomy versus Laparoscopic Roux-en-Y Gastric Bypass: a Randomized Controlled Trial Focusing on Gastroesophageal Reflux Disease
-
- H10.6. 17.45 - 18.00 **O.172** A meta-analysis assessing the effectiveness of ursodeoxycholic acid to prevent gallstone formation after bariatric surgery.

Saturday 2nd September 2017

Session: I1

Room: Churchill

Track: videos

Title: Gastric Bypass video session

I1.1. 08.30 - 08.45	How I do it – RYGB
I1.2. 08.45 - 09.00	How I do it – Tips and tricks for RYGB
I1.3. 09.00 - 09.15	How I do it – OAGB/MGB
I1.4. 09.15 - 09.30	Tips and tricks for OAGB/MGB
I1.5. 09.30 - 09.42	V.052 A Case of Internal Hernia with Volvulus after One Anastomosis Gastric Bypass: Diagnosis & Management
I1.6. 09.42 - 09.54	V.053 Laparoscopic Conversion of Roux-en-Y Gastric Bypass to Sleeve Gastrectomy: Challenges and Technical feasibility
I1.7. 09.54 - 10.06	V.054 The use of cyanoacrylate glue for the closure of mesenteric defects in laparoscopic gastric bypass
I1.8. 10.06 - 10.18	V.055 Roux En Y Gastric Bypass: A Golden Procedure For Revisional Surgery
I1.9. 10.18 - 10.30	V.056 Leak from Gastro-Jejunostomy secondary to post-operative intestinal obstruction in an operated case of Laparoscopic Roux-en-Y Gastric Bypass

Session: I2

Room: Gielgud

Track: oral abstracts and invited presentations

Title: Revisional surgery session

- I2.1. 08.30 - 08.45 What can we predict from IFSO worldwide survey about the need for revisional bariatric surgery in 10 years' time
-
- I2.2. 08.45 - 09.00 Results from the Consensus Conference on revisional surgery
-
- I2.3. 09.00 - 09.15 Tips and tricks for revisional surgery
-
- I2.4. 09.15 - 09.30 **Panel Discussion**
-
- Who should be doing revisional surgery?
-
- I2.5. 09.30 - 09.45 **O.173** Reasons and outcomes of revisional gastric bypass after primary sleeve gastrectomy; retrospective narrative review
-
- I2.6. 09.45 - 10.00 **O.174** Efficacy and safety of Bilio-Pancreatic Diversion (BPD) as salvage procedure after failed Silastic Ring Vertical Gastroplasty (SRVG)
-
- I2.7. 10.00 - 10.15 **O.175** Roux-en-Y Gastric Bypass Versus Sleeve Gastrectomy as Revisional Procedures after Adjustable Gastric Band.
-
- I2.8. 10.15 - 10.30 **O.176** Save the Epiploics! -- Important Considerations in Converting Roux-en-Y Gastric Bypass to Single-Anastomosis Modified Duodenal Switch

Session: I3

Room: Victoria

Track: oral abstracts and invited presentations

Title: Extreme bariatrics

I3.1. 08.30 - 08.45	Bariatric surgery as a bridge to transplant
I3.2. 08.45 - 09.00	How big is too big?
I3.3. 09.00 - 09.15	How sick is too sick? Choosing our patients safely
I3.4. 09.15 - 09.30	Cirrhosis and bariatric surgery
I3.5. 09.30 - 09.45	Bariatric surgery prior to joint surgery
I3.6. 09.45 - 10.00	O.177 Laparoscopic Sleeve Gastrectomy in morbidly obese patients with end stage heart failure on circulatory support as a bridge to transplant.
I3.7. 10.00 - 10.15	O.178 Simultaneous or staged bariatric and liver transplantation surgery: weighing the risks
I3.8. 10.15 - 10.30	O.179 Safety and Efficacy of Intra-Gastric Ballon as a Bridging to Bariatric Surgery in super-super morbid and high-risk obese patients

Session: I4
Room: Albert
Track: oral abstracts

Title: Basic Science abstracts - session 2

- I4.1. 08.30 - 08.45 **O.180** Gut-adipose tissue crosstalk after sleeve gastrectomy in an obese animal model of type 2 diabetes
-
- I4.2. 08.45 - 09.00 **O.181** Direct measurement of macronutrient intake and preference 3 months after Roux- en -Y Gastric bypass (RYGB)
-
- I4.3. 09.00 - 09.15 **O.182** The Dutch Bariatric Chart, an updated baseline weight independent weight loss percentile chart for gastric bypass and sleeve gastrectomy
-
- I4.4. 09.15 - 09.30 **O.183** Sleeve gastrectomy leads to accelerated gastric emptying and increased gastric mucosal nerve fiber density in rats
-
- I4.5. 09.30 - 09.45 **O.184** Differential phenotypes of adipose tissue macrophages and adipose tissue T cell repertoire in morbidly obesity with diabetes
-
- I4.6. 09.45 - 10.00 **O.185** Evaluation Of Fertility In Obesity Wistar Rats Model Induced By Hypercaloric Diet
-
- I4.7. 10.00 - 10.15 **O.186** Evaluation of Biliary Reflux After Experimental One-Anastomosis Gastric Bypass in Rats
-
- I4.8. 10.15 - 10.30 **O.187** Determination of underlying genetic variations and their influence on weight loss after bariatric surgery in a cohort of 1022 bariatric patients

Session: I5

Room: Burton/Redgrave

Track: oral abstracts

Title: Sleeve gastrectomy abstracts

I5.1. 08.30 - 08.45 **O.188** The incidence of undiagnosed obstructive sleep apnoea (OSA) within a bariatric population undergoing laparoscopic sleeve gastrectomy at an Australian Surgical Centre

I5.2. 08.45 - 09.00 **O.189** Histopathologic Findings in Sleeve Gastrectomy Patients

I5.3. 09.00 - 09.15 **O.190** Multi-dimensional validated reporting of Dysphagia post Sleeve Gastrectomy

I5.4. 09.15 - 09.30 **O.191** Role of fixation of staple line during laparoscopic sleeve gastrectomy

I5.5. 09.30 - 09.45 **O.192** Morbidity and Mortality in 2900 consecutive Laparoscopic Sleeve Gastrectomy

I5.6. 09.45 - 10.00 **O.193** Comparing outcome of LSG, RYGB and MGB in a single centre

I5.7. 10.00 - 10.15 **O.194** Sleeve gastrectomy: correlation of long - term results with remnant morphology and eating disorders

I5.8. 10.15 - 10.30 **O.195** 5-year results of Sleeve gastrectomy; are we satisfied?

Session: I6
Room: Olivier

Title: Patient Engagement session

Session to be confirmed

Session: J1
Room: Churchill
Track: oral abstracts and invited presentations

Title: Sleeve and sleeve conversion videos

J1.1. 11.00 - 11.15	How I do it (tips and tricks) – SADI
J1.2. 11.15 - 11.30	How I do it (tips and tricks) – ileal interposition
J1.3. 11.30 - 11.45	How I do it (tips and tricks) – BPD-DS
J1.4. 11.45 - 12.00	Discussion
J1.5. 12.00 - 12.12	V.057 Safest way to deal with a stricture following sleeve gastrectomy in a patient with BMI 18
J1.6. 12.12 - 12.24	V.058 SADI-P to treat failed sleeve gastrectomy
J1.7. 12.24 - 12.36	V.059 Laparoscopic Esophago-Gastrectomy with circular-stapled Anastomosis for Chronic leak after Sleeve Gastrectomy- A video presentation
J1.8. 12.36 - 12.48	V.060 Double gastric fistula after lap sleeve gastrectomy with eventful follow up
J1.9. 12.48 - 13.00	V.061 Laparoscopic Conversion to Sleeve Gastrectomy after Gastric Clipping for Morbid Obesity – Video Presentation

Session: J2

Room: Gielgud

Track: oral abstracts and invited presentations

Title: Morbid obesity and the abdominal wall

- | | |
|---------------------|--|
| J2.1. 11.00 - 11.15 | Concurrent hernia repair and abdominal surgery |
| J2.2. 11.15 - 11.30 | The role of robotic surgery in abdominal wall hernia repairs |
| J2.3. 11.30 - 11.45 | O.196 Management of abdominal wall defects in the bariatric patient: review of the literature. |
| J2.4. 11.45 - 12.00 | O.197 Hiatal surface area measurement as useful tool for preoperative decision making in the management of hiatal defect in bariatric patients. |
| J2.5. 12.00 - 12.15 | O.198 Management of Ventral Hernia during Bariatric Surgery: Our experience |
| J2.6. 12.15 - 12.30 | O.199 LAGB is a predisposing factor for the formation of a Hiatal Hernia |
| J2.7. 12.30 - 12.45 | O.200 Reflux and Hiatus hernia in Sleeve Gastrectomy - Intra-operative Repair vs Post-operative Repair |
| J2.8. 12.45 - 13.00 | O.201 Should ventral hernia repair be performed at the same time as bariatric surgery? |

Session: J3
Room: Victoria
Track: oral abstracts

Title: Basic Science abstracts

- J3.1. 11.00 - 11.15 **O.202** Bariatric surgery in patients with chronic renal disease leads to an improved renal function maintained at 2 years
-
- J3.2. 11.15 - 11.30 **O.203** Normalization of Brain Myo-Inositol Concentration Among Morbidly Obese Patients With Type 2 Diabetes Treated With Intra-gastric Balloon
-
- J3.3. 11.30 - 11.45 **O.204** The role of gastric vs intestinal anatomical changes in the regulation of Glucagon-like peptide 1: Time to Revise the Hindgut Hypothesis?
-
- J3.4. 11.45 - 12.00 **O.205** Distinct role of the alimentary, biliary, and common limbs: The ABC of glucose metabolism after roux-en-Y or one anastomosis gastric bypass.
-
- J3.5. 12.00 - 12.15 **O.206** The effects of morbid obesity, metabolic syndrome and bariatric surgery on aging of the T-cell immune system
-
- J3.6. 12.15 - 12.30 **O.207** Novel biomarkers for the diagnosis of liver fibrosis in a highly risk NAFLD cohort
-
- J3.7. 12.30 - 12.45 **O.208** Putting the hindgut hypothesis to the test in a bariatric Zucker rat model
-
- J3.8. 12.45 - 13.00 **O.209** Predictors of postoperative eGFR change and resolution of hyperfiltration in obese patients following bariatric surgery

Session: J4
Room: Albert
Track: oral abstracts

Title: Abstracts

- J4.1. 11.00 - 11.15 **O.210** Excess Weight in the Elderly: a Brazilian Experience With the Intra-gastric Balloon Treatment
-
- J4.2. 11.15 - 11.30 **O.211** Effectiveness of a dietary intervention for the treatment of obese patients through non-invasive endoscopy techniques by Endosuturing and Intra-gastric Balloon
-
- J4.3. 11.30 - 11.45 **O.212** An algorithmic approach to the management of gastric stenosis following laparoscopic sleeve gastrectomy
-
- J4.4. 11.45 - 12.00 **O.213** Management of Bariatric Complications Using Endoscopic Stents: A Multi-Center Study
-
- J4.5. 12.00 - 12.15 **O.214** Obesity Treatment with Botulinum Toxin-A Is Not Effective: A Systematic Review and Meta-Analysis.
-
- J4.6. 12.15 - 12.30 **O.215** Safety and Effectiveness of Argon Plasma Coagulation for Weight Regain Following Gastric Bypass: A Multi-Center Study
-
- J4.7. 12.30 - 12.45 **O.216** Large Experience in Reduction Of High Surgical Risk In 214 Super Obese Patients Through The Use Of Intra-gastric Balloon
-
- J4.8. 12.45 - 13.00 **O.217** Effectiveness of Intra-gastric Balloon As a Bridge to Definitive Bariatric Surgery in the Super-Obese

Session: J5

Room: Burton/Redgrave

Track:

Title: High Tech New Technologies. HTC - High Tech Surgery Association

J5.1. 11.00 - 11.20 The most promising technologies in metabolic surgery

J5.2. 11.20 - 11.30 Discussion

J5.3. 11.30 - 11.50 Augmented Reality - today and tomorrow

J5.4. 11.50 - 12.00 Discussion

J5.5. 12.00 - 12.20 The future of surgery

J5.6. 12.20 - 12.30 Discussion

J5.7. 12.30 - 12.50 Diabetes in molecular research

J5.8. 12.50 - 13.00 Discussion

O.001

A LARGE MULTICENTER BRAZILIAN STUDY: THE EXPERIENCE IN HIGH VOLUME OF PATIENTS CENTERS

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Endoscopic methods, especially the intragastric balloon (IGB), have been shown to be effective for the treatment of excess weight.

Objectives

To assess the efficacy and complications of excess weight treatment with a non adjustable IGB.

Methods

A liquid filled IGB was used. The patients had a minimum initial body mass index (BMI) of 27 kg/m². The patients were divided into groups according to degree of excess weight (overweight and grade I, II and III obesity). Data were analyzed using descriptive statistical methods, the Student t-test, and analysis of variance followed by the Tukey post-test. The level of significance was set at $p < 0.05$.

Results

The incidence of complications was 7.32(n=430), as follow: 299(5.09%) early IGB removal, 58(0.98%) absence of weight loss. Gas production inside the balloon 0.20%(n=12); leakage 0.54%(n=32); pregnancy 0.32%(n=19); gastric perforation 0.06%(n=4); upper digestive bleeding 0,05(n=3); Wernick Korsakoff syndrome 0.01%(n=1), pancreatitis and esophagus perforation 0.01% each (n=1).Of the 5444 remaining patients, 4081(74,9%) were women. Mean age was 38.38 years. Weight loss results are shown on table 1. Percent EWL and treatment success rate in the groups are shown on table 2.

Table 01

	n=5444
BMI(Kg/m2)	
initial	36.94±5.67
final*	30.08±5.06
reduction	6.85±3.06
Body weight	
reduction(Kg)	19.13±8.86
%TBWL	18.42±7.25
Excess weight	
%EWL	65.66±36.24

*p<0.0001 for all comparisons between values at baseline and at the end of the study.
body mass index(BMI); total body weight loss(TBWL); excess weight loss(EWL)

Table 02

	total group	overweight	grade I obesity	grade II obesity	grade III obesity
%EWL	65.66	131.54*	76.67*	56.01*	45.45*
%EWL>25	93.0%	99.0%	95.83%	93.65%	86.09%

*p<0.001; treatment success criterion (%EWL>25)

Conclusion

Endoscopic treatment of excess weight with an IGB has been established as an excellent therapeutic option.

O.002

PRE-OPERATIVE LIVER SHRINKING DIETS CAN ALTER COLLAGEN GENE EXPRESSION IN WOUND HEALING: A RANDOMISED CONTROLLED TRIAL

Pre-operative management

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Introduction

In bariatric surgery, pre-operative low calorie diets are felt to improve technical demands of surgery by shrinking the liver. However, diets may affect tissue healing and potentially influence the anastomosis in a yet undefined manner.

Objectives

This study aimed to examine the effect on collagen expression in wounds in patients taking 4-week low-calorie diet prior to laparoscopic gastric bypass.

Methods

A randomised controlled trial (NCT01950052) was undertaken in morbidly obese patients undergoing laparoscopic roux-en-y gastric bypass, which included a control group (n=10) on normal diet and an intervention group (n=10) on very low calorie diet (800kcal) for 4 weeks. Primary outcome measured was expression of collagen I and III in skin wounds (qRT-PCR), with biopsies taken before and after the diet, and 7 days post-operatively. The secondary outcome measures included liver volume, fibrosis, body composition, operating time, blood loss, length of hospitalisation and complications.

Results

Patient were well matched with similar age (43.5 vs 38.5 years), gender, body mass index (53.4 vs 52.8 kg/m²), co-morbidities, liver volume, body composition. After 4 weeks, expression of collagens I and III was significantly decreased in the diet patients compared to controls. Diet led to significant shrinkage of liver volume (23% vs 2%, p= 0.03) accompanied by weight loss (6.7 vs 0.4 kg; p<0.001) mainly by losing lean mass (4kg). There was no difference in operating times (129 vs 139 mins, p=0.16), hospital stay or complications.

Conclusion

Pre-operative diets may decrease expression of mature collagen in wounds but perioperative outcomes are not affected despite liver shrinkage.

□
O.003

LONG-TERM WEIGHT CHANGE AND BEHAVIOUR: IS THERE A RELATIONSHIP?

Management of weight regain after surgery

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Introduction

Research focusing on the effect of lifestyle after RYGB are sparse. However knowledge of the behavioral factors that influence weight change and the relationships between these factors is essential to improve outcomes.

Objectives

To determine the effects of eating style and physical activity on weight change after primary RYGB.

Methods

Weight, eating style (ES, Dutch Eating Behaviour Questionnaire) and physical activity (PA, Baecke total) were assessed before and 15, 24, 36 and 48 months after surgery. Maximum weight loss (TWLmax), weight regain (TWR) and change in physical activity (Δ PA) and change in eating style (Δ ES) were calculated.

Results

A total of 4762 patients were included. Mean preoperative BMI was 44 kg/m², TWLmax was 32.7%.

The preoperative PA and ES did not correlate with TWLmax. Preoperative PA correlated negative with external eating ($p=0.0029$) and positively with restrained eating ($p<0.001$). TWLmax correlated positively with Δ PA and negatively with Δ ES correlated with ($p\leq 0.001$ in all). Δ PA positively correlated with change in restrained eating behaviour ($p=0.003$).

Mean TWR was 5.3% at 36 months and 7.2% at 48 months. TWR at 36 months correlated negatively with Δ PA ($p=0.021$). TWR at 48 months did not correlate with Δ PA. Δ ES did not correlate with TWR at 36 or 48 months.

Conclusion

Patients who are more physically active and show less emotional, external and restrained eating have a higher maximum weight loss after RYGB. There was a less weight regain in patients who reported more PA after RYGB. Eating style does not seem to effect weight regain.

O.004

OCCURRENCE OR REMISSION OF ANTIDIABETIC TREATMENT SIX YEARS AFTER BARIATRIC SURGERY: A NATIONWIDE MATCHED COHORT STUDY

Type 2 diabetes and metabolic surgery

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Introduction

Few large long term studies have assessed the evolution of antidiabetic treatment after bariatric surgery (BS).

Objectives

To assess the 6-year remission or occurrence of antidiabetic treatment after BS compared with matched control obese patients.

Methods

This observational population-based cohort study of all patients undergoing primary BS in France in 2009 was followed up for 6 years and matched on age, sex, BMI categories and diabetes with control patients. Data were extracted from the French National Health Insurance database. Mixed-effects logistic regression models were carried out to estimate factors of remission or occurrence of antidiabetic treatment over 6 years.

Results

In 2009, 15,650 patients (85% female; 10% or 1,633 with antidiabetic treatment) had undergone primary BS.

For patients with antidiabetic treatment at baseline, discontinuation of treatment at 6 years was more frequent after BS than in controls (50% vs. 9%; $P < 0.001$). In multivariate analysis, the main predictive factors of discontinuation were overall (OR; 95%CI): GBP=16.7 (13.0-21.4); SG= 7.3 (5.6-9.6), AGB=4.3 (3.3-5.6), no baseline insulin (5.8 (4.6-7.4)) and no hypolipidemic treatment (1.3 (1.1-1.6)).

For patients without antidiabetic treatment at baseline, occurrence of treatment at 6 years was much less frequent after BS than in controls (1% vs. 12%; $P < 0.001$). All types of procedures were protective factors: GBP=0.06 (0.04-0.09), SG=0.08 (0.06-0.1), AGA=0.16 (0.14-0.19).

Conclusion

Our nationwide study confirms that BS leads to significant discontinuation rate of antidiabetic treatment compared to baseline and to a non-surgical group over 6 post-operative years, as well as a lower occurrence rate of treatment, with GBP being the most effective procedure.

O.005

LAPAROSCOPIC SLEEVE GASTRECTOMY OR ROUX-Y-GASTRIC BYPASS: 5-YEAR RESULTS OF THE PROSPECTIVE RANDOMIZED SWISS MULTICENTER BYPASS OR SLEEVE STUDY (SM-BOSS)

Quality in Bariatric Surgery

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Background

In some countries, laparoscopic sleeve gastrectomy (LSG) is performed more often than laparoscopic Roux-Y- gastric bypass (LRYGB).

Introduction

Today, strong evidence is still lacking of LSG being as successful as LRYGB.

Objectives

We present the 5-year results of a prospective, randomized trial comparing the two procedures (Swiss Multicentre Bypass Or Sleeve Study; SM-BOSS).

Methods

Initially 217 patients (LSG, n=107; LRYGB, n=110) were randomized to receive either LSG or LRYGB at four bariatric centers in Switzerland (of all patients: mean BMI 44±11 kg/m², age 43±5.3 years; 72% were female). Minimal follow-up was 5 years with a rate of 95.4%. Both groups were compared for weight loss, co-morbidities, quality of life (QoL), and complications.

Results

Weight loss in terms of excessive BMI loss was similar between LSG and LRYGB at each time point (1 year: 72.3±21.9% vs. 76.6±20.9%, P=0.139; 3 years: 70.9±23.8% vs. 73.8±23.3%, P=0.316; 5 years: 62.2±27.3% vs. 68±25.2%, P=0.11); in terms of %initial weight loss (%IWL) at 5 years, LSG was inferior to LRYGB (25±11.3% vs 28.6±10.7%, p=0.02). Comorbidities were significantly reduced after both procedures except GERD which was more successfully treated by LRYGB. QoL increased significantly in both groups with no statistically significant difference between the groups, neither was there a significant difference in number of complications treated by reoperation (LSG, n=19; LRYGB, n=23, P=0.6).

Conclusion

Weight loss 5 years post-surgery seems better following LRYGB compared to LSG. Improvement of comorbidities is similar except for GERD which is more successfully treated by LRYGB, no difference regarding quality of life and complications could be observed.

□
O.006

IN SEARCH OF A BETTER BYPASS: 4 YEAR RESULTS OF AN RCT ON BILIOPANCREATIC LIMB LENGTH IN RYGB

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

As time progresses initial weight loss after RYGB tends to decrease. Limb length could be one of points of engagement in the quest for a better gastric bypass.

Introduction

Roux-limb length seems to have little influence on weight loss in RYGB surgery, but some unrandomized evidence suggests that a longer Biliopancreatic-limb may result in more weight loss. This is the first RCT on BP-limb length with sufficient numbers and follow up

Objectives

The aim of this RCT was to compare outcomes in weight loss and glycemic control of a Long Biliopancreatic-Limb RYGB (LBP-GB) and a Standard RYGB (S-GB) in morbidly obese patients.

Methods

144 Primary RYGB patients were randomized; 74 patients underwent a S-GB (Roux/Biliopancreatic limb 150/75 cm) and 70 patients a LBP-GB (Roux/Biliopancreatic limb 75/150). Outcomes were percentage Excess Weight Loss (%EWL), remission of Type II Diabetes Mellitus (T2DM) and complication rates.

Results

At 48 months the follow up rate was 90%. At 2 years there was a better %EWL in the LBP-GB group of 84% vs 73% in de S-GB group ($p=0.002$). However, at 48 months %EWL dropped in both groups to 70% for LBP-GB and 62% for S-GB ($p= 0.068$). Forty-eight (33%) patients had T2DM at baseline. In the LBPL-RYGB 78% patients achieved complete remission of T2DM versus 75% patients in the S-RYGB group ($p>0.05$). The short- and long-term complication rates were comparable ($p>0.05$).

Conclusion

Although a longer biliopancreatic limb of 150cm in RYGB surgery results in a better %EWL in the first two postoperative years, this advantage lessens after 4 years.

□
O.007

RISK ASSESSMENT TOOL FOR VENOUS THROMBOEMBOLISM AFTER BARIATRIC SURGERY: RESULTS FROM THE METABOLIC AND BARIATRIC SURGERY ACCREDITATION AND QUALITY IMPROVEMENT PROGRAM

Post-operative complications

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Introduction

Venous thromboembolism (VTE) is one of the most common causes of death after bariatric procedures. Identification of high risk group patients is important for early prevention.

Objectives

To determine the risk factors for 30 -day postoperative VTE after bariatric surgery and to build a model for prediction VTE events.

Methods

From *Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP)*, we identified 143 483 patients who underwent primary laparoscopic sleeve gastrectomy or laparoscopic Roux Y gastric bypass in 2015. To analysis we include patients who completed 30-day follow up and did not have implemented IVC filter. Stepwise selection regression was used to create a model to predict risk for 30 -day postoperative VTE on the basis of training set ($n_1=71\ 577$). The model was validated using testing dataset ($n_2=71\ 906$). Significant risk factors were used to create a user -friendly online risk calculator. The maximum Youden index was used to defined cut-off point.

Results

The overall 30-day incidence of postoperative VTE was 0.31 %. Among 22 examined variables, the final risk -assessment model contained four categorical variables: male sex [OR: 0.65 (95% CI 0.49-0.87)], history of VTE [OR: 0.11 (95% CI: 0.07 -0.17)], history of GERD [OR: 0.72 (95% CI: 0.55-0.93)] and reoperation [OR: 0.08 (95% CI: 0.05 -0.11)]. The model demonstrated good calibration (Hosmer-Lemeshow goodness-of-fit test, $p=0.58$) and fair discrimination (c -statistic = 0.66). Validation reveled similar performance (c-statistics = 0.62).

Conclusion

History of previous VTE and reoperation are associated with the highest risk of 30 -days postoperative VTE. Extended pharmacoprophylaxis should be considered for high -risk patients (VTE risk >0.4%).

□
O.008

DIAGNOSTIC VALUE OF COMPUTED TOMOGRAPHY FOR DETECTING ANASTOMOTIC OR STAPLE LINE LEAKAGE AFTER BARIATRIC SURGERY.

Post-operative complications

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Introduction

Post-bariatric anastomotic or staple line leakage (ASLL) is a feared complication with an incidence up to 5.6% and a leak-associated mortality of 5.0-16.7%. While there is only limited data available regarding the reliability of abdominal computed tomography (CT) in the detection of ASLL after bariatric surgery, it remains frequently used when leakage is suspected. Feared low sensitivity of abdominal CT is causing surgeons to omit CT and directly perform diagnostic laparoscopy in case of suspected ASLL.

Objectives

Aim of this study is to evaluate the diagnostic value of abdominal CT in case of suspected ASLL after bariatric procedures.

Methods

All CT scans performed due to suspected ASLL after bariatric surgery in the period November 2007 until August 2016 were independently re-evaluated by two abdominal radiologists and one fellow abdominal radiology. The diagnostic value of abdominal CT by means of sensitivity and specificity was analyzed using findings during diagnostic laparoscopy or clinical recovery as the standard of reference.

Results

A total of 2410 patients were retrospectively reviewed; 121 (5.0%) had a clinical suspicion of ASLL. ASLL was ultimately diagnosed in 28 (1.2%) patients using CT and/or diagnostic laparoscopy.

Re-evaluation of CT scans revealed a sensitivity of 77-92% and a specificity of 65-75% of abdominal CT for the detection of ASLL after bariatric surgery.

Conclusion

Abdominal CT is a useful diagnostic method to rule out ASLL after bariatric surgery (sensitivity 77-92%). However, in case of persistent strong clinical suspicion after negative CT, diagnostic laparoscopy should be considered.

□
O.009

PRE-OPERATIVELY PLANNING FOR HIGH RISK BARIATRIC SURGICAL PATIENTS – CAN WE PREDICT HDU ADMISSIONS?

Post-operative care

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Background

As bariatric surgery rates increase on complex patients, there is little data describing risk factors for post-operative HDU-admission in these patients.

Introduction

A pre-operative risk assessment tool to predict emergent HDU-admission following bariatric surgery was recently developed in Australia using 5 factors: Revisional/Open surgery, diabetes, chronic respiratory disease, OSA.

Objectives

Here, we report the incidence, risk factors, and outcomes of planned versus unplanned HDU-admissions in patients following bariatric surgery in a UK large-volume single-centre.

Methods

This retrospective cohort study identified adult bariatric surgery patients admitted to HDU over 8-yrs (2007-2015) by electronic records. Data was tabulated and analysed with a follow up of 15mths-9yrs.

Results

Of 3003 bariatric operations, HDU-admission incidence was 2.5%(77/3003), 69%(53/77) were unplanned.

There was no difference in age(54.4vs53.2 yrs;p=0.6), gender(females 60%vs72%; p=0.3), or Apache II scores (13vs11;p=0.3), but unplanned admissions had significantly lower BMI(range:30-68kg/m², mean 46.48vs55.31; p=0.03). Both groups had similar rates of diabetes(29%vs43%; p=0.2) and hypertension(41%vs56%; p=0.2), but significantly lower rates of chronic respiratory disease(33.3%vs60%, p=0.02) in the unplanned group.

Unplanned admissions were not associated with elective operations, whether primary(p=0.9) or revisional(p=0.2), but had higher rates of emergency operations(38%vs17%;p=0.07).

There was no difference between length of ITU(5.6vs5.5 days;p=0.9) or hospital(23vs18 days;p=0.4) stay between these groups. Death rates in both groups were low(8.3%vs4%;p=0.5).

Conclusion

The incidence of HDU admission after bariatric surgery was 2.5%, lower than reported literature 4-21%. The unplanned HDU-admission rate was higher than Australia and associated with emergency operations for complications. We were unable to reflect the Australian data, the assessment tool did not predict unplanned HDU-admission.

O.010

LARGE BARIATRICS-SPECIFIC STENTS AND OVER-THE-SCOPE CLIPS IN THE MANAGEMENT OF POST-BARIATRIC SURGERY LEAKS (WITH VIDEO)

Post-operative complications

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Introduction

Endoscopic stents are successful in the management of surgical leaks, however, stent migration remains a significant problem.

Objectives

To assess an approach depending on a large bariatrics-specific stent (Mega stent) and over-the-scope clips in the management of post-bariatric surgery leaks.

Methods

Retrospective analysis of all patients with post-bariatric surgery leaks treated at our institution using an approach reliant on Mega stents and over-the-scope clips. Potential factors associated with procedure success were also evaluated.

Results

A total of 78 stents were inserted in 60 patients with post-bariatric surgery leaks (44 (73%) sleeve gastrectomies and 16 (27%) Roux-en-Y gastric bypass). OTSC clips were applied in 29 of those patients (48%). Leak closure was achieved in 49 patients (82%). Closure was achieved in 30 patients (50%) after one endoscopic attempt and in an additional 19 patients (32%) after multiple endoscopic sessions. Mean number of procedures per patient was 3 ± 1.3 (range 2-8). Complications included: Stent migration (11/60, 18%), intolerance necessitating premature removal (6/60, 10%), esophageal stricture (8/60, 13%), bleeding (4/60, 6%), perforation (4/60, 6%). One stent-induced mortality was encountered (bleeding). None of the assessed factors were associated with procedure success.

Conclusion

The approach combining a large bariatrics-specific stent and over-the-scope clips is highly effective in the management of post-bariatric surgery leaks and is associated with a low rate of stent-migration and a low number of procedures and stents per patient. These large stents, however, should be used with great caution due to the significant morbidity associated with their use.

O.011

IN-HOSPITAL POSTOPERATIVE COMPLICATIONS FOLLOWING DIFFERENT BARIATRIC PROCEDURES: RESULTS FROM THE ISRAELI BARIATRIC SURGERY REGISTRY.

Post-operative complications

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Introduction

Introduction: Rates of post-operative complications (POC) are essential for assessing bariatric procedures.

Objectives

Objective: The aim of this study was to report in-hospital POC following sleeve gastrectomy (SG), roux-en-Y gastric bypass (RYGB), adjustable gastric banding (LAGB) omega-loop gastric bypass (OLGB), duodenal switch/biliopancreatic diversion (DS/BPD) procedures using national registry data.

Methods

Methods: Retrospective analysis on bariatric patients registered between June 2013 and December 2015 and had data on in-hospital POC.

Results

In total, 23,741 patients underwent bariatric surgeries during this period. Mean age was 41.5±12.5 years, mean pre-operative BMI was 42.2± 5.2 kg/m² and 67.4% were females. The most common surgery was SG (78.9%) followed by RYGB (10.0%) and AGB (7.1%). In -hospital POC follow up information was available on 18,961 patients (79.9%).

Surgery(N)	SG(14,873)	RYGB(1,930)	AGB(1,336)	OLGB(693)	DS/BPD(129)	Total(18,961)
Leak/Sepsis	0.4%(64)	2.6%(50)*	0.2%(3)	1.6%(11)	5.4%(7)	0.7%(135)
Bleeding	2.3%(345)	4.2%(81)*	0.3%(4)	20%(14)	3.9%(5)	2.4%(449)
Wound Infection	0.2%(32)	1.8%(34)*	0	0.9%(6)	3.1%(4)	0.4%(76)
Thromboembolic	0.09%(13)	0.2%(4)	0	0.3%(2)	0.8%(1)	0.1%(20)
Cardio/respiratory	0.7%(109)	1.%(36)*	0.3%(4)	0.9%(6)	0.8%(1)	0.8%(156)
Mortality (30 days)	0.05%(8)	0.1%(2)	0.1%(1)	0	0	0.06%(11)
Hospital days	2.82.8±1.4	3.5±2.0*	1.0±0.8	2.7±1.2	4.4±2.3	3.1±1.7

*p<0.0001(RYGB vs SG)

Conclusion

Conclusions: Although in general bariatric surgery was found to be safe, a significant higher rate of in-hospital POC following RYGB vs. SG was detected and could explain SG popularity in Israel.

O.012

PORTOMESENERIC VEIN THROMBOSIS FOLLOWING SLEEVE GASTRECTOMY : A MULTI-CENTER CASE-CONTROL STUDY

Post-operative complications

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Introduction

Portomesenteric vein thrombosis(PMVT) is a rare complication of sleeve gastrectomy, but can be devastating and fatal.

Objectives

We aim to identify underlying causes of 13 patients who developed PMVT after sleeve gastrectomy, and describe treatment.

Methods

A retrospective chart review of 5,788 sleeve gastrectomy patients between January 2008 and September 2016 was performed at five bariatric centers. A total of 13 patients developed PMVT, and 3 controls for each patient were selected by matching age, gender, surgeon, and BMI.

Results

Of the PMVT cases, 5(38.5%) had a history of malignancy while only 4(10.3%) did in the controls. The odds of positive malignancy history for cases were 5.5 times the odds of that for controls($p=0.03$). Of the PMVT cases, 4(30.8%) were current smokers, while only one(2.6%) patient was a current smoker among control patients($p=0.003$). Of the PMVT cases, 3(23.1%) reported a history of blood clots, and none reported the same in the control group. Of the PMVT cases, 6(46.2%) patients showed higher than normal range in at least one category of hemoglobin, hematocrit, or RBC levels. In addition, one center used both laparoscopic and robotic approaches and the odds of undergoing robotic procedure among PVT patients were 3.82 times the corresponding odds among non-PVT patients. All patients were diagnosed by computed tomography, and were treated with conservative measures. One mortality resulted from PMVT.

Conclusion

Thorough examination of possible conditions that can cause hypercoagulable state should be performed prior to sleeve gastrectomy, and appropriate measures should be taken after surgery.

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O.013

C-REACTIVE PROTEIN ON POSTOPERATIVE DAY ONE : A SIGNIFICANT PREDICTIVE MARKER FOR EARLY DEEP SURGICAL SIDE INFECTIONS AFTER ELECTIVE BARIATRIC SURGERY

Post-operative complications

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Background

C-reactive protein (CRP) has been shown to be an effective early predictor for infectious complications after colorectal surgery.

Introduction

However, little is known about the predictive capacity of early CRP levels in patients undergoing laparoscopic sleeve gastrectomy (LSG) and laparoscopic Roux-en-Y Gastric bypass (LRYGB).

Objectives

The aim of this study was, therefore, to evaluate the predictive value of early CRP levels in these patients.

Methods

Retrospective single-center analysis conducted at a bariatric reference center. From October 2010 to October 2016, CRP values were analyzed on day one after surgery. The predictive value of CRP was assessed by the area under the curve (AUC) of the receiver operating characteristic (ROC) curve.

Results

In total 494 patients were included in the study (median age 40 years (IQR 20), BMI 43.2 kg/m² (IQR 8.2). Infectious complications were observed in 15 patients (3%) in patients undergoing LSG or LRYGB. ROC analysis including all patients revealed a significant predictive capacity of CRP levels at day 1 postoperatively for early deep SSI (AUC 0.937 95% CI 0.901-0.937, p< 0.001). A CRP cutoff at 70 mg/L achieved a sensitivity of 93% and specificity of 88% for early deep SSI. This corresponded to a negative predictive value of 100 per cent.

Conclusion

This study revealed CRP levels on the first postoperative greater or equal to 70 mg/l as a significant predictor for early deep surgical side infections. CRP levels on day one proved to have a high negative predictive value and therefore may be useful for patients within an enhanced recovery program.

O.014

IMPROVEMENT IN QUALITY OF LIFE AND DEPRESSION AFTER BARIATRIC SURGERY IS NOT RELATED TO EXCESS WEIGHT LOST.

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

Bariatric surgery is associated with improvement in quality of life and symptoms of anxiety and depression in morbidly obese patients.

Objectives

Aimed to evaluate these effects and to establish whether there is a relationship with post-operative weight loss.

Methods

All patients undergoing bariatric surgery at a single centre between January 2010 and August 2016 were evaluated preoperatively and at 12-months and a minimum of 2 years postoperatively. The Quality of Life (QOL) Index, Beck Inventory II (BDI-II), and Hospital Anxiety and Depression Scale (HADS) were completed at all outpatient visits.

Results

124 patients (71% female) completed questionnaires. The mean(SD) age was 48(13) years. The mean pre-operative body weight and BMI were 138(24) kg and 49(7.1) kg/m² respectively. Mean percent excess weight loss and BMI at one year following surgery were 66%(23%) and 29.4(13.5)kg/m² and at > 2 years were 62%(25%) kg/m² and 32.1(12) kg/m² respectively. Significant improvements were seen in all psychological indices: Mean(SD) QOL scores were improved from 8.1(1.6) preoperatively to 9.4(1.0) at 12-month (n=124) and 9.2(1.5) at > 2 years (p< 0.01, paired t-test). BDI-II scores were reduced from 14.5(25) preoperative to 6.6(12.6) and 6.5(8.4) postoperatively (p< 0.01,). HADS scores were also decreased from 6.3(4.6) preoperative to 1.5(2.9) and 2.8(3.9) postoperative (p<0.01). There was no correlation between percent excess weight loss at one year and Qol(r=0.081045, p=0.19), BDI (-0.00543, p=0.93) or HADS scores (0.000301, p=0.99, pearson).

Conclusion

Significant long-term clinical improvements in psychological functioning were observed following bariatric surgery. These improvements do not appear to be related to the absolute weight loss.

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O.015

IMPULSIVITY PREDICTS WEIGHT LOSS AFTER OBESITY SURGERY

Psychology and bariatric surgery - pre and post-op challenges

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Background

There is evidence that executive function, and specifically inhibitory control, is related to obesity and eating behaviour.

Introduction

Although the impressive weight reduction after bariatric surgery has been shown in short- and medium-term studies, the effect of personality traits on this reduction is uncertain. Specifically, the effect of impulsivity is still largely unknown.

Objectives

The goal of this study was to determine whether personality traits and inhibitory control predict weight loss after bariatric procedures

Methods

45 bariatric patients were recruited between January and April 2013 (25 had a gastric bypass, mean BMI of 41.8 and age 39.0 years; 20 had a sleeve gastrectomy, mean BMI of 47.2 and age 49.0 years). All patients completed personality measures of impulsivity—Barratt's Impulsivity Scale, behavioral measures of impulsivity - the stop-signal reaction-time (SSRT) task and the temporal discounting task measuring reward processing. These were examined in relation to weight loss 6 months after surgery.

Results

The surgical procedure and changes in the behavioral measure of inhibitory control (SSRT) were found to be significant predictors of reduction in BMI in patients undergoing bariatric surgery. In the sleeve gastrectomy group, we found a reduction in BMI of 14.1%; significantly less than the 25% reduction in BMI in the gastric bypass group. The direction of the significant effect was positive for SSRT change, which indicates that pre- and post- reduction in impulsivity correlates with BMI.

Conclusion

Impulsivity measures predict weight reduction in patients undergoing bariatric surgery. This has implications for predicting outcomes of surgical treatments in obesity.

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O.016

IDENTIFICATION OF SUB-TYPES OF BINGE EATERS IN A BARIATRIC SURGERY POPULATION

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

Binge-eaters are treated in the empirical literature as a homogenous population and there is conflicting evidence in relation to their outcomes following bariatric surgery. Clinical experience suggests that binge-eating may better be understood in terms of subtypes with varying levels of psychological comorbidity and complexity.

Objectives

To determine if there are subtypes of bariatric surgery patients with binge-eating patterns and to assess the impact of this on pre-operative weight loss .

Methods

A 2-step cluster analysis of 11 psychological characteristics was performed on a bariatric surgery sample population who met criteria for binge eating disorder (N = 270). A one-way analysis of variance was then used to explore the differences in weight loss between sub-types pre-operatively.

Results

Three sub-types of binge-eaters emerged from the cluster analysis with five key psychological characteristics (gender, previous contact with mental health service, depression, trauma history and self-harm) delineating the groups. The three sub-types can be described as 1) men with no complex psychological characteristics, 2) women with no complex psychological characteristics and 3) women with complex psychological characteristics. Patients in sub-types 1 and 3 lost weight whilst on the bariatric surgery pathway (mean weight loss = 4.1kgs and 2.5kgs). Whilst, patients in sub-type 2 did not lose weight prior to surgery (mean weight gain = 0.28kgs).

Conclusion

This data provides evidence that binge eaters in a bariatric surgery population are not a homogeneous group. Better understanding of sub-types may help predict pre- and post-operative outcomes and better inform interventions.

O.017

UNREAL EXPECTATIONS AND RISK-ACCEPTATION IN BARIATRIC SURGERY

Pre-operative management

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Introduction

It is unknown what patients expect in terms of weight loss after bariatric surgery and to what extent they accept morbidity and mortality. Long-term total weight loss (TWL) is 25 percent. The risks on short-term serious adverse events (SAEs) (leakage and haemorrhage), long-term complications (LTCs) (acute internal herniation) and mortality are respectively 4,0; 2,5 and 0,2 percent.

Objectives

Aim of the study is to examine the patient's expectations of weight loss and acceptance of morbidity and mortality after bariatric surgery.

Methods

Two hundred patients participated in a semi structured interview after completion of the extensive multidisciplinary screening at the bariatric outpatient clinic between February 2016 and February 2017. Weight loss expectations, naive assessment and maximal acceptance of SAEs, LTCs and mortality were addressed with and without visual aid. The standard gamble method was applied.

Results

Weight loss was overestimated by 75,5 percent of 200 participants and 39,5 percent was disappointed with the predicted outcome. Current health was rated 59,0/100 and obesity-related health risk as 84,7/100. Median (IQR) naive expectations on SAEs, LTCs and mortality are 5,0(3,0-14,0); 8,0(4,0-15,0) and 0,55(0,23-1,88) percent; median accepted risks are 35,7(21,0-58,0); 25,1(15,9-50,8) and 4,5(1,0-10,0) percent respectively. Patients with a BMI ≥ 50 kg/m² accept a median mortality risk of 10(2,3-25,0) percent.

Conclusion

Bariatric patients are willing to take prodigious risks for unrealistic weight loss goals; the risk of mortality is accepted up to a fiftyfold of the true risk by super-obese patients. These results display the patient's urge for bariatric surgery and reinforce thorough counselling.

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O.018

LATE COMPLICATIONS OF LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB)

Adjustable gastric banding

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Introduction

LAGB implant was descending due of the variability of their results and long-term complications

Objectives

Describe the LAGB late complications. Diagnose and treatment.

Methods

1020 LAGB patients were studied 1998-2013. BMI ≥ 50 :43.6% and ≥ 60 :14%. Age 41.5y, female 74%, BMI 48 ± 6 , weight 122.6 ± 19 Kg.

Most important late complications were detected: Gastric-slippage, erosion, leakage adjustment system, band-rupture, esophageal dilatation-megaesophagus.

Results

Slippage 71(7%), operated 5.2% (repositioned 3.4%, debanding 1.3%, conversion 0.5%) and under-control 1.8%.

Erosion 49(4.8%), operated 4.4% debanding laparoscopic 62%, endoscopic 38%, and predebanding-control 0.4%.

Esophageal-dilatation 12(1.2%): conversion 0.8% and control 0.4%.

LAGB defects: tube-port system leakage 44(4.3%) repair or replacement tube-port; balloon-leakage 18(1.8%) rebanding 0.5%, conversion 1.3%; band-rupture 2(0.2%) rebanding.

Minor-reoperations: 53(5.2%), 4.3% leakage tube-port repair. Major-reoperations: 139(13.6%), 5% debanding, 4.7% conversion to other techniques, and 3.9% rebanding-repositioned. Laparoscopy in 99.5% for major-reoperations.

Conclusion

Band-position in plain-Xray is strong presumption of slippage diagnosis and confirmation with swallow-Xray. The gastric reduction, reposition, debanding and conversion in two steps are the most common treatment. One step increases complications risk.

The endoscopy diagnoses erosion and the treatment is endoscopic/laparoscopic debanding.

The reversible esophageal-dilatation is controlled with disadjustment and irreversible situation with debanding and conversion.

Port-tube leakage (diagnosed with iopamidol test) is repaired or replaced the affected sector.

Balloon-leakage treatment is band replacement or conversion.

Major reoperations of 13.6% are an intermediate rate to solve the complications.

Although the sleeve is one of the most current techniques used, LAGB may be used in certain situations.

Prevention of complications is essential when the etiology is known.

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O.019

LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB). RESULTS AFTER 3736 PATIENTS

Adjustable gastric banding

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Introduction

Gastric Band still remains the most common "pure restrictive" bariatric procedure performed in the world. Unquestionably it seem to have a slow trend away due to its long term complications,nevertheless it's the less invasive bariatric operation and moreover it doesn't preclude any other bariatric surgery.

Objectives

The purpose of this study is to examine 3736 consecutive laparoscopic LAGB with up to 16 years of follow-up.

Methods

The outcomes after LAGB are the result of a well planned bariatric activity:accurate patient selection, standardized laparoscopic technique (the minimal dissection of the gastro-phrenic ligament, the "two-step" technique, the fixation of the band), experienced surgical team and well-engineered device.

Results

From 2002 to 2016, 3736 patients underwent LAGB placements (Heliogast®System). Data on patient demographics, operative variables and postoperative outcomes were collected.The results were evaluated according to mortality, early and late complications, EWL%,BMI, conversion to open surgery,percentage of follow up. A mortality rate of 0 in 3736 consecutive LAGB patients attests to the benign nature of the gastric band surgery. Preoperative BMI was 43,2 for male and 41.9 for female respectively. Conversion rate:3(0,08%), local impediment 2 (0,05%), slippage 189(5,5%), band erosion 17 (0,45%), trocar hernia 35(0,93%), port disconnection or leaking 54(1,44%), poor weight loss 299 (8%), band removal for psychological intolerance 37 (0,99%). Follow up 74 % at 10 years. Mean EWL at 10 years: 50,7%.

Conclusion

The LAGB is associated with inferior weight loss,when compared to other bariatric operations,but is unquestionably associated with less early complications. The long term outcomes, instead, are strictly related to patients motivation and correct patients selection. We assume that combining some simple technical artifices,we can achieve and maintain EWL>50%, with a low rate of complications.

O.020

WEIGHT LOSS AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BAND AND RESOLUTION OF THE METABOLIC SYNDROME AND ITS COMPONENTS

Adjustable gastric banding

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Introduction

Substantial weight loss in the setting of obesity has considerable metabolic benefits. Yet some studies have shown improvements in obesity-related comorbidities with more modest weight loss.

Objectives

By closely monitoring patients after gastric banding, we aimed to determine the effects of weight loss on the metabolic syndrome and its components, and determine the target weight loss required for their resolution.

Methods

We performed a prospective observational study of obese participants with metabolic syndrome (ATPIII) who underwent gastric banding. Participants were assessed for all criteria of the metabolic syndrome each month for nine months, then three-monthly until 24 months.

Results

There were 89 participants recruited, with baseline BMI 42.4 ± 6.2 kg and age 48.2 ± 10.7 years. Resolution of the metabolic syndrome occurred in 60 of 89 participants (67%) at 12 months and 60 of 75 participants (80%) at 24 months. The mean weight loss when metabolic syndrome resolved was $10.9 \pm 7.7\%$ total body weight loss (TBWL). Hypertriglyceridaemia resolved first, with disease prevalence halving at 7.0% TBWL. HDL cholesterol and hyperglycaemia resolved next at 11% TBWL; 20% TBWL for hypertension; and 29% TBWL for waist circumference. Achieving 10-12.5% TBWL correlated with significant odds of resolution of the metabolic syndrome (OR 2.09, $p=0.025$) with increasing probability of resolution with more substantial weight loss.

Conclusion

In obese participants, a weight loss target of 10-12.5% TBWL is a reasonable initial goal for metabolic benefits. Further metabolic improvement could be expected with additional weight loss. These findings can help inform weight loss efforts, in counseling patients, determining targets and assessing success of weight loss strategy.

O.021

SHORT-TERM WEIGHT LOSS RESULTS IN WESTERN EUROPEANS VERSUS SOUTH ASIAN PATIENTS AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING: A 1:2 MATCHED CONTROL COHORT STUDY

Adjustable gastric banding

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Introduction

South Asian(SA) patients have a 3-5% higher percentage of body fat than Caucasian patients of the same age, sex and BMI. The dietary composition of a typical SA diet is high in carbohydrates, which has been shown to adversely affect glucose metabolism and insulin resistance.

Objectives

The aim of this study was to understand whether there is a disparity in weight loss outcome after bariatric surgery between Western European(WE) and SA patients.

Methods

Data was obtained for consecutive SA patients who had LAGB at a single bariatric centre in the UK between April 2003 and December 2015. Each of the SA patients (n=63) were randomly matched with two WE patients (n=126) for age, sex and pre-operative BMI. Data analysis was performed using SPSS. Data was analysed for statistically significant difference using two-tailed independent t-test. A significance of $p < 0.05$ was considered significant.

Results

There was a significant difference in BMI loss between SA and WE patients at 6 months (4.9 vs 7.5kg/m²), ($p < 0.01$) and 12 months (8.3 vs 6.1kg/m²), ($p < 0.05$) respectively post-operatively. Excess BMI loss was not significantly different at 18 (8.5 vs 6.7kg/m²) and 24 months (9.8 vs 7.9kg/m²) respectively post-operatively.

Conclusion

Although BMI loss was poorer in the short-term among SA patients, SA patients had similar efficacy and tolerability outcomes compared to WE patients following LAGB in the long-term. Given SA patients' high predisposition to diabetes and cardiovascular disease, bariatric surgical intervention using LAGB should not be discounted as an active treatment option in SA patients for the long-term treatment of obesity.

O.022

REMOVAL OF GASTRIC BAND DOES NOT NECESSARILY LEAD TO SIGNIFICANT WEIGHT GAIN

Adjustable gastric banding

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Introduction

Adjustable gastric band (AGB) is removed in some patients due to complications or inadequate weight loss. The weight trajectory of these patients has not been well characterized.

Objectives

To investigate weight changes in patients who underwent AGB removal without having additional bariatric procedures.

Methods

All patients who underwent AGB removal at an academic center between 2009 and 2016 and did not have any additional bariatric procedures were studied.

Results

Twenty-five patients had their AGB removed laparoscopically. Twenty-one (84%) were female, and median age was 55 years (interquartile range, 44 -67). Indications for AGB removal included gastroesophageal reflux disease (n=10, 40%), band slippage/prolapse (n=10, 40%), band erosion (n=4, 16%), and incisional ventral hernia requiring mesh repair (n=1, 4%). Two patients had postoperative complications; an abdominal fluid collection requiring CT-guided drainage and a pulmonary embolism. The median follow-up after AGB removal was 2 years (interquartile range, 1-4). The median weight and BMI changes at the time of last follow-up were +7.3 kg (interquartile range, -2 and +18) and +1.9 kg/m² (interquartile range, -1 and +6), respectively. Forty-eight percent (n=12) did not gain more than 3 kg of body weight after removal of their AGB. All patients experienced resolution of their AGB-related symptoms.

Conclusion

Findings of this study, which is the largest reported series to date, indicate that almost half of patients did not have significant weight regain after AGB removal in short- to medium-term follow-up.

O.023

PATIENT CENTRED GASTRIC BAND CLINIC YIELDS HIGH QUALITY OUTCOMES: RESULTS FROM 293 CONSECUTIVE PATIENTS

Adjustable gastric banding

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Introduction

It is recognised that success with the gastric band is dependent upon regular and robust follow up. It is also accepted to be likely that better healthcare outcomes are associated with shorter distances to follow up clinics.

Objectives

We set up a multi centre gastric band follow up clinic to cover a radius of 55 miles from 5 separate locations. We wanted to assess follow up frequency and outcomes.

Methods

A prospective cohort study of 295 patients who attended our localised network of gastric band clinics for up to 2 years. The clinics occurred weekly, in at least one of the 5 locations. All relevant healthcare data was collected

Results

We have complete records of 293/295 patients (99% follow up).

Mean length of follow up was 8.5 months (range: 0.5 – 24 months)

Mean number of appointments was 10.4 appointments (range: 1 – 17)

Excess weight loss at 24 months was 66% (95% CI: 60 – 72%).

Excess weight loss at 12 months was 48% (95% CI: 44 – 52%)

There were 15 (5%) band related complications: 5 band slips, 8 port/tubing complications, 1 gastric band leak, 1 conversion to gastric bypass because of intolerance

Conclusion

Organising a patient centred, localised gastric band clinic is a worthwhile strategy to ensure good follow up rates, frequent attendance and excellent outcomes in terms of excess weight loss.

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O.024

CARDIAC RISK STRATIFICATION IN BARIATRIC PATIENTS: A SCREENING TOOL

Pre-operative management

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Background

Morbid obesity is an independent risk factor for ischaemic heart disease and patients with few risk factors are often referred for cardiac assessment.

Introduction

The revised cardiac risk index(RCRI) is a validated risk stratification tool for predicting the risk of major cardiac events in the non -cardiac surgical setting. Multiple factors stratify individuals into four categories (I, II, III and IV) and risk of cardiac events increases with each category.

Objectives

The aim of this study is to assess whether cardiology referrals could be reduced by applying RCRI, yet still capture all of the preoperative cardiac therapeutic interventions.

Methods

Between 2005-2015, a cohort of 1316 patients that had been evaluated for weight loss surgery was identified. Retrospective analysis of the clinical records was undertaken. Referrals to cardiology at this time were based on clinical judgement. Data collected included: RCRI, referral to cardiology, symptomatology, cardiac investigations and interventions, waiting time, morbidity and mortality.

Results

Out of 1316 patients,192(15%) were referred to cardiology. Patients in RCRI category III and IV were significantly more likely to require cardiac intervention compared to category I and II(21vs.2%, $p<0.05$). Waiting time and development of MI whilst waiting were significantly higher in cardiology referral group ($p<0.01$). Chest pain was the strongest associated symptom in patients requiring intervention ($n=10$, $p<0.01$). This together with RCRI III and IV consisted of sensitivity of 60%, specificity of 99.3% and negative predictive value of 99.96% in this studied population.

Conclusion

Cardiac interventions are more likely in patients with RCRI III and IV; this together with symptom of chest pain can make a good risk stratification tool for cardiac assessment in bariatric patients.

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O.025

CAN PHARMACOTHERAPY BE SUPERIOR TO DIET FOR PREOPERATIVE BARIATRIC SURGERY PREPARATION ?

Pre-operative management

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Introduction

Morbidly obese (MO) patient undergoing Bariatric Surgery (BS) often need very low calorie diet (VLCD) for two weeks for liver preparation prior to BS. However it has challenges of compliance. This is the first randomized study using /comparing Pharmacotherapy for preoperative preparation versus only VLCD.

Objectives

To compare weight loss after Pharmacotherapy and VLCD.

Methods

60 patients with BMI more than 35 kg/m² and Type 2 Diabetes undergoing BS were randomly subjected in 1:1 ratio to preoperative preparation either with two weeks of VLCD or daily GLP1 agonist (liraglutide 1.8mg/day) with Low Calorie Diet (LCD) for 2 weeks. Absolute weight loss in kilograms and percentage weight loss and dietary compliance just prior to surgery were measured in all and compared. The randomized group had 38 males and 22 females.

Results

At baseline the BMI was 44.2 kg/m² and 43 kg/m² with mean weight 121kg and 116kg in pharmacotherapy group and VLCD group respectively. Pharmacotherapy group lost mean of 7.5 kg (6.2% total body weight) as against 5 kg (4.2% of total bodyweight) with VLCD. The difference was statistically significant. The compliance for LCD was better in the pharmacotherapy group. Pharmacotherapy group experienced nausea as against craving for food in the VLCD group.

Conclusion

Pharmacotherapy (Liraglutide in this study) can be an effective option to induce weight loss prior to BS in patients with Type 2 Diabetes. Large studies may be required to have optimum use of Pharmacotherapy prior to BS.

O.026

ADVANCED NAFLD IS COMMON IN PATIENTS UNDERGOING BARIATRIC SURGERY AND POORLY STAGED PREOPERATIVELY BY EXISTING NON-INVASIVE BIOMARKERS

Pre-operative management

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Introduction

Advanced fibrotic Non-Alcoholic Fatty Liver Disease (NAFLD) is associated with increased mortality and hepatic decompensation after malabsorptive bariatric surgery. Accurate NAFLD staging is therefore important and histological liver biopsy assessment represents the current gold standard. However, its associated risks have led to the development of non-invasive scoring systems including the Enhanced Liver Fibrosis (ELF) test, which has been approved by the UK's National Institute for Health and Care Excellence (NICE).

Objectives

To determine histological NAFLD stage in individuals undergoing bariatric surgery and evaluate the preoperative diagnostic accuracy of existing non-invasive biomarkers.

Methods

Intraoperative liver biopsies were taken routinely from 175 patients during bariatric surgery. Histological severity was assessed using the NAFLD Activity Score (NAS) and Kleiner classifications. Complete preoperative non-invasive scoring (ELF, AST/ALT ratio, APRI, BARD, FIB4, NFS) was available in 69 cases. Diagnostic accuracy was determined through ROC curve analysis.

Results

NAFLD was present in 90.3%, advanced (F3/4) fibrosis in 25.3% and Non-Alcoholic Steatohepatitis (NASH) (NAS \geq 5) in 14.0% of patients. All non-invasive biomarkers performed poorly in preoperatively identifying advanced fibrosis (AUROC=0.56-0.72), which was best predicted by BARD scoring. ELF testing best predicted cirrhosis and NASH (AUROC=0.78 and 0.67 respectively). The NICE-recommended ELF cut-off score of 10.51 failed to predict 89.5% of advanced fibrosis and 60% of cirrhosis cases.

Conclusion

Advanced fibrotic NAFLD is common in patients undergoing bariatric surgery and the diagnostic accuracy of existing non-invasive NAFLD biomarkers is poor. There is a need to develop more accurate biomarkers in the bariatric surgical population to inform preoperative risk stratification and surgical intervention selection.

O.027

PREOPERATIVE PREDICTION OF CIRRHOSIS IN BARIATRIC PATIENTS: A PROPOSED MODEL.

Pre-operative management

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Introduction

There is a high prevalence of non alcoholic fatty liver disease (NAFLD) and non alcoholic steatohepatitis (NASH) in bariatric patients. This can progress to cirrhosis. A high proportion of patients have a diagnosis of cirrhosis made intra operatively, which is not ideal. Pre operative diagnosis of cirrhosis would allow further evaluation and stratification in terms of risk.

Objectives

The aim of this study was to assess whether we can preoperatively predict presence of cirrhosis in bariatric patients.

Methods

A cohort of 99 bariatric patients, between 2003 and 2016, who had undergone liver biopsy at the time of bariatric surgery were reassessed for histological outcome and divided into four groups Cirrhosis, NASH, NAFLD and Non NAFLD. Their medical notes were reviewed for preoperative demographics, co morbidities, biochemical markers, Child - Pugh class and MELD scoring. We studied the relationship of these factors in predicting presence of cirrhosis.

Results

Based on histological confirmation our studied cohort was divided into Cirrhosis (n=24), NASH (n=41), NAFLD (n=22) and Non NAFLD (n=12) groups. Age, Male Gender, Diabetes Mellitus, Metabolic Syndrome, elevated GGT, AST and MELD score were found to be strongly associated to cirrhosis ($p < 0.05$). Diabetes Mellitus together with elevated AST and GGT provided an overall predictive probability of 90% in our studied model with sensitivity of 70% and specificity of 96%.

Conclusion

Preoperative presence of diabetes mellitus along with elevated GGT and AST may be used to predict presence of cirrhosis in bariatric patients preoperatively. These patients can then be further evaluated and portal hypertension excluded prior to surgery.

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O.028

THE IMPACT OF PREOPERATIVE INVESTIGATIONS ON THE MANAGEMENT OF BARIATRIC PATIENTS; RESULTS OF A COHORT OF MORE THAN 1100 CASES

Pre-operative management

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St. Claraspital - Basel (Switzerland)

Introduction

Despite the increasing use of bariatric surgery as the most effective treatment of morbid obesity, there is still no consensus in its pre-operative diagnostic work-up.

Objectives

The aim of this study is to identify the impact of the endoscopic and radiological findings before performing bariatric surgery and to evaluate their influence in the therapeutic approach.

Methods

Retrospective analysis of prospectively collected data of 1171 consecutive patients, who underwent laparoscopic Roux-Y gastric bypass (n=795) or sleeve gastrectomy (n=376) at our institution. An abdominal ultrasound was performed in 1142 patients, 1134 patients underwent upper GI endoscopy, 1132 patients underwent upper GI series and 595 patients underwent esophageal manometry.

Results

Gallstones were detected in 217 (18.5%) patients and a synchronous cholecystectomy was performed in 215 (18.5%) patients. The upper GI series indicated hiatal hernias in 314 (26.8%) patients. The most common findings of the upper GI endoscopy were Type- C gastritis (n=222, 19.0%), reflux esophagitis (n=220, 18.8%), HP- positive gastritis (n=146, 12.5%) and hiatal hernia (n=54, 4.6%). Additionally, we detected one Barrett's high-grade dysplasia, one Barrett's carcinoma and one stomach cancer in asymptomatic patients, who were due to have a sleeve gastrectomy. Esophageal motility disorders were detected in 98 (16.5%) individuals, who underwent esophageal manometry. Preoperative examinations changed the therapeutic approach in 455 cases (38.9 % of all patients).

Conclusion

Abdominal sonography and upper GI endoscopy are mandatory before bariatric surgery as they reveal findings, which influence the therapeutic approach. Upper GI series and esophageal manometry help to define patients not suitable for sleeve gastrectomy.

O.030

INCONTINENCE SURGERY OR BARIATRIC SURGERY FOR MORBIDLY OBESE WOMEN WITH URINARY INCONTINENCE?

Post-operative care

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Introduction

Obesity has been shown to negatively impact on pelvic floor support and is strongly associated with urinary incontinence in women, particularly stress incontinence.

Objectives

Evaluate the effect of bariatric surgery and subsequent weight loss on a consecutive series of morbidly obese women with urinary incontinence at twelve months post operative.

Methods

From Jan. 2008 and Jan. 2017 all female patients undergoing bariatric surgery completed the International Consultation on Incontinence Questionnaire- Urinary Incontinence short form (ICIQ-UI SF) at their first consultation. Those reporting urinary incontinence completed a further questionnaire at one year following surgery.

Results

76% (366/481) were female. 41% (151/366) reported urinary incontinence. 40% (61/151) completed a questionnaire at one year post-operative. The mean age (SD) was 50(8.39)yrs. The mean(SD) post-operative weight drop was 49(21)kg and % excess weight loss was 74(22)%. 34% reported symptoms of stress incontinence (SUI), 21% reported symptoms of overactive bladder (OAB), and 44% reported symptoms of mixed incontinence. Post-operatively the mean ICIQ-UI SF score reduced from 9.3(4.4) to 4.5 (5) ($p < 0.01$, paired t-test). The improvement in severity score did not correlate with improvement in BMI (pearson, $r = -0.11$). The cure rate for SUI, OAB and mixed incontinence, was 41%, 38% and 48% respectively. However, this did not reach statistical significance. Forty-four percent of women reported complete resolution of their symptoms.

Conclusion

Bariatric surgery results in long-term cure or improvement in female urinary incontinence in the majority of patients. These results suggest that bariatric surgery should be the primary consideration in morbidly obese women with urinary incontinence.

O.031

THE IMPACT OF BARIATRIC SURGERY ON THE RESOLUTION OF OBSTRUCTIVE SLEEP APNOEA: A SINGLE-CENTRE STUDY

Post-operative care

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Introduction

Obesity is strongly correlated with the development of obstructive sleep apnoea (OSA). Bariatric surgery is postulated to have a beneficial effect in improving or resolving sleep apnoea in these patients. However, there is relative paucity in the literature on its efficacy.

Objectives

The Bariatric service in Worcestershire was established in 2012 and a prospective database maintained. We reviewed the outcomes in patients with OSA who underwent bariatric surgery in our unit.

Methods

Data was analysed on patients with OSA who underwent bariatric procedures [laparoscopic Roux-en-Y gastric bypass (LRYGB) and laparoscopic sleeve gastrectomy (LSG)] in our unit between June 2012 and September 2016. Outcomes assessed included excess weight loss (EWL) and OSA resolution or improvement using objective measures.

Results

Of 176 patients, 47 (26.7%) had OSA; with 43 patients requiring nocturnal CPAP support. 41 had other comorbidities. Mean age was 48.5 years, and 63.8% were female. Procedures were LRYGB (n=26) and LSG (n=21). Average start BMI was 51.0+/-7.6 and end BMI was 35.2+/-5.4, with mean EWL of 56.1%. At the end of the study period, 14 patients (32.6%) no longer required CPAP. A further 12 (27.9%) showing improvement in airway pressure requirements. 12 patients (16.9%) were lost to follow-up.

Conclusion

26.7% of our patients had OSA. 55.3% had resolution or improvement following bariatric surgery. We reported objective pressure measurements and CPAP use. However, there was a high rate of non-attendance of Sleep Clinic appointments. Future efforts should involve close liaison with the respiratory specialists to analyse the reasons for this and ensure more robust monitoring.

O.032

HEDONIC HUNGER AND WEIGHT LOSS TRENDS IN A POPULATION OF PATIENTS WITH SEVERE OBESITY FOLLOWING ROUX-EN-Y GASTRIC BYPASS OR SLEEVE GASTRECTOMY

Post-operative care

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Introduction

Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG) produce comparable weight loss (WL) in the short-term. Following RYGB, hedonic hunger (HH), the drive to eat to obtain pleasure in absence of energy deficit, is reduced. This HH reduction could contribute to the marked sustained decrease in weight observed following RYGB. There are no data examining the effect of SG on HH.

Objectives

To evaluate the relationships between WL and HH, assessed using the Power of Food Scale (PFS) and examine whether procedure specific difference exist.

Methods

A single-institution prospective study of patients with severe obesity undergoing primary RYGB (n=43) or SG (n=95). HH was measured using PFS before and 6 months post-surgery. The PFS is comprised of 15 items grouped into 3 domains considering when food is: 1) available (FA), 2) present (FP), 3) tasted (FT) and a total score (TS). Anthropometric data were collected at baseline and after 1 year (1y). Multivariate adjustment analysis was used.

Results

Baseline characteristics (Table) and %WL at 1y post-surgery were similar in both groups. Table 2 shows the PFS scores pre and post-surgery. Using a linear regression model we found an inverse association between %WL and FA, FP and TS but not FT. Moreover, we calculated that each TS unit reduction was equal to 2.14%WL.

Table1: baseline characteristics (Mean/n-St.dev/%)

	RYGB(43)		SG(95)		p-value
Gender (Female)	37	86%	66	69%	<0.05
Age (years)	49.0	12.0	44.9	11.0	<0.05
BMI (kg/m ²)	44.5	6.2	45.3	7.7	NS
%WL	26.9	7.8	24.7	7.8	NS

Table2(Mean±St.dev)

	RYGB(43)			SG(95)			RYGBvsSG
	Pre-surgery	Post-surgery	p-value	Pre-surgery	Post-surgery	p-value	
FP	3.1±1.2	2.4±1.1	<0.05	2.9±1.2	2.0±0.9	<0.001	NS
FA	2.8±1.0	2.1±0.9	<0.05	2.5±1.1	1.9±0.8	<0.001	NS
FT	2.7±0.9	2.4±0.9	NS	2.6±1.0	2.3±0.9	<0.001	NS
TS	2.9±0.9	2.3±0.9	<0.05	2.7±1.0	2.1±0.8	<0.001	NS



Conclusion

HH is reduced comparably following SG and RYGB with an inverse relationship between change in PFS scores and %WL.

□
O.033

ENDOSLEEVE- ENDOSCOPIC SLEEVE GASTROPLASTY WITH APOLLO OVERSTICH: A NEW PROCEDURE FOR ENDOLUMINAL BARIATRIC SURGERY IN HIGH RISK AND SUPER-OBESE PATIENTS

Endoscopic and Percutaneous Interventional Procedures

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Background

Bariatric surgery for morbid obesity can induce important excess weight loss (EWL) during years after surgery, and co-morbidities often improve or resolve. As many patients with surgical contraindications for formal bariatric surgery have no alternative besides conservative management, new endoscopic procedures can be currently applied to these cases.

Introduction

This study describes the preliminary german clinical experience with Endoscopic Sleeve Gastroplasty- Endosleeve.

Objectives

To evaluate Endoscopic Sleeve Gastroplasty as a 2 stage Procedure for BMI 50 to 100 in patients of high-risk to receive primary bariatric surgery.

Methods

Primary endoscopic sleeve gastroplasty was performed for a series of 12 patients using the full-thickness suturing device Apollo Overstich. All selected patients were ASA III classified, due to cardiopulmonary high-risk, or liver/renal transplant candidates. Technical steps included general anesthesia, insertion of an Overtube, full-thickness suturing of the corpus and fundus with interrupted nonabsorbable sutures, sizing the gastric tube. The patients were followed and documented regarding complications, weight loss and co-morbidities.

Results

All patients were submitted to the procedure without intraoperative complications. Mean operative time was 87 min. Mean preoperative BMI was 54kg/m², Highest BMI was 100, highest body weight was 310kg. Follow-up showed satisfactory weight loss with no weight regain after 6 months. Co-morbidities were ameliorated with reduction of medications in all patients.

Conclusion

Endoscopic primary sleeve gastroplasty using Apollo Overstich is a new non-invasive procedure for morbid obesity, satisfactory early results and no complications for this set of high-risk patients. Further studies are needed to evaluate indications of this technique as an alternative bariatric therapy

O.034

SETTING REALISTIC EXPECTATIONS FOR WEIGHT LOSS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY – PREDICT BMI CALCULATOR

Pre-operative management

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Introduction

Despite the clinical benefits of bariatric surgery, some patients have faced disappointment with their weight loss. Setting realistic expectations is the key to success.

Objectives

The aim of this study is to develop a specific prediction calculator to estimate expected body mass index (BMI) at 1 year post-LSG.

Methods

A retrospective analysis was performed to study 211 patients after primary LSG. Patients underwent LSG between the dates of January 2011 and September 2015 who completed 1-year follow-up. Nine baseline variables were analyzed. Least Angle Regression was employed to variable selection and build the model. External validation was performed on dataset of 184 patients. Linear logistic equation was used to construct the online predictive calculator (www.predictbmi.com).

Results

The median age of patients was 45 (Q1: 38, Q3: 45) years and median BMI was 45.3 (41.2, 52.2) kg/m² at the time of surgery. The model included three variables: preoperative BMI ($\beta = 0.023$, $p < 0.001$), age ($\beta = 0.005$, $p < 0.001$), and female gender ($\beta = 0.116$, $p = 0.001$) and demonstrated good discrimination ($R^2 = 0.672$; adjusted $R^2 = 0.664$) and good accuracy (root mean squared error of estimate = 0.124). The difference between observed BMI and the estimates BMI was not statistically significant [median = 0.737 (-2.676, 3.254); $p = 0.223$]. External validation confirmed good performance of the model.

Conclusion

The study revealed useful predictive model for estimating BMI at one year after LSG. The model was used to development BMI calculator. This tool allows to set realistic expectations of weight loss at one year after LSG.

O.035

EFFICACY AND SAFETY OF THE DUODENAL-JEJUNAL BYPASS LINER: A PROSPECTIVE COHORT STUDY WITH TWO YEARS IMPLANTATION DURATION

Endoscopic and Percutaneous Interventional Procedures

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Introduction

The duodenal-jejunal bypass liner (DJBL)/ Endobarrier™ is an endoscopic, non invasive treatment for diabetes mellitus type 2 (T2DM) and obesity. No data is available on implantation durations >1 year.

Objectives

To evaluate the safety and effects on T2DM and obesity in patients with an implantation period of two years.

Methods

Inclusion criteria were: age 18-70 years, BMI 28-45kg/m² and use of at least two different types of oral anti-diabetics or insulin. Patients using non-steroidal anti-inflammatory drugs or anticoagulants were excluded. The implantation period was extended when the DJBL was still adequately placed during endoscopic follow-up at one year. After an implantation period of 24 months the DJBL was definitively explanted.

Results

Between March 2011 and January 2015, 200 patients underwent DJBL implantation of which 182 (91%) implantations were successful. 43 Patients were suitable for extension of implantation period to two years.

In the second year, body weight decreased further from 108.1±17.5 to 94.7±16.7kg (p<0.001) which is comparable to total body weight loss of 13.1±8%. 4 Patients suffered from an adverse event: 2 patients (4.6%) gastrointestinal bleed and 2 patients (4.6%) liver abscess. In 21 (48,8%) patients the DJBL was migrated, in 2 patients the sleeve was broken and in 3 patients the sleeve disappeared; probably lost the natural way.

Conclusion

The DJBL is a minimal invasive endoscopic treatment which leads to significant improvement of T2DM and weight. However, this treatment can be associated with serious adverse events and extension of the implantation period to two years appears to lead to more complications and difficulties at the time of explantation.

O.036

POSITIVE OUTCOMES FOR HYPERTENSIVE AND NON- HYPERTENSIVE PATIENTS FOLLOWING BARIATRIC SURGERY.

Integrated Health/Multidisciplinary care

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Introduction

Bariatric surgery is known to improve hypertension and to reduce the requirement for anti-hypertensive medications.

Objectives

To evaluate the effect of bariatric surgery on blood pressure and anti-hypertensive medications in both non-hypertensive (Group A) and hypertensive (Group B) patients at a minimum of 12 months following bariatric surgery.

Methods

Data collected included age, sex, pre and post-operative systolic and diastolic blood pressure (SBP, DBP), weight (kg), Body Mass Index (BMI), and number of anti-hypertensive medications.

Results

Between January 2008 and March 2016, 266 consecutive patients were assessed. The mean (SD) age was 50 (11) years, the mean pre-operative BMI was 49(7) kg/m². 66%(150) were female. At a mean follow-up of 27 (15) months, the mean BMI fell to 34 (6.6) kg/m². The mean SBP fell from 147 (18) to 130(20) mmHg and the mean DBP fell from 87(9) to 81 (11) mmHg ($p < 0.001$, t-test). Group A (n=77) patients had a greater mean drop in blood pressure than group B (n=149) postoperatively: SBP, 23(20) mmHg vs 13 (24) mmHg ($p = 0.005$) and DBP 9 (11) vs 4 (13) mmHg ($p = 0.004$). However, 60%(89) in Group B came off all blood pressure medications and a further 30% (45) reduced their medication dosage. The mean BP medication usage fell from 2 (1) to 0.6 (1) ($p < 0.001$, Mann-Whitney). There was no correlation between the reduction in SBP and DBP and the reduction in BMI ($r = 0.122$, and $p = 0.066$; $r = 0.07$ and $p = 0.297$ respectively).

Conclusion

Bariatric surgery leads to a reduction in anti-hypertensive medication usage, and a reduction in blood pressure on long-term follow-up. This effect does not appear to be related to absolute weight loss.

□
O.037

IMPROVEMENT IN PHYSICAL FUNCTIONING AFTER BARIATRIC SURGERY: A TWO-YEAR PROSPECTIVE STUDY AT A SINGLE CENTER.

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

Obesity profoundly impairs physical functioning due to pain or other obesity related co-morbidities which in turn affects daily activities, thus impacting quality of life. Bariatric surgery not only induces weight loss but also improves metabolism. It is currently the linchpin treatment for morbid obesity and its related co-morbidities. Very few studies are available specific to the Asian population evaluating the effect on physical functioning but they differ in ethnicity, adiposity, etc.

Objectives

The current study, the first of its kind in the Indian population describes the impact of obesity on physical functioning and the effect of bariatric surgery on the same at a single centre.

Methods

A prospective review of patients undergoing bariatric surgery was conducted ($n=150$). The patients ($M: F$ ratio 54: 96, Mean age 38.95 years) were administered the IWQOL (Lite) and analyzed to see the effect of weight on their physical functioning. They were reviewed at baseline and at 2 years after bariatric surgery.

Results

There was a significant change in mean BMI at two years as compared to baseline. (*Mean BMI 43.70 and SD 7.31 to 33.86 and 6.21*). An improvement in the physical functioning of all the patients was seen at two-year follow-up when compared to the baseline score. Statistical analysis was done using the *Paired Samples t-test* and a statistically significant difference was found at 95% level of confidence in the two groups (*Mean 45.53 to 21.81, $p=0.00$*).

Conclusion

Bariatric surgery dramatically improves physical functioning and is maintained even at two-year follow-up thus also improving quality of life.

□
O.038

SURGICAL MANAGEMENT OF GASTRO-GASTRIC FISTULA AFTER LAPAROSCOPIC ROUX-EN-Y-GASTRIC BYPASS

Post-operative complications

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Background

Gastro-Gastric Fistula (GGF) is a rare but well established complication of laparoscopic Roux-en-Y Gastric Bypass (LRYGB).

Introduction

The incidence of GGF ranges from 1% to 6% and almost always accompanies marginal ulceration.

Objectives

To outline the natural history, risk factors, symptomatology and treatment options for GGFpost LRYGB.

Methods

Retrospective analysis of prospectively collected data.

Results

Between the years 2006-2015 we performed 505 LRYGB and the incidence of GGF in our cohort was 0.99% (5/505). Mean time from LRYGB to GGF was 19.8 (range: 4-60) months. Chronic epigastric pain was present in 4/5 (80%) patients, Diabetes mellitus was present in 3 patient prior to LRYGB and 3/3 (100%) had a relapse. Endoscopy showed marginal ulcer in 5/5 (100%) patients and 2 patients (40%) suffered from weight regain. Upper GI bleeding was the presenting symptom in 1 (20%) patient. Endoscopy failed to diagnose GGF in 2/5 (40%) patients. Upper-GI series in the standing position failed in 3/5 (60%) but in the left lateral laying position success rate of diagnosing GGF was 80%. CT scan revealed evidence for GGF in 5/5 (100%) patients. Findings during laparoscopy dictated the surgical approach. Treatment varied from simple fistula excision (1/5) to excision and gastric "remnantectomy" (2/5) and proximal esophago-gastrectomy with Roux-en-Y esophago-jejunostomy (1/5). One patient opted non-surgical surveillance. Post-operative course in all the patients was uneventful.

Conclusion

In any case of a marginal ulcer look actively for GGF especially if difficult to treat. CT scan is the most sensitive tool to diagnose GGF. Surgical solution must be tailored to intra-operative findings.

O.039

CT FINDINGS IN PATIENTS WITH INTERNAL HERNIATION AFTER ROUX-EN-Y GASTRIC BYPASS SURGERY

Post-operative complications

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Introduction

Diagnosing internal herniation (IH) after RYGB is difficult. CT is the diagnostic imaging technique of choice, however, assessing IH on standard abdominal CT is often difficult or inconclusive.

Objectives

Determine the sensitivity and specificity of a standard abdominal CT scan and the different IH signs for diagnosing IH in a retrospective study.

Methods

RYGB patients who underwent a re-operation after having an abdominal CT were included in the study retrospectively. Only patients with an active IH or closed mesenteric defects (no IH) during surgery were selected. All anonymized CTs were reassessed by five radiologists; two abdomen radiologists (R01, R02), one non-abdomen radiologist (R03) and two radiology residents (R04, R05). Assessment included abnormalities in the RYGB anatomy using a standardized list of signs for IH.

Results

In total 69 patients, 33 with IH and 36 without IH (group 2), were included. Sensitivity for diagnosing IH was 91%, 79%, 33%, 55% and 55% for R01 to R05, with corresponding specificities: 19%, 67%, 72%, 78% and 75%. Overall agreement was fair (Fleiss' kappa=0.32, $p < 0.01$)

An increased sensitivity for IH through Petersen's defect was found for R02 and R05 (90% and 71%). The individual IH signs have low sensitivities. Signs with the highest sensitivity were the swirl sign (29-52%), deviations of the biliopancreatic limb (19-52%) and induration of the mesentery (19-55%).

Conclusion

Large differences in CT assessment for IH were seen between the radiologists. Possibly, other signs, other assessment methods and a more standardized assessment protocol are required to improve the diagnostic value of CT for internal herniation.

□
O.040

A STUDY ON THE RISK FACTORS OF HAIR LOSS FOLLOWING BARIATRIC SURGERY

Post-operative complications

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Introduction

Hair loss is a common problem following bariatric surgery. However the reason for the phenomenon is not clear.

Objectives

In this study, we analyzed the factors for hair loss after bariatric surgery, and explored the possible risk factors by using a logistic regression model.

Methods

54 cases of obesity patients after bariatric surgery were observed. Thirteen possible risk factors were selected which may influence the postoperative hair loss: age, gender, preoperative BMI, hemoglobin, albumin, total cholesterol, iron, zinc, copper, folic acid, vitamin B12, vitamin D, and postoperative excess weight loss. Logistic regression model and regression equation were established to predict the risk of hair loss after bariatric surgery.

Results

Postoperative hair loss rate was 77.8%. Gender, folic acid, and postoperative excess weight loss were significantly associated with postoperative hair loss. The regression coefficients were 4.850, -0.644, 2.808 and the standard errors were 2.279, 0.272, and 1.267, respectively. P values were 0.033, 0.018, and 0.027, respectively. There were no significant effects of age, preoperative BMI, total cholesterol, albumin, hemoglobin, iron, zinc, copper, vitamin B12 and vitamin D on postoperative hair loss.

Conclusion

Gender, folic acid and excess weight loss are the three important factors that affect the postoperative hair loss. The reduction of the scalp adipose tissue, scalp tissue thinning due to the rapid weight loss following the bariatric surgery could be the major reasons for the hair loss.

O.041

INVERSION TECHNIQUE FOR THE REMOVAL OF PARTIALLY COVERED SELF-EXPANDABLE METALLIC STENTS

Post-operative complications

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Introduction

Partially covered self-expandable metallic stents (PCSEMS), although an effective treatment for anastomotic/staple line leaks and strictures, can be difficult to remove.

Objectives

To examine the effectiveness of the inversion technique for the removal of PCSEMS in the treatment of leaks and strictures that occurred post-sleeve gastrectomy (SG) and Roux-en-Y gastric bypass (RYGB).

Methods

Consecutive patients who underwent PCSEMS removal for a leak and/or stricture post-SG or RYGB between July 2013 and December 2016 at a single academic institution were reviewed. All PCSEMS removals were first attempted via the inversion technique, which involves grasping the distal end of the stent and inverting it through itself.

Results

Fourteen patients (4 males) underwent PCSEMS removal via the inversion technique for an anastomotic/staple line leak (50%), stricture (29%) or both (21%) post-SG (79%) or RYGB (21%). Technical success (successful removal of the stent) was achieved in one endoscopic session for 13 of the 14 PCSEMS (93%). One PCSEMS required the use of the stent in stent technique for removal. The median dwell time was 47 days (range 5-72). A distal partial occlusion developed in five patients (35%) due to tissue overgrowth and one PCSEMS (7%) migrated, necessitating premature removal. Eight patients (57%) experienced clinical success at follow-up and six patients (43%) required subsequent treatment due to persistence or recurrence of the pathology.

Conclusion

The inversion technique is a safe, effective and efficient method of removing PCSEMS placed to correct anastomotic/staple line leaks and strictures post-SG and RYGB. The stent in stent technique can be considered a salvage therapy.

O.042

INCIDENCE OF CHOLECYSTECTOMY AFTER BARIATRIC SURGERY

Post-operative care

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Introduction

Obesity and cholelithiasis are intimately related pathologies, therefore, during pre-operative evaluation for bariatric treatment it is mandatory to investigate the existence of this pathology. After bariatric surgery it is necessary to keep control of symptoms or signs to investigate the occurrence of gallstone formation, once the rapid weight loss promoted by bariatric surgery increases the risk of cholelithiasis.

Objectives

The aim of this study is to analyze the incidence of cholelithiasis in obese patients, submitted to bariatric surgery and the frequency and timing of cholecystectomies after bariatric surgery.

Methods

This study was designed in a historical cohort study with retrospective data of patients treated by the same surgeon of CITOM from 2014 to 2016.

Results

From 2014 to 2016, there were 1538 bariatric surgeries performed by the same surgeon in CITOM. The mean BMI was 42 kg/m². Regarding gender, 23% of the patients submitted to surgery were male, and 77% were female. There were 114 patients diagnosed with cholelithiasis, and submitted to cholecystectomy in the same surgical time as their bariatric procedure (7.4%). During clinical evaluation after surgery, patients with symptoms of cholelithiasis or patients with cholelithiasis in the results of the semestral ultrasonography were diagnosed with gallstone formation, and 229 were submitted to cholecystectomy, which shows an incidence of 16% cholecystectomy after bariatric surgery.

Conclusion

Gallstone disease is prevalent in patients after bariatric surgery. The formation of cholelithiasis is related to the rapid weight loss, which is why cholecystectomy is mostly required in the first months or year after bariatric procedure.

O.043

EVIDENCE OF OBJECTIVE ENDOSCOPIC GASTROESOPHAGEAL REFLUX POST SLEEVE GASTRECTOMY

Post-operative complications

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Background

Sleeve Gastrectomy (LSG) has emerged as the most commonly performed bariatric surgical procedure due to its technical simplicity, safety profile and efficacy. Development of gastroesophageal reflux disease (GERD) following LSG is a concern as both obesity and GERD are associated with Barrett's esophagus and esophageal adenocarcinoma.

Introduction

The literature is conflicting and results inconsistent on the relationship of GERD and SG. The studies done are heterogeneous, varied in design and approach to the diagnosis of GERD.

Objectives

To look objectively for endoscopic evidence of oesophagitis (EE) post SG and to look for factors associated with EE post SG.

Methods

A single centre retrospective review of all patients who had LSG performed in King Abdullah Medical City (KAMC) and had endoscopy post LSG.

Results

562 (out of 1180 LSG) patients who had a gastroscopy post LSG and finished minimum 1-year post LSG were included. The median post SG endoscopy interval was 16 months (range 12–33). EE was detected in 23 % with 64%, 31% and 5% having grade A, B and C respectively. None had hiatus hernia and one of them had a 5 cm Barrett's oesophagus (BE) . 19 % were positive for helicobacter pylori (HP) and 23 % of these had oesophagitis

Conclusion

Endoscopic oesophagitis was prevalent in nearly a quarter of our study population who had SG. There was no correlation between development of EE post SG and gender, BMI, age or presence of HP.

Follow-up gastroscopy after LSG is strongly indicated to prevent progression of EE to BE.

□
O.044

REFLUX DISEASE AFTER SLEEVEGASTRECTOMY – A QUALITY OF LIFE ASSESSMENT

Post-operative complications

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Introduction

Morbidly obese patients are affected by gastroesophageal reflux disease (GERD) more frequently than lean patients. Because of conflicting results, the indication to sleeve gastrectomy (SG) in patients with GERD is still debated.

Objectives

Aim of the study was to evaluate the de novo incidence of GERD and the resulting quality of life in patients undergoing sleeve gastrectomy in a single center of excellence.

Methods

From August 2013 to February 2016 an analysis of 130 patients undergoing SG was performed. Patients characteristics, GERD-HRQL, proton pump inhibitors (PPIs) consumption, and results of esophagogastroduodenoscopy (EGD) pre- and postoperative were collected.

Results

All patients (n=130) accepted to take part in the study (median BMI 53.0 ±9,7 kg/m²). 45 patients routinely took PPI before operation (34,6%), while 35 patients had reflux esophagitis in preoperative endoscopy (26,9%). A total of 31 patient took PPIs (23,8 %). In the GERD HRQL a mean score of 7,6 was reached preoperatively, while 46 patients (35,4%) felt unsatisfied with actual reflux symptoms. At a median 15 months of follow-up, incidence of GERD seems to decrease compared with preoperative values. Postoperatively mean GERD HRQL score decreased to 4,3 in the same cohort, while only 12 patients (9,2%) felt unsatisfied. Nevertheless, 70 patients took routinely PPIs (53,8%) after sleevegastrectomy.

Conclusion

In the present series the incidence of GERD in SG patients was lower than reported in the current literature. On the other hand PPI treatment was significantly more common after SG, leading to better GERD treatment. Thus, life quality measured by GERD HRQL was significantly improved after SG.

□
O.045

BIDIRECTIONAL JEJUNOJEJUNOSTOMY PREVENTS THE KINKING OF THE ANASTOMOSIS AFTER CLOSURE OF THE MESENTERIC DEFECT IN LÖNROTH'S ROUX-EN-Y LAPAROSCOPIC GASTRIC BYPASS

Post-operative complications

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Introduction

The closure of the mesenteric defects (CMD) in Lonröth's Roux-en-Y gastric bypass (LRYGB) reduces the risk of small bowel obstruction (SBO) due to internal hernia but increases the risk of SBO by the kinking of the jejunojejunal anastomosis (JJS).

Objectives

The aim of this study was to assess how enlarging JJS by a bidirectional linear stapling can avoid the risk of SBO by the kinking.

Methods

This cohort study concerns 1327 patients who underwent LRYGB with CMD between May 2007 and August 2016. The first 626 patients (group A) had a unidirectional JJS. The following 701 patients (group B) had a bidirectional side-to-side JJS with hand-sewn closure of the remaining defect. We compared SBO between the two groups.

Results

Eleven (0,8%) SBO by the kinking of the JJS occurred in Group A patients (1,75%). They required reoperation. No early SBO occurred in group B. Odds-Ratio OR= 0.07 [0.01 – 0.62], p= 0.002. Mean operative time was 81 min (37-330) in group A, 77 min (33-240) in group B. Mean time required for JJS was 19 min in group A and 16 min in group B. Nine digestive bleedings (1,2%) occurred in group B whereas only 2 (0,3%) in group A (OR = 4.05 [0.87-18], p= 0.054). It could be explained by the longer stapling line of the JJS.

Conclusion

Enlarging the JJS with a bidirectional linear stapling seems to eliminate the risk of SBO by the kinking of the anastomosis.

□
O.046

EVALUATION OF CARBOHYDRATE RESTRICTION AS PRIMARY TREATMENT FOR POST-GASTRIC BYPASS HYPOGLYCEMIA

Nutrition after bariatric surgery

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Introduction

Up to 15 % of patients who have undergone Roux-en-Y gastric bypass (RYGB) surgery may eventually develop hypoglycemia.

Objectives

To evaluate the daily life efficacy of a carbohydrate (carb)-restricted dietary advice (CRD) of six meals per day with a 30g carb maximum per meal in patients with documented post-RYGB hypoglycemia.

Methods

Frequency and severity of hypoglycemic events before and after CRD were assessed retrospectively in 41 patients with documented post-RYGB hypoglycemia, based on medical records and telephone questionnaires. Hypoglycemia was defined as a blood glucose level < 3.0 mmol/L. Results are expressed as mean values ± standard error or median and range.

Results

CRD decreased the number of hypoglycemic events per month from 17.1 (1.5- 180) to 2.5 (0-180), i.e. a decline of 85 % ($p < 0.001$). The lowest blood glucose measured during a hypoglycemic event increased from 2.1 ± 0.4 to 2.6 ± 0.2 mmol/L ($p = 0.004$). The number of patients who had required outside help in the treatment of hypoglycemia, decreased from 23 to 6 ($p < 0.001$). In 14 patients (34.1 %) the diet-induced reduction of hypoglycemia was insufficient and required the start of insulin suppressive therapy.

Conclusion

A CRD, consisting of six meals per day with up to 30 g carbs each, is an effective treatment of post-RYGB hypoglycemia in the majority of patients. Additional medication is needed in about a third of patients.

□
O.047

COULD PRE-PROBIOTIC USAGE ENHANCE METABOLIC EFFECTS OF ROUX-EN-Y GASTRIC BYPASS SURGERY AND PREVENT FROM NUTRITIONAL DEFICIENCY?: A PROSPECTIVE RANDOMIZED TRIAL

Nutrition after bariatric surgery

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Introduction

Following bariatric surgery, positive alterations are observed in gut microbiota, intestinal peptides and inflammatory cytokines. Previous studies demonstrate similar alterations observed in cases where pre-probiotics are used without surgery.

Objectives

From this point forth, we hypothesized that post-operative pre-probiotic usage may enhance the effects of Roux-en-Y Gastric Bypass (RYGB).

Methods

Thirty patients who had received probiotics (200 g/d yoghurt) after RYGB surgery were included in the study. Prebiotics (10 g/d inulin+oligofructose) were added in 14 patients, the remaining 16 patients did not receive prebiotics. Blood (glucose, insulin, A1c, GLP-1, PYY, IL-6, hsCRP, vitamins and minerals), feces (pH) and 24 h urine (calcium clearance) samples and anthropometric measurements have been evaluated at baseline, three and six months after RYGB.

Results

It has been observed that post-prandial GLP-1 ($p= 0.005$), PYY ($p= 0.007$) and response of PYY ($p= 0.039$) in 6th month, and fasting GLP-1 in 3rd ($p= 0.033$) and 6th ($p= 0.027$) months have been higher, and hsCRP ($p= 0.065$) in 3rd month has been lower, tendency of increase has been observed in vitamin B12, folate and iron absorption in patients who have been administered prebiotics than those who have not been administered, and no difference has been observed in other parameters.

Conclusion

Administration of pre-probiotics following RYGB may be considered as a simple and cheap treatment support, especially for protecting patients with poor medicine compliance against nutritional deficiencies, as well as for diabetic patients whose glucose regulations deteriorate in the long term, and for those who regain weight.

□
O.048

MEDIUM TERM RESULTS FOLLOWING LAPAROSCOPIC GASTRIC BYPASS (LRYGB) IN THE NHS. DOES BARIATRIC SURGERY LEAD TO SUSTAINED REDUCTIONS IN MEDICATIONS?

Post-operative care

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Introduction

Bariatric surgery is now established in the UK as part of the National Health Service. Patients receive pre-operative evaluation, surgery and two years follow up, prior to discharged back to their family doctor (FD). It is believed to be a cost effective intervention.

Objectives

We aimed to report five-year results with specific interest in co-morbidity reduction and improvements in medication burden following LRYGB.

Methods

We traced the first 104 patients to undergo surgery at our unit and contacted their family doctor (FD) for the current prescribed medication lists. These were compared to pre-operative medication burden to analyse improvements in co-morbidities and reductions in medications.

Results

Complete medication results were available for 97 patients (93%). There were dramatic reductions in diabetic medication five years post surgery. Insulin treatment reduced by 88% (9.5% to 1 %, p = 0.04) and oral hypoglycaemic requirements reduced by 65% (27% to 9%, p = 0.003). All patients prescribed insulin stopped insulin therapy although there was one de-novo case. Improvements were observed for anti-hypertensive medication with a 38% reduction (33% to 20%, p = 0.05). No improvement was seen for analgesics (65% vs 63%) and a small non-significant increase was observed for anti-depressant medication (40.6% vs 52%).

Conclusion

We demonstrated sustained improvements in diabetes and hypertension following LRYGB. Significant reductions in medications will lead to substantial cost reduction in a publically funded health care system. We unable to demonstrate a sustained reduction in patient analgesic requirements and there was a trend toward increased anti-depressant use that warrants further study.

□
O.049

PUBLIC HOSPITAL ADMISSIONS AND EMERGENCY DEPARTMENT PRESENTATIONS FOR PATIENTS WAIT-LISTED FOR BARIATRIC SURGERY IN TASMANIA, AUSTRALIA: A STATE-WIDE COHORT STUDY

Primary care and the bariatric surgery patient

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Introduction

Increased demand for bariatric surgery creates prolonged wait-list times, and increases burden on public healthcare. The long-term influence of bariatric surgery on hospital admissions and emergency department (ED) presentations is under-investigated.

Objectives

To determine public hospital services utilisation (hospital admissions, ED presentations) in patients wait-listed for bariatric surgery before and after surgery or wait-list removal, and to identify hospital admission reasons associated with drop-out.

Methods

All Tasmanians waiting for publicly funded primary bariatric surgery from 2008 to 2013, their hospital admissions and ED presentations episodes were identified and extracted using administrative datasets. Episodes were assigned to 3 periods: before wait-list, while waiting, and after a bariatric operation or drop-out.

Results

648 wait-listed patients had 3,161 public hospital admissions in 2006-2014 and 4,928 ED presentations in 2000-2014.

During the wait-list period, the hospital admission rate differed significantly between operated and dropped-out patients (44.9 vs 64.2 per 100 person-years, $p < 0.01$). Mental health problems, poisonings, injuries and renal disorders while on the wait-list were associated with drop-out. Hospital admission rates increased post-surgery (from 44.9 to 64.2 per 100 person-years, $p < 0.01$). Operated patients presented to the ED more frequently than dropped-out patients in the post-wait-list period (78.9 vs 60.1 per 100 person-years, $p < 0.05$). The likelihood of being admitted from the ED increased after the operation from 31.6% to 39.1% ($p < 0.05$) of presentations.

Conclusion

Certain conditions were associated with wait-list drop-out. While bariatric surgery has many health benefits, it was not associated with fewer hospital admissions or ED presentations in the Tasmanian public hospital system.

□
O.050

LAPAROSCOPIC GREATER CURVATURE PPLICATION VERSUS LAPAROSCOPIC SLEEVE GASTRECTOMY: LONG-TERM RESULTS OF PROSPECTIVE RANDOMIZED TRIAL

Sleeve gastrectomy

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Introduction

Laparoscopic greater curvature plication (LGCP) is a new restrictive bariatric procedure with a similar restrictive mechanism as laparoscopic sleeve gastrectomy (LSG), which has no potential risk of leak.

Objectives

Aim of the study was to compare long-term results of LSG and LGCP.

Methods

Prospective randomized study enrolled 54 patients with morbid obesity. They were allocated either to LGCP group (n=25) or LSG group (n=27). Main exclusion criteria were: ASA > III, age > 75, BMI>65 kg/m². There were 40 women and 12 men, mean age was 42,6±6,8 years (range, 35-62). Data on the operation time, complications, hospital stay, body mass index loss (BMIL), percentage of excess weight loss (%EWL), loss of appetite and improvement of comorbidities were collected.

Results

After 4 years postoperatively, mean %EWL was 74,4 ± 15,5 in the LSG group and 24,1 ± 13,7 in the LGCP group (p<0,01). The comorbidities including diabetes, sleep apnea and hypertension, improved in LSG group much more than in LGCP group.

Conclusion

Long-term results showed that LSG is better than LGCP in terms of weight loss and improvement of comorbidities.

O.051

RESOLUTION OF DIABETES MELLITUS TYPE 2 AFTER SLEEVE GASTRECTOMY: A TWO STEPS HYPOTHESIS

Sleeve gastrectomy

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Introduction

The weight loss and the changing in gut hormonal levels are involved in glucose homeostasis after Laparoscopic Sleeve Gastrectomy (LSG).

Objectives

The aim of the present study is to evaluate the time-related effects of %EWL, Ghrelin and GLP-1 plasma concentrations on Diabetes Mellitus 2 resolution after LSG.

Methods

91 patients have been investigated. The insulin secretion (insulin total area under the curve– AUC; and insulinogenic index-IGI), insulin-resistance (homeostasis model assessment - HOMAIR), plasma glucose level (PGL) and %HbA1c using the Oral Glucose Tolerance Test(OGTT) were assessed before surgery and at 3rd days, 6th,12th,24th and 36th months after LSG. At the same time, %EWL, Ghrelin and GLP-1 levels were determined. The statistical analysis was performed by Chi-square test and Pearson correlation(r).

Results

During the follow-up the resolution rate of DM2 was 9.4%,42.3%,71.8%,81.2% and 91.8% respectively. Ghrelin plasma concentrations decreased significantly after LSG (271.5 ± 24.5 pg/ml vs. 122.4 ± 23.4 pg/ml, $p=0.04$) GLP-1 plasma concentrations increased significantly after LSG (1.72 ± 2.60 pg/ml vs. 2.54 ± 3.45 pg/ml, $p=0.04$). %EWL and IGI presented a positive linear correlation(r) at all follow up time with a strong positive correlation at 12th and 24th month. A strong negative correlation was recorded between the Ghrelin and IGI during the first 3 Days ($r=-0.87$). GLP-1 and IGI presented a strong positive correlation at 3rd day and 6th month, 0.81 and 0.84 respectively.

Conclusion

The LSG may affect glucose homeostasis by two different time-related mode: a first step where the hormonal changes play a predominant role in glucose homeostasis and a second step where the % EWL determines the metabolic results.

O.052

COMPARING SLEEVE GASTRECTOMY TO SINGLE STAGE BAND REMOVAL AND CONCOMITANT SLEEVE GASTRECTOMY, ANALYSES OF 98,298 PATIENTS

Sleeve gastrectomy

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Background

The objective of this study is to compare the outcomes of laparoscopic sleeve gastrectomy (LSG) to single-stage band removal and sleeve gastrectomy (BR/LSG).

Methods

Patients who underwent LSG and BR/LSG were identified in the MBSAQIP database. Patient characteristics (age, sex, BMI, history of cardiac disease, hypertension, hyperlipidemia, DVT, diabetes, dialysis, mobility, pulmonary embolism, smoking, steroid use, albumin, hematocrit levels) and perioperative outcomes (hospital stay, renal failure, infection, organ-space infection, MI, pneumonia, PE, sepsis, septic shock, transfusion, re-intubation, ICU admission, DVT, death, conversion to open re-operation, readmission) were recorded. Multivariable regression analyses were performed to evaluate the effect of LSG vs BR/LSG on outcomes. To analyze the outcome variables effected, factors were further investigated with binary logistic regression.

Results

98,298 patients were identified. (93,852-95.8% LSG, 2,978-4.2% BR/LSG). Mean operative time was longer for BR/LSG (113.6 vs. 76.41 min). After correction for confounding factors; conversion to open (OR 1.931, $p < 0.001$), re-operation (OR 1.931, $p < 0.001$), readmission (OR 1.283, $p = 0.009$), drain placement (OR 1.159, $p = 0.001$), septic shock (OR 1.719, $p < 0.001$) were higher in the BR/LSG group. No difference was seen for death, sepsis, MI, PE, renal failure, pneumonia, organ-space infection, ICU admission, transfusion and re-intubation. For septic shock, previous cardiac surgery (OR 3.541, $p = 0.048$), age (OR 1.032, $p = 0.04$), pre-op DVT (OR 3.803 $p = 0.043$) were seen to be a significant factors.

Conclusion

BR/LSG can be performed with low risk of adverse events. However the risk of readmission and reoperation is higher, and older patients and patients with previous cardiac surgery are under increased risk of complications.

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O.053

SLEEVE GASTRECTOMY IN THE ERA OF ROBOTIC SURGERY: A META-ANALYSIS

Sleeve gastrectomy

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Introduction

Laparoscopic sleeve gastrectomy (LSG) is a standalone bariatric procedure that has gained increased popularity among bariatric surgeons and morbidly obese patients. Robotic sleeve gastrectomy (RSG) has been proposed as an alternative approach to conventional LSG.

Objectives

The aim of this study is to review the available literature on obese patients treated with robotic or laparoscopic sleeve gastrectomy, in order to compare the clinical outcomes of the two approaches.

Methods

A systematic literature search was performed in PubMed, Cochrane library, Scopus and EBSCO Host databases, in accordance with the PRISMA guidelines. Random or Fixed-Effects models were used appropriately. Between-study heterogeneity was assessed through Cochran Q statistic and by estimating I^2 .

Results

Sixteen studies met the inclusion criteria (29,787 patients). RSG technique showed significantly increased mean operative time [WMD: -20.66 (-23.45, -17.88); $p < 0.0001$] and mean hospital stay [WMD: -0.25 (-0.30, -0.20); $p < 0.0001$]. Post-operative incidence of leakage [OR: 1.28 (CI: 0.54, 3.03); $p = 0.57$], wound infection [OR: 4.19 (CI: 0.20, 89.46); $p = 0.36$] and bleeding [OR: 1.76 (CI: 0.38, 8.09); $p = 0.47$], along with weight reduction were comparable. The RSG approach was associated with increased cost.

Conclusion

These results should be interpreted with caution due to the lack of randomized controlled trials. Well-designed, randomized controlled studies, comparing RSG to LSG, are necessary to assess their clinical outcomes and cost/effectiveness.

□
O.054

THE EFFECT OF BOUGIE SIZE ON THE OUTCOME OF LAPAROSCOPIC SLEEVE GASTRECTOMY – MID-TERM FOLLOW UP RESULTS

Sleeve gastrectomy

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Introduction

Sleeve gastrectomy (SG) is a prominent bariatric option. Though widely performed, no consensus exists regarding the optimal bougie size. Published outcome comparisons of different bougie sizes, lack mid-term outcome data. The main concern of utilizing larger bougies is the possible attenuation of the restrictive effect with stomach dilatation over time.

Objectives

Compare the mid-term effect of using a 42 Fr Vs 32 Fr bougie size on weight and weight-related comorbidities.

Methods

Patients were randomly assigned to undergo SG with 42 Fr (group A) and 32Fr bougie (group B). Weight, BMI and comorbidities were compared between the time of surgery, and 4 years later.

Results

Group A consisted of 59 patients and group B of 42 patients. Mean age (A- 40.8 ± 11.6 years; B - 44.4 ± 11.55 years), weight (A- 118.8 ± 17.4 Kg; B – 121 ± 19.1 Kg) and BMI (A - 42.6 ± 3.8 ; B- 43.7 ± 6.5) were similar (P=NS).

Four years post-surgery, both groups maintained the same weight reduction rate with similar mean BMI (A- 31.2 ± 5.0 ; B – 31.8 ± 5.2) and excess weight loss (A – $65.5 \pm 28\%$; B – $64.8 \pm 24.4\%$) (p=NS).

Similar improvement of comorbidities was apparent in both groups: complete remission or improvement of hypertension: (A – 84.2% ; B – 77% P=0.6), type 2 diabetes mellitus (A- 94.1% ; B- 77.8% . P= 0.16) and dyslipidemia (A- 70.6% ; B – 88.9% . P= 0.17)

Conclusion

There is no effect of bougie size (between 32Fr and 42Fr) on mid-term major outcome measures of SG.

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O.055

SLEEVE GASTRECTOMY PLUS JEJUNALJEJUNUM BYPASS FOR THE TREATMENT OF OBESITY: SHORT-TERM OUTCOMES

Sleeve gastrectomy

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Background

The obesity has become the heavy health burden in China and its prevalence is steadily increasing along with the Chinese socioeconomic development.

Introduction

Bariatric surgery represents the most effective and sustainable treatment of obesity, however, the most suitable bariatric procedure remains controversial.

Objectives

The objective of this investigation is to evaluate the therapeutic effect of sleeve gastrectomy plus jejunaljejunum bypass (SG+JJB)(2m of jejunum) and its complications comparing to the sleeve gastrectomy (SG) .

Methods

This was a retrospective study of 360 obese patients undergoing SG+JJB (n=129) and SG (n=231) with comparable male/female ratio, preoperative BMI and age. The excess weight loss (EWL) at 1 year and incidence of postoperative complications were compared between the 2 groups.

Results

The average of operating time (min) was 109.27 ± 25.77 and 72.34 ± 25.3 for SG+JJB and SG. And the average postoperative stay (days) was 3.72 ± 0.94 and 3.53 ± 1.10 for SG+JJB and SG. Major complications included mortality due to massive bleeding (SG+JJB n=1), leakage (SG+JJB n=1) and abdominal abscess (SG n=1). The average of EWL% at 1 year was $78.7 \pm 16.63\%$ (SG+JJB n=38) and $68.84 \pm 18.37\%$ (SG n=58). The incidence of Vitamin D deficiency (SG+JJB 26.3%, SG 19.0%), Vitamin B12 deficiency (SG+JJB 10.5%, SG 5.2%), anemia (SG+JJB 7.9%, SG 6.9%) and diarrhea (SG+JJB 0, SG 0) after SG+JJB is equivalent to SG.

Conclusion

SG+JJB is better than SG alone in terms of weight loss, meanwhile, SG+JJB is associated with equivalent nutrition status than SG in short term follow-up.

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O.056

AGE-RELATED EFFECTS OF BARIATRIC SURGERY ON EARLY ATHEROSCLEROSIS AND CARDIOVASCULAR RISK REDUCTION

Bariatric surgery in the over 65's

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Introduction

Carotid intima media thickness (CIMT) is increasingly used as a prognostic indicator for early atherosclerosis and the development of cardiovascular disease.

Objectives

The objective of this study is to assess the exact effects of bariatric surgery on CIMT reduction in different age groups.

Methods

CIMT was measured just proximal to the bifurcation of the carotid artery in 166 patients with mean body mass index of 43.4 ± 4.8 kg/m² before and at 6 and 12 months after bariatric surgery. Preoperative CIMT and Framingham Risk Score (FRS) were compared to measurements at 6 and 12 months postoperatively. Impact of age on CIMT change and cardiovascular risk reduction was analyzed.

Results

Mean CIMT values at 12 months after bariatric surgery were significantly lower compared to baseline (0.619mm vs. 0.587mm, $p=0.005$ in women and 0.675mm vs. 0.622mm, $p=0.037$ in men, respectively), and these effects were statistically significant in all age groups. The mean reduction of CIMT for patients <50 years at 12 months was 0.043mm, while CIMT was reduced with 0.013mm for patients ≥ 50 years ($p=0.022$). At 12 months after bariatric surgery, FRS had decreased with 52% in patients <50 years as compared with 35% in patients ≥ 50 years ($p=0.025$).

Conclusion

Bariatric surgery resulted in a significant CIMT decrease in patients with morbid obesity in all evaluated age categories. These beneficial effects of bariatric surgery were more pronounced in younger age categories, while cardiovascular risk reduction by bariatric surgery appeared inferior in patients of 50 years and older.

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O.057

LAPAROSCOPIC SLEEVE GASTRECTOMY IN THE ELDERLY

Bariatric surgery in the over 65's

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Introduction

With increasing experience in surgical technique and perioperative care, bariatric surgery is now being offered to patients in their seventh or even eighth decade. In this patient population, the physiological reserves are limited, complications can be life threatening, and their surgical benefit is questionable as their life expectancy is shorter.

Objectives

To assess the safety and outcome of sleeve gastrectomy in patients over the age of 65, and compare these results to a similar group of younger patients undergoing the same procedure.

Methods

A retrospective analysis of a prospectively collected database of patients who underwent sleeve gastrectomy for morbid obesity between the years 2010-2015. Patients above the age of 65 were selected and compared to a randomly selected matched control group of younger patients.

Results

There were 65 patients in each group. The mean age was 67.6 \pm 2.6 years (range 65-76 years) vs. 38.4 \pm 11 years (range 18-64 years) in the control group.

Pre-operative BMI was similar (44 Kg/m² vs 42 Kg/m², p=0.17), but the study group had significantly higher rates of obesity related co-morbidities.

Median length of stay for the study and control groups was 4 and 3 days, respectively. Early complication rates were similar.

At an average follow up of 21 months (range 6-47 months) %EBMIL was 55% vs 75.7% for the study group and the control group, respectively (p<0.0001). Both groups showed significant improvement or resolution in their co-morbidities.

Conclusion

Bariatric surgery in patients above 65 years of age is safe and effective. Weight loss outcomes are inferior.

□
O.058

SAFETY AND EFFICIENCY OF SLEEVE GASTRECTOMY IN ELDERLY PATIENTS

Bariatric surgery in the over 65's

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Background

Bariatric surgery improves weight loss and metabolic profile.

Introduction

There is reluctance in performing such operations in older patients, with the rationale that the morbidity of the procedures outweighs long term benefits.

Objectives

In this study we present the safety and efficacy of laparoscopic sleeve gastrectomy (LSG) in older patients.

Methods

28 patients, (5 men, 23 women), aged 65-70 years (median 67) underwent LSG in the years 2010-2015 by a single surgeon. Preoperative BMI ranged 40-66 (median 48). ASA score was 3. All suffered from one or more of the following conditions: arterial hypertension, diabetes mellitus, dyslipidemia, hyperuricemia, chronic obstructive pulmonary disease (COPD), sleep apnea, chronic musculoskeletal pain. Follow up was 6-66 months (median 40). Weight loss, complications and metabolic changes were documented and the efficiency of the operation was measured with BAROS score and Moorehead-Ardelt Quality of Life Questionnaire II (QoL).

Results

There was no mortality. There was 1 major complication (severe postoperative pneumonia) and 3 minor complications (1 dehydration and 2 rhabdomyolysis). Average weight loss was 67% of excess weight. Hypertension improved in 70% of cases, diabetes mellitus in 71%, dyslipidemia in 60%, hyperuricemia in 75%, COPD in 80%, sleep apnea in 100% and musculoskeletal pain in 67%. Average QoL score was 1.6 (Good) and average total BAROS score was 5.3 (Very Good).

Conclusion

Complication rates were low. Long term results in weight loss, health improvement and satisfaction were very good and comparable to younger ages. Finally, LSG is safe and effective in carefully selected elderly patients.

□
O.059

INCIDENCE AND RISK FACTORS FOR INTENSIVE CARE UNIT ADMISSION AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY IN HIGH RISK ELDERLY: SAFETY AND FEASIBILITY.

Bariatric surgery in the over 65's

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Introduction

Obesity affects the aging population; leading to increased prevalence of age and obesity associated co-morbidities; including diabetes, hypertension and cardiovascular diseases leading to increased morbidity and mortality.

Objectives

To determine the incidence, indications, and outcomes of planned ICU admission in elderly, high-risk patients after laparoscopic sleeve gastrectomy in addition to safety and efficacy.

Methods

Retrospective review of prospectively collected data for all patients ≥ 60 years who underwent LSG (2011- 2016) in Hamad hospital in Qatar

Results

52 patients (60-75 years old) with mean (64 ± 3.5 SD), were followed for 23 ± 16 months. Comorbidities included DM (71%), HTN (73%), and CAD (9.6%). American Society of Anesthesiologists (ASA) Score was 3 ± 0.44 . The Obesity Surgery Mortality Risk Score (OS-MRS) was 2.5 ± 0.85 , with 77% in intermediate risk group. Twelve patients (23%) required ICU admissions for 1.5 ± 0.5 days; all were ASA-3 and intermediate to high risk on OS-MRS. No reported mortality. One case developed leak and one case had port site hernia. The mean weight and BMI decreased from 123 ± 27.3 kg and 49 ± 10.6 kg/m² to 93.9 ± 15.7 kg and 37.6 ± 10.1 kg/m² respectively. %BMIL, %TWL and %EWL were 22.3 ± 11.5 , 23.1 ± 11.3 and 44.3 ± 21.9 . 30% of diabetics had resolution and 65% decreased their medications. HbA1c dropped from 7.97 ± 1.79 to 6.49 ± 1.47 at one year and 5.98 ± 1.1 at 5 years ($p = 0.0001$). 51 % of hypertensive patients reduced their medications and 25% had resolution.

Conclusion

LSG is feasible and safe in high risk elderly patients. Pre-operative risk assessment and planned ICU admission should be predicable

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O.060

COMPARATIVE OUTCOMES OF TOTALLY ROBOTIC ROUX-EN-Y GASTRIC BYPASS (TR-RYGB) IN MATCHED PATIENTS AGED ≥ 65 VERSUS ≤ 50 YEARS

Bariatric surgery in the over 65's

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Background

Many bariatric programs consider advanced age a contraindication to bariatric surgery due to greater perioperative health issues, a higher risk for morbidity and mortality, and suboptimal weight loss.

Introduction

The robotic system with its enhanced visualization and dexterity may improve outcomes for older patients.

Objectives

To determine the effects of TR-RYGB on morbidity and mortality, weight loss and the incidence of early weight regain in gender- and BMI-matched patients aged ≥ 65 and ≤ 50 years(y).

Methods

The population included 208 patients ≥ 65 y (mean=67.8y) and 208 ≤ 50 y (mean=47.7y). BMI for both groups averaged 46 kg/m² and gender distribution was 125F/83M. Outcomes included: morbidity, mortality, weight loss at 6, 12, 24, 36 months, and incidence of early weight regain ($\geq 5\%$ initial loss).

Results

At baseline, older patients had significantly ($p < 0.0001$) more health issues. Intraoperatively, there was one conversion to an open procedure within the older group, but there were no significant differences ($p > 0.05$) between the younger vs. older patients for operative time (122 vs. 125 minutes, respectively), length of hospital stay (2.20 vs. 2.59 days), or in-hospital complications (2.41% vs. 2.59%). Both groups had identical 30-day readmission rates (5.79%), reoperations (3.7%), and mortality ($n=1$ each). Total weight loss was significantly ($p=0.04$) greater for younger patients at 6 and 12, but not at 24 and 36, months. Approximately 1/3 of both groups experienced early weight regain.

Conclusion

TR-RYGB is a safe and effective procedure for severely obese patients aged ≥ 65 y, with rates for morbidity and mortality, longer-term weight loss, and early weight regain comparable to BMI- and gender-matched ≤ 50 y patients.

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O.061

OUTCOMES OF BARIATRIC SURGERY IN THE 65+ YEARS OLD PATIENTS: EXPERIENCE OF A BARIATRIC CENTRE OF EXCELLENCE

Bariatric surgery in the over 65's

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Introduction

Still few data demonstrate the long term benefit of bariatric surgery on 65+ year old patients, supposed to experience a greater range of post-operative complications and a less important weight loss than younger patients.

Objectives

Analyze the safety and effectiveness of bariatric surgery in a cohort of 65+ years old patients.

Methods

Retrospective analysis of 43 patients older than 65 years out of 2.508 cases who underwent bariatric surgery at our centre, between January 2008 and December 2016, with a mean follow up of 2 years.

Results

Mean age was 67 (range: 65-73) and mean BMI 42,3 kg/m² (range: 31,6-59,6); we considered as major comorbidities: invalidating osteoarticular diseases, sleep apneas, arterial ipertension and diabetes mellitus. 34,9% of patients had one comorbidity, 18,6% showed two, 30,2% reported three and 4,7% had all the considered comorbidities. 14% of patients had none of the above mentioned, but were considered eligible to surgery for a BMI > 50, a RGB intolerance or uncontrolled hypothyroidism. Complication rate after surgery was 2,3% (one abdominal abscess). Mortality rate was 0%. Mean post-operative length of stay was 5 days (3-20). On patients eligible for two years follow up, we observed a mean weight loss of 38 Kg, with 72% as mean percentage of excess weight loss. There was complete resolution of sleep apnea, a neat reduction of osteoarticular diseases (-44%), arterial hypertension (-53%) and diabetes mellitus (-42.8%).

Conclusion

Bariatric surgery is safe and feasible in elderly patients and reduces the effects of severe comorbidities in selected cases who can't achieve weight loss otherwise.

O.062

THE EFFECT OF OBESITY ON ANTI/XA CONCENTRATIONS IN BARIATRIC PATIENTS

Medical management of bariatric patients

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Introduction

Morbidly obese patients have an increased risk to develop venous thrombo-embolism (VTE), especially after bariatric surgery. Adequate postoperative thrombosis prophylaxis is of utmost importance. It is assumed that morbidly obese patients need higher doses of low molecular weight heparin (LMWH) compared to normal-weight patients, however; current guidelines based on relative efficacy in obese populations are lacking.

Objectives

First, the relationship between body weight descriptors and anti-Xa activity were evaluated prospectively. Second, the dose-linearity of LMWH in morbidly obese patients was determined.

Methods

Patients were scheduled for a Roux-en-Y gastric bypass with a total bodyweight (TBW) of ≥ 140 kg. Patients ($n=50$, 64% female) received a daily postoperative dose of 5700IU of nadroparin for 4 weeks. Anti-Xa activity was determined four hours after the last nadroparin administration. To determine the dose-linearity, anti-Xa was determined following a pre-operative dose of 2850IU nadroparin in another 50 patients (52%).

Results

TBW of the complete group was 148.5 ± 12.6 kg. Mean anti-Xa activity following 5700IU nadroparin was 0.19 ± 0.07 IU/ml. Of all patients, 32% had anti-Xa levels below the prophylactic range. Anti-Xa activity inversely correlated with TBW (correlation coefficient -0.410) and Lean Body Weight (LBW; correlation coefficient -0.447), 67% of patients with a $LBW \geq 80$ kg had insufficient anti-Xa activity concentrations. No VTE-events occurred.

Conclusion

In morbidly obese patients, a postoperative dose of 5700IU of nadroparin resulted in sub-prophylactic exposure in a significant proportion of patients. Especially in patients with $LBW \geq 80$ kg a higher dose, may potentially be required to reach adequate prophylactic anti-Xa levels.

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O.063

VALIDITY OF A SIMPLE SLEEP MONITOR FOR DIAGNOSING OSA IN BARIATRIC SURGERY PATIENTS

Anaesthesia and bariatric surgery

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Background

Obstructive sleep apnea (OSA) is present in 60–70 % of bariatric surgery patients. One-third of the patients have an AHI $\geq 15/h$, which is potentially life-threatening when not detected and managed appropriately.

Introduction

Standard polysomnography (PSG) is still the gold standard to diagnose OSA. However, performing PSG in all patients scheduled for bariatric surgery is time consuming and expensive. An accurate and simple screening tool able to rule out OSA would reduce the number of patients needing mandatory PSGs.

Objectives

To assess the validity of a simple sleep monitor (Checkme Health Monitor (BodiMetrics/Viatom Technology)) for diagnosing OSA in bariatric surgery patients.

Methods

Patients scheduled for bariatric surgery were prospectively enrolled in this study. All patients underwent pre-operative PSG and simultaneously used the Checkme to assess the desaturation index (DI). The diagnostic performance of the Checkme for apnea-hypopnea index (AHI) $\geq 15/h$ was assessed using Receiver Operating Characteristic (ROC) curve analysis.

Results

A total of 52 patients were included. The area under the curve (AUC) value expressed by the ROC curve was 0,89. For exclusive diagnosis (screening) the sensitivity with the optimal cutoff value of Checkme-DI $< 9/h$ was 100% to detect PSG-AHI $< 15/h$. For definitive diagnosis, the specificity with the optimal cutoff value of Checkme-DI $\geq 9/h$ was 63% to detect PSG-AHI $\geq 15/h$.

Conclusion

The Checkme is valid for exclusion of OSA in bariatric surgery patients, however it should not be used as a single diagnostic test. The Checkme has potential to be used as a screening tool for OSA in bariatric clinics.

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O.064

23HR/NEXT DAY DISCHARGE RATE AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (LRYGB)-CAN WE DO EVEN BETTER?

Enhanced recovery in bariatric surgery

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Introduction

Our unit employs an enhanced recovery programme aiming for 23 hour discharge post Laparoscopic Roux-en-Y Gastric Bypass (LRYGB). Despite this, a minority of patients are discharged later than 23 hrs.

Objectives

This study aimed to identify causes of delayed discharge (>23 hours post op), both preventable and non preventable, to facilitate improvements to our enhanced recovery programme.

Methods

We reviewed paper and electronic patient records to identify all delayed discharge LRYGB patients between January 2012 to December 2016. Reasons for delayed discharge were identified and compliance with post operative enhanced recovery protocols assessed. Identified reasons were assessed as to whether they were potentially preventable.

Results

427 LRYGB operations were performed. 69 (16%) patients stayed in hospital beyond 23 hours. Potentially preventable reasons for delayed discharge were identified in 27 (39%) delayed discharge patients: pain (n-17, 24%) and nausea or vomiting (n-10, 14%). Non preventable reasons included: tachycardia (pulse >100/min) (n-10, 14%), minor peri-operative complications (n-22, 31%) and unclear reason (n-10, 14%).

Of patients delayed due to pain, nausea or vomiting (n-27), 11 (41%) had incorrectly prescribed analgesic / antiemetic regimens and 6 (22%) had medications incorrectly administered.

Conclusion

23hour / next day discharge was achieved in 84% of patients. Potentially preventable reasons for delayed discharge: analgesic and anti emetic treatment protocol deviations, were identified in a further 6% of patients. Improved adherence to treatment protocols has the potential to improve 23-hour discharge rates to 90%.

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O.065

FACTORS PREDICTIVE OF DAY ONE DISCHARGE AFTER BARIATRIC SURGERY

Enhanced recovery in bariatric surgery

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Introduction

Enhanced recovery programs which facilitate early discharge in bariatric patients are now relatively common. Predictive factors for early discharge have not been clearly identified.

Objectives

We aim to identify factors predictive of early discharge.

Methods

A retrospective review was performed of patients undergoing bariatric surgery over a three year period. Patients undergoing roux-en-y gastric bypass (RYGB) or sleeve gastrectomy (SG) were included. Patients were managed within an enhanced recovery program with the expectation that they would be discharged on day one post-operatively. Binomial logistic regression analysis was used to determine which factors influenced length of stay post-operatively.

Results

507 patients undergoing laparoscopic RYGB or SG were identified. 359 (70.8%) were female and the mean age was 47 (range 19-71). The mean preoperative BMI was 45.9 (range 33.3-80.6). The median length of stay was 1 day (range 1-214). Day one discharge was achieved in 268 (52.9%) and 415 (81.9%) were discharged within 48 hours. Logistic regression demonstrated that SG (OR= 3.323, $p < 0.0001$) and a BMI > 50 (OR= 1.628, $p = 0.03$) were independently associated with failure of day one discharge. Female gender also appeared to be associated with failure of day one discharge but this only approached statistical significance (OR= 1.551, $p = 0.054$). Age or comorbidity status were not significant predictors of post-operative length of stay according to our model. Overall readmission rate was 4.9%.

Conclusion

Day one discharge is safe after bariatric surgery but is less likely in patients undergoing SG and in those with BMI > 50 .

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O.066

DOES INTRA-PERITONEAL LOCAL ANESTHETIC IMPROVE OUTCOMES IN ERABS-A DOUBLE BLIND RCT.

Anaesthesia and bariatric surgery

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Background

Well established ERAS protocols have been widely implemented but their application to patients with morbid obesity is limited.

Introduction

Enhanced Recovery after Bariatric Surgery (ERABS) is a relatively new area of perioperative medicine where ERAS principles can be applied to Bariatric Surgery [1,2].

Objectives

The aim of this RCT was to evaluate the clinical efficacy of adding Intra-peritoneal Local Anesthetic (IPLA) to a standardized ERABS protocol.

Methods

After approval from federal regulatory agencies and local REB, we followed our peer reviewed trial protocol which was published a priori [3]. Morbidly obese patients undergoing elective laparoscopic Roux-En-Y gastric bypass were recruited to this double-blinded, placebo controlled RCT. After consent, a standardized ERABS protocol included preparation with peak expiratory flow (PEF) and 6-minute walk test (6MWT) measurements [4, 5]. A standardized surgical and an opioid-sparing anesthetic protocol was followed. Participants were randomized to either peritoneal irrigation of IPLA (0.2% Ropivacaine 100mL) or normal saline solution. Outcomes included pain scores, analgesic consumption, adverse effects, quality of recovery and comparison to baseline 6MWT and PEF.

Results

120 individuals were screened for eligibility of these 92 (77%) individuals were recruited and 100% completed the study. Multivariate analysis showed no significant difference between the two groups in primary or secondary outcomes. There were no serious or unexpected adverse events.

Conclusion

The cohort of patients undergoing bariatric surgery offer a unique opportunity to assess the efficacy of ERABS protocols and individual interventions. While IPLA did not improve outcomes, this trial confirms the clinical benefits of preoperative patient preparation and intraoperative protocol standardization.

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O.067

RISK FACTORS FOR PROLONGED LENGTH OF HOSPITAL STAY AND READMISSIONS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY AND LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS

Enhanced recovery in bariatric surgery

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Background

ERAS protocol has reduced length of stay (LOS) and lowered morbidity.

Introduction

There are still non-adherent patients, in case of who standard LOS appears to be too short. Shorter LOS may increase readmissions rate. Therefore, we analyzed risk factors for both.

Objectives

Study aim was to identify risk factors for prolonged LOS and readmissions.

Methods

Prospective, observational study with post-hoc analysis of patients who underwent primary LSG or LRYGB in academic, teaching hospital with implemented ERAS. Exclusion criteria: perioperative complications (30-days). Patients were informed about target LOS of 3 days. Risk factors for prolonged LOS and readmissions in the 6-months postoperative period were analyzed. From 2013 to 2016, 492 patients met inclusion criteria [310 females, 182 males, aged 42 (34-51)].

Results

LOS >3 days occurred in 145 (29.47%) patients, 79 after LSG (25.82%) and 66 after LRYGB (35.48%; $p=0.008$). In multivariate logistic regression, LOS was prolonged by decreased oral fluid intake (OR: 1.30, CI: 1.14-1.49), increased intravenous fluid volume administered on POD0 (OR: 1.71, CI: 1.03-2.82) and increased distance from home to hospital (OR: 1.59, CI: 1.26-2.01). Readmission rate was 5.89% ($n=29$), with no difference for surgeries ($p=0.172$). In multivariate logistic regression, intraoperative adverse events (OR: 4.20, CI: 1.17-151.14) and decreased oral fluid intake on POD0 (OR: 1.85, CI: 1.01-3.45) increased risk for readmission.

Conclusion

Decreased oral fluid intake and increased iv. fluid administration on POD0 and longer distance from habitual residence to bariatric center are contributing to prolonged LOS. Intraoperative adverse events and decreased oral fluid intake seem to increase risk for readmission.

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O.068

LARGE EXPERIENCE AND IMPACT OF EARLY DISCHARGE OF 4894 PATIENTS IN FOUR YEARS AT A SRC BARIATRIC CREDITED CENTER

Enhanced recovery in bariatric surgery

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Introduction

In the past few years, obesity surgery has undergone a decrease in morbidity and mortality rates. Therefore, with accumulated experience in the last four years we began to discharge patients earlier, thus reducing costs and risk of complications associated to hospital stay.

Objectives

Analysing mean time of hospitalization, 30-day readmission and compared two criteria for discharge: aggressive applied in the first three years and a milder one performed in 2016

Methods

Observational study of 4894 consecutive patients submitted to Laparoscopic Roux-en-Y Gastric Bypass and Sleeve Gastrectomy in a SRC credited center in the past four years. The two criteria are: Aggressive (1) absence of indication to ICU, (2) patients living in the same city of surgery, (3) absence of intra-operative complications, and (4) less than three comorbidities; and Milder when we only stopped pre-discharge in patients who needed ICU hospitalization or previous surgery like revisional surgery and large hiatus hernia.

Results

We operate 3189 patients between January 2013 and December 2015 and 1705 patients in 2016. Mean time of hospitalization of those patients was 60h (2013), 37,3h (2014), 29,2h (2015) and 23,7h (2016). Of the first group, 2360 patients (74%) were included in our criteria and 2171 patients (92%) received early discharge. On the second group 1668 patients (98%) were included and 1596 (96%) received early discharge. 30-day readmissions kept at lower level in both groups (3,8% vs 2,8%, respectively)

Conclusion

The adoption of milder criteria increased early discharge, reducing hospitalization mean time and maintaining low readmission rates.

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O.069

ENHANCED RECOVERY AFTER BARIATRIC SURGERY IN A SINGLE HIGH-VOLUME CENTER

Enhanced recovery in bariatric surgery

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Introduction

The number of bariatric procedures is rising worldwide. In order to increase quality and efficiency, the optimization of the surgical pathway is mandatory. An Enhanced Recovery After Bariatric Surgery (ERABS) protocol maybe the key to success.

Objectives

To demonstrate safety, feasibility and efficiency of ERABS.

Methods

Coming from a prior fast track experience developed in another hospital, in July 2015 we established a bariatric unit in a tertiary care center where bariatric surgery was never practiced before. A dedicated training session was given to anesthesiologists and nurses. Our ERABS protocol consists of optimization of comorbidity before the operation, counseling patients and relatives, parallel team-work, intubation in videolaryngoscopy, short acting drugs for anesthesia, standardized surgical procedures without nasogastric tube, drain and urinary catheter, walking and drinking water in recovery room 30 minutes after awakening.

Results

Until March 2017, 1288 patients were treated following the ERABS protocol: 1146 sleeve gastrectomy, 117 gastric bypass and 25 biliopancreatic diversion. From a retrospective review of a prospectively maintained database, we found that the average length of hospital stay (LOS) was 2.1 days. Mean surgical time (ST) and anesthesiology/patient positioning time (APT) were 63 and 24 minutes, respectively. Early complication rate was 3.95%. Mortality rate was nil. We had 10 (0.77%) readmissions to the hospital, and 0.69 % of the patients required reoperation.

Conclusion

An ERABS protocol allows to reduce the LOS and to shorten ST and APT of the procedures, maintaining a low complication rate. We can conclude that an ERABS protocol is feasible, safe, and efficient.

□
O.070

AIS CHANNEL: LEARNING BARIATRIC SURGERY WITH THE LATEST TECHNOLOGIES

Technology and bariatric surgery

#O.70

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Background

Technologies have been put at the service of surgery, helping on the tremendous advancement of the techniques. Hand in hand with the new technologies, surgical training has also experienced an enormous progress such as online video-based education websites, or virtual reality training simulators.

Introduction

AIS Channel was created as a free online-based website for new minimally invasive techniques, mainly Bariatric and Colorectal. Live surgeries, live congresses, videos, or on-site course are some of the different teaching and learning tools available through AIS Channel.

Objectives

Describe Advances In Surgery (AIS) Channel´s task on the training of Bariatric surgeons worldwide.

Methods

Analysis of the AIS Channel website data on 2016 was performed. Number of live events, website publications, new registrations, visitors, and scientific publications related to bariatric surgery are gathered.

Results

AIS Channel broadcasted live over 15 live bariatric procedures performed by international surgeons over the last year. Revisional procedures were the main focus, including conversion of sleeve gastrectomy to gastric bypass, or endoscopic revision on Roux-en-Y Gastric bypass stoma dilation. The last live event held in March 2017 counted with over 16500 surgeons connected worldwide from 102 countries, where international experts discussed about sleeve gastrectomy. Three scientific papers were published. More than 40 videos, news, and debates related to bariatric procedures were published last year.

Conclusion

AIS Channel was created blending innovative learning tools, and has been endorsed by scientific and academic institutions, upholding as a key reference point on the minimally invasive techniques training, particularly for Bariatric surgery.

O.071

INVESTIGATING NUTRITIONAL DEFICIENCIES PRE AND POST LAPAROSCOPIC SLEEVE GASTRECTOMY

Nutrition after bariatric surgery

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Introduction

Laparoscopic sleeve gastrectomy (LSG) been shown to be effective in achieving significant weight loss and resolving the obesity related co-morbidities. However the nutrition consequences beyond one year post op have not been extensively explored.

Objectives

This study aims to investigate weight loss and nutritional deficiencies in patients pre and three years post op.

Methods

Retrospective data of patients who had undergone LSG was collected. Data included pre and post-op; anthropometry, nutritional markers (haemoglobin, Fe studies, Folate, Ca, PTH, vitamin D and B12) and compliancy with supplementations. Comparisons between the proportions with deficiency pre and post surgery were compared using chi square tests.

Results

During 2010–2013, 857 patients (male:female; 248:609), aged 47±12 years with a preoperative BMI of 43±7 kg/m² underwent LSG. Weight loss at 1, 2 and 3 years post-op was 37±14, 36±15 and 33±14 kgs respectively. The prevalence of deficiencies preoperatively included haemoglobin (11%), low ferritin (14%), elevated PTH (27%), vitamin D (57%), vitamin B12 (2%). Deficiencies three years post-op, included low haemoglobin (14% females, P=0.020), low ferritin (23%, P=0.008), elevated PTH (16%, P=0.008) and vitamin D (18%, P=0.005). Sixty seven percent of patients reported compliancy with multivitamin supplementation.

Conclusion

Sleeve gastrectomy results in durable weight loss 3 years post op. Nutritional deficiencies, in particular vitamin D deficiency are prevalent among the bariatric surgical candidate. Postoperatively some of these deficiencies improve, however others persist or exacerbated. Therefore routine nutrition monitoring and multivitamin and mineral supplementations are essential to maintain optimal nutritional status.

O.072

EFFICACY OF ORAL VERSUS INTRAMUSCULAR VITAMIN B12 SUPPLEMENTATION FOLLOWING ROUX-EN-Y GASTRIC BYPASS, A RANDOMIZED CONTROLLED TRIAL

Nutrition after bariatric surgery

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Introduction

After Roux-en-Y Gastric Bypass (RYGB), due to micronutrient malabsorption, patients often develop a vitamin B12 deficiency. No randomized controlled trial (RCT) on B12 supplementation in RYGB patients has yet been performed.

Objectives

Investigate whether oral supplementation normalizes vitamin B12 concentrations (serum vitamin B12 > 200 pmol/L) in deficient RYGB patients, as compared to intramuscular injections.

Methods

A RCT in vitamin B12 deficient RYGB patients. Group 1 received bimonthly intramuscular hydroxocobalamin injections (2000 µg as loading dose and 1000 µg at follow-up). Group 2 received daily doses of oral methylcobalamin (1000 µg). Serum vitamin B12 methylmalonic acid (MMA) and homocystein (Hcy) were determined at baseline (T0) and at 2 (T1), 4 (T2) and 6 (T3) months.

Results

Fifty patients were randomized, 27 in group 1 and 23 in group 2. Mean T0 vitamin B12 concentration was 170 ± 20.4 pmol/L. At T1 vitamin B12 deficiency resolved in 93% and 96% of patients (p=0.56) and at T3 in 100% in both groups. Mean vitamin B12 concentrations at T3 were 337.4 ± 94.1 pmol/L in group 1 and 377.4 ± 156.1 pmol/L in group 2 (p=0.48). MMA normalized in 100% versus 96% at T3 (p=0.46). At T0 Hcy was raised in 15% in group 1 and 22% in group 2 (p=0.39) and normalized at T3 in 96% of group 1 versus 87% in group 2 (p=0.26).

Conclusion

The efficacy of oral vitamin B12 supplementation versus hydroxocobalamin injections were similar in the present RCT. Oral supplementation can be used as a primary treatment option or as an alternative to hydroxocobalamin injections to treat vitamin B12 deficient RYGB patients.

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O.073

METABOLIC DEFICIENCIES DURING THE FIRST YEAR AFTER A RESTRICTIVE BARIATRIC OPERATION- A SINGLE CENTRE EXPERIENCE

Nutrition after bariatric surgery

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Background

Bariatric surgery has resulted in an effective, long-term loss of excess weight in morbidly obese patients with a simultaneous improvement of their metabolic profile.

Introduction

Another aspect of bariatric surgery is vitamins malabsorption that requires administration of supplements.

Objectives

The purpose of this study is to ascertain the incidence of metabolic deficiencies after restrictive bariatric operations (gastric sleeve or plication).

Methods

Retrospective study of morbidly obese patients that underwent restrictive bariatric operations during the years 2010-2016. Levels of folic acid, B12, ferritin and serum protein were measured 3, 6 and 9 months postoperatively. 604 patients were included in the study. In cases of deficiency, supplements were administered.

Results

Out of 604 patients, 118(19.5%) presented with low folic acid levels, 17(2.8%) low B12, 66(10.9%) low ferritin and 35(5.8%) low serum protein levels. The abnormalities presented mostly at 3 months and tended to improve at 6 and 9 months. 5 cases proved refractory to folic acid administration, 4 to iron administration and 5 cases of B12 deficiency endured, 2 because of patient noncompliance to parenteral administration.

Conclusion

Restrictive bariatric operations are followed by a drop of consumed calories and fat but also by vitamin deficiencies, especially water soluble, to a degree that requires supplementation. It is pending whether it is because of changes to the anatomy and physiology of the GI tract or because of changes in eating habits. In any case the monitoring and support of a dietician is imperative to ensure a balanced diet and a healthy weight loss.

□
O.074

LONG-TERM NUTRITIONAL DEFICIENCIES FOLLOWING SLEEVE GASTRECTOMY – FIVE YEAR OUTCOMES IN 108 CASES.

Nutrition after bariatric surgery

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Introduction

Sleeve gastrectomy is associated with post-operative nutritional deficiencies in the short term. There is lack of evidence regarding how these progress over time.

Objectives

To establish outcomes at five year follow up for sleeve gastrectomy regarding percentage excess weight loss (%EWL) and nutritional deficiencies.

Methods

Between January 2005 and September 2011 data from all patients undergoing sleeve gastrectomy (SG) at a single institution was collected. Post-operative follow-up involved review at 1, 3, 6 and 12 months and annually thereafter. Weight loss and nutritional deficiencies were recorded at each follow up visit.

Results

A total of 108 patients (81 females and 27 males) underwent SG during this time period. Median %EWL at 1 year post-operatively was 85.6% and 104 patients (96.3%) had over 50% EWL. Weight loss was well maintained at 5 year follow up with a median %EWL of 74.5% and 95 patients (88.0%) having over 50% EWL.

Pre-operative nutritional deficiencies included low haemoglobin (19.4%), iron (26.7%), ferritin (6.0%), folate (2.1%), B12 (3.1%), and magnesium (34.4%). Parathyroid hormone was elevated in 3.4%. At five year follow up significantly more patients had developed anaemia (40.1%; $p=0.001$), and reduced ferritin (44.0%; $p<0.001$). There was a significant increase in B12 deficiency (12.6%; $p=0.07$).

Conclusion

In this cohort of 108 patients weight loss was well maintained at five years following SG. Nutritional deficiencies at five year follow up included anaemia, low ferritin and reduced B12. This highlights the need for long term surveillance of nutritional status following SG and dietary supplementation should be continued long-term where necessary.

□
O.075

HIGH INCIDENCE OF VITAMIN D DEFICIENCY IN MORBIDLY OBESE IRISH PATIENTS UNDERGOING BARIATRIC SURGERY.

Nutrition after bariatric surgery

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Introduction

Serum 25-hydroxyvitamin D (25(OH)D) reflects both dietary intake and dermal production from exposure to UVB sunlight. The Irish population is at particular risk of deficiency due to low levels of UVB-induced dermal synthesis (Cashman, 2013).

Objectives

To determine the Vitamin D status of a series of patients undergoing bariatric surgery at a single institution.

Methods

Serum 25(OH) D immunoassay was performed on a consecutive series of patients undergoing bariatric surgery between January 2014 and February 2017. The relationship between Vitamin D status and age, sex, BMI and seasonal variation was evaluated using linear regression.

Results

A total of 189 patients were evaluated. Forty-five (24%) were male. The mean(SD) age was 48(10) years, the mean BMI was 49 (8) kg/m² and the mean Vitamin D was 41(24) nmol/L. This mean vitamin D level was lower than the national average of 60 (24) nmol/l.

Only 45 (25%) patients had normal vitamin D levels (> 50nmol/L), 74 (41%) had insufficient levels (<50 nmol/L) and 62 (34%) were deemed deficient (<30nmol/L). Each kg/m² increase in BMI was associated with a 0.7 nmol/L decrease in Vitamin D (95% CI -1.1 , +0.2) (p=0.001 linear regression). This relationship was independently significant on multiple regression analysis (-0.6, 95% CI -1.0—0.1, p=0.01 (table 1).

Conclusion

Vitamin D deficiency in patients undergoing bariatric surgery in Ireland is very common. This study highlights the importance of routinely analyzing vitamin D status in order that appropriate supplementation can be instituted at an early stage.

□
O.076

LONG-TERM (5-YEAR) BONE HEALTH IN ADOLESCENTS FOLLOWING ROUX-EN-Y GASTRIC BYPASS.

Bariatric surgery in children, adolescents and young adults

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Introduction

Little is known about long-term effects of gastric bypass (RYGB) on the adolescent skeleton. This is the first study examining long-term bone status after adolescent RYGB.

Objectives

To report dual-energy X-ray absorptiometry (DXA) and serum bone markers across 5 years.

Methods

Inclusion criteria included: age 13-18 years and BMI >35 kg/m². Seventy-two adolescents (22 boys; mean age 16.5 years; BMI 44.8 kg/m²) undergoing RYGB underwent DXA and serum bone marker analyses at baseline and 5 years, with comparison against 36 controls at 5 years.

Results

Mean BMI reduced across 5 years by 12.8±6.5 kg/m² after RYGB, increasing in controls by 3.3±7.6 kg/m².

Bone mineral density Z-score (BMD-Z) decreased after RYGB from an abnormally high baseline level (2.02±1.19) to within the normal range at 5 years (-0.16±1.01, p<0.0001), when it was lower than controls (0.78±1.38, p<0.0001). Most (68%) bone loss occurred within 2 years, when weight loss was occurring. A similar proportion of RYGB and control patients had a below-normal BMD-Z (<-1) at 5 years (17% vs. 11%, p=0.769).

After marked increases across year 1, bone synthesis (osteocalcin; P1NP) and resorption (CTX) markers returned toward baseline levels at 5 years, although P1NP (p=0.005) and CTX (p=0.005) remained slightly higher than baseline. All markers were higher after RYGB than in controls at 5 years (all p<0.01).

Conclusion

Increased bone turnover and decreasing BMD-Z, previously observed after adolescent RYGB, both attenuate during longer-term follow-up. Observed bone losses warrant prospective investigation of preventive measures, although compared with controls, the proportion reaching abnormally low BMD-Z appears lower than anticipated.

□
O.077

BARIATRIC SURGERY IN ADOLESCENTS: WHICH SURGERY IS BETTER?

Bariatric surgery in children, adolescents and young adults

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Introduction

33% of adolescents in western countries are overweight and obese, and 80% of them will become adult obese with associated comorbidities. Medical and behavioral intervention remains ineffective.

Objectives

To report our experience with bariatric surgery in adolescents over the last 13 years and their weight loss at 1 year.

Methods

From 2002 to 2016, 125 adolescents between 13-19 years old underwent bariatric surgery. Assessed by a multidisciplinary bariatric committee. At the beginning patients only underwent laparoscopic gastric banding (LGB); over the last 10 years, sleeve gastrectomy (LSG) and Roux en Y Gastric bypass (RYGB) were added.

Results

Number of patients for each surgery were: 40 LGB, 78 LSG and 7 had a RYGB. The average age and BMI were 17 (range 13-19) and 36,7 (range 30 - 53) for all three groups. All of them had at least 3 comorbidities, the majority resolved after surgery. Major complications included 2 cases of slippage (5%) in the LGB with removal. No complications in the LSG and 1 micronutrient deficiency (14%) in the RYGB group. No mortality. Mean excess weight loss at 1 year F/U was 54% for LGB, 85% for LSG group and 72 % for RYGB.

Conclusion

Laparoscopic bariatric surgery is safe in adolescents. In adequately selected patients with strict multidisciplinary follow up, it is effective to treat obesity in the adolescent. LSG and RYGB are more effective in terms of weight loss and safety over the LGB, which is no longer performed at our institution.

O.078

LIRAGLUTIDE USE IN PATIENTS WHO HAVE REGAINED WEIGHT AFTER BARIATRIC SURGERY: THE FIRST AUSTRALIAN EXPERIENCE

Medical management of bariatric patients

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Introduction

Significant weight regain is estimated to occur in 15-20% of patients who have had bariatric surgery, with few therapies proven to assist with further weight loss.

Objectives

The aim of this study was to investigate the efficacy and tolerability of liraglutide as an adjunct to bariatric surgery in patients with weight regain.

Methods

We performed a retrospective audit of patients who had a primary bariatric procedure performed and had regained >15% of initial weight loss post primary bariatric surgery. Patients were prescribed liraglutide (1.8- 3.0 mg /day up to 28 weeks) between March to November, 2016. Patients were followed up after 1, 4 and 7 months of liraglutide treatment.

Results

Data were available from 32 patients (25 females; mean age 43±11years, initial BMI= 49.6±19.3 kg/m²) who had undergone LSG (n=20), LAGB (n=11) and RYGB (n=1). Bariatric surgery induced a median weight loss of -33.0% (range -53.3 to -8.6%). Liraglutide commenced a median 1.1year after surgery (range 0.1-11.1 years) with significant %body weight loss after 1 (median=-2.7%, n=29), 4 (median=-5.3%, n=25) and 7 months (median=-7.2%, n=9) (all P<0.001). 50% of patients tolerated liraglutide, although 50% (16/32) of patients discontinued liraglutide due to side effects (n=8), insufficient weight loss (n=5), cost (n=7) and other (n=1).

Conclusion

Liraglutide can be used effectively as an adjuvant to induce a further 5-10% weight loss in patients who have regained weight after bariatric surgery, and is an overall well-tolerated pharmacotherapy. Follow-up of patients on liraglutide treatment is ongoing.

□
O.079

EARLY WEIGHT REGAIN FOLLOWING ROUX-EN-Y GASTRIC BYPASS

Management of weight regain after surgery

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Background

Roux-en-Y gastric bypass (RYGB) results in massive weight loss over the first postoperative year.

Introduction

Following initial weight loss, a subset of the population experience early weight regain.

Objectives

To determine the percentage of RYGB patients who experience early weight regain and to identify potential predictors, i.e. patient characteristics, magnitude of initial weight loss.

Methods

The study population included 330 totally robotic RYGB patients whose anthropometrics were examined at baseline and at postoperative months 6, 12, and 24. Individuals who gained $\geq 5\%$ of their initial weight loss between one and two postoperative years were identified as 'regainers'; those who lost $\geq 5\%$ of weight as 'losers'; and, and those with weight changes $< 5\%$ as 'sustainers. Prior to surgery, there were no significant differences between the groups with regard to age, BMI or gender distribution.

Results

One year postoperatively, weight loss averaged 46 kg for a total % change from baseline of 35%. By postoperative year two, 32.4% of patients maintained their initial one-year weight loss (sustainers); 34.2% (losers) lost additional weight; and 33.3% of the study population regained $\geq 5\%$ of their weight loss (regainers), with 20.1% regaining $\geq 10\%$ of the initial loss. Early weight regain was not associated with the magnitude of initial weight loss nor with age, baseline BMI, or gender.

Conclusion

Between one and two postoperative years, more than 1/3 of RYGB patients regain $\geq 5\%$ of their initial weight loss. As early weight regain may adversely affect long-term outcomes, recognition of this subset of patients and appropriate intervention is important.

O.080

TRANSORAL OUTLET REDUCTION POST ROUX-EN-Y GASTRIC BYPASS: EVALUATION OF A TREATMENT ALGORITHM USING TWO-FOLD RUNNING SUTURES

Management of weight regain after surgery

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Introduction

Endoscopic suturing plus argon plasma coagulation (ES-APC) of gastrojejunal outlet (GJ) is not always reimbursed for transoral outlet reduction (TORe). Further, it is unknown whether TORe via ES-APC as a single procedure is effective in achieving an outlet diameter <12mm at follow-up.

Objectives

To assess (a) the efficacy of performing TORe with a two-fold running ES-APC technique and, (b) a treatment algorithm that caters to the restrictions of reimbursement in the USA.

Methods

Patients who underwent TORe between August 2015 and March 2017 due to GJ ≥ 20 mm were included. Patients whose insurance declined prior-authorization for ES-APC underwent APC alone. On completion of the ES-APC procedure, outlet diameters were reduced to 8mm via two-fold running suture technique. Follow-up EGD was performed at 8 weeks (both ES-APC and APC alone) at which time further APC was performed if GJ ≥ 12 mm.

Results

Thirty-three patients (30F) were included. Twenty-two (66.7%) underwent ES-APC with insurance approval; the remainder underwent APC alone. Fifteen patients in the ES-APC cohort underwent follow-up EGD, of which 13 (86.7%) had GJ ≥ 12 mm and underwent further APC. Two patients (15.4%) of APC alone developed gastric stenosis, both successfully treated with a single balloon dilation. Mean % reduction in BMI post-TORe was similar in patients who underwent ES-APC or APC alone (9.33 vs 8.20%, P=0.3).

Conclusion

Despite the two-fold running suture TORe, further intervention using APC was necessary to achieve GJ diameter <12mm. This study highlights the necessity of follow-up endoscopic reassessment. APC alone is a viable strategy in patients not approved for endoscopic suturing.

□
O.081

DIGITAL SUPPORT GROUP (DSG) BETTER THAN ACTUAL IN POSTOPERATIVE MANAGEMENT AFTER BARIATRIC SURGERY

Post-operative care

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Background

The efficacy of Support Groups (SG) with post Bariatric Surgery patients is well documented. However, limitations to attend SG due to various factors has been leading to an alarming drop in attendees.

Introduction

This is the first study that attempts to study the impact of a DSG using WhatsApp messenger for post-operative patients as a medium of providing support and counseling.

Objectives

To determine whether DSG for counseling has an impact on enhancing weight loss and BMI reduction.

Methods

A prospective randomized trial double blind study with 120 patients was conducted using the Control group (n=60) who only attended (physical presence) monthly SG for counseling and support while another group of patients participated in a DSG (n=60), were engaged on daily basis for lifestyle modifications and Healthy Diet counseling. Weight and BMI for all patients were recorded pre-op and at post-op after 1 year (\pm 4 months) had elapsed since surgery.

Results

Mean BMI change in DSG was 41.13 kg/m² at baseline to 28.17 kg/m² at the end, and Mean BMI change in regular SG was from 42.63 kg/m² at baseline to 30.49 kg/m² at the end. (p value = 0.02401, calculated using One Tailed T- test method)

Conclusion

DSG that provided daily support, counseling and motivation was more effective than actual SG meetings. This could be an excellent tool to enhance results in this digital era.



O.082

CARE4TODAY BARIATRIC SOLUTION- OUTCOMES FROM A LARGE CENTRE

Technology and bariatric surgery

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Background

In the UK National Health Service, patients referred for bariatric operations must first achieve specific targets within a medically managed multidisciplinary (MDT) weight loss program or Tier 3.

Introduction

Care4Today is an interactive, multimedia software solution that provides additional education and monitoring of patients in Tier 3 program.

Objectives

To assess the added impact of Care4Today on Tier 3 completion rate, achievement of weight loss targets (WLT) - a set preoperative weight loss; and overall weight changes compared to those without the software.

Methods

Data from 678 patients in Tier 3 were collected prospectively from April 2015 to January 2017 at a large Bariatric Centre in England. Outcomes of the Care4Today cohort (Group A) were compared to the standard group (Group B). Time in Tier 3 was calculated from the time of initial assessment until MDT review.

Results

There were 125 patients in Group A and 553 in Group B. About 68% in both groups achieved their WLT (85/125 and 375/553 respectively). Median time in months to achieve WLT was 5(range 2-11) in Group A and 7 (range 4-20) in Group B. Median weight loss in Kg during this time was 5(range 3 to 47) in Group A compared to 3(range -19 to 29) Kg in Group B (the negative sign indicates weight gain).

Conclusion

Care4Today Bariatric Solution appears to halve the time in Tier 3 and reduces the likelihood of weight gain during this time. Potential implications are better patients education, higher through put to surgery and efficient use of limited healthcare resources.

□
O.083

A RANDOMISED TRIAL OF TEXT MESSAGE SUPPORT FOR REDUCING WEIGHT REGAIN FOLLOWING SLEEVE GASTRECTOMY

Young IFSO Session

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Introduction

Sleeve gastrectomy (SG) is a common bariatric procedure with high rates of weight regain (WR). Clinicians and patients have identified lack of follow-up support and maladaptive lifestyle behaviours as potential causes for WR. While text message support has been shown to be effective for weight loss in non-surgical patients, it has not been investigated for reducing WR in bariatric patients.

Objectives

This study aimed to determine the effectiveness of text message support in reducing WR following SG.

Methods

A text message intervention was designed. The effectiveness of the intervention was investigated by randomised trial powered to detect a 15% difference in the primary outcome of percent of excess weight loss (84 participants required). Secondary outcomes were the Bariatric Analysis and Reporting System (BAROS) score and patient satisfaction. Outcomes were assessed at six months and twelve months.

Results

Ninety-five participants were randomised to either standard care or text message support (daily text message for one year). There was no significant difference in the primary outcome at six or twelve months. Participants who received text messages had a significantly better BAROS score at twelve months. The majority of participants who received text message support found it beneficial, would like the messages to continue and felt WR was reduced by having the text message support.

Conclusion

Text message support following SG is feasible, liked by patients and improves the BAROS score.

O.084

VARIATION IN EXHALED VOLATILE ORGANIC COMPOUNDS IN PATIENTS UNDERGOING BARIATRIC SURGERY

Technology and bariatric surgery

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Introduction

Obesity is a global health burden for which surgical intervention has been shown to be a successful intervention. Associated pre-operative dieting and reconstruction of the gastrointestinal tract may result in major metabolic changes. However, current methods of measuring these changes are inadequate.

Objectives

Analysis of volatile organic compounds (VOCs) within exhaled breath in patients undergoing bariatric surgery.

Methods

Cross-sectional study design of patients attending for consideration of gastric bypass and sleeve gastrectomy. Sample time points were: (i) at the time of initial attendance and consideration for weight loss surgery before intervention; (ii) on the day of surgery after strict calorie controlled diet, and; (iii) >3 months after surgery. Breath samples, collected in steel bags, were analysed by SIFT-MS.

Results

A total of 15 males and 56 females were enrolled in this study: 38 patients pre-diet/surgery; 20 patients post diet and pre-surgery, and; 13 patients post-surgery. The median age was 51 (37-64) years and the median pre-intervention BMI was 44 (40-48). Comparison of the three groups suggest a significant reduction in exhaled ketones (hexanone; heptanone; octanone), aromatic hydrocarbons (benzene; toluene; menthol) and organic acids (acetic acid; pentanoic acid; hexanoic acid) following surgery (Kruskal-Wallis one-way ANOVA $P \leq 0.05$). Propanoic acid demonstrated a significant increase after bariatric surgery ($p=0.01$). In this small sample size weight loss was not correlated to the post operatively measured concentration of VOCs.

Conclusion

Findings suggest that the analysis of VOCs within exhaled breath may offer a novel and reliable approach to the assessment of changes in body composition in patients undergoing bariatric surgery.

□
O.085

TWO-YEAR NUTRITION DATA IN TERMS OF ALBUMIN AND VITAMIN D AFTER BARIATRIC SURGERY AND LONG-TERM FRACTURE DATA COMPARED WITH CONSERVATIVELY TREATED OBESE PATIENTS

Post-operative complications

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Introduction

Bariatric surgery is suggested to be a risk factor for mineral and vitamin deficiencies. By the time being, little is known of the risk of bone fractures after bariatric surgery.

Objectives

This is a retrospective study from Helsinki University Central Hospital including 393 bariatric patients and 199 conservatively treated severely obese patients.

Methods

252 laparoscopic Roux-en-Y gastric bypasses (LRYGB) and 141 laparoscopic sleeve gastrectomies (LSG) were performed between 2007- 2010 and patients were followed for two years for changes in weight loss, D-vitamin and albumin. Recommended vitamin supplementation was started after the operation. The conservatively treated patients were followed for 2.3 years between 2003-2005 and weight loss was monitored. Data from major fractures (hip, long bones, back, wrist, and ankle) was collected from both surgical and conservatively treated group until the end of the year 2016.

Results

The three groups (conservatively treated, LRYGB and LSG) were similar regarding age, pre-operative weight and gender. Total weight loss percent (TWL %) in two years was significantly different between operated and conservatively treated patients (24.2/3.2%). There were no significant difference ($p=0.26$) in the number of major fractures (8.5/ 12.3/7.8%).Age increased the risk for fracture ($p<0.05$). There were no differences between the LRYGB and LSG patient groups in terms of albumin and vitamin D in one, and two years controls, and the levels were in the recommend area.

Conclusion

In a follow-up over six years, there was no difference in the numbers of major fractures between bariatric surgery patients and conservatively treated severely obese patients.

□
O.086

HOW TO IMPROVE THE PATIENT SAFETY IN CASE OF EARLY HOME RETURN?

Post-operative care

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Introduction

The current rate of complications after sleeve gastrectomy (SG) or gastric Bypass (GBP) is about 5%. In order to perform a fast home return in a secured way, new tools for surveillance are needed.

Objectives

This study reports the experience of early home return using a combination of IT platform and remote monitoring nurses.

Methods

From 1st August 2016 to 1st February 2017, 200 patients were included for a surveillance at home after SG or GBP. They had to answer a questionnaire and enter biological results defined by the surgeon. In case of lack of response, abnormal event or a direct patient demand an alarm was triggered on the platform and a nurse contacted the patient. The solution was available 24/7 for patient.

Results

Out of 200 patients (176/24 F/H, 104 GBP and 96 SG), there were 2 reoperations for complication at day 2 and day 10, for bleeding and occlusion of the remnant gastric pouch, both detected immediately by the IT platform. All the patients were seen again 1 month after the surgery. No complication escaped the app.

Conclusion

Early home return has to handle precise specifications. A platform associating an Internet app with a nursing follow-up 24h / 24h achieves a high level safety equivalent to a conventional hospitalization.

O.087

IS THERE A 'WEEKEND EFFECT' IN BARIATRIC SURGERY?

Post-operative care

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Introduction

There is considerable interest as to whether the care of surgical patients differs at the weekend when compared to weekdays.

One way of addressing this question is to examine the outcomes of patients operated on Friday (whose early post-operative management occurs predominantly over the weekend) as compared to patients undergoing surgery between Monday to Thursday.

Objectives

To assess the impact of day of the week of surgery on the peri-operative outcomes of patients undergoing Roux-en Y gastric bypass (RYGB) for morbid obesity, using a national database.

Methods

The UK National Bariatric Registry (NBSR) was interrogated to identify all patients who underwent primary RYGB between January 2009 and June 2014 on a week day. The peri-operative outcomes were collected and analysed.

Results

A total of 13088 cases of primary RYGB were identified, of which 1869 were performed on a Friday and 11219 were performed Monday to Thursday.

	Monday to Thursday (n=11219)	Friday (n=1869)
Mean length of stay in days (standard error of the mean)	2.67 (0.03)	2.98 (0.08)
Number of re-operations within 30 days (%)	355 (3.1)	63 (3.3)
Number of re-admissions within 30 days (%)	274 (2.4)	45 (2.4)
Number of cardiovascular complications (%)	50 (0.4)	15 (0.8)

Patients operated on a Friday had comparable complication rates to those operated Monday to Thursday, but a statistically significant longer hospital stay ($p=0.048$).

Conclusion

Elective bariatric surgery appears to be safe irrespective of the weekday it is performed. There is however a "weekend effect" with respect to longer hospital stay, and the underlying reasons for this require further investigation.

□

O.088

OPTIMIZATION OF IRON SUPPLEMENTATION AFTER ROUX-EN-Y GASTRIC BYPASS

Post-operative care

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Introduction

Iron deficiency is one of the most common postoperative complications after Roux-en-Y gastric bypass (RYGB). Ferrous fumarate, ferrous gluconate and Ferinject® (iron(III)carboxymaltose) are most often used for supplementation. Worldwide there is no uniform treatment protocol for iron deficiency.

Objectives

To evaluate the effect of ferrous fumarate, ferrous gluconate and Ferinject® treatment in patients with an iron deficiency after RYGB.

Methods

In this multicenter study 120 female patients with an iron deficiency (ferritin <20) after RYGB were included. Patients were randomized into three groups, 40 patients were treated with ferrous fumarate 200 milligram (195 mg elementary iron) orally three times a day, 40 patients were treated with ferrous gluconate 695 milligram (160 mg elementary iron) orally two times a day, both during three months, and 40 patients received a single dose of Ferinject® 1000 milligram intravenous. Iron and ferritin were measured six weeks, three, six and twelve months after supplementation.

Results

After three months, 8% and 10% of the patients with ferrous fumarate and ferrous gluconate respectively were still deficient compared to 0% in the Ferinject® group. So far, 69% of the patients were followed for 1 year. In both the ferrous fumarate group and the ferrous gluconate group 17 patients, 63% and 68% respectively, experienced a (re-)deficiency during the one year follow-up compared to 9 patients (29%) in the Ferinject® group ($p=0.005$). In these patients (re-)treatment was necessary.

Conclusion

Ferinject® seems to be the most effective and patient-friendly treatment in patients with an iron deficiency after RYGB compared to ferrous fumarate and ferrous gluconate.

□
O.089

THE DUTCH OBESITY CLINIC GROUP REALIZES IMPROVEMENTS IN CARDIORESPIRATORY FITNESS AND PHYSICAL ACTIVITY THROUGH A COMPREHENSIVE BARIATRIC CARE PROGRAM

Post-operative care

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Background

It is unclear which bariatric care program features can optimize health and durability of weight loss.

Introduction

Utilizing a unique care model with high patient retention, the program delivers well-established care components (medical, psychological, nutritional), and incorporates cardiorespiratory fitness and physical activity assessment.

Objectives

To assess weight loss, cardiorespiratory fitness and physical activity, and to evaluate how physical activity affects cardiorespiratory fitness and weight loss, two-years postoperatively.

Methods

Patients who underwent gastric bypass or sleeve gastrectomy between 2012-2014 were included. Baseline data was compared to two-year data for total weight loss (%TWL), VO_{2max} (absolute, relative) and the Baecke Physical Activity Questionnaire (components: work, leisure, sport). Factors that influenced %TWL and VO_{2max} were analyzed.

Results

Significant weight loss was achieved from baseline to two years postoperative (mean TWL=31%, n=3749, p<0.001). Despite patients experiencing a reduction in fat-free mass, VO_{2max} absolute increased, concurrent with improvements in VO_{2max} relative to weight and VO_{2max} relative to fat-free mass (n=1931, p<0.001). The Baecke Questionnaire showed an overall increase in physical activity (n=3442, p<0.001), with a minor decrease in the work component. Regression analysis showed that improvement in the Baecke leisure score was associated with an increase in %TWL (p<0.001). Improvement in the sport component was associated with an increase in all three VO_{2max} measures (p<0.001). Baseline sport and leisure scores were predictors of VO_{2max} (p<0.001).

Conclusion

A comprehensive bariatric care program can lead to sustained weight loss, as well as improvement in cardiorespiratory fitness and physical activity. Cardiorespiratory fitness and physical activity assessments may be relevant additions for these programs.

□
O.090

SAFETY OF POST-OPERATIVE CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP) USE FOLLOWING SLEEVE GASTRECTOMY

Post-operative care

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Introduction

Continuous positive airway pressure (CPAP) use for obstructive sleep apnea is quite commonly encountered in morbidly obese patients, and has been associated with an increased risk of anastomotic leaks following Roux-en-Y gastric bypass due to a pressure-related phenomenon. However, there is limited evidence with regards to the safety of CPAP use following sleeve gastrectomy.

Objectives

To investigate if CPAP use following sleeve gastrectomy is associated with an increased risk of staple line leaks.

Methods

Retrospective chart review of all patients who underwent sleeve gastrectomy for treatment of obesity at a single institution between 2012 to 2015. Medical and nursing notes were examined to determine if patients received CPAP within the first 48 hours following surgery, as well as any complications that occurred.

Results

In a cohort of 109 patients who underwent sleeve gastrectomy at our institution, we report one case of staple line leak following sleeve gastrectomy, who did not receive post-operative CPAP. Twenty-three patients were noted to use CPAP post-operatively, and no staple line leaks were clinically or radiologically detected. The overall 0.9% staple line leak rate is consistent with the reported leak rate in the medical literature, ranging between 0.5% to 2.5%. Regression analysis also did not show a statistically significant increase in overall post-operative complications with CPAP use ($p=0.37$).

Conclusion

Post-operative CPAP use does not appear to be associated with increased post-operative complications or staple line leaks following sleeve gastrectomy, although analysis of a larger cohort of patients would be ideal due to the low incidence of staple line leaks.

O.091

DUODENAL SWITCH FOR THE PATIENTS WITH A BMI BELOW 45. COMPLICATIONS AND DEFICIENCY

Malabsorptive bariatric operations

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Background

In USA and in other countries, some insurances have restrictions to perform DS for patients with a BMI below 50. The argument is that this operation is too dangerous to be performed in this group of patients.

Introduction

Chart review of 50 consecutive patients with a BMI 36 to 45 had been performed. All of those patients were at least 5 years after surgery. Patients age, BMI, % of weight loss, comorbidity resolution, albumin, total protein, vit A, vit D, PTH, ferritin, cholesterol, triglyceride levels & additional surgery had been documented.

Objectives

For patients with a BMI below 50 with a proper adjustment of the length of the common channel and alimentary loop, duodenal switch is a safe and effective procedure.

Methods

Retrospective chart review of 50 consecutive patients with a BMI in between 36 and 45 had been done. Median BMI before surgery was 41.7, weight 104.8 kg. 23 patients had hypercholesterolemia, 20 hypertriglyceridemia, 2 Vit D deficiency, 4 elevation of D 1-25, 2 Vit A, 4 low ferritin and % saturation, 5 DM, 9 HTN, 18 asthma, 38 arthritis, 2 stress incontinence, 23 GRDS, 2 sleep apnea.

Results

Resolution of comorbidity had been documented. Vitamin deficiency and iron metabolism had been documented. None of the patients developed protein malabsorption. 5 patients required ventral hernia repair, 4 lengthening of the common channel. Median BMI 1-5 years after surgery were 23.5, 23.6, 23.9, 24.9, 24.9. % of the excess weight loss 1-5 years after surgery were 93, 97, 93, 90, 88.

Conclusion

With a proper adjustment of the length of common channel and alimentary loop, duodenal switch is a safe and successful operation for patients with a BMI 36 to 45.

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O.092

MULTICENTRIC PROSPECTIVE RANDOMIZED TRIAL COMPARING SADI-S VS. DUODENAL SWITCH

Malabsorptive bariatric operations

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Introduction

Duodenal Switch (DS) is the most powerful bariatric procedures, but also the most complicated. SADI-S is a technical simplification of the DS with similar results, as published in previous series.

Objectives

This trial compares both procedures prospectively.

Methods

A multicentre prospective randomized trial was designed. We included patients with BMI 50 to 60kg/m² with no previous bariatric surgery. High risk patients and staged procedures were excluded. We designed a no inferiority trial. We evaluated weight loss, safety and comorbidities resolution up to 2 years of the surgery.

Results

88 patients were included. Both groups were comparable at the time of surgery in terms of age, sex, BMI and comorbidities. After surgery only surgical time showed any difference (152.38 mins for DS vs. 117.27 mins for SADI-S, $p < 0.001$). Morbidity (12.2% vs. 11.6%), hospital stay (4 vs. 4.3 days) and reoperation rate (9.1% vs. 5.7%) did not show significant differences. There was no mortality. Weight loss up to 2 years did not show significant differences. DS patients moved from 53.57kg/m² to 30.48kg/m²; and SADI-S group from 53.24kg/m² to 32.19kg/m². TWL was 49.5% vs. 38.78% respectively. During follow-up 1 patient from the DS group had to be reoperated due to complications, but none of the SADI-S.

Conclusion

These preliminary results show that SADI-S has a slightly better safety profile compared to DS. SADI-S is also a faster and cheaper procedure. In terms of weight loss we did not find statistically significant differences up to these days, but curves show a tendency favoring DS.

□
O.093

IS ROUTINE CHOLECYSTECTOMY, DURING LAPAROSCOPIC BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH, NECESSARY?

Malabsorptive bariatric operations

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Introduction

Only few data are available on the incidence of symptomatic gallstones after biliopancreatic diversion with duodenal switch (BPD-DS) when routine cholecystectomy is not performed.

Objectives

The aim of this study was to assess the need for cholecystectomy after BPD-DS when the cholecystectomy was not initially performed.

Methods

Data from 132 patients who had undergone BPD-DS without cholecystectomy between 2007 and 2015 were reviewed from our prospectively collected database. Each patient was contacted by phone and they were asked to answer a standardized questionnaire. Data collected included: demographics, operative reports, radiology reports, and postoperative complications.

Results

Of the 132 patients, 112 accepted to participate in this study and answered the survey. 74 (66,1%) were female, the median age at time of surgery was 42 (22-69) and the average BMI was 50,2 (33-83). 28 patients (25,0%) underwent a cholecystectomy after their BPD-DS. 21 (75,0%) cholecystectomies were performed electively for biliary colic and 7 (25,0%) were performed for cholecystitis. The average length of hospital stay was 2,4 (1-8) days. All the cholecystectomies were performed laparoscopically. 1 patient suffered a small bowel injury and 1 patient had a bile duct injury. 89 (79,5%) patients received ursodeoxycholic acid for 6 months following BPD-DS. Mean follow-up was 60 months.

Conclusion

BPD-DS without routine cholecystectomy is safe. However, the rate of symptomatic gallstones following BPD-DS is significant. Cholecystectomy while performing BPD-DS is not necessary, but should be considered.

O.094

3 YEARS' EXPERIENCE ON MODIFIED DUODENAL SWITCH (MDS) – A MULTICENTER STUDY THROUGHOUT 36 MONTH

Malabsorptive bariatric operations

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Introduction

Recent studies have shown effectiveness of MDS in relation to short term weight loss without compromising nutritional aspect. However, sustained long term outcomes are not well described.

Objectives

To investigate 3 years' outcomes in MDS patients

Methods

A retrospective chart review was conducted for 516 patients who underwent primary MDS from January 2013-December 2016 at four different centers. Weight loss were expressed using total body weight loss (TBWL), excess body weight loss percentage (EBWL%), and body mass index unit reduction (BMIUR). Nutritional values and complications were recorded.

Results

A sustained adequate weight observed throughout post-surgery with EBWL% of 83% (SD=27.4) at 36 month. Average nutritional values were maintained within normal limits. We noted 20% complications following surgery.

	6 month (N=516)	12month (N=385)	18month N=343	24month N=196	36month N=63
EBWL%	52 (24)	80(22)	81(30)	85(24)	83(27.4)
BMIUR	12(6)	17.1(6.7)	21.3(10)	19(7)	19(7)

	Mean(SD)
Vitamin A	39.26 (16.2)
Vitamin D	34.06 (14.8)
Vitamin E	9.37(3.1)
Vitamin K	509.63(92.9)
Vitamin B12	1041.44(905)
Albumin	3.98(0.4)
Iron	76.19(32.2)
HBA1c	5.17(0.8)

Complications

Nausea, vomiting required ER visit

Percentage

5.5

Diarrhea

1.5

Leak

0.8

Hematoma

1.0

Wound Infection

2.3

Abdominal abscess

0.8

Malnutrition/ Vit deficiency

1.0

GI dysmotility

0.3

Bowel reflux

0.3

Gastric stricture needing dilation

3.1

Dilation of the fundus

0.8

Afferent loop syndrome

0.5

Rhabdomyolysis

0.3

Chylous Ascites

0.3

Nephrolithiasis

0.3

Mesenteric venous thrombosis

1.3

Death

0.5

Conclusion

MDS potentially give a sustained adequate weight loss at long term without compromising nutritional aspect. Furthermore, complication profile similar to other major bariatric procedure. Extensive follow up is recommended to determine the validity of the study.

O.095

NON-RESPONDERS AFTER GASTRIC BYPASS: HORMONE RESPONSE AND GLUCOSE HOMEOSTASIS DURING AN ORAL GLUCOSE TOLERANCE TEST

Management of weight regain after surgery

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Introduction

Although Roux-en-Y gastric bypass (RYGBP) surgery results in massive weight loss, improved glucose homeostasis and changed gut hormone profile, 20% of patients experience poor weight results in the long term.

Objectives

To study differences in leptin and gut hormones between weight responders and non-responders after RYGBP. In a subgroup analysis, we studied hormone levels in diabetic participants.

Methods

Serum insulin and plasma glucose, leptin, ghrelin, PYY, GLP-1 and GIP were measured during fasting and during an oral glucose tolerance test (OGTT) in post-RYGBP patients: 22 non-responders (BMI 40.6 ± 6.0 kg/m² after an excess BMI loss, EBMI, of $26.0 \pm 15.9\%$) and 18 responders (BMI 29.5 ± 3.5 kg/m² after an EBMI of $74.9 \pm 18.2\%$) 11.5 \pm 3.8 years after surgery. Participants were matched for preoperative age, BMI and years of follow-up. Measurements were taken to assess glucose homeostasis.

Results

Non-responders exhibited higher levels of leptin than responders. At the end of the OGTT, leptin levels decreased from baseline and ghrelin levels returned to baseline in non-responders. A negative correlation was found between fasting leptin and %EBMI ($\rho = -0.75$, $p < 0.01$) and a positive correlation between fasting ghrelin and %EBMI ($\rho = 0.31$, $p = 0.05$). Non-responders presented with lower insulin sensitivity than responders. Diabetic participants showed lower fasting levels of ghrelin and PYY.

Conclusion

RYGBP-responsive long-term weight loss correlates with low fasting leptin and high fasting ghrelin concentrations. Hormone response to an oral glucose load might contribute to perpetuate obesity. Differences in ghrelin and PYY are associated to participants' glucose metabolism.

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O.096

IMPROVEMENT IN RENAL FUNCTION FOLLOWING BARIATRIC SURGERY IS MOST MARKED IN THE EARLY STAGES OF CHRONIC KIDNEY DISEASE (CKD)

Basic science and research in bariatric surgery

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Introduction

Chronic kidney disease is prevalent in the obese population with high BMI and is known to be strong risk factor for the development of end stage renal disease. However there is a lack of data on how bariatric surgery affects renal function at any stage of CKD.

Objectives

To understand how renal function is impacted by bariatric surgery in patients with differing stages of CKD.

Methods

Patients undergoing surgery at a bariatric centre between 2007-2015 were retrospectively reviewed and those with CKD stage 2-5 identified. Patients were split into three groups based on preoperative renal function: Stage 2 (eGFR 60-89), Stage 3 (eGFR 30-59) and Stage 4-5 (eGFR <30). Changes in renal function were observed post surgery.

Results

Of 759 patients 118 were identified as having CKD stages 2-5 with a mean age 49.9 ± 10 . In patients with CKD stage 2 a 14.1% ($p=0.02$) increase in eGFR was observed over a 2 year period with a 34.3% ($p=0.01$) reduction in BMI over the same period. Patients with CKD stage 3 observed a 17.9% ($p=0.03$) increase in renal function with the greatest change in the immediate post operative period before stabilization of function. A 31.8 % ($p=0.01$) decrease in BMI was observed in the same group. No significant improvement in eGFR was observed in patients with CKD stage 4-5.

Conclusion

Bariatric surgery appears to lead to good weight loss in those with CKD with the greatest benefit in renal function being observed during the early stages of the disease.

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O.097

EFFECTS OF BARIATRIC SURGERY ON CHANGE OF BROWN ADIPOCYTE TISSUE AND ENERGY METABOLISM IN OBESE MICE

Basic science and research in bariatric surgery

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Introduction

Brown adipose tissue (BAT) is an energy-related organ. The potential effects of bariatric surgery on brown adipocyte are yet to be investigated.

Objectives

To study the effects of different bariatric surgeries on GH/IGF-1 axis, brown adipocyte differentiation, and energy metabolism in obese mice and explore the underlying mechanisms.

Methods

Obese mice were subjected to different bariatric procedures. 8-week surviving mice were divided into 4 groups: adjustable gastric band (AGB), sleeve gastrectomy (SG), Roux-en-Y gastric bypass (RYGB), and sham-operation (SO). Pre- and postoperative weight, a metabolic index, content, and metabolic activity of BAT was recorded by micro-PET/CT. Altered energy metabolism was estimated. Serum GH/IGF-1 level and the brown adipose cell differentiation-related gene expression: PRDM16 and UCP-1 by qRT-PCR were estimated.

Results

Serum blood sugar, and serum cholesterol of the obese mice improved in the surgery groups. Serum GH and IGF-1 levels, and the content and metabolic activity of BAT increased postoperatively. The differentiation factors of the brown adipose cell were significantly stronger, energy consumption increased, and respiratory exchange frequency decreased post-operative. The effect was predominant in RYGB; SG demonstrated superior result to AGB.

Conclusion

The GH/IGF-1 axis was significantly suppressed, the brown adipose cell differentiation factors down-regulated and the BAT content greatly reduced with a sharp decrease in energy metabolism in obese mice. Bariatric surgery elevated the GH/IGF-1 levels, contributing to the differentiation of a brown adipose cell, promoting BAT regeneration, and decreasing the respiratory exchange frequency. This improves the body energy consumption resulting in weight loss; mostly evident in the RYGB group.

□
O.098

REDUCTION OF THROMBIN GENERATION AND INFLAMMATORY STATE ONE YEAR AFTER BARIATRIC SURGERY

Basic science and research in bariatric surgery

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Introduction

Obese patients are in a hypercoagulable state relative to normal-weight patients. Low grade inflammation may be a key factor for this condition. We hypothesize that weight loss induced with bariatric surgery may reduce this condition.

Objectives

Our study aimed to compare the coagulability state of morbidly obese patients before and one year after BS using the Thrombin Generation (TG) test, a widespread validated method to assess coagulation in vitro.

Methods

All patients undergoing BS between September 1, 2014 and January 1st, 2016 were eligible for this prospective study (N = 100). The main outcomes were endogenous thrombin potential (ETP). Linear multivariate regression was carried out to estimate factors associated with relative variation of ETP at one year.

Results

The rate of follow-up after one year was 97%, 44 patients (45.4%) underwent Roux-Y gastric bypass and 53 (54.6%) sleeve gastrectomy. Variation of BMI was 14.2 ± 6.5 kg/m²; CRP decreased from 9.1 (4.9-16.1) to 1.3 (0.3-4.7) mg/ml (P < 0.001) and fibrinogen from 4.2 ± 0.7 to 3.7 ± 0.8 g/L (P < 0.001). The ETP (%) decreased from 111 (95-128) to 83 (71-105) (P < 0.001). In multivariate analysis, fibrinogen reduction (relative Δ) was significantly (P < 0.001) associated with reduction of ETP (relative Δ): $\beta = 0.36$ (95%CI: 0.06-0.26), irrespective of weight loss.

Conclusion

Our study shows a significant reduction in TG potential one year after BS in morbidly obese patients. Reduction of low-grade inflammation may be one of the underlying mechanisms.

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O.099

DIFFERENCES OF GUT MICROBIOTA & EXTRACELLULAR VESICLES AFTER BARIATRIC/METABOLIC SURGERY

Basic science and research in bariatric surgery

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Introduction

Microbial ecology is reported to be an important regulator of energy homeostasis and glucose metabolism.

Objectives

To investigate roles of gut microbiota in glucose metabolism, we analyzed the changes of gut microbiota and extracellular vesicles (EV) after bariatric/metabolic surgery.

Methods

Twenty-three Wistar rats were induced to glucose intolerance via high fat diet. They underwent RYGB (n=10), SG (n=10), or sham operation (n=3). OGTT was carried out after 1,8 weeks. Gut microbiota and EVs were analyzed by metagenomics.

Results

The glucose intolerance was recovered after surgery. In stool, Firmicutes were decreased (78.9% preoperatively; 44.8%, 70.9%, 82.6% in sham vs. 38.1%, 44.8%, 56.8% in RYGB vs. 48.2%, 54.3%, 46.1% in SG at 1,4,8 weeks, respectively) and Akkermansia were increased after RYGB and SG (1.36% preoperatively; 9.6%, 2.4%, 1.5% in sham vs. 3.4%, 26.1%, 9.9% in RYGB vs. 5.9%, 11.3%, 12.9% in SG). For EVs in stool, Firmicutes were decreased (66.4% preoperatively; 41.5%, 64.2%, 51.1% in sham vs. 41.2%, 35.0%, 46.7% in RYGB vs. 29.8%, 39.2%, 39.9% in SG at 1,4,8 weeks, respectively) and Verrucomicrobia were increased after RYGB and SG (1.0% preoperatively; 1.9%, 0.8%, 0.8% in sham vs. 0.3%, 7.4%, 3.7% in RYGB vs. 1.1%, 1.0%, 4.1% in SG). For EVs in serum, Firmicutes were decreased at 8 week (31% preoperatively; 13.4% in sham vs. 11.4% in RYGB vs. 11.3% in SG, respectively).

Conclusion

These data showed that Firmicutes decreased, and Akkermansia increased after bariatric/metabolic surgery, which suggests microbiota change might have important roles in glucose metabolism after bariatric/metabolic surgery.

O.100

CHANGES IN INCRETINES AND BILE ACIDS AFTER ROUX-EN-Y GASTRIC BYPASS

Basic science and research in bariatric surgery

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Introduction

Several variants of Roux-en-Y Gastric Bypass (RYGB) have been described with varying lengths of the Roux- and biliopancreatic limb (BPL). A recent randomized controlled trial performed in our institute showed 10% additional excess weight loss (EWL) in patients with a longer BPL of 150cm (LBPL-RYGB), compared to the standard BPL of 75cm (S-RYGB). The physiology of differences in weight loss are not yet fully understood, a common hypothesis includes additional changes in gut hormones and bile acids.

Objectives

Comparing changes in gut hormones and bile acids after LBPL-RYGB and S-RYGB.

Methods

Ten female patients, age-matched, without comorbidities were included and underwent two measurements, preoperatively and four weeks postoperatively. Blood levels of GLP-1, glucose, insulin, FGF-19 and 21, ghrelin, PYY and (total) bile acids were determined after an overnight fast and 30, 60, 90, 120 and 180 minutes after consumption of a standardized meal.

Results

Preoperative weight was 127.9(±12.9) vs 132.4(±14.5)kg and decreased to 84.4(±8.7) and 91.8(±8.3) kg in the LBPL-RYGB and S-RYGB group respectively after 12 months. Which is comparable to a % Excess Weight Loss (EWL) of 77.1(±10.5) and 63.1(±5.7) respectively. Postprandial PYY peak level pre-and postoperatively was 80.1(±20.3) and 102.6(±73.1) pg/ml in the LBPL-RYGB and 69.6(±37.9) and 98.1(±64.9)pg/ml in the S-RYGB group. With an earlier peak level time point postoperatively at 30 minutes instead of 120 min after meal consumption.

Conclusion

LBPL-RYGB results in 10% additional EWL compared to S-RYGB. The found difference in gut hormone and bile acid response after LBPL-RYGB compared to S-RYGB is thought to explain this increased EWL.

O.101

SHORT-TERM OUTCOMES OF ROBOTIC ROUX-EN- Y GASTRIC BYPASS

Robotic bariatric surgery

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Introduction

Laparoscopic roux-en-Y gastric bypass (RYGB) is an effective treatment for morbid obesity and related comorbidities. Robotic technology shows promising early outcomes indicating potentially offered several advantages over laparoscopic surgery.

Objectives

The aim of this study was to present our robotic RYGB experiences with regard to intra-and postoperative outcomes.

Methods

From January 2015 to December 2016, 127 patients underwent robotic RYGB. Gastro-jejunostomy was created end-to-side using a hand-sewn double-layer technique and jejun-jejunostomy was done using a linear stapler, with hand-sewn double-layered closure of the enterotomy. All of the patients underwent an intraoperative leakage test using methylene blue. The demographic data of patients, operative and postoperative findings in these patients were defined.

Results

The mean age of the patients was 37 and M/F sex distribution was 83/44. Type II diabetes in the preoperative period was present in 32% of the patients. The mean preoperative BMI was 47 (40-57). The mean operation periods was 195 minutes. Early (<30-day) complications included urinary tract infections (0,9%), atelectasis (0,9%), venous thromboembolism (1,6%), surgical site infection (1,6%). Passage radiographs were taken for all of the patients in the first 24-48 hours. No extravasation was observed from any patients. Oral food intake was started at an average of 1.8 days. The average hospital stay was 3.7 days and the return to normal activity rate was 7.8 days.

Conclusion

Robotic approach is an effective and safe option for patients undergoing RYGB. The long-term results recorded in these patients that we have shown will reveal the success and substantial weight loss and comorbidity remission.

O.102

ROBOTIC GASTRIC BYPASS SURGERY IS SAFE AND EFFICIENT: RESULTS OF A PROPENSITY SCORE MATCHED ANALYSIS

Robotic bariatric surgery

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Introduction

The introduction of robotics is a novel development in bariatric surgery. The results of laparoscopic gastric bypass surgery (L-GB) nowadays are excellent. In order to establish a new operation technique one has to compare it to the current standard.

Objectives

The aim of this study was to assess the safety and efficiency of a novel fully robotic gastric bypass technique (R-GB).

Methods

243 obese patients underwent gastric bypass surgery. Patients were operated using either standard linear stapled L-GB or fully R-GB. Perioperative complications and weight loss were analysed. A propensity score matched analysis was used to compare the two groups.

Results

186 patients underwent L-GB and 57 R-GB within a period of 18 months. The preoperative BMI was comparable in both groups (42.1 kg/m² in L-GB versus 41.5 kg/m² in R-GB; $p=0.26$). The overall perioperative complication rate was 5.8% in the L-GB and 7.1% in the R-GB group ($p=0.18$). There was no leakage observed and weight loss was similar in both groups. The BMI after 18 months was 28.8kg/m² in the L-GB and 28.5kg/m² in the R-GB group ($p=0.83$). The mean operative time was longer in the R-GB group with 124.5 minutes compared to 94 minutes in the L-GB group ($p<0.001$). These results were confirmed by a bipartite propensity score matched analysis

Conclusion

R-GB is safe and efficient. The results are comparable to the current standard technique the L-GB. Therefore, R-GB surgery is a potential alternative to L-GB surgery.

O.103

EARLY EXPERIENCE WITH INTRA-OPERATIVE LEAK TEST USING A BLEND OF METHYLENE BLUE AND INDOCYANINE GREEN DURING ROBOTIC GASTRIC BYPASS SURGERY

Robotic bariatric surgery

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Background

Leak test of the gastro-jejunal anastomosis with air and/or methylene blue are integral parts of gastric bypass surgery. Still, early leaks remain reported in the literature.

Introduction

Indocyanine green (ICG) fluorescents with laser excitement which makes it easily visible in smallest amounts and thus might be an excellent agent for leak testing.

Objectives

To develop an anastomotic leak test with a sensitivity greater than conventional methods.

Methods

During robotic gastric bypass surgery, a leak test of the gastro-jejunal anastomosis was performed with air through a nasogastric tube under manual occlusion of the duodenum. Afterwards, 50 ml of a mix of 100 ml sterile water, 2 mg of methylene blue and 5 mg ICG was injected through the same tube. The entire anastomosis was inspected for integrity in both fluorescent and well as normal light mode. Additional sutures were applied if any of the test were positive. Data was collected prospectively.

Results

Leak test with air and the blend of methylene blue and indocyanine green was performed in 45 patients. 0 patients had a positive leak test with air, 0 patients showed an excretion of methylene blue and a leak of ICG was observed in 3 patients. No anastomotic complications including leaks and strictures were found postoperatively.

Conclusion

Leak test using a blend of methylene blue and ICG appears very sensitive in finding small defects of the gastro- jejunal anastomosis during robotic gastric bypass surgery. Larger datasets and more stringent research are needed to determine the exact clinical value of this new method.

O.104

A COMPARISON OF THREE TYPES OF SLEEVE GASTRECTOMY: CONVENTIONAL LAPAROSCOPIC, SILS AND ROBOTIC

Robotic bariatric surgery

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Introduction

With the increasing popularity of new techniques and emerging technology, the bariatric surgeon has several options for providing one of the most commonly performed weight loss operations. Conventional laparoscopy, single-incision laparoscopic surgery (SILS) and the robotic platform are all options for performing sleeve gastrectomy.

Objectives

This study aims to compare operating time, stapler usage, short-term complication rates, and length of hospital stay across these three modalities.

Methods

All sleeve gastrectomies performed in a 16 month period were compared. Statistical analysis was used to determine significant differences between three groups of sleeve gastrectomies: conventional laparoscopic, SILS, and totally robotic (utilizing the robotic stapler).

Results

A total of 121 sleeve gastrectomies, including 54 conventional laparoscopic sleeves, 36 SILS sleeves and 31 robotic sleeves were performed. The robotic group had a longer operating time when compared with the laparoscopic groups (65 minutes conventional, 70 minutes SILS, 122 minutes robotic; $p < 0.001$). There was significantly higher stapler usage in the robotic group (5.7, 5.8, 7.2 loads; $p < 0.001$), and a longer length of stay (2.2, 2.1, 3.4 days; $p < 0.001$). There were no significant differences in short-term complication rates. Comparing only conventional laparoscopy to SILS, there were no differences in operating time, stapler usage, short-term complications or length of stay.

Conclusion

Conventional laparoscopy, SILS and the robotic platform are all options in performing sleeve gastrectomies. With comparable short-term complications, all are safe, although robotic surgery is associated with longer operating time and potentially longer hospital stay. SILS can provide superior cosmesis without diminishing surgical efficiency.

O.105

ENDOSCOPIC GASTRIC MUCOSAL DEVITALIZATION (GMD) RESULTS IN A SIMILAR REDUCTION IN VISCERAL ADIPOSITY COMPARED TO SLEEVE GASTRECTOMY (SG): A RANDOMIZED CONTROLLED TRIAL

Emergent technology

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Introduction

Endoscopic therapies lack a method that improves visceral adiposity in a weight-independent manner.

Objectives

Assess the effects of gastric mucosal devitalization (GMD) on body weight and visceral adiposity.

Methods

Twenty-one litter matched 8-week old German-Sattelschwein pigs (30-35kgs) were equally randomized into three groups: GMD, sleeve gastrectomy (SG) and sham. GMD consisted of submucosal injection of saline followed by devitalization of 70% of the gastric mucosa using argon plasma coagulation. Visceral and subcutaneous adiposity was quantified by MRI immediately pre-procedure and on day 60. Chemical shift-coded water-fat MRI was performed using a modified Dixon sequence to evaluate fat fraction in adipose tissue.

Results

No adverse events occurred. Examination 60 days post-GMD demonstrated regeneration of the gastric mucosa without significant ulceration or scarring. Significant relative weight reduction occurred in GMD over sham (37.3%, 95%CI 26.8-47.8, $p < 0.001$). Although there was no significant difference in weight loss in GMD compared to SG at 30 days (8.9%, 95% CI 1.6-19.4, $p = 0.126$), SG resulted in superior weight loss at 60 days (24.89%, 95% CI 14.3-35.3, $p < 0.001$). Remarkably, there was no significant difference in visceral adiposity between GMD and SG at day 60 (0.96% vs 0.61%, $p = 0.16$), and both were significantly superior to sham. Regarding subcutaneous adiposity, GMD was significantly inferior to SG (24% vs 21%, $p = 0.03$) and both were superior to sham.

Conclusion

GMD resulted in similar reduction in visceral adiposity as SG, though the weight loss was inferior. GMD demonstrates potential as an endoscopic therapy, with metabolic improvements superior to what would be expected by weight loss alone.

O.106

LONG TERM STABILITY AND SAFETY OF A NOVEL TRANSGASTRIC INTAKE SENSOR AS PART OF CLOSED-LOOP GASTRIC ELECTRICAL STIMULATION (CLGES) SYSTEM

Technology and bariatric surgery

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Introduction

The CLGES therapy incorporates a transgastric food sensor which detects a patient's food intake 24/7, and triggers tailored vagal stimulation to produce satiety.

Objectives

To report on the long-term safety and stability of the transgastric lead at four European centers.

Methods

Eighty-one CLGES systems were implanted at four centers as part of a feasibility and a post-market study. During laparoscopic system implant, the transgastric food sensor is placed in the anterior stomach wall, body-fundus region, in order to detect entry of food into the stomach. A dilating needle is inserted through a trocar and is used to pierce the gastric wall to provide entry for the food sensor probe which has a silicon flange that is fixed by a seromuscular suture. Endoscopic examinations were done between 25 and 61 months post-implant in order to confirm long term stability.

Results

A total of 52(64%) of the CLGES systems were evaluated endoscopically at greater than twenty-four months following implantation, while 19 remain implanted but without endoscopic evaluation. The long term endoscopic examinations performed confirmed the stability of the lead in 49/52(94%) cases, in terms of stable extension into the gastric lumen, and no evidence of leakage. There were 3/52(6%) cases of migration of the distal portion of the lead into the gastric lumen, all were resolved by explant without sequelae.

Conclusion

These long-term results show that this novel transgastric sensor is safe and stable, while being effective for long-term detection of food intake.

O.107

PRELIMINARY RESULTS OF ROBOTIC ROUX-EN-Y BYPASS. 125 CASES.

Robotic bariatric surgery

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Background

Robotic-assisted surgery has been described for many general surgery procedures, including gastric bypass.

Introduction

In order to analyze the effects of a new technology in a bariatric department and socially with the first generation of robotic surgery, this study was conducted.

Objectives

Our database was reviewed for all our RARNY procedures performed over the last 5 years. Operative times, length of stay and all complications listed for the 90 days postoperatively were recorded and statistically analyzed.

Methods

This is a descriptive study looking at the short-term outcomes and technical differences between laparoscopic Roux-en-Y gastric bypass (LRNY) and robotic-assisted Roux-en-Y gastric bypass (RARNY).

Results

A total of 125 RARNY were performed. The average body mass index (BMI) was 43 (30-52), mean age 43 years, and 90 women. Regarding comorbidities, 51 patients (41%) were diabetic, 50 patients (40%) were hypertensive. There was a total of 21 major and minor complications (16%), including infection of port site (1.6%), endoluminal (0.8%) and extraluminal (1.6%) hemorrhage, leak of the reservoir or the anastomosis (8.1%), iatrogenic perforation (0.8%) and incisional hernia (2.4%).

The only significant data in complication rate was for pouch leak (n=5) but not at the gastrojejunostomy: there were 2 leaks in the robotic series (1.6%). Length of stay was 2 days (range: 2-90).

Conclusion

In our experience, high complexity cases or anastomosis calibration can benefit of robotic surgery and advances in technology, although more studies are required in this regard. The learning curve of this new technology must be made in accordance with an absolute standardization, not necessarily exportable of the laparoscopic technique.

O.108

COMPARATIVE STUDY OF THE DA VINCI XI VERSUS THE DA VINCI SI SURGICAL SYSTEM FOR BARIATRIC BYPASS SURGERY

Robotic bariatric surgery

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Introduction

The da Vinci Surgical System family remains the most widely used surgical robotic system. Data about bariatric surgery with the novel Xi Surgical System are not available yet.

Objectives

We report our experience with bariatric bypass surgery comparing the da Vinci Xi to the Si Surgical System.

Methods

All robotic bariatric bypass procedures performed between January 2013 and September 2016 were analyzed retrospectively. Patient demographics, operative and postoperative outcomes up to 30 days were compared between two cohorts. Robotic costs per procedure were modeled based on a standard set of robotic instruments, capital investment and yearly maintenance.

Results

144 Xi Surgical System and 195 Si Surgical System procedures were identified. Mean age, gender distribution, BMI and ASA scores were similar in both cohorts. Surgical procedures were mainly primary Roux-en-Y gastric bypass. Operating room times were similar in both groups (219.4 ± 58.8 vs. 227.4 ± 60.5 min for Xi vs. Si, $p=0.22$). Docking times were significantly longer with the Xi compared to the Si Surgical System (9 ± 4.8 vs. 5.8 ± 4 min, $p < 0.0001$). There was no difference in incidence of minor (12.5 vs. 9.7%, $p=0.48$) and major complications (5.6 vs. 5.1%, $p=1$ for Xi vs. Si). Costs were higher for the Xi Surgical System caused by higher capital investment and yearly maintenance.

Conclusion

Bariatric bypass surgery can be safely performed with the Xi Surgical System, while drawbacks include longer docking times and higher costs. Health care providers who are not targeting surgical procedures during which the Xi feature brings incremental value might choose the less costly option of the Si Surgical System.

O.109

GASTRIC BYPASS-INDUCED REDUCTION OF OXIDATIVE STRESS IN PATIENTS WITH TYPE 2-DIABETES AND STEATOHEPATITIS IS RELATED TO IMPROVED HEPATIC OXIDATIVE DEFENSE

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Oxidative stress is increased in type 2 diabetes mellitus (T2DM) and non-alcoholic steatohepatitis (NASH).

Introduction

Bariatric surgery reduces oxidative stress and improves T2DM and NASH although it remains unclear whether this is related to less production of reactive oxidative species (ROS) or improved defense against ROS.

Objectives

To study the effects of Roux-Y gastric bypass (RYGB) on hepatic and subcutaneous fat defense genes in metabolically sick but only moderately obese patients with NASH, T2DM and a body mass index (BMI) $<35\text{kg/m}^2$.

Methods

Twenty patients with poorly controlled, insulin-dependent T2DM and histologically proven NASH were enrolled. All patients were treated with a standardized Roux-Y gastric bypass (RYGB). Intraoperative and follow-up biopsies after 36 months of both subcutaneous and liver were collected. RNA was isolated and expression of defense genes was measured. To assess changes in oxidative stress, systemic and liver nitrotyrosin were measured.

Results

Both systemic ($206.3\pm 63.2\text{ng/ml}$ to $31.5\pm 13.5\text{ng/ml}$; $p=0.0002$) and liver (2.3 ± 0.9 to 1.0 ± 0.9 ; $p=0.03$) nitrotyrosin decreased. The expression of glyoxalase 1, a key eliminator of carbonyl stress, was upregulated in liver and subcutaneous fat (both $p<0.05$). In contrast, superoxide dismutase (SOD2) was up-regulated in the liver (1 ± 0.4 to 7.4 ± 2.4 , $p=0.02$) whereas SOD2 was down-regulated in the adipose tissue (1 ± 0.4 to 0.16 ± 0.04 , $p=0.047$). Other defense genes (NQO1, AKR1B1) were not affected.

Conclusion

RYGB improves systemic and hepatic oxidative stress. However, while the hepatic oxidative/carbonyl defense is improved, only the carbonyl defense is improved in the subcutaneous fat while the oxidative defense is reduced indicating that effects of RYGB on oxidative/carbonyl defense are tissue dependent.

O.110

TRIDIMENSIONAL TOMOGRAPHIC (3DCT) POUCH VOLUMETRY AND SCINTIGRAPHIC GASTRIC EMPTYING: INFLUENCE ON LONG-TERM WEIGHT LOSS AND FOOD TOLERANCE AFTER GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Anatomical and functional influences on gastric bypass outcomes are often poorly evaluated, and yet not fully understood.

Objectives

To evaluate the influence of the gastric pouch volume and its emptying rate on long-term weight loss and food tolerance after gastric bypass.

Methods

Weight loss, food tolerance, pouch volumetry (V) by 3DCT, and pouch emptying rate for solid foods by 4 hours scintigraphy were evaluated in 67 patients. Cutoffs were identified for V and retention percentage (%Ret) at 1 hour (%Ret1). From these parameters the sample was categorized, looking for associations between V, %Ret, weight loss and food tolerance, assessed by questionnaire for quick assessment of food tolerance (SS).

Results

PO median follow-up time was 47 months; median V was 28mL; %Ret at 1, 2, 4 hours were 8%, 2%, 1%, respectively. There were associations between $V \leq 40\text{mL}$ and higher emptying rates up to 2 hours ($V \leq 40\text{mL}$: %Ret1=6, %Ret2=2, $p=0.009$; $V > 40\text{mL}$: %Ret1=44, %Ret2=13.5, $p=0.045$). It was found association between higher emptying speed in 1 hour and higher late WL, represented by lower %EWL regain ($p=0.036$), and higher %EWL ($p=0.033$) in the group with %Ret1 $\leq 12\%$, compared to the group %Ret1 $\geq 25\%$. Better food tolerance (SS >24), was associated with lower %Ret1 ($p=0.003$).

Conclusion

Pouch study by 3DCT and scintigraphic emptying with solid food provides an accurate morphofunctional evaluation of GBP. Smaller pouch have shown faster emptying, that was correlated with WL maintenance and better food tolerance. These data suggest that construction of small pouch, with rapid emptying rate, is an important technical parameter for good outcomes in GBP.

O.111

AFTER 5 YEARS OF FOLLOW-UP: ROUX-EN-Y GASTRIC BYPASS IS SUPERIOR TO SLEEVE GASTRECTOMY IN SUPER-OBES PATIENTS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Super-obese patients (BMI \geq 50 kg/m²) have high complication rates and weight regain after Laparoscopic Roux-en-Y gastric bypass (RYGB) and laparoscopic sleeve gastrectomy (LSG).

Introduction

Many surgeons advocate LSG as a staged procedure.

Objectives

We aim to study the outcome of LSG and RYGB for super-obese patients.

Methods

We used our prospective database for consecutive patients with super-obesity who underwent RYGB or LSG.

Results

Between 2009 and 2016, 215 patients with BMI \geq 50 had LSG 65 or RYGB 150). Mean BMI in LSG was 54 kg/m² (50-73) vs 58 kg/m² (50-91) in RYGB (P=0.001). Mean age was 36.3 (19-36) in LSG vs 35.7 (16-68) in RYGB. Males were 30.7% (20/45) in LSG vs 32.7% (49/101) in RYGB. Obesity associated comorbidities were present in 83% of LSG vs 78% of RYGB. OR time was 99 minutes (70-180) in LSG vs 119 minutes (89-170) in RYGB. Hospital stay was 2.5 days (2-15) for LSG vs 2.8 days (1-10) for RYGB. Hgb A1c improvement from baseline was in P=0.00004 RYGB and P= 0.01 in LSG. Thirty-days Complication rate was 3% in LSG and 4.6% in RYGB (P =0.6). Excess weight loss percentage (EWL%) at 1, 2, 3, 4 and 5 years for LSG group was 55%, 59%, 57%, 52.8% and 45% respectively and in RYGB it was 59.5%, 61%, 64%, 62% and 57% respectively (p=0.04).

Conclusion

Despite a higher rate of super-obesity in RYGB patients, RYGB led to superior weight loss and improvement in Hgb A1c and equal weight loss compared to LSG with a similar complication rate.

O.112

GASTRIC BYPASS REDUCES BOTH LIVER VOLUME AND FIBROSIS AS SEEN BY ACOUSTIC RADIATION FORCE IMPULSE IMAGING; A NON-INVASIVE LIVER MONITORING TECHNIQUE

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Studying the impact of bariatric surgery on liver structure is challenging as obesity limits non-invasive techniques. Acoustic radiation force impulse imaging (ARFI) is a promising non-invasive innovation combining ultrasound and elastography to measure liver stiffness which strongly correlates with fibrosis but has not been evaluated in morbidly obese patients.

Objectives

The study examines the long-term impact of weight loss on liver structure following liver shrinking diet and bariatric surgery.

Methods

A cohort of morbidly obese patients was randomised to taking very low calorie diet (800kcal) and controls. Liver volume and fibrosis was estimated by ultrasound and ARFI respectively at baseline, four weeks after diet and 12 months after Laparoscopic Roux-en-Y Gastric bypass (LRYGB). Liver biopsies taken during surgery were evaluated. Overall changes in liver volume and fibrosis after diet and surgery were compared.

Results

24 patients with a median BMI of 52kg/m² awaited LRYGB. Pre-operative liver shrinking diet (n=14), compared to matched controls (n=10) led to significant reduction in liver volume (21%), non-significant decrease in liver steatosis (15% vs 40%) without change in fibrosis at 4 weeks. One year after surgery, left liver lobe shrunk by 50% in volume (421ml to 102ml) and liver fibrosis decreased significantly from 2.84m/s to 1.7m/s (p<0.001) while excess weight loss was 67%. These changes were seen irrespective of pre-operative diet.

Conclusion

ARFI may be a suitable technique for evaluating liver fibrosis in morbidly obese patients. Gastric bypass causes significant reduction in liver volume and fibrosis in 12 months, changes not influenced by pre-operative liver shrinking diet.

O.113

MANAGEMENT OF AN ACUTE FISTULA AFTER ONE-ANASTOMOSIS GASTRIC BYPASS.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Background: Leakage after one-anastomosis gastric bypass (OAGB) is fortunately rare (<1%), but remains the most severe complication. Few published data exist on this specific issue.

Objectives

To analyze the results from patients who presented with acute intra-abdominal sepsis (AIAS) caused by leakage after OAGB.

Methods

Between October, 2006 and February, 2016, 17 consecutive patients with a diagnosis of AIAS caused by leakage after OAGB were included. Preoperative characteristics, clinical symptoms, radiologic findings, management, morbidity, and mortality were assessed.

Results

All 17 patients were included in the study. There were four men (23.5%), median age was 48 years and median preoperative BMI was 51 kg/m². The most frequent clinical sign was tachycardia (65%). An oral contrast-computed tomographic scan was performed in 15 patients (88%), which showed a diagnosis of AIAS in 93% of cases. The median time between OAGB and leak diagnosis was 4 days. A gastro-jejunal anastomosis (GJA) leak was the most frequent origin (41%). Sixteen patients (94%) were managed surgically (laparotomy n=11, laparoscopy n=5) and one medically. There were no deaths. Overall morbidity rate was 47%. Six patients underwent an emergency conversion into RYGB and were compared to 6 patients that did not undergo conversion, but who could have benefited. We observed a tendency towards a reduced overall morbidity rate and shorter lengths of stay in the "conversion into RYGB" group.

Conclusion

The management of AIAS caused by leakage after OAGB was safe, effective, and mostly surgical. Emergency conversion into RYGB in cases of GJA, gastric-tube, or biliary-limb perforation was feasible and safe.

O.114

LONG-TERM READMISSION AND EMERGENCY DEPARTMENT VISITS AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: A SYSTEMATIC REVIEW.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Short-term outcome of Laparoscopic Roux-en-Y gastric bypass (LRYGB) is well-known. Data on long-term outcome is scarce, especially on readmission and emergency department (ED) visit > 30 days.

Objectives

To evaluate the number and indications of readmissions and ED visits >30 days after LRYGB.

Methods

A systematic search in Pubmed, Scopus, Embase, Cochrane library and PsycINFO was performed with indexed terms for 'Readmission', 'Emergency visit' and 'Roux-en-Y Gastric Bypass'. Included were RCTs, prospective and retrospective cohort studies on patients ≥ 18 years with data on readmission and ED visits >30 days after primary-RYGB. The PRISMA-statement was used.

Results

Eight articles were included; four studies on readmission (n=15.722) and five on ED visits (n=20.006). Readmission-rate varies between 2.8-22.4%(1-7 years follow-up) and declines over time. Most common indication for readmission is cholecystectomy in up to 68.57% of readmitted patients, followed by abdominal pain (not further specified) in 6.6-14.1%. Emergency department visits lie between 3.3-5.5%(90 days-4 years follow-up) and diminishes over time. Data suggest multiple ED visits per patient; one study shows 23.919 visits in 8688 patients of which 2818 due to gastrointestinal causes.

Conclusion

A remarkable high rate of ED visits is seen long-term after RYGB. However, the report on indications for ED visits is very concise. Readmissions are reported in up to one in five patients and are mainly indicated by gallbladder disease and abdominal pain. The causes for the complaints not related to gall stones were not analysed. Better understanding and information could reduce this high number of patients with postoperative abdominal complaints.

O.115

GASTRIC BYPASS: ROUX EN Y VERSUS ONE ANASTOMOSIS. COMPARED BAROSCORE OVER 7 YEARS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

One Anastomosis Gastric bypass (OAGBP) has been increasingly used to treat morbid obesity. We present a BAROSCORE study over two groups of patients treated with RYGBP and OAGBP over 7 years.

Objectives

The aim of the study is to assess efficacy and safety of OAGBP vs RYGBP

Methods

This prospective study followed 884 RYGBP and 1048 OAGBP, performed in a single Surgical Center from September 2004 to December 2016. Every 6 months, we recorded: weights, complications, re-operation, variations of co-morbidities and quality-of-life scores. Ki2 test was used.

Results

Two groups were similar regarding age, initial weight and BMI. They were different for sex ratio, comorbidities, previous surgical procedures, and procedure duration. There were 8.5% early re-interventions for RYGBP vs 3.5% for OAGBP ($p < 0.05$). 1 death for RYGBP and 1 for OAGBP. There were less fistulas, ulcer punctures, and occlusions in OAGBP vs RYGBP: 1/6, 3/15, and 9/23 respectively ($p < 0.05$). There were more anemia due to iron and protein deficiency in CCGO, none deadly. On average, weight loss after 7 years was: RYGBP 25kg vs OAGBP 34kg, weight excess loss was: RYGBP 57% vs OAGBP 74% ($p < 0.05$). The BAROSCORE was: RYGBP good to excellent 76.7% vs OAGBP 84% ($p = 5\%$).

Conclusion

Procedure duration of OAGBP was shorter. The weight and excess weight losses as well as the BAROSCOREs were better in OAGBP. There were less surgical complications in OAGBP, especially fistulas, ulcer perforations and late occlusions. Yet, there were more metabolic complications in CCGO, probably due to a longer short-circuited jejunum.

□
O.116

PRIMARY LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: SAFETY AND EFFICACY OUTCOMES IN A SINGLE CENTRE SERIES IN THE UK

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

With the increasing popularity of newer bariatric procedures, it is important to highlight the perioperative and long term outcomes of what has been considered the gold standard procedure; Laparoscopic Roux-en-Y gastric bypass (LRYGB).

Introduction

In addition to available data from clinical trials and national registries, prospective single-centre series including the learning curve provide real-life data that can inform current practice.

Objectives

The objective of this report is to demonstrate the perioperative safety and long-term efficacy of the procedure in a UK centre of excellence from commencement of the program to date.

Methods

Single centre series performed by three surgeons. Prospective data collection. Patients were medically optimised and weight loss was encouraged before surgery.

Results

In 1643 patients undergoing primary LRYGB, there was only one mortality (0.06%). Mean percentage excess weight loss at 1 year postoperatively was 65.9, at 5 years 59.1 and at 10 years 52.2.

Conclusion

LRYGB is safe with weight loss maintenance sustained for at least 10 years. Alternative procedures, established or novel should continue to be tested against LRYGB.

O.117

IS ECONOMICAL AND/OR EDUCATIONAL STATUS A PREDICTOR OF SUCCESS IN BARIATRIC SURGERY? OUR EXPERIENCE IN ARGENTINA

Young IFSO Session

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Background

Obesity is a worldwide pandemic and does not discriminate socioeconomic status.

Introduction

Bariatric surgery has been proven as the most effective tool for weight reduction. However, failure rates depend on several variables regardless technique.

Objectives

To compare economical and educational status associated with weight loss success.

Methods

Patients undergoing gastric bypass (GBP) and sleeve gastrectomy (SG) who achieved at least one year of follow-up were included. Patients were tabulated according to economical status (monthly household income in US dollars G1 <1000; G2 1000-2000; G3 >2000) and to educational status (A= completed low/medium-school; B= completed high-school; C= completed college/university). Gender, age, BMI, %EWL, and their relationship with described tabulation were evaluated.

Results

A total of 777 patients were recruited. Age, gender and initial BMI were statistically similar. 426 underwent SG and 351 GBP. At 12 months the success percentage was 59.86 and 80.34 respectively ($p < 0.5$). %EWL were 41.5 ± 6.2 and 42.5 ± 7.1 in patients of Group A1 and A2 for SG; and 56.7 ± 3.2 and 58.1 ± 4.1 for GBP ($p < 0.5$). Patients of Group A1, B1 and C1 showed at 12 months $41,5 \pm 6,2$; $57,3 \pm 3,7$ and $68,4 \pm 5,9$ of %EWL ($p < 0.5$) in the SG group. Patients in groups C1, C2 and C3 showed a success percentage of 73,33 and 83,33; 74,36 and 84,06; 73,68 and 85,71, respectively for SG and GBP.

Conclusion

Low educated patients would have worse results in SG. There was not significative difference in GBP patients in any variable analyzed. There is a slightly but not significant difference in higher educated group with better results related to higher incomes.

□
O.118

ONE YEAR CROSS-SECTION DEMOGRAPHIC DATA AND TREATMENT OUTCOMES OF BARIATRIC PATIENTS FROM THE LARGEST BARIATRIC AND METABOLIC CENTER IN THE CZECH REPUBLIC.

Young IFSO Session

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Background

Obesity affects about 400.000 inhabitants of Czech population.

Introduction

Demography and treatment outcomes in one year cross-section from the largest bariatric center providing > 30% of yearly country's total bariatric operations were prospectively evaluated.

Objectives

To compare demographic data and treatment outcomes of bariatric patients from the largest bariatric and metabolic Center in the Czech Republic with those reported in Europe and worldwide.

Methods

From January- November 2015, 395 bariatric patients data were entered before operation, analysed 6,12 and 24 months after surgery and compared to those already published elsewhere.

Results

On entry 81.7% of patients were women. Average age 44.2 (\pm 11.28yrs), BMI 42.57 (\pm 6.83) kg/m², weight 122.5 (\pm 24.94) kg, 30.6% diabetics, 56.1% hypertensive. Comparison showed higher women ratio (Buchwald's metaanalysis /72.6%/, Guerra's /79.1%/). Average age was higher in Czech patients, (Buchwald's /38.9 yrs/, however close to Guerra's /43.4 yrs/), at entry, patients exhibited lower BMI than Buchwald's (46.8 kg/m²), and similar to Guarra's (42.8 kg/m²). Our group showed twice as high T2DM prevalence (Buchwald's /15.3%/), significantly higher rate of hypertension (56.1% vs 35.4%). Score of restriction TFEQ 10.4, disinhibition 4.26, hunger 3.15. After 6 months TFEQ disinhibition lowered to 3.6 (p=0,012), hunger score to 1.96 (p=0,016). BMI dropped by 7.2, 8.5 and 11.5 kg/m² at 6, 12 and 24 mths. BMI reduction in two years is consistent with Buchwald's, Van Hout's, and others.

Conclusion

Compared to other reports, there were more women, significantly higher T2DM proportion and/or more hypertensive patients. Other demographic data are consistent with those reported in Europe and worldwide.

O.119

SUPER OBESE BARIATRIC PATIENTS DO NOT HAVE WORSE EARLY POSTOPERATIVE OUTCOMES – POLISH MULTICENTER STUDY

Young IFSO Session

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Introduction

Many studies reported that super obese patients are at increased risk for morbidity and mortality after different types of surgeries. We found advisable to determine BMI's influence on postoperative outcomes of bariatric treatment.

Objectives

We aimed to analyze BMI at moment of LSG and LRYGB as determinant factor in postoperative outcomes.

Methods

Prospective, observational study included patients undergoing LSG or LRYGB in two referral centers for general surgery. Patients were divided into two groups: BMI <50 kg/m² and ≥50 kg/m². Endpoints were influence of BMI on postoperative morbidity, operative time, LOS, readmissions. Patients' care was standardized (ERAS), as well as surgical techniques. From 2013 to 2016, 788 patients met inclusion criteria.

Results

649 patients had BMI <50 kg/m² and 139 had ≥50 kg/m². Higher ASA and comorbidities' rates were more often present in BMI ≥50 kg/m² group. Surgeries distribution was comparable. Postoperative morbidity (respectively 13.27% and 13.67%) in the 6 months period was not influence by BMI (OR: 1.03, CI: 0.60-1.78). Risks for gastrointestinal leakage (OR: 1.19, CI: 0.38-3.74), gastrointestinal stricture (OR: 0.46, CI: 0.06-3.65), postoperative hemorrhage (OR: 0.14, CI: 0.02-1.07), wound infection (OR: 0.27, CI: 0.04-2.04), port site hernia (OR: 0.46, CI: 0.06-12.53) or marginal ulcers (OR: 0.01, CI: 0.06-3.65) remained uninfluenced. BMI ≥50 kg/m² increased operative time by 18.89±4.18 min (p≤0.001), but did not influence LOS (p=0.338). Readmission rates were comparable (7.43% and 8.63%; p=0.758).

Conclusion

Patients with BMI ≥50 kg/m² have prolonged operative time, but it does not influence the risks of postoperative morbidity. Rates of readmissions and LOS remain uninfluenced.

O.120

THYROID DYSFUNCTION IN CHINESE OBESE PATIENTS UNDERGOING BARIATRIC SURGERY

Young IFSO Session

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Introduction

Number of obese patients is increasing rapidly in mainland China, the country with high prevalence of thyroid diseases. Few studies evaluated in thyroid function of Chinese patients undergoing bariatric surgery.

Objectives

To investigate prevalence and relationship of thyroid functions and obesity in Chinese patients.

Methods

Basic data and thyroid function tests of patients underwent bariatric surgery was collected and analyzed in First Affiliated Hospital of Jinan University between April 2016 and February 2017. Thyroid functions including free triiodothyronine(FT3), free thyroxine (FT4), thyroid stimulating hormone (TSH), parathyroid hormone (IPTH), thyroglobulin (TG), anti thyroglobulin antibody (anti-TG), anti thyroid peroxidase antibody (anti-TPO), and serum calcium (Ca).

Results

29 cases (9 males, 20 females) of obese patients with thyroid diseases were enrolled in this study. Mean BMI was 42.57 ± 9.84 , FT3 was 5.36 ± 0.69 pmol/L, FT4 was 12.56 ± 3.01 pmol/L, TSH was 2.67 ± 1.44 mIU/L, IPTH was 52.30 ± 29.07 pg/ml, serum Ca was 2.34 ± 0.13 , TG 17.17 ± 39.82 ng/ml, anti-TG was 49.62 ± 183.75 IU/ml, anti-TPO was 32.06 ± 105.49 IU/ml. BMI was negatively correlated with FT3($R=-0.164$), FT4($R=-0.072$), Ca($R=-0.348$) and TG($R=-0.192$), positive correlated with IPTH ($R=0.074$), TSH($R=0.039$), anti-TG($R=0.060$), anti-TPO($R=0.036$), age($R=0.115$). Serum calcium was positive correlated with FT3($R=0.467$) and TSH($R=0.015$), negatively correlated with FT4($R=-0.411$), IPTH ($R=-0.063$), TG ($R=-0.027$), anti-TG ($R=-0.042$), anti-TPO ($R=-0.031$), age ($R=-0.362$).

Conclusion

This is the first study to evaluate the thyroid function of Chinese patients undergoing bariatric surgery. Obesity may be related to the incidence of thyroid diseases. Obesity, TSH and anti-TPO levels have an impact on each other. Further studies are required to evaluate the influence of thyroid hormones of bariatric surgeries in Chinese populations.

O.121

BARIATRIC SURGERY VS LIFESTYLE MODIFICATION IN CLASS I OBESITY: 7 TO 10 YEARS RESULTS.

Surgery and strategies for low BMI

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Background

Class I obesity is related to an increased risk of comorbidities, and it is associated to an increased psychosocial burden, particularly in women.

Introduction

Patients affected by class I obesity are usually treated with Lifestyle Modification (LM) rather than Bariatric Surgery (BS).

Objectives

Aim of our study was to retrospectively compare long-term results of bariatric surgery and LM in subjects with a BMI=30–35 kg/m².

Methods

All patients with class I obesity that have been assessed before December 2006 were included in the study. Patients that underwent bariatric surgery were allocated in group A, subjects that have been treated with LM were inserted in group B. Long term weight loss was retrospectively compared using Delta-BMI and %EWL as parameters.

Results

Seventy-six patients were included in the study. Twenty patients were treated with LM (group B), while 56 subjects underwent BS (Group A). In the BS group 34 patients underwent Laparoscopic Adjustable Gastric Band (LAGB), 9 Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) and 13 Sleeve Gastrectomy (LSG). No difference in mean initial age and BMI was observed between groups. Delta-BMI after 10 years was 8.3 ± 9.8 in group A and 1 ± 3.3 in group B ($p < 0.01$). %EWL after 10 years was 11.8 ± 3.5 in group A and 46.2 ± 39.23 in group B ($p < 0.01$). In group A, no difference ($p < 0.01$) was detected in 10-year %EWL between LAGB, LRYGB and LSG patients.

Conclusion

Subjects that received LM maintained the weight stable but failed to obtain satisfactory weight loss. Sleeve Gastrectomy appears to be the best option for this class of patients.

O.122

EFFICACY OF WEIGHT REDUCTION OF ENDOSCOPIC INTRASTOMACHIC BALLOON (IGB) VS ORAL SIBUTRAMINE IN PATIENTS WITH CLASS I OBESITY IN AN ASIAN COHORT – A RANDOMIZED CONTROL TRIAL WITH LONG TERM FOLLOW UP.

Surgery and strategies for low BMI

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Background

Intragastric balloon (IGB) is an effective treatment for weight reduction but its long-term efficacy is remained uncertain.

Introduction

This study will provide longest follow up on weight reduction intervention in IGB and pharmacotherapy.

Objectives

This randomized study aims to evaluate early (6 & 12 months) and long-term (10 years) follow-up data on weight loss on IGB and Sibutramine treatment for Class I obese.

Methods

Subjects (18-60 yrs old) with Class I obesity without medical comorbidity were randomly assigned to receive either 6 months IGB or sibutramine (15mg daily) treatment. Self-reported body weight and comorbidity was recorded and willingness to receive retreatment was asked at follow-up interval.

Results

From 2006 to 2007, 50 and 49 subjects were recruited to undergo IGB (mean BW 80.3±11.6kg) and sibutramine (mean BW, 82.0±9.1kg) treatment respectively. IGB group has significantly more weight loss than sibutramine group at end-of-treatment (9.8±4.7kg Vs 7.5±5.2kg, p<0.03) and >6 months post-treatment (6.5±5.1kg Vs 4.4±5.0kg, p=0.05). At 10 years after treatment, 32 subjects showed completed follow-up data. All subjects has rebound of body weight to preoperative level (IGB =2.3±1.1kg p=0.19; Sibutramine = 1.9±0.18kg, p=0.90) and with no difference between 2 arms. However, comorbidity such as joint pains, metabolic syndrome, and sleep apnoea developed in 60%, 44% and 50%, respectively. Moreover, acceptability for re treatment is significantly higher among IGB group as compared to sibutramine (81% vs. 56%, p<0.01)

Conclusion

IGB is a modest treatment tool for Class I obesity especially among Asians and showed effective weight loss up to 1 year with higher acceptability compared to pharmacotherapy.

O.123

COMPARISON OF THREE NOVEL TECHNIQUES FOR TYPE II DM TREATMENT IN PATIENTS WITH BMI 28-32 KG/M2: SINGLE ANASTOMOSIS GASTRIC BYPASS, SIDE TO SIDE JEJUNOILEAL ANASTOMOSIS AND TRANSIT GASTRIC BIPARTITION

Surgery and strategies for low BMI

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Background

Metabolic surgery provided effective treatment of type II diabetes treatment in morbid obese patients in the last decade with promising results. However the use of metabolic surgical techniques in patients with BMI < 35 is still experimental and in developmental stage.

Introduction

In this study we have compared shortterm results of three most effective laparoscopic metabolic surgical techniques, single anastomosis gastric bypass (SAGB), sleeve gastrectomy transit gastric bipartition (STGB) and side-side jejunoileal anastomosis (SJA) in patients with BMI range of 28-32 kg/m2 in 12 months of follow-up.

Objectives

To justify the role of novel surgical procedures in controlling TypeII diabetes.

Methods

Data were evaluated from three centers retrospectively and all the results were given in SDM. 30 patients in each group were either using oral antidiabetic drugs or insulin with uncontrolled diabetes. Mean age and BMI were(46±10.2, 50±8.2 and 48±6.2),(31.2, 30.4 and 30.8) respectively for SAGB, STGB,SSJIA respectively.

Results

After 12 months of follow up the mean post operative BMI and TBWL was (28.2±2.1 , 10.2%) , (30.1±1.8, 8.3%) and (29.1±2.4, 9.2) complete resolution of diabetes occurred in(86%,84.2% and 78%)and mean Hba1c values were 6.8%(5.7-8.4%),7.1%(5.8-9%),6.6%(5.7-8.1%) 12 months after the operation in SAGB, STGB and SJA groups and there was no statistical significance(p>0.05).

Conclusion

SAGB, STGB and SSJIA provided comparable, promising Type II diabetes remission in 12 months postoperative period with safe outcomes . Currently lack of long term randomized data limits the justification of these operations. However in future these operations might be a standard of care for the treatment of type 2 diabetes.

O.124

INTRAGASTRIC ELLIPSE BALLOON

Surgery and strategies for low BMI

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Introduction

The temporary use of the intragastric devices for weight loss is increasing worldwide. Avoidance of aggressive procedures for borderline BMIs is highly encouraging toward the intragastric devices.

Objectives

To study the group of patients who underwent insertion of Ellipse gastric balloon for weight loss

Methods

This is a retrospective cohort study for a group of patients who underwent insertion of Ellipse gastric balloon in the period between August 2016 – Jan 2017. Patients were followed up for different time intervals to assess the pattern of weight loss. The weight loss was calculated by applying the EWL% equation. The undesired symptoms accompanied the balloon insertion were encountered.

Results

105 patients underwent Ellipse gastric balloon insertion and were followed up in this study. The majority (86%) were females with mean age = 31 +/-8.8 years old. The mean follow-up period = 3.5 +/- 1.5 months. The following table 1 describes the findings. :

Variables (Mean +/- SD)	(N= 105)
Initial BMI kg/m ²	33.4+/-4.7
Initial weight	92.8 +/-20.2
Weight loss at 3 months kg	9.2 +/- 16
2nd BMI kg/m ²	31.1 +/- 6.7

Insertion was done as out patient procedure No major complications or mortality were encountered in this study. Only (N=2) patients could not tolerate it and had to be removed. The following table shows main symptoms in the initial period post insertion:

Symptoms	N=105
Stomach pain	65%
Nausea & vomiting	83.7%
Need for IVF	44.1%
Mean frequency of IVF use	1.3 +/-2

Conclusion

Intragastric Ellipse balloon is an effective, safe & feasible non-invasive method for weight loss.

O.125

PLASTIC SURGERY AFTER BARIATRIC PROCEDURE: NATIONAL STUDY ON 23,000 PATIENTS

Plastic surgery after weight loss

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Introduction

Plastic surgery is a natural outcome of bariatric surgery. The degree of use of plastic surgery is poorly known in the medical literature, particularly in France.

Objectives

The main objective of the study is to describe the rate of use of plastic surgery. The secondary objective is the analysis of factors associated with the use of plastic surgery.

Methods

This is a descriptive observational study, based on administrative data (PMSI). We included all adult patients operated on bariatric surgery in France between 2007 and 2013. The main objective of the study is to describe the rate of use of plastic surgery. The secondary objective is the analysis of factors associated with the use of plastic surgery.

Results

Between 2007 and 2013, 183,000 patients underwent bariatric surgery. In this population, 23,400 plastic surgeries were performed on 18,300 patients: abdominoplasty (62%), dermolipectomy of the upper or lower limbs (25%), and reconstruction of the breast (14%). The rate of plastic surgery was 21% after 7 years of bariatric surgery. Multivariate analysis shows that the most important factors associated with performing a plastic procedure are: the type of bariatric surgery, sex, and the hospital of origin.

Conclusion

The plastic surgery is more frequent when the bariatric procedure is more effective. The provision of healthcare facilities influences the access to plastic surgery.

O.126

ABDOMINOPLASTY AFTER MASSIVE WEIGHT LOSS: STANDARDIZED TECHNIQUE & RESULTS OF A HIGH VOLUME POST-BARIATRIC CENTER

Plastic surgery after weight loss

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Introduction

Due to massive weight loss after bariatric surgery there is an exponential rise in body contouring procedures that, unfortunately, are still associated with a significant number of complications.

Objectives

The aim was to evaluate the complication rate after abdominoplasty procedures performed in our high volume post-bariatric center, to identify predictors of complications and to compare our results with other published series.

Methods

A retrospective review was performed and included all abdominoplasty procedures performed between January 2011 and December 2016 according to our standardized technique. Complications according to the Clavien-Dindo classification (type I to V) were documented and potential risk factors were statistically evaluated.

Results

A total of 599 consecutive patients were included. Type III complications occurred in 3.3% (n=20) with reintervention for wound problems (=10), seroma (n=4), umbilical necrosis (n=4) and bleeding (n=2). Type II complications requiring medical intervention occurred in 7.8% (n=47). Four patients developed deep venous thrombosis or pulmonary embolism; others received antibiotic treatment for wound infections. Type I complications (minor wound problems) occurred in 19.7% (n=118). The weight of skin tissue resected plus the interval between bariatric surgery and abdominoplasty were both important predictors for developing complications ($p < 0.001$ and $p < 0.05$ respectively).

Conclusion

In this large post-bariatric abdominoplasty series the overall complication rate is low compared to other published series as a consequence of our complete standardized approach and technique. This analysis shows a significant linear correlation between the weight of skin tissue resected and post-operative complications. Moreover, the longer the interval between bariatric surgery and abdominoplasty, the higher the complication rate.

O.127

PROSPECTIVE, MULTICENTRIC, COMPARATIVE STUDY BETWEEN SLEEVE GASTRECTOMY AND GASTRIC BYPASS, 277 PATIENTS, 3 YEARS FOLLOW-UP (CLINICALTRIALS.GOV IDENTIFER : NTC 00722995)

Sleeve gastrectomy

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Introduction

The two surgical techniques are currently performed in common practice, but few studies have shown superiority of one strategy over the other.

Objectives

To demonstrate that sleeve gastrectomy (SG) improves the benefit/risk ratio of Roux-en-Y gastric bypass (RYGBP) resulting with less morbi-mortality and a weight loss not lower than that of the RYGBP at 36 months.

Methods

Prospective, multicentric, comparative study between SG and RYGBP. The study tested 2 hypotheses : a hypothesis of difference on the frequency of morbi-mortality events, and non-inferiority of SG on the reduction of excess weight greater than 50% at 36 months.

Results

277 patients were included (91 RYGBP, 186 SG). The mean age was 41.1 ± 11.1 years, and average preoperative BMI of 45.25 ± 5.44 kg/m². Concerning the morbi-mortality, there was a significant difference with more frequent events in the RYGBP group: 15,4% of major complications after RYGBP compared with 5.9% after SG ($p = 0,0098$). The loss of excess weight greater than 50% at 36 months was 79.12% and 79.46% for RYGBP and SG respectively, let be a difference of -0.34% CI 95% (-10.5%; 9.8%). The superior border of the CI 95% of 9.8% < 15% (margin of non-inferiority) allowed to conclude the non-inferiority of SG on the reduction of the excess weight at 36 months.

Conclusion

The weight loss observed 36 months after SG is not inferior to that obtained after RYGBP. But the morbi-mortality after SG is lower than that obtained after RYGBP.

O.128

LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: 10-14 YEARS FOLLOW UP EXPERIENCE

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Roux-en-Y Gastric Bypass (RYGB) is an effective weight loss procedure. Few studies have reported long-term outcomes of RYGB.

Objectives

To investigate long-term weight loss, co-morbidity remission, nutritional status, and complication rates among patients undergoing RYGB.

Methods

All patients that underwent RYGB from January 2000 to December 2006 were included. Clinical data collected were age, BMI, complications, nutritional status. Weight loss was calculated as %EWL at 8, 10, 12 and 14 years.

Results

285 obese patients underwent RYGB in the selected period. Mean initial BMI was $45.30 \pm 5.91 \text{ kg/m}^2$ before RYGB. Mean BMI after the procedure were 33.52 ± 5.1 , 33.8 ± 5.08 , 30.45 ± 4.06 and $32.6 \pm 4.69 \text{ kg/m}^2$ and mean excess weight loss (EWL%) were 66.25 ± 21.15 , 64.23 ± 23 , 76.69 ± 21.52 , and $69.84 \pm 23.26\%$ at 8, 10, 12 and 14 years respectively. 69% of patients achieved a $\text{BMI} \leq 35 \text{ kg/m}^2$ at 10 years. The follow up rate was 91% at 8 years, 84% at 10 years, 72% at 12 years and 63% at 14 years. Reported complications: hemorrhage in 3.5% of patients, conversion to laparotomy in 1.4%, bowel obstruction occurred in 7.3% of patients, internal hernia in 1.4% of patients, gastrojejunal leak in 0,7% of cases, gastrojejunal stenosis in 1% of cases. Mortality was of 0.35% for internal hernia. 60% of patients suspended multivitamin supplementations and 35.7% of patients presented nutritional deficiencies requiring repeated adjustments of therapy. 7.36% of patients required revision procedures for weight regain.

Conclusion

Majority of patients maintained successful weight loss and remission from co-morbidities in long term. Complication rate was low, but nutritional deficiencies negatively affected the follow-up period. Life-long surveillance is mandatory.

□
O.129

ROUX-EN-Y GASTRIC BYPASS IN PAEDIATRIC TYPE 2 DIABETES: A SYSTEMATIC REVIEW

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Dramatic increases in the incidence of paediatric type 2 diabetes have mirrored the rise in child and adolescent obesity. Despite this, few effective treatments are available. Roux-en-Y gastric bypass surgery is increasingly considered for the treatment of adolescents with type 2 diabetes.

Objectives

To systematically review and analyse the effectiveness of Roux-en-Y gastric bypass for the treatment of paediatric type 2 diabetes.

Methods

A systematic search of four databases (MEDLINE, Embase, Scopus and Cochrane Library) was conducted to identify studies on Roux-en-Y gastric bypass in adolescents with type 2 diabetes. Heterogeneity among included studies precluded meta-analysis and well established narrative synthesis approaches were used.

Results

Nine studies with a total sample size of 119 patients were included. 101/119 (84.9%) patients showed evidence of remission of type 2 diabetes after Roux-en-Y gastric bypass. In studies that followed patients for three or more years, 23/24 (95.8%) patients showed decreases in haemoglobin A1c and fasting plasma glucose to non-diabetic ranges.

Conclusion

Roux-en-Y gastric bypass may effectively reverse paediatric type 2 diabetes with some degree of durability, although the paucity of evidence must be noted. Further research is needed to better evaluate the efficacy and safety of Roux-en-Y gastric bypass for the treatment of paediatric type 2 diabetes.

□
O.130

AN EXTENDED REVIEW OF LITERATURE COMPARING LAPAROSCOPIC SLEEVE GASTRECTOMY AND ROUX-EN-Y GASTRIC BYPASS IN THE MANAGEMENT OF OBESITY AND RELATED CO-MORBIDITIES

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) was known to be the gold standard bariatric surgery for over 30 years. In the last few years, Laparoscopic Sleeve Gastrectomy (LSG) is increasingly used as a stand-alone bariatric procedure and it has overtaken adjustable gastric banding in many parts of the world

Introduction

An extended literature review and critical analysis was carried out to compare the outcomes of LRYGB and LSG.

Objectives

“Is laparoscopic sleeve gastrectomy a superior to laparoscopic Roux-en-Y gastric bypass in the management of obesity and related co-morbidities?”

Methods

:An extended review of literature will be undertaken for this study. Electronic databases were searched comparing the results LSG studies and studies comparing LSG versus LRYGB. Studies published in English language since 2000 until now were included. 62 relevant papers were selected; relevant data was collected and entered onto a themed matrix to facilitate critical analysis

Results

The studies were subgrouped into following outcomes; weight loss, co-morbidity resolution, postoperative complications, super-obese population, micronutrient deficiencies and cost analysis; which were critiqued used validated tools.

Conclusion

The critical analysis concluded that LSG is comparable to LRYGB resulting in weight loss, has shorter operative time and is associated with lower mortality and morbidity both in short and long term as evidenced by our studies. The diabetic remission was comparable between both procedures, whereas resolution of hypertension, hyperlipidaemia and obstructive sleep apnoea were better in the LRYGB patients. The deficiencies of protein and micronutrients mainly vitamin B12 and vitamin D were more pronounced after LRYGB than LSG.

O.131

VALUE OF CT-SCAN FOR SUSPECTED INTERNAL HERNIATION IN PATIENTS FOLLOWING LAPAROSCOPIC GASTRIC BYPASS SURGERY

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Internal herniation(IH) is one of the late complications after gastric bypass surgery. Abdominal CT-scans are often used in case of suspected IH but its value is not certain.

Objectives

To determine the value of an abdominal CT-scan in diagnosing internal herniation (IH) in patients following gastric bypass surgery.

Methods

Patients were retrospectively included after laparoscopic gastric bypass surgery (primary and as revision) between January 1, 2011 and December 31, 2014. Clinical records were screened for CT-scans and reoperations between the initial operation and December 31, 2016, to select patients suspected of IH. If in the period of 90 days after CT-scan no follow-up CT-scan or re-laparoscopy was performed the episode was presumed negative and a new episode was started.

Results

A total of 1475 patients were included (84.7% female, mean age 46.5(±10.2) years). Complaints were found in 192(13%) patients of which 37(19.3%) had a laparoscopic proven IH; incidence 2.5%(37/1475). In total 247 CT-scans were made, 58(23.5%) were positive for IH, leading to 47 re-laparoscopies in 30(63.8%) of which IH was confirmed. Re-laparoscopy was also performed after 24 negative CT-scans with IH in 25%(6/24). Surgery without a preceded CT-scan showed IH in 33.3%(6/18).

Combining follow-up ≥90 days and operative findings as reference resulted in a sensitivity of CT-scan of 83.8%(95%-CI;71.9-95.7%), specificity of 86.6%(95%-CI;81.9-91.3%), PPV of 53.4%(95%-CI;40.6-66.3%), and NPV of 96.7%(95%-CI;94.0-99.3%)

Conclusion

CT-scans are a valuable tool to help exclude IH and prevent re-laparoscopy in patients suspected of IH. However, in patients with a high suspicion of IH and a negative CT-scan re-laparoscopy is still indicated.

O.132

IS THE CURRENT CALCIUM SUPPLEMENTATION ADEQUATE IN PATIENTS AFTER GASTRIC BYPASS? – COMPARISON BETWEEN MATCHED COHORT OF PATIENTS WHO UNDERWENT ONE-ANASTOMOSIS GASTRIC BYPASS AND ROUX-EN-Y GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Vitamin D deficiency might be more common following One-anastomosis gastric bypass (OAGB) compared to Roux-en-Y gastric bypass (RYGB).

Objectives

To compare serum Calcium, Vitamin D, and Parathyroid hormone (PTH) levels in a matched cohort of patients who underwent OAGB and RYGB.

Methods

200 patients who underwent OAGB from October 2012 to October 2015 were matched to patients who underwent RYGB based on age, sex, body mass index (BMI), and time of surgery. We compared serum levels pre-operatively and 6 monthly intervals after surgery.

Results

Age, Sex, BMI, and pre-operative blood results were comparable between the two groups. Before the operation, majority of the patients were deficient in Vitamin D – OAGB 71.7% and RYGB 74.2%. Twenty-one patients in the OAGB group and 34 in RYGB group had elevated PTH levels, and only one patient in RYGB group had hypocalcaemia. Post-operatively, there was a significant drop in Calcium levels at all time points. In the OAGB group mean Calcium levels dropped from 2.43 (0.09) to 2.33 (0.08) mmol/litre at two years ($p < 0.001$), and in the RYGB group similar reduction from 2.43 (0.09) to 2.34 (1.0) mmol/litre ($p < 0.001$) was observed. Vitamin D and PTH increased significantly in both the groups. Levels were comparable between the two groups.

Conclusion

With the current supplementation, Vitamin D gets replenished in both groups after surgery. Hence, the increase in serum PTH levels is likely triggered by the drop in Calcium levels, and we may need to consider increasing the dose of Calcium supplements.

O.133

THE TEEN BYPASS EQUIPOISE SLEEVE TRIAL (TEEN-BEST): A RANDOMISED CONTROLLED TRIAL OF GASTRIC BYPASS VERSUS SLEEVE GASTRECTOMY FOR ADOLESCENTS WITH SEVERE OBESITY

Dragons' Den meets Shark tank (proposals for randomized controlled trials)

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Background and rationale for the RCT, including existing literature reviews

Six to seven percent of children in Western Europe have obesity (1), many experiencing life-changing and life-shortening comorbidities (2), which begin in adolescence (3) and may progress more rapidly when onset is in youth (4).

Where non-surgical therapies fail (5), surgical treatments are well established in adults (6). In addition to our published reviews (2,3,6), we and another group have recently reported the long-term safety and efficacy of adolescent gastric bypass (7, 8). Gastric bypass has been the procedure of choice, but has recently been overtaken in popularity by sleeve gastrectomy, despite an absence of long-term outcome data in adolescents. With limited evidence permitting direct comparison between these procedures, a clear knowledge gap, coupled with genuine clinical equipoise prevents evidence-based recommendation to eligible adolescents.

Overall aim in PICO (Patients, Intervention, Comparator, Outcomes) format

In adolescents eligible for bariatric surgery, is sleeve gastrectomy non-inferior to gastric bypass, in terms of achieving a 10% total bodyweight loss and the relative incidence of additional surgical intervention, 3 years after surgery?

Trial design (selection and recruitment of patients, timing of randomization, details of the intervention)

Multicenter randomised controlled trial across two centralised units; one in the Netherlands and one in Sweden. The protocol will be specifically designed to be deliverable across a broad range of healthcare systems worldwide and, upon successful initiation, further centres will be invited to conduct additional satellite trials, resulting in sufficient aggregate power to examine prospectively identified secondary outcomes, which require larger cohorts for sufficient power.

Inclusion/exclusion:

Meeting all US (9) and European (10) criteria, including:

-Aged 14-18 years, BMI ≥ 40 kg/m² with comorbidity, or ≥ 35 kg/m² with serious comorbidity (e.g. T2DM).

Randomisation:

-Independent, computerised, on day of surgery.

Interventions:

-Standardised techniques agreed by lead surgeons (7, 8).

-Performed by a bariatric surgeon, accompanied by a paediatric surgeon.

Primary outcomes:

At 3 years after surgery:

1. Successful ($\geq 10\%$) total bodyweight loss.

2. Additional surgical intervention rate.

□ Chosen as both relevant and deliverable outcomes within the Netherlands and Sweden across a 3-year recruitment phase. A sample size of 116 patients/arm will permit detection of non-inferiority for TBW loss, with a margin of <-0.1 in success rate ($\alpha=0.05$, $1-\beta=0.9$, $nB=99$), allowing a 15% dropout (85/arm required for additional surgical intervention).

Secondary outcomes:

Prospectively determined by a Delphi expert consensus process, which we are currently undertaking to develop a Core Outcome Set specific to adolescent bariatric surgery, as recently determined in adults (11).

All outcomes will be assessed in line with our previous study (7), by a dedicated research nurse within each country, at 30 days and 6, 12, 24, 36, 60 and 120 months.

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O.134

SINGLE ANASTOMOSIS DUODENAL SWITCH (SADI-S) VERSUS ROUX-EN-Y GASTRIC BYPASS - DEFINING A NEW GOLD STANDARD IN METABOLIC SURGERY

Dragons' Den meets Shark tank (proposals for randomized controlled trials)

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Background and rationale for the RCT, including existing literature reviews

Morbid obesity is one of the most frequent chronic medical disorders. Surgery is considered the most effective treatment option, as it results in adequate weight loss and significant improvement in comorbidity. Although Roux-Y gastric (RYGB) bypass is considered for many bariatric surgeons the gold standard, it can fail in about 20% of the cases. Therefore, new bariatric operations as single anastomosis duodenoileal bypass with sleeve (SADI -S) have emerged, trying to decrease the potential complication rate and to maintain or improve the outcomes of classical operation, particularly in super-obesity. The aim of the study is to investigate and compare the efficacy of SADI-S and gastric bypass surgery for grade III obesity. In this randomized controlled trial SADI-S will be compared to the metabolic RYGB (with 200 cm biliopancreatic limb), in order to conclude which option is the optimal therapeutic strategy in the morbidly obese patient.

Overall aim in PICO (Patients, Intervention, Comparator, Outcomes) format

The primary objective is to evaluate whether SADI -S is superior in terms of percentage excess weight loss after 18 months follow-up compared to metabolic RYGB.

Secondary endpoints are evaluation of quality of life, cure /improvement of obesity related comorbidity, early/late complications and malnutrition.

Trial design (selection and recruitment of patients, timing of randomization, details of the interve

In this randomized controlled trial 120 patients, with BMI between >45 and <50, will be randomized either to laparoscopic SADI -S with a 300 cm common channel, measured from the ileocecal junction, or to a metabolic gastric bypass (200 cm biliopancreatic limb) with a variable common channel length. Randomization will take place in the operating room and is single blinded. Morbidly obese patients without prior bariatric or major abdominal surgery, will be selected from multidisciplinary evaluation for obesity treatment consultation. Selection, randomization and surgery will take place in a 12 months period of time. The study will continue in an outpatient setting with regular visits at 1, 3, 6, 12 and 18 months post intervention, evaluating BMI, % EWL, waist circumference, quality of life questionnaires, improvement in comorbidity and the occurrence of any adverse events. Biochemical and hormonal data will also be evaluated, including the parameters: vitamin B1, B6, B12, D, folic acid, HbA1C, ferritin, iron, transferrin, cholesterol, HDL -cholesterol, LDL -cholesterol, triglyceride, calcium, magnesium, albumin, Zinc, homocysteine, parathomone, ghrelin, GLP -1, citruline, fecal elastase-1 and calprotectin. Data will be recorded prospectively and stored in a database. This study will take place in accordance to the standards of good clinical practice, in agreement with the Declaration of Helsinki and has been approved by the Hospital Medical Ethical Committee.

O.135

THE EFFECT OF IMPROVED PRE-OPERATIVE EDUCATION ON THE HEALTH-RELATED QUALITY OF LIFE OUTCOMES FOLLOWING BARIATRIC SURGERY

Dragons' Den meets Shark tank (proposals for randomized controlled trials)

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Background and rationale for the RCT, including existing literature reviews

Within the UK, there is no standardised patient education for patients undergoing bariatric surgery. A BOMSS membership survey conducted in 2015 showed little to no consistency in the pre-operative education provided between hospital trusts. Most responses to this survey demonstrated that pre-operative education focuses mainly on diet and physical health changes (or complications of surgery), not the psychosocial aspects such as relationship with food or coping mechanisms. Research however has shown that patients appreciate more pre-operative education, and that education is successful in helping patients to make lifestyle adaptations.

Qualitative research conducted by this team demonstrated that patients feel more psychosocial education and support is beneficial, and identified topics that they felt should be included in pre-operative education. An educational course has been designed to cover these topics, and was used as the intervention in a pilot controlled clinical trial, assessing the impact of an educational course on post-operative health-related quality of life. This study demonstrated that a trial of this nature is feasible and acceptable, and received significant interest from both patients and professionals.

Improved education could theoretically therefore help to significantly improve health related quality of life for patients following bariatric surgery, improve the patient's perception of success, and help to prevent weight regain or the resurgence of obesity related comorbidities.

Overall aim in PICO (Patients, Intervention, Comparator, Outcomes) format

P- Patients newly referred to the bariatric service, aiming to undergo primary bariatric surgery

I- An educational intervention, aimed at educating patients about the psychosocial aspects of bariatric surgery, and helping to adapt behaviours which may significantly alter their post-operative lifestyle

C- Patients undergoing usual pre-operative education (no additional psychosocial education or coaching)

O- Primary outcome would be to assess if enhanced education has a beneficial impact on health-related quality of life two years after surgery (most weight regain begins within this timeframe) by using the BAROS assessment tool (Bariatric Analysis and Reporting Outcome System)

Trial design (selection and recruitment of patients, timing of randomization, details of the intervention)

A non-blinded randomised controlled trial.

One hundred newly referred, primary bariatric surgery patients would be approached and recruited to each arm (control and intervention), after being accepted and listed for surgery. In

□ the pilot, 49 patients were recruited over 5 months, with a 70% attendance rate to the intervention, recruitment would be for up to 2 years. Recruited patients would need to ensure they were willing and able to attend the intervention. Intervention would occur approximately 2-6 weeks pre-operatively, running on a monthly basis.

Intervention includes topics such as: the psychological function of food and our relationship with food, understanding and changing eating habits, willpower, what to do when weight regain occurs, side effects of surgery, changes to body image and relationships, dealing with guilt, shame and the public perception of surgery, demands and resources, expectations, accessing support. Includes presentations, discussions, individual and group exercises and activities.

Follow up would be performed by emailing or posting the Moorhead-Ardalt Quality of Life assessment tool (part of the BAROS) to patients at 3, 6, 12, 18 and 24 months; other data collection regarding physical health would be collected via telephone with the patient.

O.136

LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS VERSUS ONE ANASTOMOSIS (MINI) GASTRIC BYPASS: A PROSPECTIVE RANDOMISED CONTROLLED CLINICAL TRIAL

Dragons' Den meets Shark tank (proposals for randomized controlled trials)

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Background and rationale for the RCT, including existing literature reviews

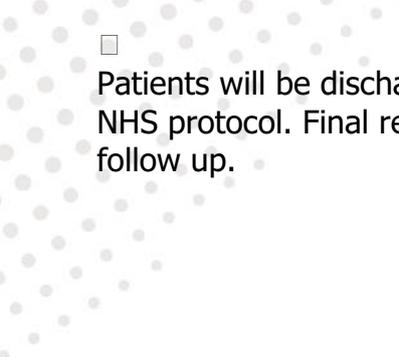
One anastomosis (Mini) gastric bypass (MGB) is rapidly gaining popularity in the world. First reported in 2001, this procedure is considered effective and safe as compared to the gold standard Roux-en-Y Gastric bypass (RYGB). The latest systematic review of MGB has been in 2014 by Georgiadou, D et al. Till date only one prospective randomised controlled trial comparing these two procedures have been conducted in 2005 (Lee, WJ et al). We have reported our experience with MGB in 2015 which is the only published study from the UK till date (Parmar, C et al). The uptake of MGB has been slow in the UK with concerns regarding reflux in postoperative period. A RCT in the NHS would be a robust way to study the merits of this procedure compared to gold standard RYGB.

Overall aim in PICO (Patients, Intervention, Comparator, Outcomes) format

Obese patients satisfying the NICE guidelines for bariatric surgery under the NHS will be recruited for the study to undergo either MGB (Experimental group) or RYGB (Control group). Two centres from England involved in recruitment. Excess weight loss(EWL%) at 2 years will be the primary outcome. Secondary outcomes will include revision surgery for reflux and malnutrition.

Trial design (selection and recruitment of patients, timing of randomization, details of the intervention)

We aim to recruit 100 patients in each group over a period of 2 years. Patients between ages 25 - 60 years included in the study. Patients with mild to moderate Gastro oesophageal reflux disease(GORD) and/or mild/moderate hiatus hernia (HH) will be included. Patients with HH > 4cm, histological proven barretts disease, previous bariatric surgery, pregnancy excluded from the study. Both these hospitals routinely perform pre-operative gastroscopy in their patients. Once the patient is confirmed to proceed for gastric bypass by the bariatric MDT, the patient will be randomised by an independent team. Stratified randomisation will be done to ensure that patients with GORD and HH are evenly distributed between the two groups. Laparoscopic MGB will be with standard limb length of 150 cms. Laparoscopic RYGB will be performed with BP limb of 50cms and alimentary limb length of 150cms. Potential internal hernia defects sites will be closed in the RYGB group. Both groups will have comparable peri operative and post operative structured pathway. The post operative oral supplements including prophylaxis with proton pump inhibitor(PPI) will be for similar dosage and duration. Patients will be followed up(f/u) at 3, 6, 12 and 18 months postoperatively by the dieticians and/or bariatric nurse specialist. Final 24 month appointment will be with consultant surgeon. Routine blood tests including trace elements and vitamin D levels will be done at every 6 monthly f/u. Late complications, EWL, BMI, quality of life and comorbidities will be determined. The primary end point will be % EWL and % total weight loss(TWL) at final f/u. The secondary end points will be revisional surgery for reflux symptoms and malnutrition.



□ Patients will be discharged to their General Practitioners after 2 years of bariatric surgery as per NHS protocol. Final results will be analysed when all patients have reached 2-year post operative follow up.

O.137

ROUX-EN-Y GASTRIC BYPASS AMELIORATES ALBUMINURIA AND PODOCYTE INJURY IN EXPERIMENTAL DIABETIC KIDNEY DISEASE

Type 2 diabetes and metabolic surgery

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Introduction

Metabolic improvements after Roux-en-Y gastric bypass (RYGB) are associated with reductions in albuminuria, suggesting a positive effect on glomerular injury, specifically podocyte health. The Zucker Diabetic Fatty rat (ZDF) is a well-characterized model of Diabetic Kidney Disease (DKD) associated with obesity and the development of type 2 diabetes.

Objectives

The aim of the study was to describe the effects of RYGB and a pharmacological intervention delivering RYGB-equivalent improvements in weight and glycemic control on albuminuria and glomerular injury in an experimental model of DKD.

Methods

Twelve week old male ZDF rats underwent RYGB or sham surgery. Zucker Fa/+ rats acted as healthy controls. A sub group of sham-operated rats were calorie restricted and received insulin, liraglutide, metformin, ramipril, rosuvastatin and fenofibrate for 2 months (medical bypass MB). Weight, glycaemia, albuminuria, glomerulomegaly, podocyte number and foot process frequency were assessed at follow up.

Results

RYGB resulted in 20-30% weight loss and normalized hyperglycemia. The MB protocol successfully matched the weight loss and glycemic control of the RYGB group without the requirement for ongoing insulin administration. Both interventions resulted in significant and equivalent reductions in albuminuria. Similar improvements were seen in glomerulomegaly and podocyte foot process frequency.

Conclusion

These data demonstrate that RYGB induces a reparative programme in the diabetic kidney that may be directly underpinned by improvements in body weight and the metabolic milieu.

O.138

TYPE 2 DIABETES RESOLUTION IN THE INSULIN-DEPENDENT PATIENT – WHICH METABOLIC OPERATION?

Type 2 diabetes and metabolic surgery

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Introduction

Although several studies have examined the impact of bariatric surgery on diabetes resolution, there is limited data available regarding the relative efficacy of metabolic operations in advanced (i.e. insulin-dependent) type 2 diabetes (IDT2DM).

Objectives

To assess the impact of metabolic surgery on diabetes improvement in IDT2DM.

Methods

The UK National Bariatric Registry (NBSR) was interrogated to identify patients with IDT2DM who underwent primary metabolic surgery between January 2009 and June 2014. The demographic, peri-operative, and post-operative outcomes were collected and analysed.

Results

A total of 927 patients with IDT2DM were identified, of whom 120 had adjustable gastric banding (AGB), 138 had vertical sleeve gastrectomy (VSG) and 647 had Roux-en-Y gastric bypass (RYGB). Just under half of patients had diabetes for 10 years or longer prior to undergoing surgery.

	AGB (n=120)	VSG (n=138)	RYGB (n=669)
Number with duration of diabetes 10 years or more (%)	57 (48)	67 (49)	305 (46)
Average length of follow up in days (standard error of the mean)	680 (40)	460 (26)	603 (16)
At follow up, number off diabetes medication (%)	17 (14)	46 (33)	277 (34)
At follow up, number on non-insulin diabetes medication (%)	27 (23)	45 (33)	213 (32)
At follow up, number on insulin (%)	76 (63)	47 (34)	179 (27)

VSG and RYGB had comparable rates of cessation of insulin therapy. AGB was associated with a poorer rate of cessation of insulin therapy when compared to VSG and RYGB ($p < 0.05$).

Conclusion

In IDT2DM, both VSG and RYGB, but not AGB, are associated with high incidence of post-operative cessation of insulin therapy.

O.139

DO WE REALLY KNOW THE CONSEQUENCES OF BARIATRIC SURGERY IN THE PANCREAS? CHANGING THE CONCEPTS OF REGENERATION AND HYPERPLASIA.

Type 2 diabetes and metabolic surgery

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Background

The amelioration of glycemia after metabolic surgery occurs independent of weight-loss. However, the underlying mechanisms of action, remain poorly understood.

Introduction

There are studies that suggest the bypass has the capacity to produce pancreatic regeneration and hyperplasia. Therefore, a risk of tumorigenesis over time is been posed.

Objectives

Evaluate the effect of bypass surgery in the pancreas tissues.

Methods

Thirty-six rats diabetics non-obese were underwent to One Anastomosis Gastric Bypass (OAGB) versus sham surgery. Each group was operated according to the time of diabetes evolution: early, medium and late. Weight, plasmatic parameters and pancreatic histological samples were evaluated

Results

No animal lost weight. The principal effect was the improvement in glycemic levels ($p=0.0001$ at late group). The morphometric/Ki67 analyzes didn't reveal an increase in the number or size of the pancreatic islets. Intra-islet insulin content remains stable (not insulin hyperproduction). There was a progressive increase in glucagon production in the sham rats ($\times 3.5$ at medium; $\times 5.9$ at late group). They also had reduced the expression of NKX6.1 (β -cell's identity marker) during the progression of T2D. (16% at medium and 98% at late group).

Conclusion

The amelioration of glucose levels occurs independent of weight loss, β -cell mass expansion or insulin production. We suggest the β -cell doesn't disappear or die with DT2 evolution. They're in an hibernation process and they can regain their original identity/function with the surgery. The process behind this phenomenon is unknown, but may be attributed to the new β -cell de/trans-differentiation mechanisms. The risk of tumorigenesis is unfounded.

O.140

ROUX-EN-Y GASTRIC BYPASS WITH A LONG BILIOPANCREATIC LIMB WITH DISTINCTIVE INCRETIN CELL DISTRIBUTION IMPROVES DIABETES CONTROL

Type 2 diabetes and metabolic surgery

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Introduction

Type 2 diabetes (T2D) improvement after Roux-en-Y gastric bypass (RYGB) has been partially attributed to gastrointestinal (GI) hormone response. The impact of modifying the biliopancreatic limb length on glycemic control has never been demonstrated.

Objectives

Access the influence of the RYGB biliopancreatic (BP) limb length in T2D control and the relation with relative distribution of incretin producing cells.

Methods

Obese T2D patients (n=114) submitted to classical (n=41; BP length 84 ± 2 cm) or long BP limb RYGB (n=73; BP = 200 cm) were monitored until 5 years after surgery. The relative proportion of K, L and K/L incretin secreting cells in the small intestine was evaluated in tissue fragments (n=39) of non-diabetic (n=17) and diabetic patients (n=10), collected at 60 to 100 cm from the Treitz ligament, and of diabetic patients (n=12), at 200 cm. Immunohistochemistry/immunofluorescence was used to quantify GIP and GLP-1 stained cells.

Results

Comparing the classical procedure, RYGB with long BP limb resulted in significantly higher T2D remission rate, lower anti-diabetic drug requirements in patients with persistent disease and lower T2D relapse rate. GIP and GLP-1 stained cells relative densities were significantly different at the two small intestine locations, with significantly lower GIP and higher GLP-1, yielding a significantly higher GLP-1/GIP ratio, in the distal as compared to the proximal intestine.

Conclusion

RYGB with longer BP limb results in improved T2D control, remission and relapse rates. The enhanced anti-diabetic effect of the long BP limb RYGB procedure could be attributed to the distinctive incretin producing cells distribution.

O.141

IS BARIATRIC SURGERY WORTHWHILE IN LONG-STANDING SEVERE DIABETES? THE LONG TERM OUTCOME ANALYSIS

Type 2 diabetes and metabolic surgery

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Background

The actual long-term impact of bariatric surgery upon severe long-standing diabetes is unknown.

Introduction

A retrospective analysis of all insulin-treated patients with a >10-year history of diabetes who underwent bariatric operations and had >1 year of follow up was performed.

Objectives

To assess the long term effect of different bariatric procedures on obese patients with severe long standing diabetes.

Methods

The postoperative diabetes response was graded: complete remission (HbA1C \leq 6 without medication); partial remission (HbA1C \leq 6.5 without medication); controlled diabetes (HbA1C \leq 7 w/wo treatment); uncontrolled diabetes (HbA1C >7).

Results

91 patients were included (mean age 55 years, (36-74), 63% males, mean diabetes duration 17 years). Forty, 33 and 14 underwent RYGB, SG and BPDDS, respectively. Bands were excluded. The mean preoperative FPG, HbA1c, and insulin dose were 190 mg/%, 8.8 g/%, and 113 units-per-day, respectively. The follow-up rate was 92% at 3 year, and 80% at five years.

At 3 and 5 years the diabetes response was complete remission in 7% and 15% respectively, partial remission in 8% and 3%, controlled in 40% and 31% and uncontrolled in 44% and 50%. Uncontrolled diabetes at 3 years was seen in 45% of RYGB, 53% of SG and only 18% of DS.

Conclusion

Morbidly obese patients with a long standing diabetes comprise a high risk particular subgroup of bariatric population: they are elderly with male predominance, and have a high prevalence of severe diabetes complications. Bariatric surgery yields low response rates on the long-term. The risk benefit ratio to conduct bariatric surgery should therefore be heavily weighted.

O.142

NON-ALCOHOLIC STEATOHEPATITIS: EFFECT OF LAPAROSCOPIC SLEEVE GASTRECTOMY SURGERY.

Type 2 diabetes and metabolic surgery

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Background

Non-alcoholic steatohepatitis leads to cirrhosis and end stage liver disease. Obesity is a risk factor for NASH

Introduction

LSG resolve many of the obesity related diseases. There are no many studies to assess the effect of LSG on NASH

Objectives

This study assess the effect of LSG on NASH by paired biopsies

Methods

Prospective study was conducted in obese patients undergoing LSG during April 2013 to February 2014. 55 patients underwent LSG and intra-operative liver biopsies. 39 had NASH. 15 underwent ultrasound guided liver biopsies after 6 months. Biopsies were evaluated and compared by an experienced hepatopathologist. Pre operative fasting lipid panel, Serum glucose, HbA1C, USG grading, liver biopsies and liver enzymes were compared at 6 months.

Results

Significant differences were noted in the following variables. BMI 42.28 vs 32.25 kg/m² (p=0.001); Serum Glucose 135.25 vs 91.51 (p=0.007); HbA1C 7.01 vs 5.38 (p=0.002); triglycerides 220.99 vs 114.96 mg/dl; (p=0.017); SGOT 27.02 vs 20.28 (p=0.02); SGPT 36.55 vs 15.9 (p=0.001). Significant improvement in steatosis, lobular inflammation, portal inflammation, lobular fibrosis and NAS score were noted. USG showing moderate to severe fatty changes 13/15 (86.7%) had resolved to mild fatty changes 12/13 (92%). Histopathology criteria for NASH were no longer found in 13/15 patients (87%) and 1/15 (7%) patient was showing a resolving pattern of NASH.

Conclusion

Weight loss after LSG results in significant improvement in glucose, HbA1C, Liver enzymes and lipid profile. More importantly for this study, LSG results in significant improvement in histological features of NASH with resolution of disease in majority of patients.

O.143

GASTRIC BYPASS IMPROVES HEPATIC MITOCHONDRIAL FUNCTION IN PATIENTS WITH SIMULTANEOUS STEATOHEPATITIS AND TYPE 2 DIABETES MELLITUS

Type 2 diabetes and metabolic surgery

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Background

Mitochondrial dysfunction is among the first step in the development of non-alcoholic steatohepatitis (NASH) but may also cause type 2 diabetes mellitus (T2DM). The enzymes of the respiratory chain are impaired and dysfunctional resulting in increased oxidative stress and consecutive cellular damage including apoptosis and necrosis.

Introduction

It is unclear what the effects of metabolic surgery on mitochondrial function are.

Objectives

The aim of this study was to assess mitochondrial function in a cohort of T2DM patients (BMI <35kg/m²) with NASH remission after Roux-Y gastric bypass (RYGB).

Methods

Twenty patients were enrolled in this prospective observational study. Paired liver biopsies (obtained intraoperatively and 3 years postoperatively) of 10 patients were investigated. RNA was extracted from the liver tissue and the expression of mitochondrial genes of the respiratory chain and β -oxidation was analyzed.

Results

All patients had a complete resolution of their NASH within 3 years after RYGB while glycemic control was improved (HbA1c $8.5\pm 1.2\%$ to $7.2\pm 0.9\%$; $p=0.006$). Expression of enzymes of the mitochondrial respiratory chain including mtCO1 and UQCR1 but also enzymes of β -oxidation (ACADM and ACSLI) increased (all $p<0.05$). Furthermore, genes associated with mitochondrial fusion and transcription (MFN1, FIS1, NRF1) were expressed higher (all $p<0.05$).

Conclusion

Improvement in mitochondrial function and homeostasis, i.e. mitochondrial fusion, after RYGB may be the underlying cause of NASH and T2DM remission in metabolically sick patients.

O.144

GASTRIC BYPASS BILIOPANCREATIC LIMB LENGTH INFLUENCES MEAL-RELATED HORMONE RESPONSE AND DIABETES REMISSION

Type 2 diabetes and metabolic surgery

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Introduction

Roux-en-Y gastric bypass (RYGB) is associated with long-term weight-loss and type-2 diabetes (T2D) remission. Minor modifications of the surgical technique could result in improved metabolic outcomes.

Objectives

Access the influence of the RYGB biliopancreatic limb (BPL) length in the meal related gastrointestinal hormone response and T2D improvement.

Methods

A cohort of T2D obese patients (n=114) submitted to classical BPL (n=41; BPL length 84±2 cm) or long BPL (n=73; BPL=200 cm) RYGB were followed up to 5 years after surgery. After weight loss stabilization, mixed-meal test were performed on a subset of non-T2D patients submitted to classical BPL (n=9) or long BPL (n=11) RYGB, while blood was sampled before and timely after the meal for glucose, insulin, C-peptide, total GLP-1, glucagon, GIP, PYY and PP measurement.

Results

At 5 years after surgery, T2D remission rate was significantly higher in patients submitted to long BPL RYGB (73.1% vs 55%, p<0.05), with lower relapse rate (11.9% vs 32%, p<0.05) and improved metabolic control with decreased need for pharmacological treatment in those patients with persistent disease (p<0.05). After a mix meal test both patient groups depicted similar glucose excursion curves, although those submitted to long BPL RYGB displayed higher GLP-1 levels at t=45 min (p<0.05) with a higher AUC (p=0.01), lower GIP levels at t=15 min (p<0.01), as well as lower insulin and c-peptide levels at t=30 min (p<0,001), when compared the classical RYGB group.

Conclusion

Modification of the RYGB procedure by increasing the BPL length prompts an increased meal elicited GLP-1 response and enhances T2D remission rate.

O.145

LOW VARIANCE OF WEIGHT LOSS OUTCOMES IN THE MODIFIED DUODENAL SWITCH

New (Non Standard) Surgical Techniques

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Introduction

Many patient- and surgery-specific variables determine a bariatric patient's weight loss following surgery. Operations with the highest standard deviations also have the highest long-term failure rates. Therefore, the absence of variance and small standard deviations in weight loss may better describe an operation's efficacy than mean weight loss alone. Modified duodenal switch (MDS) offers excellent weight loss with early reports suggesting a reduced incidence of complications compared to previous malabsorptive procedures.

Objectives

To differentiate between procedure- and patient-related variables in outcomes, we decided to compare results across three geographically diverse centers.

Methods

In our single-anastomosis version of the MDS, a longitudinal sleeve gastrectomy is performed. Next, the duodenum is transected 3cm from the pylorus and anastomosed to the small bowel 300cm from the ileocecal valve. For 240 patients across 3 centers in NY, NC, and UT, percent excess BMI loss (%EBMIL) means and standard deviations were analyzed 12 months post-op.

Results

Pre-op BMI ranged from 49-50 across all sites with no significant difference ($p=0.78$). At 12 months post-op, %EBMIL and standard deviation were $82\% \pm 19\%$ in the NC group ($n=81$), $84\% \pm 22\%$ in the NY group ($n=48$), and $78\% \pm 30\%$ in the UT group ($n=111$). The male:female ratio was not statistically different between sites ($p=0.58$).

Conclusion

The weight loss results of our MDS are consistent across different populations, geographic locations and surgeons. This suggests that outcomes at 1-year post-op are more related to the procedure than to patient-related variables. Longer follow-up with this cohort will reveal whether any differences arise.

□
O.146

LAPAROSCOPIC GREATER CURVATURE PLICATION VERSUS SLEEVE GASTRECTOMY: LONG-TERM RESULTS IN PATIENTS WITH BMI MORE AND LESS 40 KG/M2

Gastric Plication

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Introduction

Laparoscopic greater curvature plication could be effective procedure for weight loss.

Objectives

Aim of this study to compare long term-results of laparoscopic greater curvature plication (LGCP) and laparoscopic sleeve gastrectomy (LSG) in the patients with BMI more and less 40 kg/m².

Methods

Methods. Prospective randomized study enrolled 63 patients with morbid obesity. They were allocated either to LGCP group (n=31) or LSG group (n=32). There were 43 women and 20 men, mean age was 43,8±6,2 years (range, 30-62). BMI > 40 kg/m² was in 30 patients. BMI < 40 kg/m² was in 33 patients.

Results

Results. After 3 years postoperatively, mean %EWL was 70,2±13,5 in the LSG group and 28,4±14,1 in the LGCP group (p<0,01). In the group of the patients who had BMI > 40 kg/m² this difference was more significant, than in group of the patients with BMI < 40 kg/m².

Conclusion

Conclusions. Long-term results showed that in the patients who had BMI > 40 kg/m² LSG is more effective, than LGSP. In the patients with BMI < 40 kg/m² the results of both operations are comparable.

O.147

LONG-TERM WEIGHT LOSS BETWEEN SLEEVE GASTRECTOMY AND SLEEVE GASTRECTOMY WITH JEJUNAL BYPASS. A CASE-CONTROL STUDY

New (Non Standard) Surgical Techniques

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Introduction

Sleeve gastrectomy with jejunal bypass (SGJB) has been an alternative bariatric procedure in DIPRECA Hospital since 2004. To date, it has not been compared to sleeve gastrectomy (SG) in long term weight loss achievement.

Objectives

The aim of this study is to compare weight loss in patients who underwent SG or SGJB in the long-term.

Methods

Case-control study of patients who underwent SG or SGJB with more than five years of documented follow up between 2006 and 2011. Groups were matched for preoperative body mass index (BMI), age and gender. Results are reported by age, gender, preoperative BMI, operation time, annual postoperative BMI and annual percentage of excess weight loss (%EWL). Shapiro-Wilk test or t-Student was used to compare continuous variables between groups. For categorical variables, Chi-square test was used.

Results

128 SG and 192 SGJB were included. There was no significant difference between groups in age, gender, and preoperative BMI (35.8 ± 5.33 kg/m² SG; 36.7 ± 5 kg/m² SGJB; $p=0.247$). There was no difference in preoperative comorbidities. Operative time was longer in SGJB ($p<0.001$). %EWL was higher for SGJB between first and sixth year of follow up ($p<0.05$). %EWL at 5 years was 89% for SGJB and 66.6% for SG.

Conclusion

SGJB has better weight loss than SG, and this difference is maintained in the long term follow up. These results suggest that adding a jejunal bypass improves weight loss outcomes at short and long term in obese patients.

O.148

VERY LONG BILIOPANCREATIC LIMB GASTRIC BYPASS IS SAFE AND VERY EFFICIENT IN SUPEROBES PATIENTS

New (Non Standard) Surgical Techniques

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Introduction

Conventional roux-en-y gastric bypass (rygb) fails to achieve good results in superobese patients (bmi>50). New studies suggest that the elongation of the biliopancreatic limb leads to greater metabolic results and greater weight loss, while the length of alimentary limb is important only to avoid biliopancreatic-reflux

Objectives

Evaluating the safety and the efficiency of very long biliopancreatic limb (300cm) rygb in superobese patients, and comparing with a rygb with long, but not too long, biliopancreatic and alimentary limbs (200cm each)

Methods

From July/2014-April/2016, 26 superobese patients were submitted to a laparoscopic rygb with 300cm of biliopancreatic and 60cm of alimentary limb; while from January/2013-December/2013, 20 superobese patients were submitted to laparoscopic rygb with 200cm of biliopancreatic and 200cm of alimentary limb. Data were collected 1 year after surgery. Nutritional safety was evaluated through serum albumin

Results

In the 300x60 cm group, mean weight was 157kg (138-192), and mean bmi was 53,4 (50,2-62). In the 200x200 cm group, mean weight was 152kg (115-198) and mean bmi was 53,3 (50-58,5). The groups were matched before surgery. There was no mortality, fistula or reoperation. One year after surgery, in the 300x60 cm group, mean weight and mean bmi were 82kg (66-114) and 28,2 (25,4-33), respectively. In the 200x200 cm group, mean weight and mean bmi were 101kg (78-127) and 34,5 (29-40,1). $P < 0,04$ in this comparison. There was no hypoalbuminemia in this follow-up

Conclusion

Very long biliopancreatic limb rygb is safe and more effective to achieve weight loss than rygb with both limbs of 200cm, in superobese patients

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O.149

LAPAROSCOPIC SLEEVE GASTRECTOMY COMBINED WITH ROSSETTI FONDPLICATION (R-SLEEVE) FOR THE TREATMENT OF MORBID OBESITY AND GASTROESOPHAGEAL REFLUX DISEASE

New (Non Standard) Surgical Techniques

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Introduction

Gastroesophageal Reflux (GERD) is a disease that can be considered related to obesity. Roux-en Y by-pass (RYBP) is the standard of practice, in obese patients with GERD, for its therapeutic effects on acid reflux.

Objectives

This study aims to assess the effectiveness, on morbid obese patients suffering from GERD, of the combined LSG and Rossetti anti-reflux fundoplication. The secondary outcome is the postoperative incidence of gastric fistulas.

Methods

40 obese patients with GERD underwent LSG -Rossetti laparoscopic fundoplication (R-sleeve) from January 1st to October 31 2015. The minimum follow-up was 12 months. There were no lost at follow-up.

Results

Mean BMI was 44.45 ± 4.75 and all patient were suffering from GERD. Mean operative time was 38 ± 6 minutes. The mortality rate was 0%. No intraoperative, medium and long term complications were reported. Excess Weight Loss percent (EWL%) at 1, 3, 6, 12 months was 25.65 ± 6.06 , 41.87 ± 12.46 , 56.73 ± 13.01 , 61.68 ± 13.57 respectively. All patients underwent R-Laparoscopic Sleeve had a complete remission of reflux symptoms. A good sense of repletion without episodes of vomiting, nausea or dysphagia was reported at 12 months follow up from 95% of patients

Conclusion

Laparoscopic R-Sleeve is well tolerated, feasible and safe procedure in selected patients with good postoperative weight loss results and resolution of GERD. Two monocentric studies will start at our institution to analyze and confirm these preliminary results.

O.150

COMPARISON OF BANDED VERSUS NON-BANDED ROUX-EN-Y GASTRIC BYPASS: IS BANDING OF THE BYPASS REALLY EFFECTIVE?

Banded procedures

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Introduction

Variations have been proposed in order to improve weight loss and decrease complication profiles in Roux-en-Y gastric bypass (RYGB) patients. We previously reported a preliminary result of pericardial patch ring RYGB.

Objectives

We aim to report a detailed result of banded RYGB by comparing these patients to non-banded RYGB patients with larger case number and longer follow-up.

Methods

A retrospective chart review was performed in 543 banded RYGB and 607 non-banded RYGB patients who underwent laparoscopic RYGB between January 2009 and December 2014.

Results

Thirty-day readmission rate was 3.1%(n=16) in the banded group and 3.8%(n=23) in the non-banded group. Thirty-day reoperation rate was 1.5% (n=8) in the banded group and 1.6% (n=10) in the non-banded group. Two mortalities occurred after a mesenteric venous thrombosis and an intracranial hemorrhage in the non-banded group. The differences in 30-day readmission and reoperation rates were not statistically significant between the two groups.

Mean percentage of excess BMI loss (%EBMIL) dating from the time of RYGB was 53.1%, 72.5%, 76.5%, 78.8%, and 73.3% in the banded group, and 51.5%, 73.5%, 78.8%, 79.0%, and 74.8% in the non-banded group at 6, 12, 18, 24, and 36 months, respectively, adjusted for preoperative BMI. The differences in %EBMIL were not significant at any follow-up points between the two groups.

Conclusion

Banded laparoscopic RYGB with a pericardial patch may not demonstrate a significant additional weight loss or prevent future weight regain. We were not able to demonstrate a clear advantage of banded RYGB over non-banded RYGB.

O.151

BANDED GASTRIC BYPASS VS STANDARD GASTRIC BYPASS: WEIGHT LOSS AND MAINTENANCE AFTER FOUR YEARS.

Banded procedures

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Background

Banding the gastric bypass operation has been reported to result in better weight loss and weight loss maintenance.

Introduction

A retrospective comparative study of banded versus nonbanded gastric bypass was done to see if there is a difference in the weight loss after four years follow up.

Objectives

Assessing difference in weight loss at 4 years of follow up comparing banded and non banded gastric bypass.

Methods

Data from all patients who had a gastric bypass in the year 2012 at Mohak Bariatric and Robotic Surgery Center were reviewed. They were divided into two groups the banded and the nonbanded groups. Analysis as to weight loss and weight regain were made.

Results

Two hundred ten patients had gastric bypass in 2012; 134(67%) had complete 4-year follow-up; 50 were banded and 84 nonbanded. The preoperative patient profile in terms of weight, gender and comorbid conditions was similar in both groups except the body mass index (BMI) was significantly higher in the banded group. The perioperative and postoperative complication rates were similar. The weight, BMI and percentage excess weight loss (PEWL) at 4years were 80.93 kg, 29.45 kg/m² and 66.72% in the nonbanded group and 77.06 kg, 27.66 kg/m² and 74.08 % in the banded group, respectively. Resolution of comorbid conditions was the same in both groups.

Conclusion

The patients with banded gastric bypass had significantly better results in terms of weight loss and weight stability at four years.

O.152

MEDIUM-TERM OUTCOMES OF THE BOB (BAND-ON-BYPASS) PROCEDURE TO SALVAGE FAILED ROUX-EN-Y GASTRIC BYPASS

Banded procedures

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Introduction

Revisional surgery options for failed gastric bypass are limited. There is scant data to support the safety and efficacy of various approaches, including revision of pouch and/or stoma size, limb lengthening and endoscopic approaches. The adjustable gastric band-on-bypass procedure (BoB) is a promising salvage operation but its medium to long-term results are unknown.

Objectives

This study aimed to assess medium to long-term outcomes of the BOB procedure.

Methods

We performed a retrospective review of prospectively collected data from all patients who underwent a BoB procedure over a 5-year period. Primary outcomes were weight loss, morbidity and mortality.

Results

During the study period, 18 patients (16 females) underwent BoB for weight regain post-RYGB. Preoperative investigations identified a dilated pouch in all patients whilst 72% also had stomal dilatation. Mean BMI pre-RYGB was 51.4 ± 9.9 kg/m², and patients reached a nadir BMI of 32.7 ± 6.6 kg/m² at 13.7 ± 6.4 months post-RYGB. The average weight regain post-RYGB was 24.8 ± 13.5 kg. Mean interval to BoB was 6.5 ± 3.0 years and mean BMI at this time was 41.4 ± 7.7 kg/m². Mean follow-up post-BOB was 30 ± 18 months (range 5-62). Weight regain was arrested in all patients, and the average weight loss post-BoB was 12 ± 11 kg, representing an additional EWL of 15.8 ± 14.2 %. There was no mortality. Reoperation rate for BoB-related complications was 16.7% (n=3), including a band erosion, band slip, and a small bowel obstruction caused by band tubing.

Conclusion

BoB is a safe and effective revisional procedure for weight regain post-RYGB in the medium to long-term, but similar complications to primary adjustable gastric banding can arise.

O.153

FIRST RESULTS OF THE BODY-Q; A SPECIFIC 'PATIENT REPORTED OUTCOME MEASURES' (PROM) FOR BODY CONTOURING SURGERY.

Plastic surgery after weight loss

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Introduction

Obesity and excessive skin have a negative impact on Health Related Quality of Life (HRQoL). Up to date no specific questionnaire was available to assess this parameter in the post-bariatric population. The BODY-Q is a psychometric validated Patient Reported Outcome Measures (PROM) designed specifically to measure HRQoL, appearance and patient experience in this population.

Objectives

To evaluate the change in BODY-Q score in a post-bariatric population undergoing an abdominoplasty or lower body lift (LBL).

Methods

The BODY-Q consist of a questionnaire containing 20 subcategories, 4–11 questions per category and takes 15 minutes to fill out. Each subcategory is scored between 0–100, a high score is positive. The questionnaire was filled out before and 3 months after body contouring surgery.

Results

In this ongoing prospective study 250 patients are included. The first results cover patients three months after an abdominoplasty or LBL (n = 68). Mean preoperative score on the subcategory abdomen was 12.9 (on a scale from 0-100): this score was 73.9 three months postoperatively (p<0.001). On body image scale the mean score was 29.5 before BCS and 56.7 after (p<0.001). Mean score on psychological well-being scale was 56 and went up to 67 three months postoperatively (p<0.001).

Conclusion

The BODY-Q is the first PROM specific for the bariatric population. The first results of the BODY-Q show a substantial effect of body contouring surgery on body image and HRQoL in post-bariatric patients. This might eventually lead to a better weight maintenance on the long-term.

□
O.154

BODY-CONTOURING SURGERY AND THE MAINTENANCE OF WEIGHT-LOSS FOLLOWING ROUX-EN-Y GASTRIC BYPASS: A RETROSPECTIVE STUDY

Plastic surgery after weight loss

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Background

Bariatric surgery leads to significant weight-loss with reduced morbidity and mortality. However, excess skin as a consequence of marked weight-loss represents a major problem for patients, impacting upon functionality with potential negative effects on weight-loss.

Objectives

We aimed to evaluate the effect of body-contouring-surgery on weight-loss maintenance following bariatric surgery.

Methods

We undertook a retrospective analysis of patients undergoing Roux-en-Y gastric bypass (RYGB) +/- Body-contouring surgery (BC). The control group (n=61) received RYGB, the test group (n=30) received RYGB+BC 12-18 months after bariatric surgery. Each RYGB+BC patient was matched for age, sex, glycaemic status and weight on day of surgery to two control patients. Percent weight-loss (%WL) was calculated at 3, 6, 12, 24, 36, 48, 60, and 72 months post-RYGB and compared between groups.

Results

%WL was similar in both groups at 3, 6 and 12 months post-RYGB. At 24 months %WL was 35.6% in the RYGB+BC group and 30.0% in the RYGB group (p<0.05). At 36 months the RYGB+BC group maintained their weight-loss (%WL 33.0%), in contrast the RYGB gained weight (%WL = 27.3%, p<0.05). This trend continued (RYGB+BC v RYGB) at 48 months (%WL 30.8% v 27.0%), 60 months (%WL 32.2% v 22.7%, p<0.05), 72 months (%WL 28.6% v 25.5%).

Conclusion

Our results suggest patients who undergo body-contouring after bariatric surgery are able to lose significantly more weight and maintain weight-loss at 6 years of follow-up compared to those undergoing bariatric surgery alone.

O.155

CORRECTION OF GYNECOMASTIA AFTER MASSIVE WEIGHT LOSS: HOW WE DO IT.

Plastic surgery after weight loss

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Introduction

A perfect correction of the thorax in males after massive weight loss remains a challenging and partially misunderstood surgery, most certainly in its every detail and refinement.

Objectives

The goal is to create a masculine appearing chest, remove all the volume and redraw all the skin excess. We try to improve the satisfaction rate and reduce complications.

Methods

Our study of 21 patients is established on a precise description of the desired goals and a detailed clinical evaluation of the breast (volume, shape, gland to fat ratio, skin excess, ptosis, IMF level, NAC shape and location), chest (barrel shape, axillary skin excess) and upper back (back rolls). We analyzed the various treatment options for gynecomastia (liposuction, round block, mastopexy with lower pedicle, boomerang pattern, J torsoplasty) as well as their limits, and provide you with our experience using liposuction to correct the adipose volume and a made-to-measure desepidermization to redrape the skin. The final torsoplasty scar is centered on the new NAC position.

Results

Satisfactory improvement was observed in all 21 cases. Contour improvement, no NAC necrosis, sensibility conserved, no bulkiness of the central chest, no hematoma, no seroma, no dehiscence and little pain.

Conclusion

We have obtained encouraging results due to the lack of dead space and absence of surgical drains. Reduction in pain, hospital stay and complication rates make this technique seem very interesting. We must however pursue our studies and applications, and expand our series of cases for more objective results.

O.156

IMPACT OF INITIAL RESPONSE OF LAPAROSCOPIC AJUSTABLE GASTRIC BANDING ON OUTCOMES OF REVISIONAL LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS FOR MORBID OBESITY

Revisional surgery

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Introduction

Failed laparoscopic adjustable gastric banding (LAGB) can be converted to laparoscopic Roux-and-Y gastric bypass (LRYGB), which is currently the gold standard for bariatric surgery. Revisional LRYGB (rLRYGB) is associated with inferior results compared to primary LRYGB (pLRYGB), but the exact influence of the initial response to LAGB is unclear.

Objectives

To compare follow-up outcomes after pLRYGB with rLRYGB in nonresponders of LAGB and rLRYGB in responders of LAGB.

Methods

All patients who underwent pLRYGB and rLRYGB after LAGB were reviewed in an observational study. Postoperative outcomes, excess weight loss (%EWL), total weight loss (%TWL), success and failure rate were compared in patients after pLRYGB and rLRYGB (both responders and nonresponders of LAGB) at 12, 24 and 36 months.

Results

A total of 1285 primary patients, 96 nonresponders and 120 responders were included. The median follow-up was 33.9±18.0 months. After 36 months, the mean %EWL was significantly lower in the non-responding group compared to the responding and primary groups (48.1% versus 58.2% versus 72.8%, $P < .001$), %TWL showed the same trend. The success rate was 38.2% versus 61.0% versus 81.6% respectively, $P < .001$. The failure rate was significantly higher after rLRYGB compared to pLRYGB (10.9% nonresponders, 8.5% responders and 2.5% primary, $P = .001$).

Conclusion

Nonresponders of LAGB show inferior weight loss results after rLRYGB compared to responders of LAGB and pLRYGB at all moments of follow-up.

□
O.157

SYSTEMATIC REVIEW AND META-ANALYSIS OF OUTCOMES AFTER REVISIONAL BARIATRIC SURGERY FOLLOWING A FAILED ADJUSTABLE GASTRIC BAND

Revisional surgery

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Introduction

Laparoscopic adjustable gastric band(LAGB) related complications have been reported in significant numbers of patients often leading to band removal. Increasingly revisional bariatric surgery(RBS) is offered, most commonly either band to roux-en-y gastric bypass(B-RYGB) or band to sleeve gastrectomy(B-SG).

Objectives

We conducted a systematic review and meta-analysis of studies to evaluate the efficacy of RBS following failed LAGB.

Methods

Medline, Embase, The Cochrane Library and NHS Evidence were searched for English language studies assessing patients who had undergone LAGB and who subsequently underwent RBS.

Results

Thirty-six studies met our criteria for inclusion. In total there were 2617 patients. B-RYGB was performed in 60.5%. There was only one death within 30 days reported(0.0004%). The overall pooled morbidity rate was 13.2% (8.9% early and 8.1% late complications). There was no difference between B-RYGB and B-SG in overall morbidity, leak rate or return to theatre. Percentage excess weight loss(%EWL) for all patients combined at 6, 12 and 24 months was 44.5%, 55.7% and 59.7% respectively. There was no statistical difference in %EWL between B-RYGB and B-SG at any time point. The rates of remission of diabetes, hypertension and obstructive sleep apnoea were 46.5%, 35.9% and 80.8% respectively. Only two studies looked at quality of life and both demonstrated an improvement following revisional surgery.

Conclusion

The existing evidence, although limited suggests that RBS is associated with generally good outcomes similar to those experienced after primary surgery. Further high quality, research is required to assess the impact of RBS on long-term weight loss, comorbidity resolution and quality of life outcomes

O.158

A LONGER BILIOPANCREATIC LIMB ROUX-EN-Y GASTRIC BYPASS AS REVISIONAL BARIATRIC PROCEDURE RESULTS IN MORE WEIGHT LOSS: RANDOMIZED CONTROLLED TRIAL

Revisional surgery

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Introduction

The laparoscopic adjustable gastric band (LAGB) was one of the most performed bariatric procedure, with good short term results. In the long term, however, weight loss and co-morbidity reduction are often disappointing resulting in a high number of revisional procedures. The Roux-en-Y gastric bypass (RYGB) seems to be the revisional procedure of choice in many patients. However, there is no uniformity on limb length for optimal weight loss and reduction of obesity related comorbidities.

Objectives

The aim of the present study was to evaluate the effect of a Long Biliopancreatic Limb RYGB (LBPL-RYGB) and Standard RYGB (S-RYGB) as revisional procedure after failed LAGB.

Methods

In this randomized controlled trial 146 patients, who underwent a RYGB as revisional procedure after LAGB, were randomized; 73 patients underwent a S-RYGB (Roux/Biliopancreatic limb 150/75 cm) and 73 patients a LBPL-RYGB (Roux/Biliopancreatic limb 75/150). The primary outcome was the percentage Total Body Weight loss (%TBWL).

Results

The baseline characteristics between S-RYGB and LBPL-RYGB were comparable. At 36 months the follow up rate was 91%. A TBWL of 20% for S-RYGB versus 24% for LBPL-RYGB was achieved ($p=0.039$). All comorbidities significantly decreased, however, no significant differences were found between the two groups. In total 14 (10%) short term complication occurred, eight (6%) in the LBPL-RYGB group and six (4%) in the S-RYGB group ($p>0.05$).

Conclusion

The LBPL-RYGB is a safe revisional bariatric procedure after LAGB and results in excellent total body weight loss and reduction of comorbidities.

O.159

ENDOSCOPIC VERSUS LAPAROSCOPIC REVISIONAL POUCH REDUCTION OF LONGITUDINAL SLEEVE GASTRECTOMY: 103 PATIENT ANALYSIS

Revisional surgery

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Introduction

Over the past decade bariatric surgery gained the limelight as a premier form of permanency with respect to weight loss, the most common of these procedures being the Longitudinal Sleeve Gastrectomy (LSG). Moreover, selection of a well-suited bariatric procedures does not guarantee weight loss, even with strict adherence to diet and exercise regimens, lending to the world-wide failure rate of nearly 15-20%. As a result, several surgeons have likened to the expanding field of revisional bariatric surgery.

Objectives

The purpose of the following study is to compare the efficacy of newly developed endoscopic (EPR), versus standard laparoscopic (LPR), pouch revisions in failed LSG patients.

Methods

The following study consists of one hundred and three (n=103) reoperative LSG patients who received either EPR (n=29), or LPR (n=74). All patients received weight check and blood workup and general examination pre-operatively and post operatively at 1 week, 1, 3, and 6 months. All patients were subject to requirements including nutrition, exercise, and support group regimens. Patients were assessed for excess weight loss, resolution of comorbidities, complications, vitamin deficiencies, and general quality of life.

Results

	EPR	LPR
Excess Weight Loss After Initial Bariatric Procedure	26%	29%
Excess Weight Loss After Revisional Bariatric Procedure (6 month)	68%	73%
Complication Rate	0%	3%
Vitamin Deficiency	3%	5%
Quality of Life Increase After Surgery	73.6%	55.8%

Conclusion

Surgery for failed LSG patients has particular risks and benefits that must be accounted for when considering an invasive re-operative approach. As seen, EPR offers comparable excess weight loss to LPR without increased risk of dissection or over-stapling, effectively ensuring successful/safe weight loss in reoperative LSG patients.

O.160

GASTRIC BAND CONVERSION TO ROUX-EN-Y GASTRIC BYPASS SHOWS GREATER WEIGHT LOSS THAN CONVERSION TO SLEEVE GASTRECTOMY

Revisional surgery

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Introduction

Roux en-Y gastric bypass (RYGB) and laparoscopic sleeve gastrectomy (LSG) are often utilized as revisional surgeries for a failed laparoscopic adjustable gastric band (LAGB). There is debate over which procedure provides better long-term weight loss.

Objectives

Compare the weight loss results of these two surgeries.

Methods

A retrospective review was conducted of all LAGB to RYGB and LAGB to LSG surgeries performed at a single institution. Primary outcomes were change in BMI, % excess BMI lost (EBMIL), and % weight loss (WL). Secondary outcomes included 30-day complications.

Results

The cohort included 192 conversions from LAGB to RYGB and 283 LAGB to LSG. The baseline age and BMI were similar in the two groups. Statistical comparisons made between the two groups at 24-months post-conversion were significant for BMI (RYGB=32.93, LSG=38.34, $p=0.0004$), %EBMIL (RYGB=57.8%, LSG=29.3%, $p<0.0001$), and %WL (RYGB=23.4%, LSG=12.6%, $p<0.0001$). However, the conversion to RYGB group had a higher rate of reoperation (7.3% versus 1.4%, $p=0.0022$), longer OR time (RYGB=120.1 min versus LSG=115.5 min, $p<0.0001$), and longer length of stay (RYGB=3.33 days versus LSG=2.11 days, $p<0.0001$) than the LAGB to LSG group. Although not significant, the conversion to RYGB group had a higher rate of readmission (7.3% versus 3.5%, $p=0.087$).

Conclusion

Weight loss is significantly greater for patients undergoing LAGB conversion to RYGB than LAGB to LSG. There were statistically significant differences in BMI, %EBMIL, and %WL at 24-months between the two surgeries. Therefore, patients looking for the most effective weight loss surgery after failed LAGB should be advised to have RYGB performed.

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O.161

FAILED ADJUSTABLE GASTRIC BANDING CONVERTED TO LAPAROSCOPIC GASTRIC BYPASS. A COMPARISON TO PRIMARY BYPASS

Revisional surgery

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Introduction

Laparoscopic Adjustable Gastric Banding (LAGB) has a failure rate of 40-50%. Laparoscopic Roux-en-Y-Gastric-Bypass (LRYGB) is a conversion options.

Objectives

To compare complication rates, weight loss and resolution of comorbidities between LRYGB converted from LAGB and primary LRYGB.

Methods

Retrospective analysis of data of all the patients converted from LAGB to LRYGB between 2007 and 2016. This group was compared to patients, matched for age and gender who underwent primary LRYGB during the same period.

Results

170 patients underwent conversion from LAGB to LRYGB were compared to 170 primary LRYGB. Mean age, male:female ratio, ASA score and BMI were comparable. Reasons for conversion: weight regain–74.2%, food intolerance–34%, slippage–13.8% and GERD 12.1%. Mean operative time was 126.3 min for primary LRYGB and 149.7 min for the conversion group. Early overall complication rate in the conversions and the primary group were 6.8% and 10.7% respectively. Late complications were 18.9% and 25.5% respectively. After a mean follow-up of 37 months excess weight loss was 60.3% and 78.5% for the conversion and the primary groups respectively. Resolution/improvement in Diabetes was 90.5% for the conversions vs 75.9% for the primary group. Hypertension resolution/improvement was 35% for the conversion group and 57.4%for the primary LRYGB. Dyslipidemia improvement/resolution was 43.5% for the conversion group vs 75.9% for the primary LRYGBs.

Conclusion

Conversion of LAGB to LRYGB has no additional risk for early or late complications when compared to primary RYGB. Weight loss tends to be less but the resolution/improvement of comorbidities is excellent.

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O.162

ROUX-EN-Y GASTRIC BYPASS INCREASES POSTPRANDIAL SYSTEMIC INSULIN CONCENTRATIONS BY DECREASING HEPATIC INSULIN UPTAKE IN MINIPIGS.

Type 2 diabetes and metabolic surgery

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Introduction

Gastro-intestinal exclusion by Roux-en-Y gastric bypass (RYGB) improves glucose metabolism, independent of weight loss.

Objectives

Here, we analyzed the mechanisms underlying the increase in postprandial systemic insulin levels after RYGB and the role of the liver therein

Methods

To this aim, we used the Göttingen-like minipig (n=9), a human-size mammalian model, which allows continuous sampling and simultaneous analysis of pre-hepatic portal and systemic venous blood. Insulin and C-peptide concentrations were measured in portal blood and compared to systemic blood during a standardized meal test before and after RYGB.

Results

Postprandial insulin concentrations increased after RYGB in the systemic blood ($P < 0.001$) and in the portal blood ($P < 0.01$). Interestingly, the ratio of after:berfore insulin was higher in the systemic blood than in the portal blood ($P < 0.05$), indicating a role for the liver in systemic insulin concentrations changes. In line, the C-peptide-to-insulin ratio, an index of hepatic insulin extraction, decreased at 60 min after RYGB in the systemic blood ($P < 0.01$).

Conclusion

ur results show that the increase in insulin after RYGB is due to an increase of insulin production by the pancreas but also to a decreased of hepatic insulin clearance. Thus, alterations in hepatic function contribute to the increase in systemic insulin after RYGB.

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TAIWAN DIABESITY STUDY (TDS): METABOLIC SURGERY VERSUS MEDICAL CARE IN OBESE T2DM PATIENTS "A PRELIMINARY REPORT OF A LONG-TERM STUDY"

Type 2 diabetes and metabolic surgery

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Introduction

Obesity and associated type 2 diabetes mellitus (T2DM), so called diabetes, is becoming a serious medical issue worldwide. The Taiwan Diabetes Study (TDS) is a large prospective, controlled intervention trial comparing the long-term outcomes between metabolic surgery versus medical care in obese diabetic patients.

Objectives

To evaluate the natural history of diabetes and the long term outcome of metabolic surgery on diabetes.

Methods

TDS was launched in March 2014. Six teaching hospitals from Taiwan recruited the patients under identical inclusion and exclusion criteria.

Results

The recruitment of patients was stopped on March 2017 with 1016 patients. The mean BMI was 30.6 Kg/m². The mean HbA1c level was 8.2%, and the average duration of diabetes was 6. years, with 18% of patients requiring insulin at baseline. Among all, 123 patients had chosen to undergo metabolic surgery, and the other 893 patients received medical treatment. Surgery group patients were significantly younger in age with higher BMI and shorter duration of diabetes. After one year, 399 patients had completed 1-year data, including 317 in medical care group and 22 in metabolic surgery group. Reductions in body weight, BMI and waist circumference were greater in surgical group. HbA1c and triglyceride level dropped significantly more in surgical group. Surgical group improved in retinopathy but deteriorated in neuropathy.

Conclusion

TDS is the first large cohort study evaluating the natural history of diabetes and the long term outcome of metabolic surgery on diabetes. After one year, metabolic surgery resulted in higher weight reduction, better glycemic and blood lipid control than medical care.

O.164

CHANGES IN THE INTRA-ABDOMINAL FAT DEPOTS AND ASSOCIATIONS WITH GLYCEMIC PARAMETERS IN PATIENTS WITH TYPE 2 DIABETES UNDERGOING BARIATRIC SURGERY

Type 2 diabetes and metabolic surgery

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Introduction

Bariatric surgery has been shown to induce remission of type 2 diabetes in the majority of patients.

Objectives

The objectives of this study were to characterize changes in the intra-abdominal fat depots in patients with type 2 diabetes undergoing gastric bypass surgery or sleeve gastrectomy, and to explore associations between specific fat depots and glycemic response to a mixed meal.

Methods

Seventeen obese patients with type 2 diabetes completed this pilot study. A liquid mixed meal test was conducted and liver and pancreatic fat content, and abdominal visceral (VAT) and subcutaneous (SAT) adipose tissue volumes were determined by MRI before surgery and at 2 and 4 weeks after surgery.

Results

The AUCglucose_{0-150min} declined by 320.1±467.0 (mean±SD) over 4 weeks (p=0.02 week 4 vs 0; 20% decrease). The percent liver fat content decreased by 8.0±6.0% (p<0.0001; 44% decrease), while the pancreatic fat content did not change significantly (p=0.50). The intra-abdominal VAT and SAT volumes declined by 452.7±282.2 cm³ (p<0.0001; 24% decrease) and 304.4±268.5 cm³ (p=0.0003; 7% decrease), respectively. Lower pancreatic fat content (β coefficient -204.1 (95% CI -217.4, -190.9) min*mmol/L per 10% increase) and higher VAT (β coefficient 268.5 (95% CI 268.2, 268.7) min*mmol/L per 1000 cm³ increase), but not liver fat content (p=0.14) and SAT (p=0.27), were found to be significant univariate predictors of the AUCglucose_{0-150min} measured at 3 time points.

Conclusion

There are substantial declines in liver fat and VAT in patients with type 2 diabetes shortly after bariatric surgery which are accompanied by reductions in glucose excursions after a meal.

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O.165

GUIDELINES OF PREGNANCY AFTER BARIATRIC SURGERY

Fertility, pregnancy and bariatric surgery

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Background

Bariatric surgery increasingly becomes viable therapeutic option for the treatment of severe obesity especially for women in reproductive –age group.

Introduction

Obese women in the reproductive age group are having increased risk of cardiovascular disease, diabetes, irregular menstrual cycle , polycystic ovary syndrome (PCOS) and infertility. Although bariatric surgery is deemed effective in long term weight loss and resolution of obesity related health problems there is increased incidence of small for gestational age infants, pre-term birth and nutritional deficiencies.

Objectives

To review the published guidelines and recommendations of pregnancy after bariatric surgery for women in reproductive age group.

Methods

An online search in PubMed, Cochrane reviews and Google Scholar for the period between 2006 and 2016 was performed to identify all published guidelines and recommendations of pregnancy after bariatric surgery including the keywords pregnancy, gestation and bariatric/ weight loss surgery,

Results

11 studies were included in our review. The recommendations are divided into the appropriate timing of pregnancy, which is found to be between 12-18 months after bariatric surgery with proper counseling to highlight the higher incidence of having small for gestational age infants and pre-term birth. Avoiding and correcting any nutritional deficiencies is cornerstone in the perigestational period. Lastly high index of suspicion for any gastrointestinal symptoms during pregnancy for early detection and management of bariatric surgery complications.

Conclusion

Pregnancy is safe after bariatric surgery if recommendations and guidelines are followed with close monitoring of the mother and the fetus.

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O.166

INTRAUTERINE GROWTH RETARDATION AFTER ROUX-EN-Y GASTRIC BYPASS: A REPORT OF TWO CASES.

Fertility, pregnancy and bariatric surgery

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Introduction

Pregnancy outcomes after bariatric surgery are becoming a major concern for the obstetricians as number of women of reproductive age after bariatric procedures is constantly growing. A pregnancy after bariatric surgery should be considered as high-risk pregnancy.

Objectives

Presentation of case: The first patient, who had undergone LRYGB 2 years before pregnancy presented in the 35th week of pregnancy with suspected IUGR and because of suspicious CTG tracings was immediately admitted to hospital. The second patient, who had undergone LRYGB 7 years before the pregnancy, presented in 28th week of pregnancy with suspected IUGR and abnormal RUt blood flow and was accordingly admitted to hospital.

Methods

Management: The first patient had an urgent cesarean section performed because of pathological CTG tracings in 35th week of pregnancy. The newborn weighed 1690g (<1st percentile). The second patient had a cesarean section from psychiatric indications in the 36th week, giving birth to a newborn of 2095g (5th percentile). Both newborns received 10 points Apgar in the 3rd minute of life.

Results

Discussion: The literature review shows that the mean birth weight of the neonates is lower and the risk of SGA/IUGR significantly higher in patients after bariatric surgery, especially after malabsorptive procedures. The incidence of SGA/IUGR is also higher after bariatric surgery when compared to preoperative pregnancies in the same patients.

Conclusion

As the rate of SGA and IUGR is higher after bariatric surgery, precise recommendations concerning nutrition and vitamin supplementation in pregnant patients should be created.

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O.167

MID AND LONG-TERM OUTCOMES AFTER SINGLE ANASTOMOSIS DUODENO-ILEAL BYPASS (SADI) AS A REVISIONAL PROCEDURE AFTER SLEEVE GASTRECTOMY

Management of weight regain after surgery

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Introduction

Single anastomosis duodeno-ileal bypass with sleeve gastrectomy (SADI-S) mid and long-term results indicate that it can be considered as an optimal bariatric/metabolic procedure. However, information about 2nd-step SADI after primary sleeve gastrectomy (SG) for insufficient weight loss or in super obese individuals results remains scarce.

Objectives

To evaluate mid and long-term results of SADI after sleeve gastrectomy in terms of safety, ponderal evolution and nutritional status.

Methods

Observational study from prospective data from 44 consecutive patients with a mean BMI of 40.8 kg/m², a mean excess weight of 45.2 kg, and a mean EWL of 36.3%, in whom 2nd-step SADI was performed from February 2012 to April 2017.

Results

Neither intraoperative complications nor perioperative mortality were observed. Mean hospital stay was 3.1 days. There were 4 (9%) major early complications that were successfully managed within the first 24h. After 12, 24, 36 and 48 months %TWL was 42.3, 47.1, 48.7%, and 48.3% respectively. Global %EWL was 77.9%, 76.2% and 75.8% after 2, 3 and 4 years. Two and 3-year remission rate was 67% and 63% for T2DM, 27% and 25% for hypertension and 35.5 and 32% for dyslipemia. Five patients (11%) in whom SADI was performed <250cm proximal to the ileocecal junction required conversion to duodeno-jejunal bypass due to severe hypoproteinemia.

Conclusion

As revisional procedure after SG, SADI provides excellent weight loss results and an acceptable comorbidity resolution rate. Nevertheless, due to the need of additional supplementation and the possibility of severe malnutrition specially after <250cm SADI-S, carefully patient selection is mandatory.

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O.168

VITAMIN AND MINERAL DEFICIENCIES AFTER SLEEVE GASTRECTOMY: FOUR YEAR RESULTS OF AN RCT

Nutrition after bariatric surgery

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Introduction

After Sleeve Gastrectomy (SG) there is an increased risk for nutritional deficiencies. A multivitamin supplement (WLS Optimum, WLSO) was developed based on published literature for SG patients. Initial results after one year showed enormous amounts of deficiencies in all patients.

Objectives

This double-blind randomized controlled study was performed to determine the effectiveness of WLSO compared to standard multivitamin supplement (SMVS) after SG.

Methods

Between November 2011 and August 2014, patients who were scheduled for a SG were randomized for WLSO and SMVS for a period of 1 year. WLSO holds higher nutrition's, e.g. vitamin B12 400% RDA, iron 150% RDA, and folic acid 150% RDA. The SMVS consists of the same ingredients as WLSO but with 100% RDA for all supplements.

Results

In total 150 patients (75 in each group) underwent a SG procedure. Weight, BMI, sex and total body weight loss were similar for WLSO(28.8%) and SMVS (28.6%) ($p>0.48$). Mean serum levels for iron, vitamin B12, folic acid and vitamin D were similar at baseline in both groups. No adverse events concerning the supplement usage in both groups. Preliminary data shows less deficiencies for vitamin B12 (14% vs 27%) and ferritin (11 vs 23%) and a lower serum level drop with WLSO, but it requires further optimization.

Conclusion

Much more deficiencies occur in GS patients than has been reported in literature. Preliminary results of this RCT shows that an optimized multivitamin supplement results in less vitamin B12 and ferritin deficiencies after a mean 4 years. However, the content of WLSO requires further optimization.

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O.169

ASPIRATION THERAPY AS A TOOL TO TREAT OBESITY: ONE TO FOUR YEAR RESULTS IN AN 85-PATIENT ONGOING MULTI-CENTER POST-MARKET STUDY

Endoscopic and Percutaneous Interventional Procedures

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Background

The AspireAssist® System (Aspire Bariatrics, Inc. King of Prussia, PA) is a weight-loss device, with which patients aspirate approximately 30% of ingested calories after a meal utilizing a customized percutaneous endoscopic gastrostomy tube, in conjunction with lifestyle (diet and exercise) counseling.

Introduction

Although the AspireAssist has been the subject of a one-year multicenter study in the US, there is little data on its long-term safety and effectiveness.

Objectives

The objective of this study was to study the long-term safety and effectiveness of the AspireAssist in a clinical setting.

Methods

A total of 85 patients were enrolled from June 2012 to December 2016 in 3 centers: University of Ostrava (Ostrava, Czech Republic), Blekinge County Hospital (Karlskrona, Sweden); and Centro Médico Teknon (Barcelona, Spain). Mean baseline BMI was 45.7 + 8.6 kg/m².

Results

As of December 31, 2016, 63, 34, 22, and 12 patients have completed 1, 2, 3, and 4 years of therapy, respectively. Of the 85 enrollees, 25 patients have had their gastrostomy tube removed and withdrew from the study: 9, 11, 2, and 3 patients in the 1st, 2nd, 3rd, and 4th years, respectively. Mean (±SD) percent weight-loss after 1, 2, 3, and 4 years of therapy was 17.6%(8.6%), 21.7%(10.0%), 22.1% (9.7%), and 19.2%(13.6%), respectively. Complications were few and minor, with no evidence of the development of any metabolic abnormality or abnormal eating behaviors.

Conclusion

Aspiration Therapy provides a safe and effective weight-loss method, for people with Class II and Class III obesity.

O.170

PREGNANCY OUTCOMES IN WOMEN FOLLOWING BARIATRIC SURGERY

Fertility, pregnancy and bariatric surgery

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Introduction

Bariatric surgery is the most effective treatment for people with a body mass index (BMI) of >40 kg/m², leading to sustained weight loss, metabolic and health benefits including improved fertility. The majority of procedures are undertaken in women of childbearing age. Total body weight loss in the first post-operative year averages 25-30% and women are advised to delay conception for 12-18 months post-procedure.

Objectives

We aimed to compare maternal and fetal outcomes in women post bariatric surgery, compared to the outcomes in women who had pregnancies with a similar pre-bariatric surgery BMI and a group of women who underwent pregnancies with a similar conception BMI.

Methods

A retrospective observational study was conducted at a tertiary bariatric centre. Outcome measures included; prevalence of gestational diabetes, mode of delivery, gestational age and neonatal birth weight. Between group analysis was undertaken.

Results

	Surgery<1(n:19)	Surgery>1(n:49)	BMI28-32(n:98)	BMI35-45(n:99)	
Gestation(weeks)	39.77±2.0	39.45±1.6	39.30±2.6	38.5±3.0	Anova:F ratio: 1.59, P value=0.19
Neonatal weight(Kg)	2.93±0.65	3.18 ± 0.45	3.27±0.66	3.32±0.78	Anova:F ratio: 1.25, P value=0.29

Figure 1. Neonatal weight varied between groups independently of gestational age. Neonatal weight was significantly lower in the <1 year (2.95 ± 0.63kg) versus >1 year post-surgery group (3.15± 0.43kg)

	Bariatric Surgery(n:68)	BMI28-32(n:98)	BMI35-45 (n:99)	
C-section(%)	29.5	41.1	53	Chi square:6.754, P=0.0342(significant <0.05)
Post- Partum Haemorrhage(%) *(>500mls)	29.2	44.3	50	Chi square:2.219,P=0.329

Figure 2. Indicating statistical significance that C-section rates were higher in the non-surgical groups.

Conclusion

Pregnancy post-bariatric surgery is safe and associated with lowered obstetric complications, especially caesarean sections, compared to both control groups. Bariatric surgery is an attractive therapeutic option for women with obesity who desire future pregnancies. However, larger studies are warranted.

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O.171

QUALITY OF LIFE 1 YEAR AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY VERSUS LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: A RANDOMIZED CONTROLLED TRIAL FOCUSING ON GASTROESOPHAGEAL REFLUX DISEASE

Quality in Bariatric Surgery

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Introduction

Bariatric surgery is the only treatment that achieves sustained weight loss in obese patients and also has positive effects on obesity-related comorbidities. Laparoscopic sleeve gastrectomy (LSG) seems to achieve equal weight loss as laparoscopic Roux-en-Y gastric bypass (LRYGB), but there is still much debate about the quality of life (QOL) after LSG, mainly concerning the association with gastroesophageal reflux.

Objectives

Our main objective is to assess the differences in QOL between LSG and LRYGB after 1 year.

Methods

Between February 2013 and February 2014, 150 patients were randomized to undergo either LSG or LRYGB in our clinic. Differences in QOL were compared between groups by using multiple QOL questionnaires at follow-up moments preoperatively, 2 months and 12 months after surgery.

Results

After 12 months of follow-up, 128 patients had returned the questionnaires. Most QOL questionnaires showed significant improvement in scores between the preoperative moment and after 12 months of follow-up. Gastroesophageal reflux disease questionnaire (GerdQ) score deteriorated in the LSG group after 2 months, but recovered again after 12 months. After 2 months of follow-up, mean GerdQ score was 6.95 ± 2.14 in the LSG group versus 5.50 ± 1.49 in the LRYGB group ($p < 0.001$). After 12 months, mean GerdQ score was 6.63 ± 2.26 in the LSG group and 5.60 ± 1.07 in the LRYGB group ($p = 0.001$).

Conclusion

This randomized controlled trial shows that patients who underwent LSG have significantly higher GerdQ scores at both 2 and 12 months postoperatively than patients who underwent LRYGB, whereas overall QOL did not differ significantly.

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O.172

A META-ANALYSIS ASSESSING THE EFFECTIVENESS OF URSODEOXYCHOLIC ACID TO PREVENT GALLSTONE FORMATION AFTER BARIATRIC SURGERY.

Medical management of bariatric patients

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Introduction

Bariatric surgery is associated with rapid weight loss and consequently increased risk of postoperative gallstone formation. Historically, certain studies have reported early evidence suggesting that the administration of ursodeoxycholic acid after bariatric surgery reduces the risk of gallstone disease.

Objectives

The purpose of this study is to review the available literature on obese patients treated with ursodeoxycholic acid (UDCA) in order to prevent gallstone formation after bariatric surgery.

Methods

A systematic literature search was performed in PubMed, Cochrane library and Scopus databases, in accordance with the PRISMA guidelines. Random-effects statistical model was used. Between studies heterogeneity was tested by calculating Cochrane Q and statistic I^2 .

Results

Eight studies met the inclusion criteria (1,355 patients). Our meta-analysis showed a significantly lower incidence of gallstone formation in patients taking UDCA ($p < 0.00001$). Subgroup analysis reported fewer cases of gallstone disease in the UDCA group in patients treated with SG ($p = 0.0002$) and RYGB ($p < 0.00001$). Moreover, subgroup analysis showed fewer cases of gallstone formation after bariatric surgery in the UDCA group, independently of the different administered doses of UDCA and different time points from bariatric surgery. Adverse events were similar in both groups. Fewer patients required cholecystectomy in UDCA group. No deaths were reported.

Conclusion

The administration of UDCA after bariatric surgery seems to prevent gallstone formation.

O.173

REASONS AND OUTCOMES OF REVISIONAL GASTRIC BYPASS AFTER PRIMARY SLEEVE GASTRECTOMY; RETROSPECTIVE NARRATIVE REVIEW

Revisional surgery

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Background

Laparoscopic sleeve gastrectomy(SG) became the most common bariatric procedure in Korea same with the worldwide trend.

Introduction

Like other bariatric operations, inadequate weight loss and complications have been reported.

Objectives

We want to know about the reason and clinical outcome revision SG to gastric bypass(RYGB).

Methods

Retrospective review of revision case SG to RYGB done from September 2011 to May 2016. Patients who had a primary SG in other clinic were excluded.

Results

20 patients underwent conversion of SG to RYGB in our institute. There were 271 SGs performed from April 2009 to October 2016. Incidence of revision RYGB after primary SG in our own databases was 7.4%(20/271). Mean time to revision 31 months (Range, 17~78) and mean follow up after revision RYGB was 27 months (Range, 4~62). Indications for revision were inadequate weight loss or weight regain(N=13), intractable reflux(N=5), and others(N=2). Resection of distal stomach was done in 7 patients. 1 case need reoperation due to gastrojejunostomy bleeding(bleeding control was done by laparoscopy under aid of endoscopy). Reflux symptoms resolved in all cases and post-bypass gastroscopic findings showed no evidence of esophagitis. Among 12 patients for more than 1-year follow up, %EWL resulted less than 50% in 6. After revision, 2 case regained and 11 case showed 25% additional EWL(Range, 9.5~47.5).

Conclusion

Revision to RYGB was effective to treat reflux complicated as sleeve gastrectomy. However, for weight loss failure patients, the outcomes was quite inconsistent and in some cases very disappointing.

O.174

EFFICACY AND SAFETY OF BILIO-PANCREATIC DIVERSION (BPD) AS SALVAGE PROCEDURE AFTER FAILED SILASTIC RING VERTICAL GASTROPLASTY (SRVG)

Revisional surgery

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Introduction

SRVG was a popular bariatric procedure in the past. Long-term complications included Gastro-Esophageal-Reflux-Disease (GERD), vomiting, nutritional problems and weight regain. Converting SRVG to Laparoscopic Roux-en-Y-Gastric Bypass (LRYGB) was encountered with a high complication rate.

Objectives

The aim of this study is to assess the safety and efficacy of SRVG conversion to BPD.

Methods

Retrospective analysis of all collected data of SRVG conversions to BPD. The BPD consisted of removal of the ring, stomach preserving division at the incisura angularis, a 200 cm anastomosis of the alimentary limb to the upper stomach creating a common channel of 75 cm.

Results

Between 2011-2017, 25 patients were converted. Mean age: 48.5±8 years. Females: 72%. Mean pre-operative BMI: 47.6±8 Kg/m². Mean period from SRVG to BPD: 17.6±4 years. Indications were: vomiting 20%, severe GERD (4-8)% and weight regain 96%. Pre-operative comorbidities: Diabetes (DM) 28%, Hypertension (HTN) 36%, Dyslipidemia 44% Sleep Apnea (SA) 8% and arthralgia 24%.

Conversion to open surgery and mortality: 0%. Mean operative time: 214±67 min. Mean post-operative length of stay: 7±6 days. Post-operative complications: leakage: 1(4%), bleeding: 1(4%), small bowel obstruction: 1(4%).

After a median follow-up period of 26±15 months mean BMI dropped from 47.6±8 to 32.6±12 kg/m². Improvement or resolution of 86% for DM, 78% for HTN, 64% for Dyslipidemia, 100% for SA and 50% for arthralgia was noticed. Average bowel movements a day: 3.5±2

Conclusion

Conversion of SRVG to BPD is safe. Resolution of comorbidities is excellent as is post-operative quality-of-life. BPD is the procedure of choice for failed SRVG in our institute.

O.175

ROUX-EN-Y GASTRIC BYPASS VERSUS SLEEVE GASTRECTOMY AS REVISIONAL PROCEDURES AFTER ADJUSTABLE GASTRIC BAND.

Revisional surgery

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Introduction

Laparoscopic adjustable gastric banding (LAGB) has been abandoned in favor of laparoscopic sleeve gastrectomy (LSG) and laparoscopic Roux-en-y gastric bypass (LRYGBP).

Objectives

The aim of this study was to compare results of LRYGBP and LSG performed as a revisional procedure after LAGB.

Methods

All patients converted from LAGB to LSG or to LRYGBP from January 2007 to December 2015 were included in the study. Clinical data collected were age, gender, indications for revision, complications, body mass index (BMI), and body weight at revisional procedures. Weight loss was calculated as %EWL and Delta-BMI.

Results

Sixty-four patients were included in this study, 56 females and 8 males. Twenty-six patients were converted to LRYGBP (LRYGBP group) and 38 to LSG (LSG group). Indication for conversion was weight loss failure in 45 (70%) patients and band complications in 19 (30%) patients. No significant difference in age, BMI, and body weight in the two groups was found at the time of revision. One patient converted to LRYGBP had an internal hernia; one patient initially scheduled for LSG was intraoperatively converted to LRYGBP due to staple line leak. No other major perioperative complication was observed. Delta-BMI and percentage of excess weight loss (%EWL) were not significantly different in the two groups at 1, 3, and 5 years ($p > 0.05$).

Conclusion

LRYGBP or LSG are feasible and effective surgical options after LAGB. Satisfactory weight loss was achieved after both procedures.

O.176

SAVE THE EPIPLOICS! -- IMPORTANT CONSIDERATIONS IN CONVERTING ROUX-EN-Y GASTRIC BYPASS TO SINGLE-ANASTOMOSIS MODIFIED DUODENAL SWITCH

Revisional surgery

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Introduction

Recidivism after Roux-en-Y Gastric Bypass (RYGB) has no universally accepted solution. Case reports of conversions to modified duodenal switch (MDS) demonstrate improved weight loss but high rates of complications. Our technical modifications to the classic MDS include preservation of greater than 6 epiploic branches, focused duodenal dissection, and sleeve angle modification.

Objectives

To report our experience with conversion from RYGB to MDS with our technical modifications.

Methods

The duodenum is transected 3cm distal to the pylorus, minimizing excessive mobilization to preserve blood supply to the remnant stomach. Six epiploic branches are then identified. The roux limb is divided and the attached pouch is resected. First, the posterior gastro-gastric anastomosis is created using a bougie, followed by a vertical angled sleeve and then the anterior layer of the anastomosis. Finally, the post-pyloric alimentary limb is anastomosed to the target ileum 300cm proximal to ileocecal junction.

Results

Patient	Preop BMI	Preop Weight (kg)	Postop Weight (kg)	%EBW
1	72.50	249.90	242.60	4.24%
2	65.90	182.40	141.00	33.31%
3	34.20	96.00	86.00	27.25%
4	51.20	119.00	103.96	20.46%
5	37.90	106.40	98.80	16.14%
6	54.20	157.10	131.50	26.81%
7	36.40	102.30	91.62	23.87%

Since June 2015, 7 patients underwent conversion from RYGB to MDS. Follow-up time ranged from 1 to 8 months. Percent excess body weight loss ranged from 4.24% to 33.31 percent. Complications were limited to one abdominal wall abscess.

Conclusion

Our conversion experience has resulted in favorable weight loss outcomes with limited complications. We believe the key to our short term success lies in the preservation of epiploic branches for reliant gastro-gastric anastomosis.

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O.177

LAPAROSCOPIC SLEEVE GASTRECTOMY IN MORBIDLY OBESE PATIENTS WITH END STAGE HEART FAILURE ON CIRCULATORY SUPPORT AS A BRIDGE TO TRANSPLANT.

Sleeve gastrectomy

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Introduction

Morbid obesity is a relative contraindication for patients with end stage heart failure for transplant listing.

Objectives

Our aim is to measure the efficacy and risks of Laparoscopic Sleeve Gastrectomy (LSG) in morbidly obese patients suffering from end stage heart failure with a left ventricular assist device (LVAD) in place as a bridge to transplant.

Methods

Ten morbidly obese patients with end stage heart failure with LVAD in place that underwent LSG between 2013 and 2016, were reviewed retrospectively. All ten patients suffered from non-ischemic cardiomyopathy (NICM). Bariatric, cardiac, and renal parameters, operative and postoperative complications, comorbidities, and United Nation of Organ Sharing (UNOS) transplant candidacy status were analyzed.

Results

The mean preoperative BMI was 45.19 kg/m² with a mean follow up of 16.1 months. There were no operative mortalities. One patient experienced bleeding of the staple line requiring readmission at 6 days postop, while another patient required readmission postop day 10 for oral intolerance and dehydration. Three patients received successful transplant within an average time of 10.2 months from LSG. Four patients obtained UNOS status 1b after LSG. Two patients with follow up at 3 and 6 months, respectively remained ineligible for status 1b listing due to obesity. One patient experienced subarachnoid hemorrhage from a ruptured mycotic aneurysm and died within 6 months postoperatively from bariatric surgery.

Conclusion

This study suggests LSG is safe and effective for patients with end stage heart failure dependent on mechanical circulatory support to lower their BMI, so that these patients may be listed for transplant.

O.178

SIMULTANEOUS OR STAGED BARIATRIC AND LIVER TRANSPLANTATION SURGERY: WEIGHING THE RISKS

Integrated Health/Multidisciplinary care

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Introduction

Obesity is an increasingly prevalent global burden with metabolic sequelae including Non-Alcoholic Fatty Liver Disease (NAFLD), which is present in approximately 90% of individuals undergoing bariatric surgery. NAFLD-associated cirrhosis is rapidly becoming the leading cause of end-stage liver disease.

Morbid obesity restricts transplant eligibility and post-transplantation weight gain is common, resulting in recurrent or *de novo* NAFLD. Combined or staged bariatric and liver transplantation surgery has therefore been proposed to treat obese patients with liver failure.

Objectives

To determine the safety profile of combined or staged bariatric and liver transplantation surgery and the optimal choice and timing of bariatric intervention relative to transplantation.

Methods

A systematic review and meta-analysis was designed and prospectively registered (PROSPERO ID: CRD42017053235) with adherence to PRISMA guidelines. All studies published by 11/01/2017 were included.

Results

1571 unique citations were screened after database and grey literature searching. 46 full-text articles were assessed for eligibility and 8 studies (all case reports or case series) were included in qualitative synthesis. No studies were suitable for meta-analysis.

Sleeve gastrectomy was the most commonly selected bariatric procedure and usually performed before or, increasingly, combined with liver transplantation. Complications were frequent but largely transient and treatable, although there was an association with early hepatic function deterioration. Peri-transplantation bariatric intervention resulted in weight loss and metabolic benefits regardless of procedure or timing.

Conclusion

Simultaneous or staged bariatric and liver transplantation surgery is feasible in selected patients. Appropriately powered comparative studies are, however, required to determine the optimal choice and timing of bariatric intervention relative to transplantation.

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O.179

SAFETY AND EFFICACY OF INTRA-GASTRIC BALLON AS A BRIDGING TO BARIATRIC SURGERY IN SUPER-SUPER MORBID AND HIGH-RISK OBESE PATIENTS

Bariatric surgery in the over 65's

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Background

Intragastric balloon is a temporary treatment for weight loss with proven safety and efficacy when associated with lifestyle intervention.

Introduction

Pre-operative weight loss of at least 10% of excess body weight has shown to improve both intra and postoperative outcomes especially in super-obese patients.

Objectives

We looked at safety and efficacy of IGB as bridging technique for bariatric surgery in super-super morbid, and significantly high-risk obese individuals.

Methods

This was a retrospective study carried out in the departments of MIS Bariatric Surgery and Advance endoscopy of King Abdullah Medical City

All super-super morbid obese patients (BMI ≥ 65 kg/m²) and high risk individuals who had IGB inserted for weight loss before bariatric surgery were included in the study.

Results

46 Super-super morbid obese, and high-risk bariatric surgery candidates were included.

Average body mass index (BMI) $69 \pm 9,45$ kg/m².

The average % of excess weight loss post balloon insertion was $24 \pm 9,46$ % with average BMI 59 ± 11.4 at 6 months follow-up. 2 patients required removal for UGI bleeding and intolerance.

19 patients had balloons removed and underwent LSG. The median time between balloon removal and surgery was 52 days.

Operated 19 patients had very smooth perioperative course with mean operative time 63 minutes and postoperative LOS 1.2 days.

There were neither complications nor mortality.

Conclusion

Intragastric balloon as bridging procedure for very high-risk bariatric surgery patients is save and feasible, and improved overall operative risk in studied sample.

O.180

GUT-ADIPOSE TISSUE CROSSTALK AFTER SLEEVE GASTRECTOMY IN AN OBESE ANIMAL MODEL OF TYPE 2 DIABETES

Basic science and research in bariatric surgery

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Introduction

Bariatric Surgery has been recognized as an effective treatment for obesity and improves glucose metabolism and insulin resistance while increasing postprandial GLP-1 secretion. However, mechanisms regarding the modulation of adipose tissue function need further clarification.

Objectives

The present study assesses vascular remodeling and gut-adipose tissue crosstalk in an experimental model.

Methods

After weaning, 32 diabetic non-obese Goto-Kakizaki rats were assigned randomly to either normal rat chow (8 animals) or high fat diet (HFD) enriched with sucrose (24 animals). At four months, rats with diet-induced obesity were submitted to vertical sleeve gastrectomy (VSG), sham surgery (SHAM) or allocated to a control group. At six months, intraperitoneal glucose and insulin tolerance tests were carried out and animals sacrificed. Parameters of vascular remodeling were studied in periepididymal fatty tissue using western blotting.

Results

Besides an attenuated increase in body weight, animals submitted to VSG showed improved glucose tolerance and insulin sensitivity in comparison to controls and SHAM allocated to HFD. GLP-1R, GLUT4 and PPAR γ were significantly increased in adipose tissue in VSG which underscores the role of GLP-1 in insulin mediated glucose uptake and improved fatty acid storage. Moreover, rats submitted to VSG also exhibited elevated levels of VEGF, angiotensin2, FGFR, CD31, PAI-1, AT-1 and eNOS suggesting an impact on vascular remodeling and function.

Conclusion

After VSG in an experimental model of obese type 2 diabetes, markers of vascular remodeling in periepididymal fat underwent significant modulation while glucose metabolism improved and oxidative stress was reduced. Increased GLP-1R levels are suggestive of the importance of gut-adipose tissue crosstalk.

O.181

DIRECT MEASUREMENT OF MACRONUTRIENT INTAKE AND PREFERENCE 3 MONTHS AFTER ROUX- EN -Y GASTRIC BYPASS (RYGB)

Basic science and research in bariatric surgery

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Introduction

Verbal reports, questionnaires and fMRI based data in humans suggests that Roux- en-Y gastric bypass (RYGB) shifts preferences away from sweet and fatty foods. Direct measurement of food intake and preference in humans would permit definitive documentation of this phenomenon.

Objectives

We therefore designed a longitudinal study incorporating a self-selection buffet paradigm, to incorporate direct assessment of food preferences after RYGB.

Methods

RYGB patients and normal weight comparator group were recruited to a study in which choices at a standardised buffet meal are recorded and macronutrient breakdown along with caloric intake was assessed. Participants attend 1 month before and 3, 12 and 24 months after surgery. We herein present our initial data from a sample of patients and comparator group assessed at 1 month before and 3 month after surgery.

Results

At 3 months, calorie intake in the RYGB group (n=5) was decreased by 66% vs baseline (1882.0±304.2 to 633.8±85.7kcal, p=0.014). This coincided with a decrease in consumption of all macronutrients; fat (764.2±137.3 to 298.2± 69.3kcal, p=0.014), carbohydrate (868.2±200.7 to 214.3±39.5kcal, p=0.03) and of which sugars (408.7±125.6 to 53.74±7.791kcal, p=0.06) and protein (243.3±18.5 to 116.7±20.9kcal, p=0.004). The time matched comparator group (n=4) had no changes in calorie (1374.0±468.2 to 1438.0±378.6kcal, p=0.6) or macronutrient intake. Neither group had a change in macronutrient preferences.

Conclusion

Direct measurement of macronutrient and calorie intake is feasible in humans. Preliminary results demonstrate a reduction in all macronutrient groups 3 months after RYGB but no changes in preferences.

O.182

THE DUTCH BARIATRIC CHART, AN UPDATED BASELINE WEIGHT INDEPENDENT WEIGHT LOSS PERCENTILE CHART FOR GASTRIC BYPASS AND SLEEVE GASTRECTOMY

Basic science and research in bariatric surgery

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Background

Recent evidence showed that traditional bariatric-benchmark 50%EWL(excess-weight-loss) is very weak in recognizing insufficient weight-loss (specificity=41%). Furthermore, the %EWL-metric, more than %TWL(total-weight-loss), systematically introduces baseline-weight bias, significantly affecting bariatric outcome.

Introduction

From American, Dutch and Spanish gastric-bypass data, different researchers independently found one alternative concept that avoids baseline-weight bias altogether. That validated alterable-weight-loss(AWL) concept paved the way for constructing an innovative bariatric-benchmark, a baseline-weight-independent bariatric weight-loss percentile-chart.

Objectives

To complement the 2016 Dutch-Bariatric-Chart with multicenter-data for gastric-bypass and with separate curves for sleeve-gastrectomy.

Methods

Independent weight-loss data of all primary gastric-bypass and sleeve-gastrectomy patients operated 2007-2017 in three bariatric-centers was pooled to build percentile(p)-curves p97/p90/p75/p50/p25/p10/p03 with the lambda-mu-sigma method, expressed as baseline-weight-independent %AWL. The %AWL-p25 curve was used as baseline-weight-independent reference for sufficient weight-loss to test the 50%EWL-criterion.

Results

Included 12,068 patients (gastric-bypass=7,961, sleeve-gastrectomy=4,107); baseline-BMI: mean43.2(34.3-73.0)kg/m²; follow-up: mean23(0-108)months, 2-year(operated<2015)68%, 5-year(operated<2012)42%. The gastric-bypass percentiles p25/p50/p75 reached nadir 40/48/57%AWL at 15/16/19months, 29/38/46%AWL at 7-years; the sleeve-gastrectomy percentiles nadir 35/44/53%AWL at 12/14/16months, 20/32/43%AWL at 7-years. The 50%EWL-criterion had 99.3% sensitivity, 45.4% specificity.

Conclusion

Bariatric weight-loss percentile-charts are new, welcome tools to assess weight-loss success/failure and weight-regain. Strong variations in baseline-weight limit the accuracy of simple criteria like 50%EWL. The Dutch-Bariatric-Chart is baseline-weight-independent, allowing to benchmark all patients against >12,000 peers, up to 7-years after gastric-bypass or sleeve-gastrectomy. The visual aspect of consecutive results plotted on a chart among the percentile-curves of peers conveys a strong, intuitive message on the personal progress of postoperative weight-loss. The chart can easily be used in the consulting-room or applied in smart-media or apps.

O.183

SLEEVE GASTRECTOMY LEADS TO ACCELERATED GASTRIC EMPTYING AND INCREASED GASTRIC MUCOSAL NERVE FIBER DENSITY IN RATS

Basic science and research in bariatric surgery

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Introduction

Sleeve gastrectomy (SG) changes gastric emptying. Nervous system controls the motility of stomach. However, the effect of SG on gastric nerve system remains unclear.

Objectives

To evaluate the change of gastric emptying and gastric mucosal nerve fiber density (MNFD) in high-fat diet-induced obese (DIO) rats receiving SG, sham operation (SO), and pair-fed (PF) SO.

Methods

Sprague-Dawley DIO rats are randomly assigned to SG, SO, or PF groups. The bead method is used to evaluate the gastric emptying 2 weeks after the operation. The gastric MNFD is quantitated by immunostaining of mucosal nerve fibers in the stomach over lesser curvature with anti-protein gene product 9.5 (PGP9.5).

Results

The body weight is decreased after SG (385.9 ± 12.6 gm) and PF (368.4 ± 8.1 gm) compared with SO (454.9 ± 9.7 gm). The gastric emptying is faster after SG (65.0 ± 3.2 %) than those after SO (47.5 ± 3.2 %) or PF (52.1 ± 3.6 %). Besides, the gastric MNFD is higher after SG (934.8 ± 78.9) than those after SO (513.0 ± 59.4) or PF (511.6 ± 62.6). There is no difference either of the gastric emptying or the gastric MNFD between the rats receiving SO and PF.

Conclusion

SG in rats increases the gastric MNFD. The result may provide an explanation for the rapid gastric emptying after SG.

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DIFFERENTIAL PHENOTYPES OF ADIPOSE TISSUE MACROPHAGES AND ADIPOSE TISSUE T CELL REPERTOIRE IN MORBIDLY OBESITY WITH DIABETES

Basic science and research in bariatric surgery

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Background

It is well known that adipose tissue inflammation(ATI) contribute to the development of the obesity-related disease including diabetes. Major components to regulate ATI are immune cells including macrophages & T-cell.

Introduction

Although the phenotypic & functional alteration of adipose tissue immune cell population during obesity-induced metabolic syndrome are very well studied in rodent model, characterization in human have not been explored.

Objectives

To characterize the phenotype of adipose tissue macrophages & T lymphocyte TCR repertoire in humans in relation to obesity and diabetes.

Methods

Visceral adipose tissues from humans with obesity collected during bariatric surgery were studied with QRT-PCR, flow cytometry, next-generation sequencing for expression of inflammatory genes, frequency of macrophages and TCR repertoire analysis. Results were correlated with clinical characteristics including diabetes status.

Results

Compared to non-diabetic obese subjects(Non-DM), expression of pro-inflammatory genes and macrophages accumulation was significantly increased in visceral adipose tissue from obese subjects with diabetes(DM). Among the adipose tissue macrophage populations, pro-inflammatory CD11c+CD206+ were ~2-folds increased in DM while CD11c+CD206- and CD11c-CD206+ were similar. Furthermore, T-cell receptor repertoire analysis demonstrated that adipose tissue T-cell diversity were restricted compared to blood T-cell. Moreover, adipose tissue T cell repertoires were more skewed in DM compared to Non-DM.

Conclusion

These data are consistent with the hypothesis that adipose tissue macrophages in the context of human obesity contribute the ATI & are associated with T cell repertoire, with profound effects on systemic metabolism. These findings suggest adipose tissue macrophages and specific T cell repertoire as a potential target to manipulation of obesity-associated metabolic diseases.

O.185

EVALUATION OF FERTILITY IN OBESITY WISTAR RATS MODEL INDUCED BY HYPERCALORIC DIET

Basic science and research in bariatric surgery

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Background

Obesity causes metabolic and cardiovascular changes in the body, such as type II diabetes and hypertension, affecting about 38% of women in the world.

Introduction

Obesity and overweight disease can negatively influence fertility and cause possible pregnancy complications.

Objectives

To evaluate the fertility in a model of nulliparous obese rats submitted to a hypercaloric diet.

Methods

Thirty female Wistar 4-week-old rats were separated into two equal groups; Control, rats were fed standard rats diets and treated water ad libitum (NDG - Normal Diet Group); And experimental group, hyperlipid feeding and treated water supplemented with 20% fructose ad libitum (HDG - Hypercaloric Diet Group) for induction of obesity for 24 weeks. Body weight and feed and liquid intake were measured on a weekly basis. After this period the rats were placed to mate for nine days. The pups and the mothers were weighed at weaning, counting number of females that had delivered, number of animals born and animals killed.

Results

Of the NDG rats 86% had pups and the HDG only 66%. HDG rats had a total of 72 pups, with 15.3% dying, while NDG had 126 pups and only 3.9% died. The offspring of the NDG group at weaning had on average 45.2g while the HDG group 26.9g.

Conclusion

It was observed that obesity changes fertility, fewer pregnant females and number of pups born, and it impairs the development of the pups, which presented 59% of the body weight of the pups of non-obese rats at the time of weaning.

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O.186

EVALUATION OF BILIARY REFLUX AFTER EXPERIMENTAL ONE-ANASTOMOSIS GASTRIC BYPASS IN RATS

Basic science and research in bariatric surgery

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Introduction

Controversy remains regarding biliary reflux after one-anastomosis gastric bypass (OAGB).

Objectives

The aim of this pilot study was to analyze biliary reflux and its potential long-term consequences on esogastric mucosae in OAGB- operated rats.

Methods

Diet-induced obese rats were subjected to OAGB (n = 10) or sham (n = 4) surgery and followed up for 16 weeks. Evolution of weight and glucose tolerance was analyzed. Bile acid concentration measurement, histological and qRT-PCR analysis were performed in the esogastric segments.

Results

Weight loss and glucose tolerance were improved after OAGB. Mean bile acid concentration was 4.2 times higher in the esogastric segments of OAGB rats (compared to sham). A foveolar hyperplasia of the gastro-jejunal anastomosis and an eosinophilic polynuclear cell infiltration were observed in OAGB rats. An esophageal hyper-papillomatosis was observed in both groups (OAGB = 50%, sham = 50%). qRT-PCR analysis showed no differences between OAGB and sham mRNA levels of Barrett's esophagus or esogastric carcinogenic-specific genes. No intestinal metaplasia, dysplasia, or cancer was observed after a 16-week follow-up.

Conclusion

After a 16-week follow-up, this pilot study confirmed the good reproducibility of our OAGB rat model. OAGB rats had not developed any pre-cancerous or cancerous lesions. Further experimental studies with longer term follow-up are required.

O.187

DETERMINATION OF UNDERLYING GENETIC VARIATIONS AND THEIR INFLUENCE ON WEIGHT LOSS AFTER BARIATRIC SURGERY IN A COHORT OF 1022 BARIATRIC PATIENTS

Basic science and research in bariatric surgery

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Introduction

A number of monogenetic causes of obesity have been identified in humans, yet only little is known about the relation of obesity gene mutations and (sustained) weightloss. Next generation sequencing (NGS) techniques now provide an efficient method to simultaneously identify mutations in all known disease genes and screen a large number of candidate-genes in a single experiment.

Objectives

We developed and validated a custom NGS-assay aimed at enrichment of 255 either known obesity genes or putative obesity candidate-genes.

Methods

Analysis of 52 obesity associated genes was performed as a diagnostic genepanel-test through the genome diagnostics laboratory of UMC Utrecht. Patient inclusion criteria were indication for redo-surgery, BMI>50kg/m² or childhood age of onset of obesity. Genomic DNA of 1022 patients was sequenced at>100X median coverage, yielding a 15X horizontal genepanel coverage of>95%.

Results

Multiple known pathogenic mutations and genetic variants of uncertain clinical significance(VUS) were identified. Within the group of known pathogenic mutations 9 patients showed a mutation in the Melanocortin-4-Receptor(MC4R) gene, the most common reported cause of monogenic obesity. Their mean BMI preoperatively was 47.1±12.1kg/m², 1 year after surgery their %TotalBodyWeightLoss (TBWL) was 22.1±6.6, which was not significantly different from non-mutation carriers.

Conclusion

Follow up of these first results is necessary, to be able to assess the long term risk of weight regain or insufficient weight loss. In parallel, analysis of all identified pathogenic mutations and VUS and their influence on weight loss will be performed. The remaining 203 research obesity candidate genes will be analyzed and may uncover novel genetic causes of obesity.

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O.188

THE INCIDENCE OF UNDIAGNOSED OBSTRUCTIVE SLEEP APNOEA (OSA) WITHIN A BARIATRIC POPULATION UNDERGOING LAPAROSCOPIC SLEEVE GASTRECTOMY AT AN AUSTRALIAN SURGICAL CENTRE

Sleeve gastrectomy

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Introduction

Obstructive sleep apnoea has been shown to be associated with increased incidence of stroke, hypertension and coronary artery disease. Research has suggested that OSA is more prevalent within the bariatric population.

Objectives

The purpose of this study was to investigate the incidence of undiagnosed OSA within a bariatric population undergoing laparoscopic sleeve gastrectomy.

Methods

A retrospective analysis was undertaken incorporating 387 patients with a BMI>30 who had undergone a laparoscopic sleeve gastrectomy at an Australian Surgical Centre between 2014 and 2016. All patients underwent a sleep study preoperatively. Patients with no known OSA with positive sleep studies were included in the study. Patients with known OSA were excluded from the study.

Results

Of the 387 patients who underwent laparoscopic sleeve gastrectomy, 46 (11.9%) had known OSA and hence were excluded from the study. Of the 341 patients with no previous diagnosis of OSA, 261 (76.5%) had positive sleep studies. Of these patients, 87 (33.3%) had mild OSA, 24 (9.2%) had mild/moderate OSA, 40 (15.3%) had moderate OSA, 21 (8.1%) had moderate/severe OSA, 59 (22.6%) had severe OSA and 30 (11.5%) had very severe OSA.

Conclusion

More than three quarters (76.5%) of bariatric patients in the study had undiagnosed OSA. This is higher than the general population average which studies have suggested as being between 37-50%. Furthermore, of the patients with undiagnosed OSA, only 33.3% had mild disease while 34.1% had severe and very severe OSA with urgent continuous positive airway pressure (CPAP) therapy recommended.

□
O.189

HISTOPATHOLOGIC FINDINGS IN SLEEVE GASTRECTOMY PATIENTS

Sleeve gastrectomy

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Introduction

Vertical sleeve gastrectomy (VSG) is currently the most commonly performed bariatric surgery in the United States. Several reports detailing the incidental findings from VSG specimens have been published previously.

Objectives

We now present the largest such histopathologic series in sleeve patients yet reported.

Methods

A prospective database of all patients undergoing VSG at our institution was reviewed. Patient characteristics, including age, sex, and body mass index and pathology reports of these VSG patients were examined for any histopathologic changes or findings.

Results

2037 patients underwent VSG during between January 2014 and October 2016. 1487 specimens (72.79%) were found to have normal histologic findings with mean age of 44.37 and BMI of 44.12. There were 452 patients (22.12%) with findings of acute or chronic gastritis. Follicular gastritis was encountered in 69 patients (3.38%). Five GISTs (0.24%) were identified with mean age of 53.4 and BMI of 49.76, and, in each, VSG was definitive treatment with no additional intervention necessary. Intestinal metaplasia was identified in eight patients (0.39%) with mean age of 52.13 and BMI of 44.9, and benign leiomyoma in only two patients (0.10%). There was one patient with the incidental finding of low grade lymphoma in a perigastric lymph node with an otherwise normal VSG specimen.

Conclusion

The incidence of significant pathologic findings in VSG specimens is remarkably low and in general, appeared in older population. Further studies may be needed to determine if there is a subgroup of the VSG patient population for whom such pathologic analysis may safely be omitted.

O.190

MULTI-DIMENSIONAL VALIDATED REPORTING OF DYSPHAGIA POST SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Introduction

Few studies have reported the prevalence of dysphagia in the bariatric population, as its own clinical entity, without being examined under the umbrella of GERD. This is compounded by studies not outlining methodologies used to assess dysphagia. Moreover, varying follow-up periods and comparison between the different bariatric procedures have led to conflicting results.

Objectives

To assess prevalence of dysphagia using a statically robust patient-reported tool, Dysphagia Handicap Index (DHI), post Laparoscopic Sleeve Gastrectomy (LSG). DHI is a validated tool which additionally measures the handicapping effects of dysphagia on emotional and functional aspects.

Methods

DHI questionnaire was administered to 121 patients who underwent LSG at least one year prior. Post-operative weight, BMI, Total Weight Loss (TWL) and EWL% were calculated. Physical, emotional and functional domains were analysed separately and altogether. Three additional questions were added to the DHI to delineate oesophageal dysphagia.

Results

Average pre-operative weight and BMI is 123.8 kg and 43, respectively. Median TWL and EWL% are 35.3 kg and 76.2%, respectively. 95 patients reported positive to atleast 1 element of the DHI (See table below for results). No patient required pneumatic dilatation. Mild dysphagia is a common symptom reported in our cohort.

	Overall DHI Score (100)	Physical Domain (36)	Functional Domain (36)	Emotional Domain (36)	Oesophageal Specific Dysphagia Score (12)
(Maximum Score Attainable)					
Median	10	2	4	2	2
Range	0-50	0-20	0-14	0-14	0-8

Conclusion

Prospective, single-institution analysis using a validated tool reveals post-operative dysphagia to be a common clinical entity in our population, with functional and psychological influences.

O.191

ROLE OF FIXATION OF STAPLE LINE DURING LAPAROSCOPIC SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Background

Background: Although sleeve gastrectomy provides a technically simple procedure with minimal effect on digestive tract it deprives the stomach from its ligaments of fixation which results in impairment of gastric functions, vomiting, axial gastric rotation in addition to bleeding or leakage from staple line.

Introduction

Laparoscopic sleeve gastrectomy has been accepted as a standalone effective bariatric procedure. Although it is associated with excellent results. A number of complications related to improper position and/or gastric tube deformities, resulting from loss of natural fixation

Objectives

To study effect of staple line fixation during sleeve gastrectomy

Methods

This is a prospective randomized study using closed envelop method carried on 100 patient with morbid obesity who underwent laparoscopic sleeve gastrectomy (LSG) they were divided into two groups each is 50 patient group A underwent classic (LSG) with no fixation and group (B) with staple line fixation.

Results

patients were 68 female and 32 male with a mean age of 32.2 ± 5.7 years, mean (BMI) 48.9 ± 8.6 kg/m². early post operative vomiting, gastric axial rotation, impaired gastric emptying all were significantly higher in group (A). Although staple line bleeding and leakage were higher in group (A) but it was not statistically significant. The operative time was shorter in group (A) but it was not significant.

Conclusion

Staple line fixation should be a step during sleeve gastrectomy as it regains the stomach its ligaments of fixation anatomically and so functions better less vomiting, less gastric axial rotation, better gastric emptying in addition to decreasing staple line bleeding and leakage with minimal effect on operative time.

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O.192

MORBIDITY AND MORTALITY IN 2900 CONSECUTIVE LAPAROSCOPIC SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Introduction

Morbid obesity is increasing worldwide: among bariatric procedures Laparoscopic Sleeve Gastrectomy (LSG) has become the most practiced in the world.

Objectives

To evaluate the morbidity and mortality of 2900 consecutive LSG performed by the same bariatric team.

Methods

A retrospective review of a prospectively maintained database was conducted. 2900 consecutive patients (71.9 % female) underwent LSG from October 2010 to March 2017. 570 (19.65%) procedures were performed by surgeons still in learning curve (Group A) and 2330 (Group B) by skilled surgeons. Initial body weight was 122.4 +/- 23.4 kg and body mass index (BMI) was 44.9 +/- 7.5 kg/m². Mean age was 41.2 (range 16-68) years.

Results

We had 3 cases of conversion to laparotomy. Mean operative time was 57 minutes. The average length of stay in the hospital was 2.16 days. Overall 30-day morbidity was 3.48%, with 16 events of gastric leak (0.55%). 6 leaks occurred in Group A (1.05%) whilst 10 (0.42%) in Group B. The difference between the two groups is not significant at $p < .05$ (chi-square is 3.2442, p-value .071675). There was no perioperative mortality, nevertheless one patient with gastric leak died 119 days after surgery due to hemorrhage complications. Readmission rate was 0.65%, while 1% of cases required reoperation.

Conclusion

Laparoscopic sleeve gastrectomy is a safe procedure for surgical weight loss. Our results show a very low 30-day morbidity rate with no perioperative mortality. This study supports the concept that implementing high-volume centers allows to keep low the complication rate despite surgeons still in their learning curve.

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O.193

COMPARING OUTCOME OF LSG, RYGB AND MGB IN A SINGLE CENTRE

Malabsorptive bariatric operations

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Introduction

There are no major studies comparing the outcome of the three most popular surgeries, even if present, shows conflicting outcomes.

Objectives

A prospective study comparing the outcome of Laparoscopic Sleeve gastrectomy, RYGB and MGB done in a single centre.

Methods

All patients who underwent the above procedures from November 2012 to November 2015 and completed one year, two year and three year of follow-up were included in the study. Baseline characteristics, percent excess weight loss, immediate and delayed complications, comorbidity resolution data and weight regain were compared and analysed.

Results

A total of 382 patients were included. Based on the type of surgery, patients were divided into 3 groups: laparoscopic Roux-en-Y gastric bypass (RYGB), laparoscopic mini-gastric bypass (MGB), and laparoscopic vertical sleeve gastrectomy (SG). After one year, RYGB and MGB patients had similar excess weight loss and comorbidity resolution than SG patients. But at the end of three years, the results are in favour of bypass procedures with better patient compliance with MGB. There was no mortality or leaks reported. There were comparable complication and morbidity rates amongst the three groups.

Conclusion

Malabsorptive procedure had a better outcome than restrictive procedures with regards to both EWL and resolution of co-morbidities. Though RYGB being a gold standard, MGB seems to give better patient compliance with equal or better outcome. However further RCT's are required to support the claim.

O.194

SLEEVE GASTRECTOMY: CORRELATION OF LONG - TERM RESULTS WITH REMNANT MORPHOLOGY AND EATING DISORDERS

Sleeve gastrectomy

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Introduction

Remnant dimension is considered crucial determining success of Sleeve Gastrectomy (SG) and dilation of gastric fundus is often believed the main cause of failure.

Objectives

To find correlations between remnant morphology immediately post surgery, its dilation in years and the long-term results and to correlate preoperative eating disorders, taste alteration, hunger perception and early satiety with post-SG results.

Methods

Evaluation of remnant morphology through oesophagus-stomach-duodenum X-ray, in day1 post-surgery and during follow-up (≥ 2 year). Pre-surgery diagnosis of eating disorders and their evaluation through "Eating Disorder Inventory-3" (EDI3) during follow-up. Assessment of change in taste perception, sense of appetite and early satiety. 50 patients were divided into two groups and compared (23 "failed SGs": EWL $<$ 50% and 27 "efficient SGs": EWL $>$ 50%).

Results

On a long-term basis a mean increase of 57,2% was documented in remnant areas but in "failed" SGs dilation was significantly superior than in "efficient" SGs (70,2%vs46,1%). Preoperative eating disorders were paradoxically more present in "efficient" SGs than in "failed" SGs with the exception of sweet eating. Postoperatively the two groups did not statistically differ as far as all the variables of the EDI3 are concerned.

Conclusion

On a long-term basis, remnant mean dilation is of around 50% compared to immediate postoperative but "failed" SGs showed larger dilation than "efficient" and, in percentage, the more dilated part of the remnant is the body. As far as all the EDI3 variables obtained are concerned, the two groups did not statistically differ. Of all eating disorders, sweet eating seems to be connected to SG failure.

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O.195

5-YEAR RESULTS OF SLEEVE GASTRECTOMY; ARE WE SATISFIED?

Sleeve gastrectomy

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Introduction

The Sleeve Gastrectomy has proven its value in the treatment of morbid obesity. Although performed as frequently as the gold standard gastric bypass nowadays, long-term outcome is still scarce compared to its counterpart. These data become available now.

Objectives

The goal of this study was to evaluate the 5-year results of the sleeve gastrectomy in terms of weight loss, comorbidities, long-term morbidity and the revision rate.

Methods

Between August 2008 and December 2011, 833 sleeve gastrectomies have been performed at a high volume single bariatric centre. Patient data were collected prospectively in a digital registry. The long-term results were studied retrospectively.

Results

Interestingly, half of the patients did not accomplish the mandatory 5-year follow-up. Median Excess Weight Loss was 52.8% after 5 years. No difference was found in Excess Weight Loss between age <55 and >55 years nor between men and women. The minority of patients (n = 64) who underwent a sleeve gastrectomy as a revision for lap band or VBG achieved significantly worse results. Diabetes remission was seen in 76.6% of the patients and hypertension, dyslipidaemia and sleep apnoea significantly disappeared or improved in 58.6%, 53.2% and 83.3% respectively. The revision rate in this cohort was 21.4%. Reflux or dysphagia symptoms were the indications for revision in nearly half of these patients.

Conclusion

This is the largest cohort reporting on the five-year outcome of sleeve gastrectomy so far. The results are satisfying, but could be improved by shifting the focus to the patient compliance regarding postoperative follow-up.

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O.196

MANAGEMENT OF ABDOMINAL WALL DEFECTS IN THE BARIATRIC PATIENT: REVIEW OF THE LITERATURE.

Hernia surgery in the bariatric patient

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Background

Management of abdominal wall defects in the bariatric patient.

Introduction

Obesity is considered a major risk factor for ventral hernia. Currently, there is no consensus on the optimal timing or method of repairing abdominal wall defects in candidates for bariatric surgery.

Objectives

Systematic review is to identify the management of the ventral hernia in bariatric patients.

Methods

A systematic review of the literature. We have applied the PRISMA recommendations for systematic reviews. We have included all articles that report obese patients operated with ventral hernia before, during and after bariatric surgery.

Results

Sixty five studies found, 27 were included. The mean of recurrence is 3-4 times higher for patients with BMI > 40 kg/m² compared to those with a BMI < 40 kg/m², operated previously for parietal defect. The herniorraphy at the same time as bariatric surgery showed a recurrence rate of 30%. The use of synthetic mesh, showed a rate of infection of 1% and a rate of recurrences of 3.4%. The use of a biological mesh is complicated by a recurrence rate of 26%. Recurrence is rarely reported in patients operated after bariatric surgery and weight loss. They report 36% of postoperative intestinal incarceration and occlusion, in the case of hernia dissection without repair upon bariatric surgery.

Conclusion

The repair of abdominal wall defects is currently recommended after bariatric surgery and weight loss. In this case, it is important to avoid dissection of the hernia during bariatric surgery, in order to prevent incarceration of the small bowel. Several studies showed that it is possible to treat small defects at the same time as bariatric surgery.

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O.197

HIATAL SURFACE AREA MEASUREMENT AS USEFUL TOOL FOR PREOPERATIVE DECISION MAKING IN THE MANAGEMENT OF HIATAL DEFECT IN BARIATRIC PATIENTS.

Hernia surgery in the bariatric patient

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Introduction

Hiatal surface area (HSA) calculation has been recently proposed as useful tool for planning the treatment of hiatal defects, with or without hiatal hernia (HH). Correlation among preoperative upper GI endoscopy, barium swallow, symptoms score and intraoperative findings are lacking.

Objectives

To evaluate the usefulness of HSA measurement in the management of the hiatal defects of bariatric patients.

Methods

We analyzed prospectively 25 patients, candidates for laparoscopic antireflux surgery as primary surgery, single or concomitant, with or after bariatric surgery. Six normal weight patients, without clinical, endoscopic evidence of GERD/esophagitis constituted the control group. Multidetector (MDCT) scan measurement of HSA was done preoperatively (using cross-sectional imaging with multiplanar reconstruction technique), while intraoperatively measurement was achieved using a simplified, geometrical calculation of the HSA (area of a rhombus formula). CT-scan was repeated 12 months postoperatively, or when necessary.

Results

Mean HSA in control patients (no obesity, no HH, no GERD) was $<5 \text{ cm}^2$ (2.94 ± 0.66). Mean HSA in obese patients candidates to cruroplasty, with suspected defect, was $10.75 \pm 4.54 \text{ cm}^2$, and $5.89 \pm 3.0 \text{ cm}^2$ after hiatus repair. Intraoperative measurement of HSA was $11.25 \pm 6.2 \text{ cm}^2$.

Conclusion

The preliminary results suggest that HSA preoperative and intraoperative evaluations are comparable. The HSA postoperative measurement suggests that cruroplasty succeeded to bring the HSA in the normal range observed in the control group. The CT scan seems to be a reliable tool and should be useful also in the follow-up in case of recurrent or de-novo symptoms to assess the eventual changes of the HSA.

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O.198

MANAGEMENT OF VENTRAL HERNIA DURING BARIATRIC SURGERY: OUR EXPERIENCE

Hernia surgery in the bariatric patient

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Introduction

It is not uncommon for patients undergoing Bariatric surgery to have an associated ventral hernia. There is no consensus towards dealing with such hernias while attempting bariatric procedures in these patients.

Objectives

We present our experience of thirty patients undergoing Bariatric surgery who had associated ventral hernias.

Methods

Concomitant hernia repair along with the bariatric procedure was performed in thirteen patients. Ten patients who had a defect of size less than 3cm underwent primary suture repair of their hernia. The other 3 patients with larger hernias underwent concomitant Laparoscopic Intra-peritoneal Onlay Mesh (IPOM) repair or Open mesh hernioplasty. In the remaining seventeen patients, we left the hernia alone as they were not coming in our area of dissection or were asymptomatic.

Results

At mean follow up of 24 months, six patients out of ten in whom a primary suture repair of hernia was performed simultaneously during bariatric surgery had developed recurrence (60%). None of the seventeen patients in whom hernia was left alone developed complications. All these patients underwent repair of their hernias after adequate weight loss at various durations after bariatric surgery. In those three patients who underwent simultaneous mesh hernioplasty with bariatric surgery, the postoperative period was uneventful and none of them had any recurrence.

Conclusion

Primary repair of ventral hernias in patients undergoing bariatric surgery is better avoided, unless the hernia is obscuring the field of surgery as it is associated with high recurrence rate. Unless symptomatic, their hernia should be repaired after stabilization of weight loss.

O.199

LAGB IS A PREDISPOSING FACTOR FOR THE FORMATION OF A HIATAL HERNIA

Hernia surgery in the bariatric patient

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Introduction

Laparoscopic adjustable gastric band (LAGB) is a viable bariatric option, with low short-term complication rates. The concentric stenosis on the proximal stomach may induce dilation of the gastric pouch and distal esophagus. Recurrent vomiting, repeatedly exposes the hiatal region to elevated pressures.

Hiatal hernia (HH) is highly prevalent in the bariatric population and can cause significant difficulty in performing bariatric surgery (BS).

Objectives

We hypothesize that LAGB will instigate occurrence of HH, making its prevalence significantly higher than the general morbidly obese population undergoing BS.

Methods

Retrospective review of a prospectively maintained database of all BS procedures performed in a high-volume bariatric service. Data collected included demographics, anthropometrics, co-morbidities, previous BS, preoperative and intra-operative HH detection, operation time, perioperative complications and length of hospital stay.

Results

Between October 2010 and March 2015, 2843 patients (1026 males – 36.08%) underwent BS. Of these, 193 patients (6.79%) had a previous LAGB (LAGB group), and 2650 did not (control group). The reasons for conversion were weight regain, band intolerance and band related complications.

Mean age and body mass index (BMI) were similar between the LAGB and the control groups (p - NS).

HH was preoperatively diagnosed by barium swallow in 9.33% and 8.94% of the LAGB and control groups (p=0.085), respectively. However, HH was detected intraoperatively in 20.21% and 7.43%, respectively (p<0.0001).

Conclusion

A previous LAGB is a prominent predisposing factor for HH. HH should be actively looked for in conversional surgery after LAGB. Preoperative barium swallow is noncontributory for the detection of HH.

O.200

REFLUX AND HIATUS HERNIA IN SLEEVE GASTRECTOMY - INTRA-OPERATIVE REPAIR VS POST-OPERATIVE REPAIR

Hernia surgery in the bariatric patient

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Introduction

Reflux is a common problem after sleeve gastrectomy. Hiatus hernia repair has been advocated as way to prevent this from happening. Pre-operative investigation with endoscopy and pH manometry should help to evaluate the possibility of identify patients that potentially should not be offer surgery. It may not be practical to have those procedures performed on all patients.

Objectives

Is hiatus hernia repair necessary on most patients to prevent chronic symptomatic reflux.

Methods

Retrospective chart review from single surgeon identified numbers of patients undergo sleeve gastrectomy from 2011 to 2016. Most patients with reflux after surgery were investigated with gastroscopy and CT fizzogram.

Results

From patient database of single surgeon, (n= 965) , 213 patients underwent hiatus hernia repair during surgery. Average length of follow up is 23.4 months. Lost of follow up rate (10%). From chart record to date only 35 patients has underwent either hiatus hernia repair or gastric bypass surgery for intolerable reflux. (3.6%). Among those only 13 patients has hiatus hernia repair during primary surgery. 3 patients has hiatus hernia subsequently underwent RYGBY for treatment of reflux or stricture along incisura.

Conclusion

Sensible simple history together with anatomical decision during operation is adequate to achieve low morbidity from chronic reflux associated with sleeve gastrectomy. Reflux is probably associated with factors more then hiatus hernia but more related to shape of sleeve construction and tightness of staple line against boogie. Presence of significant reflux do warrant consideration of other bariatric procedure such as bypass.

O.201

SHOULD VENTRAL HERNIA REPAIR BE PERFORMED AT THE SAME TIME AS BARIATRIC SURGERY?

Hernia surgery in the bariatric patient

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Background

Patients who require bariatric surgery often present with concurrent ventral hernia. There is no strict or clear consensus on the optimal timing of hernia repair.

Introduction

We sought to ascertain the optimal timing of hernia repair in patients awaiting bariatric surgery using a 'best evidence topic' approach.

Objectives

To answer this question: in morbidly obese patients undergoing bariatric surgery, when a ventral hernia is picked up in clinic or intraoperatively is concurrent repair of the hernia better than delayed repair after weight loss with regards to complication rates?

Methods

A best evidence topic was constructed using a described protocol. A literature search yielded 179 papers were found. 5 studies were deemed to be suitable to answer the question.

Results

All 5 studies assessed were non randomised studies. The overall quality of these studies was poor. The outcomes assessed were incidence of complications associated with hernia repair (recurrence, infection) and deferral of repair (small bowel obstruction).

Conclusion

The evidence does not provide a consensus for the optimal timing of ventral hernia repair, with some of the selected studies contradicting each other. However, the studies do affirm the risk of small bowel obstruction if hernias are left alone. The reported rate of surgical site infection is low when mesh repair is performed at the same time as weight loss surgery.

Until large volume, high quality randomized control trials can be performed, a case by case approach with open discussion on the risks and benefits of each approach is recommended.

O.202

BARIATRIC SURGERY IN PATIENTS WITH CHRONIC RENAL DISEASE LEADS TO AN IMPROVED RENAL FUNCTION MAINTAINED AT 2 YEARS

Basic science and research in bariatric surgery

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Introduction

Epidemiological studies have showed that, after stratification for those without hypertension and diabetes a significant association exists between obesity and Chronic Kidney Disease (CKD). While the beneficial effects of surgery on weight loss and metabolic disease are well documented, there is a little data on the effect of surgery on renal function.

Objectives

Understand the effect of bariatric surgery on renal function in the setting of CKD stages 2-5.

Methods

A retrospective review was performed of a database at a high volume bariatric centre, where patients with CKD stages 2-5 who underwent bariatric surgery between 2007-2015 were identified. Patients were followed up for two years with changes in renal function quantified in estimated Glomerular Filtration Rate (eGFR).

Results

759 patients underwent surgery during this time period. 118 had Stage 2-5 CKD. Mean age was 49.9 ± 10 . 28 underwent sleeve gastrectomy, 88 underwent roux en y gastric bypass and 2 had gastric bands. Comorbidity levels were well matched in each group. Mean preoperative BMI was 49.1 ± 7.9 . A 31.7 % reduction in BMI was observed at 2 years ($p=0.01$). eGFR improved by 14.7 % over the same time period ($p=0.01$). The greatest improvement in eGFR was seen in the early postoperative periods with a 6.9% increase over the first 3 months.

Conclusion

Bariatric surgery appears to confer benefits to renal function sustained at two years, with the greatest change seen in the early postoperative period where the greatest weight loss is also seen. Prospective studies are required to further understand this change

O.203

NORMALIZATION OF BRAIN MYO-INOSITOL CONCENTRATION AMONG MORBIDLY OBESE PATIENTS WITH TYPE 2 DIABETES TREATED WITH INTRAGASTRIC BALLOON

Basic science and research in bariatric surgery

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Introduction

Obesity is associated with metabolic and microstructural brain abnormalities in otherwise healthy individuals. Obese individuals demonstrate reduced concentrations of N-acetylo-aspartate (NAA, found exclusively in neurons, is a marker of brain integrity). Additionally, type 2 diabetes (T2D) is associated with decreased NAA and increased concentrations of myo-inositol (m-Ino, putative marker of brain inflammation).

Objectives

To assess whether weight loss leads to normalization of NAA and m-Ino concentrations.

Methods

The study was performed among 24 morbidly obese patients (12 with T2D (OD), and 12 without (OB)) treated with intragastric balloon (IGB). They underwent magnetic resonance spectroscopy (single voxel, short echo time) before IGB insertion and three months after insertion. Spectra were acquired in two 2×2×3cm volumes of interest located in the left frontal white matter (frontalWM) and the left parietal white matter (parietalWM). A control group (CON) consisted of 12 healthy volunteers with BMI in normal range.

Results

Three months after balloon placement, the average weight reduction was 15.0±9.5kg (6–35kg), which corresponds to an 18.7±11.8% reduction of excessive weight. Before insertion of the IGB, we found 13% elevated m-Ino in the parietalWM only in OD patients (p<0.01). Three months after IGB insertion, we found in this group (OD) that m-Ino in the parietalWM decreased by 9% (p=0.006), and tended to decrease by 7% (p=0.08) in the frontalWM. No differences or changes in NAA were found.

Conclusion

Weight reduction leads to remission of inflammation (assessed by m-Ino concentration) among morbidly obese patients with T2D.

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O.204

THE ROLE OF GASTRIC VS INTESTINAL ANATOMICAL CHANGES IN THE REGULATION OF GLUCAGON-LIKE PEPTIDE 1: TIME TO REVISE THE HINDGUT HYPOTHESIS?

Basic science and research in bariatric surgery

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Introduction

Glucagon-like peptide 1 (GLP-1) is an incretin hormone mainly secreted by L-cells in the distal bowel and negatively regulated by dipeptidyl peptidase 4 (DPP4). Circulating postprandial levels of GLP-1 characteristically increase after Roux-en-Y Gastric Bypass (RYGB). According to the "hindgut hypothesis", direct delivery of nutrients to the distal bowel due to the re-routing of the small intestine would explain the increased GLP-1 response after RYGB. GLP-1 levels, however, also increase after sleeve gastrectomy, suggesting that that changes in GLP-1 regulation may not depend on intestinal re-routing.

Objectives

To investigate the effect of gastric vs intestinal manipulations on the regulation of GLP-1.

Methods

Zucker rats that had undergone standard RYGB or a sham operation were used to investigate the role of gastric plus intestinal anatomic changes. Wistar rats that had undergone duodenal-jejunal bypass (DJB) or a sham operation were used to investigate the role of intestinal re-routing alone. Preproglucagon (coding for GLP-1) and DPP4 gene expression levels were measured using RT-PCR in the duodenum, jejunum and ileum all animals.

Results

Compared to sham operated controls, RYGB increased preproglucagon expression in the duodenum (excluded segment) ($p < 0.01$) but not in the jejunum or ileum. Ileum DPP4 expression was also significantly downregulated following RYGB compared to sham controls ($p < 0.01$). In contrast, DJB did not change preproglucagon nor DPP4 gene expression at any level of the small bowel.

Conclusion

These findings suggest that alterations of gastric anatomy, rather than intestinal re-routing, can influence GLP-1 regulation, challenging the anatomic assumptions of the "hindgut hypothesis".

O.205

DISTINCT ROLE OF THE ALIMENTARY, BILIARY, AND COMMON LIMBS: THE ABC OF GLUCOSE METABOLISM AFTER ROUX-EN-Y OR ONE ANASTOMOSIS GASTRIC BYPASS.

Basic science and research in bariatric surgery

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Introduction

Roux-en-Y gastric bypass (RYGB) improves postprandial glucose metabolism beyond weight loss. However, the direct contribution of each intestinal segment of RYGB (alimentary limb/AL, biliary limb/BL, and common limb/CL) to this metabolic benefit is unknown.

Objectives

To decipher the effect of each intestinal limb of gastric bypass on postprandial glucose response (PGR).

Methods

Adult healthy minipigs (n= 28, 49±5 kgs) were submitted to a sham operation or one of 4 bypass variants: RYGB (short BL, long CL, short AL), distal RYGB (short CL, short BL, long AL), one anastomosis gastric bypass (OAGB) (short BL, long CL, no AL), or distal OAGB (long BL, short CL, no AL). Mixed-meal test was performed post operatively to measure PGR and intestinal sodium dependent glucose transport, as well as postprandial GLP-1.

Results

Body weight decreased after bypass and postprandial GLP-1 increased. PGR decreased with shortening of CL, as well as with increasing of BL. The decrease of PGR was related to reduced xylose AUC. Xylose AUC was not modified by the absence of AL; increased when sodium (5g of NaCl) was added to the meal after distal OAGB; and decreased when Phlorizin (an inhibitor of sodium dependent glucose transport) was added to the meal in RYGB.

Conclusion

PGR decreases after bypass in relation with intestinal sodium dependent glucose transport. PGR is reduced with longer BL (more reabsorption of endogenous sodium contained in bile) and/or shorter CL (limited contact of endogenous sodium with ingested glucose).

O.206

THE EFFECTS OF MORBID OBESITY, METABOLIC SYNDROME AND BARIATRIC SURGERY ON AGING OF THE T-CELL IMMUNE SYSTEM

Basic science and research in bariatric surgery

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Introduction

Morbid obesity is associated with subclinical systemic inflammation and accelerated aging, including the T-cell immune system. The metabolic syndrome (MetS) may potentiate these phenomena, and bariatric surgery might delay this accelerated aging.

Objectives

The effects of bariatric surgery on accelerated immune aging were measured by relative telomere length and phenotypic characteristics of T cells in morbidly obese patients before and after bariatric surgery.

Methods

Ten healthy controls (HC) and 108 morbidly obese patients undergoing bariatric surgery were included: 41 without MetS and 67 with MetS. Relative telomere length (RTL) and differentiation status were measured in circulating CD4+ and CD8+ T cells via flowcytometry. T-cell characteristics were compared for age, MetS, Cytomegalovirus(CMV)-serostatus and gender prior to, and at 3, 6 and 12 months after bariatric surgery.

Results

Thymic output was significantly higher in patients ≤ 50 years of age without MetS. MetS, CMV-seropositivity, older age and male gender significantly enhanced T cell differentiation. Patients with MetS had significant lower CD4+ RTL than without MetS and HC, especially in patients ≤ 50 years and CMV-seropositivity. Within 6 months after bariatric surgery, telomere attrition was decreased in CD4+ T cells. T cells were less differentiated following bariatric surgery, especially in the MetS group.

Conclusion

Especially in morbidly obese patients ≤ 50 years of age, MetS significantly decreased the RTL and enhanced T-cell differentiation and were partially reversed following surgery. These data suggest that obese patients with MetS are at risk for accelerated aging of the T-cell immune system and might benefit from bariatric surgery at an earlier stage.

O.207

NOVEL BIOMARKERS FOR THE DIAGNOSIS OF LIVER FIBROSIS IN A HIGHLY RISK NAFLD COHORT

Basic science and research in bariatric surgery

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Introduction

Morbid obese patients are at particular risk for the development of chronic liver disease, such as Non-alcoholic fatty liver disease (NAFLD). NAFLD includes different stages, ranging from simple steatosis to non-alcoholic steatohepatitis (NASH). Despite the increase of this disease, there are still no reliable non-invasive diagnostic tests and the liver biopsy remains the gold standard for diagnosis of liver fibrosis in NAFLD.

Objectives

Our goal was to identify novel serum biomarkers for non-invasive diagnosis of NAFLD in a cohort of obese.

Methods

Were included 71 patients who underwent bariatric surgery and intra-operative liver biopsy. Of each patient were collected anthropometrical parameters and blood samples before surgery. From a first analysis in silico four biomarkers were selected (IGF2, SPARC, CD44, EGFR) and subsequently tested on patients' plasma. Steatosis and fibrosis were graded in accordance with Brunt-Kleiner criteria on liver wedge biopsy.

Results

Fibrosis was the main factor/contributor associated with IGF2 plasmatic levels and with the ratio EGFR/IGF2. IGF2 had the highest accuracy in detecting fibrosis with an optimal threshold of 1.9 ng/mL and with a sensitivity and specificity of 86 and 74%, respectively.

Conclusion

This study proposes IGF2 and EGFR as noninvasive biomarkers of moderate / severe fibrosis in patients with severe obesity. The introduction of these biomarkers in clinical practice, alone or in combination with other serum markers, can reduce the need of liver biopsy for the diagnosis of fibrosis.

O.208

PUTTING THE HINDGUT HYPOTHESIS TO THE TEST IN A BARIATRIC ZUCKER RAT MODEL

Basic science and research in bariatric surgery

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Introduction

The hindgut theory hypothesizes a key role of differential hindgut stimulation following bariatric procedures in ameliorating diabetes mellitus.

Objectives

We used two strategies to remove the hindgut from intestinal continuity in order to analyze its impact on diabetes remission.

Methods

Loop duodeno-jejunostomy (DJOS) with exclusion of one third of total intestinal length was performed in 3 groups of 9-week-old Zucker diabetic fatty rats. In group 1, no further alteration of the intestinal tract was made. Group 2 received additional ileal exclusion via jejunocoecal bypass anastomosis (DJOS + IE). Group 3 underwent additional ileal resection with end-to-end jejunocoecal anastomosis (DJOS + IR). 1, 2, and 4 months after surgery, fasting blood glucose levels, oral glucose tolerance tests (OGTT), glucose-stimulated hormone analyses were conducted, and bile acid blood levels were compared. Body weight was documented weekly.

Results

There were no significant weight differences between the groups ($p > 0.05$). Bile acid blood levels were significantly higher in DJOS group compared to both DJOS + IR and DJOS + IE ($p = 0.0009$ and $p = 0.0114$). GLP-1 and GIP levels did not differ at any time point (Mann-Whitney $p > 0.05$ for all). Furthermore, we did not observe a significant impact on fasting glucose levels or fasting and glucose stimulated insulin blood levels ($p > 0.05$).

Conclusion

We implement two strategies of ileal exclusion to test the impact of the hindgut in remission of diabetes mellitus. This data supports the foregut hypothesis and suggests that mechanisms driving the amelioration of diabetes mellitus after duodenal bypass surgical techniques cannot be reduced to the ileum.

□
O.209

PREDICTORS OF POSTOPERATIVE EGFR CHANGE AND RESOLUTION OF HYPERFILTRATION IN OBESE PATIENTS FOLLOWING BARIATRIC SURGERY

Basic science and research in bariatric surgery

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Background

Bariatric surgery can improve glomerular hyperfiltration.

Introduction

Very Few studies identified associative factors with glomerular filtration rate (GFR) and resolution from glomerular hyperfiltration after bariatric surgery.

Objectives

To investigate the predictors of estimated GFR (eGFR) changes and resolution from glomerular hyperfiltration after bariatric surgery.

Methods

We enrolled patients who underwent bariatric surgery for obesity from January 2008 to December 2014 and had more than a year of follow-up. Glomerular hyperfiltration was defined as an eGFR above 95 percentile values for age and sex matched cohorts extracted from the Korea National Health and Nutrition Examination Survey (KNHANES) Database. Patients with baseline eGFR less than 60 ml/min/1.73m² were excluded.

Results

Total 138 patients (age: interquartile range [IQR] 28–43; 21 men, 117 women) were analyzed. The median follow-up period was 36 months (IQR 25–35 months). One hundred twenty (87%) patients were defined as having glomerular hyperfiltration and 75 (54%) resolved after surgery. Multivariate analysis found that sex, preoperative body mass index (BMI), and age were predictive of postoperative eGFR. In patients with preoperative glomerular hyperfiltration, female and lower BMI groups had significantly higher resolution rates ($p = 0.012$ for sex, $p = 0.016$ for BMI). Younger age was related with early resolution after bariatric surgery.

Conclusion

Younger patients had a faster eGFR decline after bariatric surgery. Predictive factors for resolution of glomerular hyperfiltration after bariatric surgery include female sex and lower BMI.

O.210

EXCESS WEIGHT IN THE ELDERLY: A BRAZILIAN EXPERIENCE WITH THE INTRAGASTRIC BALLOON TREATMENT

Endoscopic and Percutaneous Interventional Procedures

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Introduction

With the aging of the population, the incidence of obesity has also increased among the elderly. However, there is a higher incidence of severe comorbidities in this population comparing to adults, which often makes bariatric surgery unfeasible. In this scenario, treatment with the intragastric balloon (IGB) may be an interesting option.

Objectives

To assess the efficacy and complications of obesity treatment in the elderly using a non adjustable IGB.

Methods

A total of 77 patients were analyzed. The minimal initial body mass index (BMI) was 28 kg/m². The level of significance was set at p<0.05.

Results

58 patients were women (75.3%). Mean age was 64.26 (60-80) years. Ten patients had no comorbidities, 52 had hypertension, 45 had dyslipidemia, 32 had insulin resistance, 12 had type II diabetes, and 10 had ischaemic heart disease. There were no major complications. Results are shown on table 1 and treatment success rate on table 2. Elderly shows a higher BMI reduction (p=0.0002) and %total body weight loss (TBWL) (p=0.0003) than adults.

Table 1 **Results**

	n=77
Body weight(kg)	
Baseline	103.37±17.14
Final	81.66±15.71
Reduction	21.71±7.58
%TBWL	21.07±6.07
BMI(kg/m²)	
Baseline	37.89±5.41
Final	29.86±4.76
Reduction	8.03±2.88
Excess weight(kg)	
Baseline	35.53±16.98
Final	13.82±15.49

□ %EWL 69.27±30.01

*p<0.0001 for all comparisons between values at baseline and at the end of the study.
IGB (intra-gastric balloon); TBWL (total body weight loss); EWL (excess weight loss)

Table 2
Treatment success rate (≥10%TBWL; ≥25%EWL)

	n=77
%TBWL(n;%)	
< 10%	3 (3.89%)
≥ 10%	74 (96.11%)
% EWL(n;%)	
< 25%	1 (1.3%)
≥ 25%	76 (98.7%)
BMI(n;%)	
23-28kg/m ² (Normality according to OPAS*)	30 (38.76)

*OPAS=Pan American Health Organization

Conclusion

Endoscopic treatment of obesity with an IGB shows to be an excellent therapeutic option for the elderly.

O.211

EFFECTIVENESS OF A DIETARY INTERVENTION FOR THE TREATMENT OF OBESE PATIENTS THROUGH NON-INVASIVE ENDOSCOPY TECHNIQUES BY ENDOSUTURING AND INTRAGASTRIC BALLOON

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Different bariatric endoscopy (BE) techniques have shown effectiveness and safety

Objectives

To compare different BE procedures in terms of weight loss at 1 year, using the same followup team

Methods

The same follow-up team and single endoscopist treated 717 patients (211 men) (mean BMI 38.0 + 5.8 kg/m², mean age 44.6 +10.6) with at least 1 year of follow-up, using four BE techniques (Orbera Intragastric Balloon n=250, Duo Balloon n=92, Apollo endoscopic sleeve n=141, POSE procedure n=234)

Results

Weight loss results at 1 year of follow-up for Orbera Intragastric Balloon, Duo Balloon, Apollo endoscopic sleeve and POSE procedure were: Total Body Weight Loss (TBWL): 19.2, 17.7, 20.4 and 16.2 kg respectively, and Percentage of TBWL (%TBWL): 17.3, 16.7, 18.2, 14.9 respectively.

Conclusion

We have communicated the first report in the world of compare weight loss results at 1 year of four different BE techniques, with the same endoscopist and follow-up team

O.212

AN ALGORITHMIC APPROACH TO THE MANAGEMENT OF GASTRIC STENOSIS FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Gastric Stenosis (GS) is a potential adverse event post-laparoscopic sleeve gastrectomy (LSG). Endoscopic management is preferred; however, there is significant variation in therapeutic strategies with no defined treatment algorithm.

Objectives

This study aims to describe the safety and efficacy of a pre-defined step-wise algorithm for endoscopic management of GS post-LSG.

Methods

Consecutive patients with symptomatic GS post-LSG, presenting between July 2015 and August 2016, were subjected to a predefined treatment algorithm of serial dilations (up to four) using achalasia balloons, followed by a fully covered self-expanding metal stent (FCSEMS) if dilations were inadequate. FCSEMS were secured with four endoscopic sutures. Patients who did not respond or opted out of ongoing endoscopic therapy were offered revision Roux-en-Y gastric bypass (RYGB).

Results

Seventeen patients underwent a median of 2 (range 1-4) balloon dilations. Twelve patients (70.6%) reported clinical improvement with balloon dilation alone while 3 (17.6%) required subsequent FCSEMS placement. One patient suffered a tear to the muscularis propria with balloon dilation, which was managed conservatively. Overall, 15 (88.2%) reported clinical improvement with endoscopic management. Pre and post PAGA-SYM scores revealed that the strongest response to therapy was in following items: nausea, heartburn during day, heartburn on lying down, reflux during day and reflux on lying down. Two (11.8%) patients (one with severe stenosis and another with helical stenosis) failed endoscopic therapy and underwent RYGB.

Conclusion

Endoscopic management of GS using the described algorithmic approach is safe and effective post-LSG. Patients with severe stenosis or helical stenosis are likely to require revision RYGB.

O.213

MANAGEMENT OF BARIATRIC COMPLICATIONS USING ENDOSCOPIC STENTS: A MULTI-CENTER STUDY

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Complications after bariatric procedures including leaks and strictures can be difficult to treat. Endoscopic treatment may be desired due to less invasiveness in these patients.

Objectives

This aim of this study is to examine the effectiveness and outcome of managing bariatric complications using endoscopic stents.

Methods

A total of 139 patients underwent endoscopic stenting after a bariatric procedure from September 2012 to December 2016 in four bariatric centers. Previous bariatric procedures included Roux-en-Y gastric bypass (25.4%), sleeve gastrectomy (69.5%), duodenal switch (3.4%), and vertical banded gastroplasty (1.7%).

Results

Mean age at intervention was 51.5 ± 13.8 years old and mean body mass index was 45.8 ± 6.8 kg/m² at the time of bariatric procedure in these patients. Reasons for stenting included sleeve leakage (n=93, 66.9%), sleeve stricture (n=7, 5.0%), staple line disruption (n=7, 5.0%), stricture of gastrojejunal (GJ) anastomosis (n=8, 5.8%), leak at the GJ anastomosis (n=8, 5.8%), leak at the gastric pouch (n=10, 7.2%), and stricture at the site of band (n=6, 4.3%). Migration rate of initial stents was 27.1%, and 13.6% of patients required stenting more than once. The resolution rate of complications using stents was 84.7%, and 15.3% required a reoperation for a resolution. Mean time between first intervention and resolution of symptoms was 29.2 ± 6.8 days.

Conclusion

Stenting may be safe and effective as a first-line treatment for complications arising after bariatric procedures.

□
O.214

OBESITY TREATMENT WITH BOTULINUM TOXIN-A IS NOT EFFECTIVE: A SYSTEMATIC REVIEW AND META-ANALYSIS.

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Development of cost-effective therapies to control the worldwide pandemic of obesity is a leading priority in modern medicine. The injection of Botulinum toxin (BTA) in gastric wall is a recent developed endoscopic therapy for obesity. However, the effectiveness of BTA therapy is not well known since the results presented in the literature are highly discrepant and the previous published meta-analysis has serious methodological issues.

Objectives

To systematically review and meta-analyze the available data to assess the real effect of BTA therapy as primary treatment of obesity.

Methods

Two independent reviewers thoroughly searched MEDLINE, Embase, Cochrane, SCOPUS, EBSCO, LILACS, BVS and the Library of University of Sao Paulo. We considered eligible only randomized controlled trials enrolling obese patients (BMI above the 30) comparing BTA versus saline injections. The outcomes assessed were absolute weight loss (AWL) in kilograms and BMI reduction in kg/m².

Results

Our initial search identified 8811 records. After application of eligibility criteria, 6 studies were selected for analysis. After critical appraisal, two articles were excluded and we meta-analyzed the remainder. The mean difference (MD) in AWL was -3.53 [95% CI, -4.25, -2.81] in favor of BTA. However, we detected high heterogeneity and after funnel plot and I^2 analyses one outlier study was excluded. Then, the remainder were homogenous ($I^2 < 50\%$) and the MD was 0.12 [CI 95%, -1.14, 1.38]. The MD for BMI reduction was -0.06 [95% CI, -0.92, 0.81].

Conclusion

We conclude that treatment of obesity with intragastric injection of BTA is not effective with regard to absolute weight loss and BMI reduction.

O.215

SAFETY AND EFFECTIVENESS OF ARGON PLASMA COAGULATION FOR WEIGHT REGAIN FOLLOWING GASTRIC BYPASS: A MULTI-CENTER STUDY

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Weight regain occurs in 10-30% of patients after Roux-en-Y gastric bypass (RYGB). Endoscopic suturing and sclerotherapy have been suggested as a non-invasive approach to address this issue. Recently, argon plasma coagulation (APC) has been used to decrease the size of the gastrojejunal anastomosis and therefore reinitiate weight loss. The purpose of this study is to assess the effectiveness of APC for patients with weight regain.

Objectives

The purpose of this study is to assess the safety and effectiveness of APC for patients with weight regain.

Methods

A retrospective chart review was performed in 448 patients underwent APC after RYGB from January 2014 to December 2016 in six bariatric centers.

Results

Mean age at intervention was 38.4 ± 7.6 years old and mean body mass index was 35.9 ± 5.4 kg/m² at the time of APC. The male to female ratio was 2 to 8. The mean length of gastrojejunal anastomosis was 22.0 ± 5.8 mm at baseline, and 12.7 ± 3.3 mm after intervention. The mean difference was 9.3 mm and this was statistically significant ($p < 0.0001$). Mean number of intervention was 2.1 ± 0.8 times. Mean body mass index (BMI) was 31.3 kg/m², 30.0 kg/m², 27.6 kg/m², and 31.6 kg/m², at 6, 12, 24, and 36 months, respectively. Mean percentage of excess BMI loss was 48.6%, 62.2%, 76.2%, and 29.5%, at 6, 12, 24, and 36 months, respectively. Complication rate was 2.7%.

Conclusion

APC may be a safe and effective approach that is non-invasive in reinitiating weight loss after gastric bypass.

O.216

LARGE EXPERIENCE IN REDUCTION OF HIGH SURGICAL RISK IN 214 SUPER OBESE PATIENTS THROUGH THE USE OF INTRAGASTRIC BALLOON

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Super obese patient has a high surgical risk (major complications 30% and mortality 5-12%). Preoperative weight loss is related to lower complication rate and mortality. In literature, the intragastric balloon (BIB) demonstrates good early weight loss but poor long term results. For this high-risk patient, the interest is only in the short term given that they will soon be submitted to definitive treatment like surgery.

Objectives

To evaluate the use of BIB as a preoperative procedure aiming an initial weight loss and reduction of surgical risk.

Methods

From November 2000 to March 2017, 214 super obese patients (mean BMI=55) were treated with the BIB for at least four months before surgical treatment. Associated severe grade diseases were arterial hypertension (40%), diabetes (15%), sleep apnea (32%) and osteoarthritis (25%).

Results

The mean percent excess weight loss was 26,7%, mean weight loss was 14.4kg and mean BMI reduction was 9,1 kg/m². BIB group had only minor complications (nauseas, vomits, gastroesophageal reflux) and one case of early balloon withdrawal (within 2 months) due to patient intolerance. Around 88% of patients showed satisfactory results with improvement in hypertension, diabetes, sleep apnea and with surgical risk reduction from ASA III/IV to ASA II. All these patients were submitted to bariatric surgery (RYGB 82%, LAGB 10% or BPD 8%) without major complications. There was no mortality. Only 12% of patients needed a two-stage surgery.

Conclusion

BIB is an effective non-surgical technique to prepare BMI > 50 patients, reducing the severity of major complications and changing surgical risk.

O.217

EFFECTIVENESS OF INTRAGASTRIC BALLOON AS A BRIDGE TO DEFINITIVE BARIATRIC SURGERY IN THE SUPER-OBESE

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Super Obese patients with body mass index (BMI) > 60kg/m² pose particular difficulties for primary laparoscopic bariatric surgery. Laparoscopic port access, stapling and suturing become increasingly difficult with higher BMI. Our unit's practice of placing an intragastric balloon for 6 months prior to definitive surgery in patients with BMI > 60kg/m² aims to make definitive surgery less difficult by reducing weight.

Objectives

To quantify weight loss after balloon placement and determine if these patients subsequently underwent definitive bariatric surgery.

Methods

Retrospective review of 46 consecutive patients with intragastric balloon placement using SPSS statistical analysis on the results.

Results

Median weight loss 14kg (0-42) P<0.0001, median % excess weight loss (%EWL) 15% (-3.3-64.66) P<0.001 and median BMI reduction 5kg/m² (-1.3-13.9) P<0.001. 29/46 (63%) patients underwent definitive bariatric surgery. 10/46 (22%) patients had minor complications (nausea, vomiting and pain) requiring re-admission, of these 7/10 (70%) had early balloon removal and 6/10 (60%) did not have definitive bariatric surgery. 6/46 patients had second balloon placement median weight loss -6kg (-22-33), median %EWL -4.85% (-21.6-34.96), median BMI reduction -1.3kg/m² (-8.5-2.5).

Conclusion

Results from intragastric balloon placement are encouraging and comparable with a recent meta-analysis. Re-admissions and low %EWL with the first balloon are predictors for early balloon removal and failure to proceed to definitive surgery. Intragastric balloons as a bridge to definitive bariatric surgery are effective and safe. Sequential intragastric balloons are not recommended.

□
P.001

THE NEED FOR STANDARDIZED EVIDENCE-BASED RECOMMENDATIONS FOR VITAMIN-MINERAL SUPPLEMENTATION AFTER SLEEVE GASTRECTOMY. A REVIEW OF CURRENT GUIDELINES.

Nutrition after bariatric surgery

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Introduction

There is a general agreement that patients after laparoscopic sleeve gastrectomy (LSG) need lifelong nutritional monitoring, but recommendations for vitamin and mineral supplementation (VMS) are very heterogeneous and vary from no long-term basic supplementation to schemes including numerous pills or regular intramuscular injections. Various so-called specific "bariatric" formulas have been placed on the market by the dietary industry. This may lead to an increase in potentially harmful auto-prescription of VMS by LSG patients.

Objectives

The aim of this study was to investigate the recommendations from different scientific societies about VMS (type, dosage, duration) for patients undergone LSG.

Methods

We compared the current guidelines, position papers and meta-analysis regarding VMS after LSG.

Results

Only 3 of the 8 guidelines found (BOMSS 2014; AACE/TOS/ASMBS 2013; ADA 2010) contain specific indications for LSG. However, the differences between dose, dosage form and frequency of supplementation were notable, especially for vitamin-D and vitamin-B12. The remaining 5 guidelines (ES 2010; IFSO-EC/EASO 2014; NICE 2014; DAG 2014; SICOB 2016) contain only generic advices regarding the need for VMS after bariatric surgery. We found only one meta-analysis about nutritional deficiencies in LSG, which concludes that "postoperative prophylactic iron and B12 supplementation, in addition to general multi-VMS is recommended."

Conclusion

All of the consulted guidelines, position papers and meta-analysis recommend lifelong VMS after LSG. However, they diverge in type, dosage and route of basic VMS in LSG. Further research including long-term studies is needed to develop evidence-based, standardized micronutrient-supplement protocols for patients after LSG.

P.002

EFFICACY OF BARIATRIC SURGERY IN PATIENTS BELOW BMI 30- OUTCOMES OF A "COSMETIC" OPERATION

Surgery and strategies for low BMI

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Introduction

Although bariatric surgery is predominantly performed for prognostic and metabolic reasons, a significant number of patients undergo bariatric surgery for purely weight loss or cosmetic reasons. The outcomes of these patients have been poorly documented.

Objectives

To characterise the surgical profile and safety of primary bariatric surgery in patients with a low BMI (BMI < 30) using a national database registry

Methods

The UK National Bariatric Registry (NBSR) was interrogated to identify patients with a BMI < 30 who underwent primary bariatric surgery between January 2009 and June 2014. The demographic, peri-operative, and post-operative outcomes were collected and analysed.

Results

A total of 55 patients were identified. The pre-operative weight ranged between 65.2-118 Kg (Mean 80.59 Kg SD 8.5). BMI ranged between 24.9-29.8Kg (Mean 28.5 Kg SD 1.3). The majority of procedures were gastric balloons (28/55; 51%) and gastric bands (18/55; 32.7%). Only 3/54 (5.55%) were diabetic and only 2/54 (3.7%) had 2 or more metabolic comorbidities.

There were no documented post-operative readmissions, re-operations or deaths within 30 days of operation.

Post-operative weight follow up was recorded in 6/55 (10.9%). Weight loss averaged 8.3Kg (SD 11.3Kg) and BMI loss averaged 2.85 Kg/m² (SD3.9Kg/m²).

Conclusion

Bariatric surgery in patients with BMI under 30 is feasible and associated with good peri-operative outcomes.



P.003

MICRONUTRIENT DEFICIENCY AFTER BARIATRIC SURGERY - IS THERE ANY DIFFERENCE BETWEEN SLEEVE GASTRECTOMY AND GASTRIC BYPASS?

Nutrition after bariatric surgery

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Background

Prevalence of post-op micronutrients deficiency in Asian patients remains unknown.

Introduction

Whether micronutrients malnutrition is less severe after sleeve gastrectomy is unclear.

Objectives

We report our experience of protocol-based follow-up (FU) program in prevention of micronutrients malabsorption after different types of bariatric procedures.

Methods

Patients having either laparoscopic sleeve gastrectomy (LSG) or laparoscopic gastric bypass (LGBP) with at least 2 years of FU were reviewed. LGBP patients were given regular daily multivitamin, calcium, vit D and also iron supplements, with B12 injection every 3 months. LSG patients were given oral multivitamin only.

Results

Between 2008 and 2014, 92 patients(M/F:35/57) with LSG and 38 patients(M/F:19/19) with LGBP done had complete sets of 2-years FU. They were comparable in preop demographics. Both groups also had comparable postop % total wt loss by 2 years (LSG:26.2% vs LGBP:19.7%). There was significant drop in Hb level in both groups (LSG: 16.9g/dL to 13.0g/dL; LGBP: 16.0g/dL to 12.8g/dL) by 2 years. Despite supplements given, %Fe-saturation dropped in the LGBP group but not in the LSG group. There were also decrease in serum B12 level but the magnitude was more marked in the LGBP group (from 204 down to 125) than the LSG group.

Conclusion

With a structured protocol based joint FU program, no measurable micronutrients deficiency was seen after bariatric surgery in our centre. However, patients with bypass tend to have a lower trend in Fe saturation and B12 level in blood. Long term monitoring and substitution with dose adjustment is needed in this subgroup of patients.

□
P.004

QUANTITATIVE AND TOPOGRAPHIC ANALYSIS BY IMMUNOHYSOCHEMICAL EXPRESSION OF GHRELIN GASTRIC CELLS IN PATIENTS WITH MORBID OBESITY

Sleeve gastrectomy

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Introduction

Distribution of ghrelin producing cells in stomach in morbid obesity is still unclear

Objectives

To evaluate quantitatively ghrelin producing cells in different gastric regions in morbidly obese patients operated by Laparoscopic Sleeve Gastrectomy (LSG) and to compare these results with relevant clinical findings.

Methods

This is a prospective study involving 60 patients. Following the removal of the surgical piece, specimens of antrum, body and fundus were processed for histological and immunohistochemical study for ghrelin producing cells. Also, the presence of inflammation, degree of severity, intestinal metaplasia and signs of atrophy were analyzed.

Results

71.7% women, age of 50.9±11.3 years and BMI of 51.1 ± 6.2 kg/m². 36.1% were diabetic, 59% presented hypertension and 18% showed both comorbidities. An 88.5% of the cases had a pattern of gastritis, of which 81.48% had an antrum, body and fundus involvement (pan-gastritis). The expression of Ghrelin was 217.28 ± 196.64 cells/C in antrum, 292.18 ± 231.55 in the body and 276.84 ± 166.30 in fundus (p = 0.04). There was difference between antrum cells regarding sex, being superior in men (p = 0.018). In Diabetic patients, no differences in topography were observed; In the hypertensive patients, there was a significant difference in the number of ghrelin cells in the antral region, with a lower number of cells in the hypertensive group (p = 0.002).

Conclusion

The antrum is a potential producer of Ghrelin. Our study shows different topographic patterns of the ghrelin-cells in patients with morbid obesity, in relation to sex, the presence of gastritis and comorbidities

P.005

VITAMIN D INSUFFICIENCY AND DEFICIENCY IN THE MORBIDLY OBESE, AND FOLLOWING ROUX-EN-Y GASTRIC BYPASS

Nutrition after bariatric surgery

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Introduction

Vitamin D insufficiency (30-50nmol/L) and deficiency (<30nmol/L) is common in the morbidly obese, and may worsen following roux-en-Y gastric bypass (LRYGB). Vitamin D enhances calcium absorption in the small intestine. Deficiency may result in osteomalacia, and has been suggested to impair wound healing.

Objectives

To assess perioperative Vitamin D insufficiency and deficiency.

Methods

A prospective database of 135 patients undergoing LRYGB was maintained. 129 had data available for analysis. Post-operative nutrient supplementation was consistent with British Obesity and Metabolic Surgery Society recommendations. Total Vitamin D and corrected calcium levels were audited.

Results

Pre-operative Vitamin D levels were low in 60/89(67.4%): 30(33.7%) insufficiency and 30(33.7%) deficiency. These rates improve following surgery with concomitant monitoring and supplementation: at 6-8 months post-operatively 26/64(40.6%) have low vitamin D: 15(23.4%) are insufficient and 11(17.2%) deficient. This trend does not persist; testing at 2 years or more post operatively reveals 20/38(52.6%) of patients have low vitamin D: 10(26.3%) are insufficient and 10(26.3%) deficient.

Low vitamin D preoperatively is associated with low levels postoperatively ($p=0.0056$, χ^2 test)
Hypocalcaemia is rare both preoperatively (3.2%) and postoperatively (0-2.4%)

Conclusion

The majority of morbidly obese patients exhibited low Vitamin D levels pre-operatively. Whilst the prevalence of deficiency decreases post operatively as patients receive supplementation, it remains high. We suggest supplementation is commenced prior to surgery with a loading dose if necessary; compliance is encouraged; and that persisting deficiency is managed with increasing doses of supplementation and involvement of endocrinologists if proving refractory. Patients with low levels pre-operatively would benefit from targeted interventions and monitoring.



P.006

THE USE OF 24H MULTICHANNEL INTRALUMINAL IMPEDANCE FOR THE ASSESSMENT OF GASTRO-ESOPHAGEAL REFLUX IN MORBIDLY OBESE PATIENTS FOLLOWING SINGLE ANASTOMOSIS GASTRIC BYPASS: A PROSPECTIVE STUDY

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Single anastomosis gastric bypass (SaGB) was introduced in 2001 as an alternative to “loop” gastric bypass. It was considered as a procedure that would eliminate alkaline reflux and associated esophagitis. However, existing evidence is based on studies using symptom questionnaires.

Objectives

The aim of our study is to assess gastro-esophageal reflux (GERD) 12 months after SaGB by using 24h multichannel intraluminal impedance pHmetry (24h MIIpH).

Methods

Morbidly obese candidates for SaGB underwent 24h MIIpH prior and 12 months following their bariatric procedure.

Results

Eleven patients were included in this prospective study. Results of 24h MIIpH revealed that DeMeester score (40.48 vs 24.16, $p=0.339$) has a tendency to increase 12 months after SaGB. Acid reflux episodes decrease, whereas non-acid reflux episodes increase postoperatively, both in proximal and distal esophagus. Total median bolus clearance time and acid clearance time increase. De novo Gastroesophageal Reflux Disease (GERD) developed in 2 patients (28.6%) and worsening of already existing GERD developed in all patients with preoperative evidence of GERD.

Conclusion

Assessment of GERD following SaGB by using symptom questionnaires may not accurately depict the real image. The use of 24h MIIpH in morbidly obese patients who undergo SaGB revealed an increase of total number of non-acid reflux episodes and a decrease of total number of acid reflux episodes.

□
P.007

HEALTH-RELATED QUALITY-OF-LIFE (HRQOL) AN AVERAGE OF TWELVE YEARS AFTER GASTRIC BYPASS

Quality in Bariatric Surgery

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Background

Morbidly obese patients have a low health-related quality-of-life (HRQoL), and this is often the main reason for their seeking bariatric surgery.

Introduction

The global obesity epidemic is rapidly becoming a major public health problem. The disease is associated with co-morbidities. Morbidly obese (BMI > 40 kg/m²) individuals have a low health-related quality-of-life (HRQoL), especially physical aspects.

Objectives

Between 1993 and 2003, 820 patients were operated at the University Hospitals of Örebro and Uppsala. Fifty-five patients died during follow-up, and 20 patients from other countries excluded. The remaining 745 were invited to answer questionnaires regarding their clinical situation and HRQoL, and to leave blood for analyses. Two HRQoL instruments were used, the SF-36 and the Obesity-related Problems (OP) scale.

Methods

486 patients accepted to participate (50.7 ± 10.0 years-of-age, 84% women). The study group was compared with two control groups, both matched for age and gender, one from the general population and one containing morbidly obese patients evaluated and awaiting bariatric surgery.

Results

The study group scored better in the SF-36 domains (all four physical domains and the vitality sub-score) and OP-scale compared to obese controls, but their HRQoL scores were lower than those of the general population. HRQoL was better among younger patients and in the following subgroups: men; patients with satisfactory weight loss; satisfied with the procedure; free from co-morbidities and gastrointestinal symptoms; employment.

Conclusion

Long-term follow-up after GBP for morbid obesity showed better scores in most aspects of HRQoL compared to obese controls, but did not achieve the levels of the general population. Patients with a good medical outcome had a better HRQoL.

P.008

THE ELIPSE® BALLOON: MULTI-CENTER EXPERIENCE IN 691 PATIENTS

Endoscopic and Percutaneous Interventional Procedures

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Background

Intragastric balloons are recognized as safe and effective weight loss devices.

Introduction

The Elipse Balloon (Allurion Technologies, Natick, MA USA) is the first balloon that does not require any endoscopy or sedation.

Objectives

To evaluate post-market results in 13 international centers of excellence.

Methods

The Elipse Balloon is enclosed in a small capsule that is swallowed and is filled with 550mL of liquid. The balloon remains in the stomach for approximately 4 months after which it spontaneously opens, empties, and is excreted. Patients receive nutritional counseling every 2 weeks. Approximately 1,500 balloons have been placed to date. Data were collected from large volume centers that treated patients with a BMI between 27-45 kg/m².

Results

691 patients (152M/539F) with mean age of 35.9 ± 5.3 years, mean weight of 99.4 ± 10 kg, and mean BMI of 36.6 ± 4.8 kg/m² were included. After 4 months, the mean weight loss was 13.5 kg, mean percent excess weight loss was 54.5%, and mean BMI reduction was 5.1 kg/m². Total body weight loss was 14%. Eleven (1.5%) balloons were removed early due to intolerance. Two bowel obstructions occurred requiring laparoscopic removal of the balloon. One bowel obstruction occurred in a contraindicated patient with a history of multiple abdominal surgeries. Post-operative course was uneventful. Six empty balloons were vomited uneventfully.

Conclusion

This multi-center experience with the Elipse Balloon indicates that it is a safe and effective method for weight loss.

□
P.009

MEDIUM AND LONG-TERM OUTCOMES FOR GASTRIC BYPASS AND SLEEVE GASTRECTOMY: SYSTEMATIC REVIEW AND META-ANALYSIS

Quality in Bariatric Surgery

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Introduction

Whilst bariatric surgery effectively achieves short-term weight loss and improves comorbidities, data on medium and long-term outcomes are lacking.

Objectives

We undertook systematic review and meta-analysis of medium and long-term outcomes following Roux en-Y Gastric Bypass (RYGB) and Sleeve Gastrectomy (SG).

Methods

We searched MEDLINE, EMBASE, PubMed and Cochrane databases for cohort studies or randomised trials of adults undergoing RYGB (10-year outcomes) and SG (5 and 10-year outcomes). A random-effects meta-analysis examined excess weight loss (%EWL) or BMI loss (%EBMIL) and remission of diabetes/hypertension/sleep apnoea. Statistical heterogeneity was assessed using I^2 statistic and publication bias by funnel plots and Egger's linear regression test.

Results

There were 5 studies for RYGB and 22 for SG. At 5-years for SG, EWL was 62.6% (95%CI 55.9%-69.4%; $I^2=93%$;13 studies) and EBMIL was 62.3% (95%CI 42.9%-81.6%; $I^2=96%$;3 studies). At 10-years for RYGB, EWL was 65.2% (95%CI 63.3%-67.1%; $I^2=82%$;4 studies) and EBMIL was 68% (95%CI 59%-77%;1 study). For SG at 5+ years, diabetes remission occurred in 54% (95%CI 43%-62%; $I^2=74%$;10 studies), hypertension in 56% (95%CI 35%-75%; $I^2=85%$;7 studies) and sleep apnoea in 75% (95%CI 33%-95%; $I^2=91%$;5 studies). Current results were limited by high attrition rates, heterogeneity and publication bias.

Conclusion

RYGB and SG are efficacious in maintaining long and medium-term weight loss, respectively, however, existing studies were limited by high attrition rates.

P.010

COMPARATIVE GASTRIC BALLOON SYSTEMS: DOES SIZE MATTER?

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Bariatric surgery has flourished significantly from its meager beginnings in the 1950s. With a world-wide complication rate of 3-7%, less invasive procedures for weight loss have been developed. One such option is the intra-gastric balloon (IGB), wherein a balloon (or series of balloons) filled with saline or nitrogen, is placed within the stomach of a patient seeking weight-loss. The gastric balloon(s) resides in the stomach for a period of six months, triggering early satiety, thereby promoting weight loss.

Objectives

To comparatively assess the efficacy of one, two, and three IGB systems

Methods

The following study consists of eighty-one (n=81) IGB patients, who received 1-IGB (n=41), 2-IGB (n=29) or 3-IGB (n=11). Patients were assessed for excess weight loss, resolution of comorbidities if any, complications, and general quality of life pre-operatively and post operatively at 1 week, 1, 3, and 6 months.

Results

	1-IGB	2-IGB	3-IGB
Insertion/Extraction Method	Endoscopically/ Endoscopically	Endoscopically/ Endoscopically	Swallowing/ Endoscopically
Medium to Inflate	Saline	Saline	Nitrogen Gas
Volume Occupied	500cc	900cc	750cc
Average BMI	33.2	34.0	33.7
Excess Weight Loss After IGB Placement (6 month)	36.6%	45.7%	49.1%
Complication Rate	7.3%	6.89%	0%
Quality of Life Increase After Surgery	40.6%	43.9%	60.2%

Conclusion

Among all IGB systems, 3-IGB showed the largest excess weight reduction (49.1%), although having nearly 150cc smaller volume than 2-IGB. This finding may be attributed to the differing (Nitrogen Gas/Saline) medium that fills the 3-IGB system. Moreover 3-IGB staggered placement system boasts a 0% complication rate, likely caused by the gradual increase in stomach volume 250cc at a time. Further research should be conducted to identify the possible significance of medium, as well as gradual increase in stomach volume, to the superior reduction in excess weight.

P.011

LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS IS AS SAFE AS LAPAROSCOPIC SLEEVE GASTRECTOMY WITH REGARD TO EARLY (30-DAY) POSTOPERATIVE COMPLICATION RATE: RESULTS FROM A SINGLE SURGEON COHORT.

Post-operative care

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Introduction

A recent meta-analysis and systematic review of six RCTs including 695 patients indicated that LRYGB is associated with a higher 30-day complication rate than LSG. We follow a standardized protocol with all procedures carried out by a single Consultant Surgeon who had completed the learning curve prior to commencing independent practice.

Objectives

The aim of the study was to identify any difference in 30-day outcomes between patients undergoing LRYGB and LSG.

Methods

A prospectively collected database of all patients under primary LRYGB and LSG between March 2010 until February 2017 was analyzed. Data on demographics, length-of-stay (LOS), conversion to open, 30 day complications and mortality were reviewed.

Results

Over a 7-year period, 488 patients (LRYGB-279pts, 57.2% and LSG-209pts, 42.8%) were included. There were no significant demographic differences (Age, Sex, BMI) between the groups. There was no difference in the pre-operative risk scoring (ASA/OSMRS) between the groups. There was no significant difference between the groups in terms of LOS, complications, re-admissions or re-operations within 30-days. There were no conversions to open or in-patient mortality in either group.

	LRYGB (n=279)	LSG (n=209)	p
<i>Demographics</i>			
Age(y)(Mean/SD)	44.6(10.1)	44.3(10.2)	0.519
Gender(M:F)	217:62	154:55	0.295
BMI(kg/m ²)(Mean/SD)	47.9(5.67)	48.7(7.57)	0.196
ASA(Median/IQR)	2(2-3)	2(2-3)	0.995
OSMRS(Median/IQR)	A(A-B)	B(A-B)	0.203
<i>Outcomes</i>			
LOS(d)(Mean/SD)	2.42(0.881)	2.62(2.91)	0.263
Total complications(%)	5.38%	4.31%	0.589
Readmission(%)	1.82%	3.35%	0.272
Reoperation(%)	2.15%	0.960%	0.304
Mortality	0	0	-



Conclusion

The present study shows no difference in early complication rates between LRYGB and LSG in a comparable cohort when performed by a surgeon with sufficient experience in bariatric surgery in contrast to the results of a recent meta-analysis.

P.013

ENDOPLASMIC RETICULUM STRESS MARKERS AND AUTOPHAGY IN HUMAN β -CELLS EXPOSED TO SERA FROM OBESE TYPE 2 DIABETIC PATIENTS

Type 2 diabetes and metabolic surgery

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Background

Obesity-associated metabolic disturbances cause pancreatic β -cell dysfunction.

Introduction

The impaired β -cell function arises mainly from stresses on the endoplasmic reticulum (ER).

Objectives

The aim of this study was to investigate the expression of key proteins involved in ER stress and autophagy in β -cells exposed to sera from patients with obesity and type 2 diabetes (T2D), before and after they attained weight loss and improved glycemic control.

Methods

The patients with obesity and T2D were randomly assigned to receive conventional medical therapy for T2D or to undergo laparoscopic sleeve gastrectomy. Human 1.1B4 β -cells were exposed for 72 h to sera from obese T2D patients (collected at 0 and 6 months of study) and the following were investigated: cellular viability (by MTT assay), reactive oxidative species (ROS) production (DCFH-DA), and the levels of several ER stress sensors and of proteins important for the autophagic flux (Western blot).

Results

Human β -cells exposed to sera from obese T2D patients who achieved weight loss and improved glycemic control, compared to cells incubated with each corresponding serum sample obtained initially showed significantly increased cell viability and decreased ROS production, diminished protein expression of the ER stress-related proteins XBPs and CHOP, and significantly augmented expression of ATF6, GRP78, SIRT1 and of the autophagy marker p62, and diminished protein expression of the p53 marker associated with cell death.

Conclusion

Pancreatic β -cells exposed to sera from obese T2D patients which achieved weight loss and better glycemic control exhibit a diminished ER stress and enhanced autophagic flux which contribute to improved β -cells function and survival.

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□
P.014

OCCUPATIONAL OUTCOMES OF BARIATRIC SURGERY – DO THE EMPLOYED RETURN TO WORK, AND DO THE UNEMPLOYED FIND WORK?

Quality in Bariatric Surgery

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Introduction

Bariatric surgery offers excellent weight loss results and improvement in obesity-associated co-morbidities. Many patients undergoing surgery are of working age so it is important to determine the relationship between surgery and employment status.

Objectives

To ascertain the occupational outcomes of patients undergoing bariatric surgery at a high-volume, UK centre.

Methods

A retrospective search was performed of a prospectively maintained consecutive electronic database. We collected data on patient demographics and employment status before and after bariatric surgery. All patients with a documented employment status within thirty months of surgery were included. Follow-up was divided into three groups: within six months post-operatively; 7-18 months post-operatively; and 19-30 months post-operatively.

Results

A total of 1104 patients were included. Median age was 47 years. Pre-operatively 56.8% were employed compared to 68.9% post-operatively ($p < 0.01$). The number unemployed fell from 41% pre-operatively to 21.2% post-operatively. The improvement in employment status was seen at all durations of follow-up. For those in employment pre-operatively, approximately 90% were still in employment at each subsequent follow-up. For those who were unemployed pre-operatively, approximately 40% were in employment at each subsequent follow-up. An increase in employment was seen in all 'working age' groups except for those aged 51-60 years pre-operatively at 19-30m follow-up.

Conclusion

This, the largest study worldwide looking at employment outcomes following bariatric surgery, demonstrates a significant increase in number of employed patients following bariatric surgery. Improvement is maintained at all durations of follow-up. Whilst many of those unemployed pre-operatively entered employment, interestingly some patients who were employed pre-operatively became unemployed following surgery.

□
P.015

ANALYSIS OF TOTAL AND ACTIVE GRELIN BEFORE AND AFTER SLEEVE GASTRECTOMY AND ITS RELATIONSHIP WITH GASTRIC ANTRUM

Sleeve gastrectomy

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Introduction

Ghrelin is an orexygenic peptide secreted mainly by the gastric fundus. Changes in total and active ghrelin levels in morbid obesity and after bariatric surgery are contradictory, as well as its relation with antrum.

Objectives

Our goal is to analyze the differences between total and active (TG and AG), before and after laparoscopic Sleeve Gastrectomy (LSG) at two different distances in the beginning section from the pylorus (3-8cm).

Methods

Randomized study in 60 morbidly obese patients (n = 30-3 cm and n = 30-8cm). 38 Fr. Faucher tube in all of them. Quantification of GT and GA levels before surgery, at 6 and 12 months (ELISA-Milliplex®).

Results

OM group: 71.7% women, BMI of 51.1 ± 6.2 kg/m². GT levels were well below the the control group (219.36 ± 38.5 vs 575.13 ± 35.6 ng / ml, p <0.05), as opposed to the levels of GA (34.21 ± 5.4 vs 17.04 ± 2.3 pg / ml, p <0.05). At 6 and 12 months, AG normalization (10.67 ± 12.4 pg/ml) reached levels comparable to control group, unlike GT, which still decreases its value. In 3 cm group decreases TG levels significantly, unlike 8 cm group, which does not change their values. Both groups significantly decreased AG levels to normal levels.

Conclusion

After LSG, values of AG are normalized, but not those of TG. TG levels behave according to anatomical model. This is not the case for AG, suggesting other metabolic pathways; immunohistochemical studies for ghrelin producing cells are undoubtedly needed.

P.017

INVESTIGATING POTENTIAL PREDICTORS OF OSA FOR BARIATRIC PATIENTS REFERRED FOR SLEEP STUDIES

Pre-operative management

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Introduction

The Snoring, Tiredness, Observed apnoea, high blood Pressure, Body mass index, Age, Neck circumference, and Gender (STOP-BANG) questionnaire is a validated screening tool to identify a greater risk of Obstructive Sleep Apnoea (OSA). The current Bariatric-Sleep Pathway (BSP) identifies patients scoring ≥ 4 as requiring an overnight pulse oximetry sleep study; Continuous Positive Airway Pressure (CPAP) treatment is initiated if required. There is an ever increasing demand for Bariatric sleep studies and 20% of this group require CPAP treatment; hence the need to improve screening.

Objectives

This retrospective study aimed to investigate potential predictors of OSA for Bariatric Patients referred for sleep studies. Success in discovering a strong predictor could be implemented into the BSP; thus a reduction in the demand for sleep studies.

Methods

54 sleep studies were performed between December 2016 and February 2017; complete data was available from 45 patients. Individual scores for the STOP-BANG questions, Body Mass Index (BMI), Epworth sleep Score (ESS) and Average Oxygen Saturation (SpO₂) were analysed to identify potential factors that influence the Oxygen Desaturation Index (ODI).

Results

Logistic regression analysis for STOP-BANG indicated the following with significance level $p=0.0007$:

Referred for CPAP	S	T	O	P	B	A	N	G
Yes	9	6	5	6	10	3	9	8
No	28	31	4	16	35	14	29	9
Total Positive Responses	37	37	9	22	45	17	38	17
Likelihood of requiring CPAP	24	16	56	27	22	18	24	47

BMI, ESS and SpO₂ did not appear to influence ODI. 11/54 patients required CPAP in this period analysed.

Conclusion

This preliminary study highlighted scoring 'O' and 'G' in STOP-BANG were more significant; findings would be more reliable with a larger sample size. Further investigation is recommended identify further potential predictors.

P.018

GASTROINTESTINAL PHYTOBEZOAR FOLLOWING BARIATRIC SURGERY

Post-operative complications

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Introduction

Bezoars are collections of undigested foreign material that accumulates in the gastrointestinal-tract. The most common are phytobezoars formed from plant fibers, particularly those related to ingestion of persimmon. Patients who undergo abdominal surgery particularly gastrectomy, including bariatric surgery for obesity are prone to bezoar formation due to reduced gastric motility, loss of pyloric function, and hypoacidity. Bezoars can form months to years postoperatively.

Objectives

Our objective was to review the published literature regarding phytobezoar formation following bariatric surgery.

Methods

We investigated the entire scientific literature on phytobezoars as complication after bariatric surgeries, using PubMed and Embase searches of all reports published to date. We used the keywords "phytobezoars" or "bezoars" and "bariatric surgery" or "Laparoscopic adjustable gastric band" (LAGB) or "Laparoscopic sleeve gastrectomy" (LSG) or "Roux-en-Y gastric bypass" (RYGB) or "Single anastomosis gastric bypass" (SAGB) or "Biliopancreatic diversion" (BPD).

Results

Seventeen eligible articles were included. We provide an overview of the incidence, classification and manifestations of bezoar formation as a rare late morbidity of bariatric surgery. Treatment options include chemical enzyme therapy, endoscopic dissolution and removal, or surgery. Nutritional counseling regarding bezoar formation and prevention of recurrence after bariatric surgery should emphasize changing eating habits, including sufficient drinking and chewing, as well as avoiding overindulging of foods with high-fiber content, especially citrus pith and persimmons.

Conclusion

Clinicians should be aware of this potential rare complication. Further studies are needed to examine the eating habits and food choices of bariatric patients with bezoar complications and to elucidate more clearly the risk factors for this pathology.

P.019

LONG-TERM FOLLOW-UP OF THE SAFETY AND EFFECTS OF BARIATRIC SURGERY ON IMMUNOSUPPRESSION IN POST-TRANSPLANT PATIENTS

Integrated Health/Multidisciplinary care

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Introduction

Transplanted patients comprise a special sub-population that reflects the growing epidemic of obesity. Their surgical risk is high, and the modified gastrointestinal anatomy after bariatric surgery (BS) may lead to significant pharmacokinetic alterations in the oral absorption of immunosuppressive drugs.

Objectives

To report the outcome of BS as well as the safety and feasibility of maintaining immunosuppression among solid-organ transplanted patients.

Methods

A cohort study with a retrospective review of prospectively collected data was conducted on all transplanted patients who underwent BS in our institution between 11/2011–1/2017. Weight loss and improvement in comorbidities, as well as changes in dosage and trough levels of immunosuppression drugs before and after BS were analyzed, with a follow-up of 6 months to 5 years.

Results

Thirty-six patients (13 females, 23 males, average age 53 years) underwent laparoscopic sleeve gastrectomy or laparoscopic Roux-en-Y gastric bypass or simultaneous liver transplantation and sleeve gastrectomy, and were included in the study. The BS met the criteria for successful weight loss in 80% and 95% of patients at the 1-year and 3-years follow-up, respectively. Comorbidities improved significantly. Immunosuppressive stability increased from 39% to 47% among all patients. The blood trough levels of tacrolimus declined slightly, but remained within therapeutic range. One patient died of an anastomotic leakage.

Conclusion

Our results suggest that BS among transplanted patients ensure good immunosuppressive maintenance together with significant weight loss and improvement in comorbidities without serious graft rejection or dysfunction. The surgical risk is higher than in the regular BS population.

P.020

AUDIT OF COMPLIANCE OF BOMSS GUIDELINES IN MONITORING BLOOD RESULTS POST BARIATRIC SURGERY

Post-operative care

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Introduction

Bariatric surgery is effective in treating obesity and obesity related comorbidities. However, apart from the immediate procedure related risks, there may be long term nutritional and vitamin deficiencies which require micronutrient monitoring and access to specialist services.

The current commissioning guidelines are for surveillance for 2 years at the surgical centre, followed by life-long nutritional follow-up at a tier 3 or 4 service.

In 2014 BOMSS (British Obesity and Metabolic Surgical Society) issued clear guidelines for monitoring bariatric patients, advising yearly assays for electrolytes and trace elements.

Objectives

To retrospectively review patient's blood test monitoring, after bariatric surgery. Furthermore the audit looked at whether the Tier 4 surgical centre had given any advice on what monitoring was necessary for each patient at the time of discharge

Methods

A list of the first 50 patients who had bariatric surgery in 2012 and then 2014 (after the BOMSS guidelines) in the York area was obtained and data collated on age, date of operation, date of discharge, post bariatric blood monitoring and confirmation of adequate information in the discharge letter.

Results

year	Serial clinic non attender-discharged from tier 4	Fit for discharge-discharged from tier 4	Explicit discharge letter	GP organised blood monitoring	Tier4 Follow up	Tier 4 organised blood monitoring	Lost to follow up
2012	27	2	14	6	16	14	5
2014	9	2	11	3	37	32	2

Conclusion

Blood test monitoring in patients after bariatric surgery is difficult and does not meet the recommended guidelines, especially in the community. Explicit advice from Tier 4 service providers and BOMSS website does not improve monitoring.

P.021

STAPLED TISSUES WITH FULL THICKNESS MUCOSA CAPTURED EXHIBIT HIGHER LEAK PRESSURES

Technology and bariatric surgery

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Introduction

Anastomotic leakage rates have slowly declined with procedure and stapler improvements, but are still a crucial clinical risk.

Objectives

We sought to evaluate the degree of mucosal capture after stapling, and determine whether damage to the mucosa influences staple line integrity (SLI) as assessed by leak pressures.

Methods

Porcine ileum was transected using commercially available stapling platforms, using staple sizes appropriate for the tissue thickness as recommended by the manufacturer. The stapled mucosal surface was exposed and rated for degree of mucosal capture on a 5-point scale from 1 (most mucosa captured on both sides) to 5 (most mucosa not captured). Additional transected ileal segments were assessed for leak pressure, location, and extent of mucosal capture.

Results

Significant differences in mucosal capture scores and average burst pressures were detected when comparing stapling devices ($p < 0.001$). Devices with (lower) better mucosal capture scores had higher leak pressures. Initial leakage was located at sites of incomplete mucosal capture 78% of the time.

Mucosal Capture Scores and Leak Pressures for 3 Staplers

<i>Stapler</i>	<i>Mucosal Capture</i>	<i>Leak Pressure</i>
A	2.0 ± 0.9	46.7 mm Hg
B	1.6 ± 0.7	41.3 mm Hg
C	3.0 ± 1.2	33.5 mm Hg

Lower mucosal capture score indicates superior apposition.

Conclusion

There are differences in mucosal apposition between commercial staplers. Devices that produce better mucosal capture had significantly higher leak pressures, suggesting mucosal capture is an important factor in initial SLI. Further research is needed to determine the significance of these findings on staple line healing throughout the postoperative recovery period.

□
P.022

3D LAPAROSCOPY AND THE LEARNING CURVE IN BARIATRIC SURGERY

Technology and bariatric surgery

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Background

Three dimensional laparoscopy (3D) allows the surgeon to regain the sense of depth and improve accuracy

Introduction

Complications and mortality in the first 100 patients in bariatric surgery are higher, new technology might help to reduce the impact of the learning curve

Objectives

The aim of the study was to assess the impact of 3D in bariatric surgery and in the learning curve

Methods

A retrospective cohort study was conducted. Patients who underwent bariatric surgery (sleeve gastrectomy (SG) or gastric bypass (GB)) between 2013 to 2016 were included. We compared 3D laparoscopy cohort and 2D laparoscopy cohort. Variables: age, gender, DM, hypertension, surgeon experience and type of intervention. Comparisons of operative time, hospital stay, conversion, complications, reoperation and exitus are completed.

Results

312 consecutive were included. 56,9% of patients underwent GB and 43,1% SG. Global complications were 3,2% . 104 procedures were performed in the 3D cohort and 208 in the 2D cohort. 2D cohort and 3D cohort were similar regarding: percentage of GB vs SG, age, gender, learning curve, diabetes mellitus 2, hypertension Sleep Apnea. Operating time and hospital stay were significantly reduced in the 3D cohort (144,07±58,07 vs 172,11±76,11 minutes and 5.12±9,6 vs 7.7±13.2 days. Complications were reduced in the 3D cohort in the surgeries performed by novice surgeons (10,2% vs 1,8%, p=0,034)

Conclusion

The use of 3D laparoscopy in bariatric surgery in our center has helped reducing operating time and hospital stay, and improving the safety of the surgery, either in GB or SG, being equally favorable in novice or more experienced surgeons.

P.023

ASSESSING THE VALUE OF EHEALTH FOR BARIATRIC SURGERY: THE BEPATIENT-TRIAL

Technology and bariatric surgery

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Introduction

In this era of easy accessible medical information, rising patient awareness and mobile applications, opportunities arise to monitor outpatients more efficiently. It can be hypothesized that self-control by eHealth could enhance clinical outcomes such as more weight loss and comorbidity reduction. The beneficial value of incorporating eHealth applications as standard postoperative care is yet to be established. In our hospital we provide all patients with eLearnings, informative media and interpatient communication using BePATIENT online platform.

Objectives

To assess the value of eHealth by comparing different levels of telehealth provided to bariatric patients.

Methods

Preoperative bariatric surgery patients (n=200) are stratified in three groups using randomization: (I) standard quality of care (n=100); (II) standard care + online eHealth platform (n=50); (III) standard care + online platform + self-monitoring devices, which can measure weight, blood pressure, oxygen saturation and physical activity. Body Mass Index (BMI) are registered monthly up to 2 years postoperatively.

Results

Up till 1st of March 2017 a total of 20 patients haven been included. 12 patients are planned for/underwent sleeve gastrectomy and 8 for gastric bypass. 7 patients are allocated to group (I), 7 to (II) and 6 to (III). 8 additional contact were necessary for instructing usage of device. 83% of the requested measurements have been performed. Median time spent on the website per month in both the device and access group is 32 minutes (± 8).

Conclusion

Willingness is high and the majority of requested measurement is delivered, although follow-up is too short for other comparisons yet.

□
P.024

EXPLORING BODY VOLUME IN OBESE PATIENTS BEFORE AND AFTER BARIATRIC SURGERY BY USE OF A 3D SCANNING TECHNIQUE

Technology and bariatric surgery

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Introduction

Since the beginning of obesity surgery, the same anthropometric data are still used in order to evaluate success of the procedure, namely weight and length. With the latter being assumed to be stable for many years, BMI can be calculated and is used as a tool for making comparisons by both professionals and patients. For this research, the question arose whether BMI is still sufficient as single obesity-determinant. Therefore, body volume as additional parameter in analyzing obesity was evaluated.

Objectives

The aim of the study is to explore whether body volume is a useful indicator in evaluating bariatric surgery by analyzing volume changes pre- and postoperatively.

Methods

Length, weight and BMI of obese patients were collected pre-operatively. In addition, a 3D scan of their total body was made before surgery by means of a structure sensor and TechMed3D software. Each scan was reconstructed and volume of the total body was calculated. One year post-surgery, a new 3D scan and BMI calculation was made.

Results

After bariatric surgery, both BMI and body volume are significantly reduced. A Bland-Altman plot suggests that the majority of patients show a greater decline in body volume than BMI post-operatively. A Pearson correlation of 0.58 ($p=0.08$) was achieved, indicating no significant linear relationship.

Conclusion

These data suggest that body volume changes with a different proportion than BMI postoperatively, which could be promising regarding bariatric follow-up. However, further analysis is necessary to achieve better insight in assessing body volume within the bariatric process.



P.025

NOVEL TECHNIQUE IN LAPAROSCOPIC STAPLE-LINE REINFORCEMENT: BEATING THE COST AND OUTCOME

Technology and bariatric surgery

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Background

Minimal invasive surgery offers a variety of advantages over open approach, However, a continuous challenge for laparoscopic surgeon and the commonest cause of conversion to open is to keep the surgical field almost bleeding-free.

Introduction

Mainly three different techniques proposed in the literature to prevent staple-line bleeding including over suturing, buttressing material and application of tissue glue or sealant agent. however these material are expensive.

Objectives

The autho describes a new and less expense technique to lower the incidence of staple-line bleeding in laparoscopic surgery in comparison with existing commercial one

Methods

novel technique

Results

staple-line is reinforcement with hemostatic material using one piece of SURGICEL SNoW® (4 x 4 inches) or large SURGICEL® (usually one piece cut for five to six loads of cartages). After loading the carriages (any cartage thickness depending on the indication) to the stapler handle (Echelon® or Endo GIA™) the piece of hemostatic material tied twice with 3-0 or 2-0 absorbable suture. The tie could be one or two loops (figure 1). The distal tie has to be at least 10 mm before the last staple to guarantee complete cut of the distal tie, likewise, the proximal tie applied 10 mm after the blade site to allow free initial movement of the blade (figure 2). The stapler with enforced hemostatic material applied to the tissue (stomach) after waiting for 15-20 seconds, the stapler fired and removed. The two crossing threads cut with scissor.

Conclusion

Stapler line reinforcements with SURGICEL fixed with suture in this novel technique is safe and costeffective.

P.026

ASSESSING THE EDUCATIONAL REQUIREMENTS OF BARIATRIC SURGERY PATIENTS

Technology and bariatric surgery

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Introduction

Bariatric surgery is a life-changing elective procedure, making adequate patient education crucial to success. Digital technology is a timely and cost-effective means for patient education, yet poor implementation has led to its underperformance and limited use.

Objectives

This three-part study aims to establish the potential for digital education in the bariatric population and explore those factors determining patient engagement; enabling the formulation of a framework to guide future developments in digital education.

Methods

A systematic review evaluated current use of digital education for bariatric patients. Findings were combined with those of qualitative usability-testing of a bariatric surgery application by 14 patients at a major hospital in order to generate a theoretical model for patient engagement with digital technology. A smartphone-usage survey of 210 patients subsequently validated elements of the model using logistic regression.

Results

Thirty factors influencing patient engagement were identified and classified into four categories; patient, content, technological and contextual factors. 93% of patients owned a smartphone or tablet with only 44% using health apps. Patients aged over 60 ($p=0.029$) or unemployed patients ($p=0.000$) were less likely to download health applications.

Conclusion

Mobile applications are accessible to bariatric patients. Multiple factors interact in determining successful patient engagement with digital education. The validation of relevant factors allowed the suggestion of an encompassing model for successful engagement. This model serves as a checklist for both the development and evaluation of digital education for bariatric patients.

□
P.027

MINIGASTRIC BYPASS IN PATIENTS WITH SUPER OBESITY [BODY MASS INDEX(BMI)>50KG/M2]: COMPARISON OF LAPAROSCOPIC VERSUS ROBOTIC APPROACH

Technology and bariatric surgery

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Introduction

Management of superobese patients can be very challenging in minimal-invasive surgery. Robotic surgery can have greater advantage in performing complex abdominal procedures in the super-obese especially with the advantages of 3d visualization and extended movement capabilities

Objectives

The aim of the present study is to compare laparoscopic and robotic approach in super-obese patients that are undergoing minigastric bypass (MGB).

Methods

216 patients underwent MGB in our clinic in 2 years. Laparoscopic approach (Lap group) was done in 143 patients and robotic (Rob group) approach in 73 patients. Among these patients 83 were super obese (46 Lap group versus 37 Rob group) and were evaluated for demographic and perioperative parameters such as operative time, VAS scores and etc.

Results

Mean age of the patients in lap and Rob groups were 41.2 and 41.6 years($p=0.58$) respectively. Mean preoperative BMI in Lap and Rob groups were 54.4 and 55.1kg/m² respectively($p=0.58$). Operation times were significantly longer in the Rob group when compared to the Lap group (147.3 min versus 127.6 min ; $p=0.047$). The postoperative VAS scores in the Rob group were 5.9 and 3.2 in the PO1st and PO2nd day respectively. In the Lap group VAS in the PO1st and PO2nd were 6.2 and 4.7 respectively. VAS scores were significantly lower in the Rob group when compared to Lap group($p=0.02$).

Conclusion

Robotic surgery seems to be comparable with conventional laparoscopic surgery except the operative time. Nevertheless decreased operative trauma in these patients seems to be the reason why the VAS scores are decreased in the robotic approach.

□
P.028

A PROSPECTIVE STUDY COMPARING SHORT TERM OUTCOMES OF USING ENDOSCOPE VERSUS BOUGIE FOR CALIBRATION OF LAPAROSCOPIC SLEEVE GASTRECTOMY

Technology and bariatric surgery

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Introduction

Laparoscopic sleeve gastrectomy (LSG) is currently the most commonly performed bariatric surgery. Studies have been conducted to assess short term results of LSG and compare different methods to calibrate size of the sleeve. However there is a paucity of prospective studies comparing weight loss after bougie guided (36F) versus endoscope guided (28F) LSG.

Objectives

To prospectively compare the weight loss pattern and complication rate following sleeve calibration by endoscope (28F) or bougie (36f) during LSG.

Methods

Morbid obesity patients who underwent LSG between April 2015 and December 2016 were studied in two groups each consisting of 32 patients. In group A bougie size of 36 French and in group B endoscope of 28 French was used. A comparison between the two groups was carried out by assessing percentage of excess weight loss (%EWL) at one week, one month and three months after surgery and complications of surgery.

Results

Seven days after LSG, the mean %EWL in group A & B was 9.32% & 11.44% (P-value=0.0709) respectively. One month after LSG, the mean %EWL in group A & B was 20.39% 21.96 % (P-value=0.4756) respectively. Three months after LSG, the mean %EWL in group A & B was 36.22% & 40.13 % (P-value=0.3275) respectively.

Conclusion

The perception that %EWL in LSG is better over endoscope than bougie is not supported by the present data. Nor is there a significant difference in complication rates. Larger randomised trials are required to support one over the other method of sleeve calibration.



P.029

A TALE ABOUT STAPLES, CARTRIDGES AND STOMACHS.

Technology and bariatric surgery

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Background

There is a gap of knowledge between Endostapler Manufacturers and Surgeons.

Introduction

Selecting the proper cartridge implies the knowledge of how the stapler works, the characteristics of new devices and the benefits on a safest staple line formation.

Objectives

Analyze the literature and science available in staple line formation and check it against our routine use of endostaplers in order to provide guidelines to select the correct cartridge in sleeve gastrectomies.

Methods

Review of the literature and the Industry information to check how the staple line is secure formed in different situations.

Results

The knowledge about staple line formation dynamics implies a better use of the endostapler on each tissue, considering its thickness and the way the surgeon uses it. The presence of milking and aside slippage of the gastric tissue with the stapler compression and firing during a sleeve gastrectomy has to be considered to choose the correct cartridge. The grip of the cartridge on the stomach is an important issue. Also the precompression of the tissue with the stapler is important in order to obtain the ideal B shape staple formation. We also analyze the relevance of mucosal capture in the staple line. Comparing the available staple heights and gastric thickness, we propose an ideal cartridge selection for safer sleeve gastrectomies.

Conclusion

Surgeons must know how endostaplers work to make a proper cartridge selection during a sleeve gastrectomy. A device to measure the exact thickness of the stomach should help in this matter.

□
P.030

USING THE NEW TECHNOLOGIES: SINGLE-PORT LAPAROSCOPIC SLEEVE GASTRECTOMY - STEP-BY-STEP

Technology and bariatric surgery

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Introduction

Bariatric surgery evolved in the pass few years involving each time more technology during the procedures. This brought smaller indices of complication and, thus, minor mortality. Single-port in bariatric is related to less postoperative pain and better cosmetic results.

Objectives

To demonstrate the use of new techonology in surgery

Methods

Female 38, BMI 42, polycystic ovary syndrome and hepatic steatosis.

Submeted to a Single-port Laparoscopic Sleeve Gastrectomy with the use of a wireless ultrasonic dissection device and an automatic laparoscopic stapler with cartridge that has three rows of varied height staples and allow a better hemostasis and safer stapler line.

Results

Minor bleeding during the surgery, early discharge (<24h), no complications or hospitalar readmissions and a loss of weight inside the expectation.

Conclusion

New technology is crucial to a safer bariatric surgery with minor surgery time and minor complications during the procedure. Single-port is a feasible procedure for sleeve gastrectomy.

□
P.031

USING THE NEW TECHNOLOGIES: LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS - STEP-BY-STEP

Technology and bariatric surgery

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Introduction

Bariatric surgery evolved in the pass few years involving each time more technology during the procedures. This brought smaller indices of complication and, thus, mino mortality.

Objectives

To demonstrate the use of new techonology in surgery

Methods

Male 45, BMI 42, arterial hypertension, sleep apnea, hepatic steatosis.

Submeted to a laparoscopic Roux-en-Y Gastric Bypass with the use of a wireless ultrasonic dissection device, an automatic laparoscopic stapler with cartridge that has three rows of varied height staples and allow a better hemostasis and safer stapler line and an absorbable barber suture that eliminates the need to tie knots.

Results

Minor bleeding during the surgery, minor surgery time, early discharge (<24h), no complications or hospitalar readmissions and a loss of weight inside the expectation

Conclusion

New technology is crucial to a safer bariatric surgery with minor surgery time and minor complications during the procedure.

□
P.032

OUTCOME OF ESOPHAGEAL STASIS ON BARIUM ESOPHAGOGRAM DURING FOLLOW-UP AFTER LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB)

Adjustable gastric banding

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Introduction

LAGB has potential to lead an increase and worsening of GERD and develop esophageal dilation, aperistalsis, alterations in lower esophageal sphincter pressure and pseudoachalasia.

Objectives

This study was evaluated the clinical progression and impact on weight loss after developing esophageal stasis on Barium Esophagogram in LAGB patients.

Methods

All data were recorded prospectively by patients' hospital visits who undertook the same day LAGB using LAP® APs in Korean morbid obesity for 7 years. Patients were limited to be able to follow up more than 2 year after surgery. Patients conducted a barium esophagogram every time they visited.

Results

Total 471 patients were enrolled with the esophageal stasis (ES) (n=306, 65%) and non-esophageal stasis (n=165, 35%). Post-LAGB alcohol consumption was a leading cause of esophageal stasis (67% vs 37.5%, p<0.0001). Esophageal stasis was diagnosed at 31.4 months. Non-tolerance to solid foods appeared 11 months earlier without gastric outlet obstruction (60.8%, p<0.0001). 24.8% (n=76) of esophageal stasis patients were developed esophageal dilatation or pseudoachalasia at 48.3 months (p<0.0001). All of them was carried out a band explantation at 8.7 months after the onset of esophageal dilatation. %EBMIL at 1, 3, 6, 9, 12, 24, 36, and 48 months was 21.6, 31.4, 46.7, 66.1, 56.2, 59.1 and 59 in the ES, and 24, 36.7, 50.9, 66.6, 70, 78, and 84.6 in the Non-ES, respectively (P<0.001).

Conclusion

This study revealed that esophageal stasis following LAGB affect poor and delayed weight loss and more frequently developing outlet stenosis as well as esophageal dilatation or pseudoachalasia to lead the explantation.

□
P.033

BAND EROSIONS: LONG-TERM EXPERIENCE WITH ENDOSCOPIC BAND REMOVAL AND FURTHER SURGICAL WEIGHT LOSS MANAGEMENT

Adjustable gastric banding

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Introduction

Laparoscopic adjustable gastric banding (LAGB) is still among the most common bariatric procedures in Australia. Gastric band erosion is a challenging complication that requires band removal. Previously, we have described our experience with endoscopic band removals.

Objectives

The aim of this study is to assess our long-term experience with endoscopic band removal and subsequent further weight loss management including LAGB, laparoscopic Roux-en-Y gastric bypass (LRYGB) and laparoscopic sleeve gastrectomy (LSG).

Methods

Patients who underwent LAGB from August 1996 to June 2016 were evaluated. Patients who developed band erosion were identified and clinical presentation, band characteristics and subsequent management were evaluated.

Results

2365 patients underwent LAGB. Band erosion developed in 110 patients (4.6%). The median preoperative BMI was 43. Endoscopic removal was attempted in 95 patients with successful removal in 89 (94%). The median number of endoscopies prior removal was 1 (range 1-5). The duration of time taken for removal was 51 min (17-263). Re-banding was attempted in 47 patients with successful insertion in 40 patients. In the remaining 7 patients the procedure was abandoned. Median follow up after re-banding was 50 months. Reerosion occurred in 8 patients (20%). LSG was performed in 5 and RYGB in 3 patients.

Conclusion

Endoscopic band removal is a safe and effective management option for band erosion. Re-banding is a feasible procedure for ongoing weight loss management. However, the re-erosion rate is high. Therefore, LRYGB or LSG may be offered as alternative options for further weight loss management.

□
P.034

LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING IN AUSTRALIAN ADOLESCENTS:

Adjustable gastric banding

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Introduction

We aimed to evaluate medium term (>36 months) safety and efficacy of LAGB in adolescents with severe obesity.

Objectives

There are very few studies on laparoscopic adjustable gastric banding (LAGB) in obese adolescents with follow up for more than 36 months, let alone good prospective data beyond 24 months in Australian adolescents. We aimed to evaluate medium term safety and efficacy of LAGB in adolescents with severe obesity.

Methods

Prospective cohort study (March 2009–December 2015) in one tertiary referral hospital including obese adolescents (14-18 years) with a body mass index (BMI) >40 (or ≥35 with comorbidities) who consented to have LAGB. Exclusion criteria were syndromal causes of obesity, depression and oesophageal motility disorders. Main outcome measures include change in weight and BMI at 6, 12, 24, 36 and 48 months post LAGB. Postoperative complications and admissions.

Results

21 adolescents (median age [Interquartile range (IQR)] 17.4 [16.5-17.7] years, 9 males, mean ± SD BMI 47.3 ± 8.4 kg/m²) had a median follow up of 45.5 [32-50] months post LAGB. Follow up data were available for 16 adolescents. Weight and BMI improved significantly at all follow up times (all p <0.01). The median maximum BMI loss was 10 [7.1-14.7] kg/m². There were 4 minor early complications. Seven bands were removed due to weight loss failure/regain (2 had also obstructive symptoms).

Conclusion

We have shown , that LAGB improves BMI in the majority of adolescents without significant comorbidities. LAGB is still a reasonable option to be considered as a temporary procedure to manage severe obesity during adolescence.

□
P.035

IS ROUTINE ESOPHAGOGASTRODUODENOSCOPY BEFORE REVISIONAL SURGERY AFTER GASTRIC BANDING MANDATORY?

Adjustable gastric banding

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Background

Revisional procedures after gastric banding is increasingly being performed in bariatric surgery and the role of routine assessment by esophagogastroduodenoscopy (EGD) is unclear.

Introduction

A previous study found that routine preoperative assessment by esophagogastroduodenoscopy (EGD) in patients who are planned for primary bariatric surgery in Western countries is not indicated.

Objectives

Aim of the present study is to quantify the yield of preoperative EGD in patients scheduled for revisional procedures.

Methods

Patients, planned for revisional procedures (conversion from gastric band to laparoscopic Roux-Y Gastric Bypass (LRYGB) or laparoscopic sleeve gastrectomy) from January 2008 until January 2017, were routinely screened by EGD before surgery. Results of EGD and patient characteristics were retrospectively analyzed and categorized according to a classification system based on intervention needed.

Results

Overall, 564 patients (142 male, 422 female, mean age 44 years, average BMI 39) underwent preoperative EGD. In 294 patients (52%) had a normal gastric band in situ without abnormalities. In 72 patients (13%) abnormalities without treatment consequences were found. Overall, 121 patients (22%) were H. Pylori positive. In 73 patients (13%) treatment with proton pump inhibitors was required. Gastric band erosion was found in 4 patients (0.7%) and required follow up EGD for band removal before surgery.

Conclusion

Standard preoperative assessment by EGD in patients who are planned for revisional bariatric surgery is associated with a high number needed to screen to find clinically significant abnormalities.

P.036

OUTCOMES FOLLOWING LAPAROSCOPIC REMOVAL OF ERODED GASTRIC BANDS: A 5-YEAR SERIES FROM A TERTIARY-REFERRAL BARIATRIC CENTRE IN THE UNITED KINGDOM.

Adjustable gastric banding

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Introduction

Laparoscopic gastric banding (LAGB) represents 20% of bariatric procedures performed in the UK. Band erosion (BE) may occur in 0.2-14% and can manifest as port-site infection/pain, sepsis, loss of restriction/weight regain.

Objectives

We reviewed outcomes of patients who had bands removed due to BE.

Methods

We reviewed prospectively collected data on patients treated for band removal due to BE at a tertiary-referral Bariatric Centre over a 5-years period (Jan 2012-17). Patients with BE were cross referenced with theatre records and over 26551 endoscopies performed during this period. Extracted data included patient demographics, clinical presentation, operative details and outcomes.

Results

During the study period, 75 band removals were performed in our Centre. Of these, 10 removals were due to BE of whom 6 patients had their bands inserted elsewhere. The mean±SD duration between LAGB insertion and diagnosis of erosion was 70.8±31 months. In 9 patients diagnosis was made endoscopically. Symptoms at presentation included epigastric pain (80%), dysphagia (50%), nausea (30%), vomiting (40%), port site (50%) or chest (40%) pain. The median (interquartile range, IQR) duration between BE diagnosis and band removal was 27 (1.5-97) days. Mean±SD length of stay was 5.7±2.7 days. There was a high morbidity rate with over 50% of patients developing pneumonia and 20% readmission rate.

Conclusion

Laparoscopic removal of eroded bands was associated with high morbidity with over 50% of patients developing pneumonia leading to prolonged hospitalisation. Patients should be appropriately counselled about this prior to surgery.

□
P.037

LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING: A PROSPECTIVE RANDOMIZED STUDY COMPARING 6-YEAR RESULTS OF TWO DIFFERENT BANDS IN 103 PATIENTS

Adjustable gastric banding

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Introduction

Laparoscopic adjustable gastric banding is one of the most common bariatric procedures. Various types of bands are used during this operation, but there is insufficient data comparing different bands in long-term.

Objectives

The aim of this study was to analyze long-term results comparing SAGB and MiniMizer Extra adjustable bands.

Methods

Between January 1, 2009, and January 31, 2010, 103 morbidly obese patients were randomized between SAGB and MiniMizer Extra adjustable gastric bands. The SAGB was used in 49 and MiniMizer Extra in 54 patients. The primary endpoint was weight loss, and secondary endpoints were complication rate, improvement of co-morbidities and the quality of life.

Results

A total of 88 of 103 patients (85.4%) completed the 6-year follow-up. The average %EWL after 6 years was 44.2% (SAGB 42.7% vs. MiniMizer 45.5%). The overall complication rate was 14.5%. All 5 (4.8%) band erosions developed in MiniMizer Extra group, but the difference was not significant (9.2% vs. 0%; $p = 0.058$). The average BAROS score was 2.91 ± 2.42 in the SAGB group and 3.25 ± 2.23 in the MiniMizer Extra group ($p = 0.43$). No difference was found regarding postoperative complications, resolution of co-morbidities and quality of life.

Conclusion

SAGB and MiniMizer Extra bands demonstrated similar results regarding the weight loss, resolution of comorbidities, morbidity, and quality of life.



P.038

SAFEGUARDING THE GASTRIC BAND LEGACY

Adjustable gastric banding

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Background

Changes in the bariatric landscape have seen the adjustable gastric band (AGB) lose its previous position as a modality of choice.

Introduction

As aftercare clinics are becoming scarcer and recently qualified healthcare professionals lack thorough AGB expertise, patients are finding that continuing adequate function of their device is under threat.

Objectives

We present audit data from a private aftercare service, based on our cohort of 206 patients.

Methods

Observational study over a 5 year period

Results

Our patients had their AGB placed privately in the UK (58%), Europe (38%) or further abroad (4%). Three quarters of our patients (74%) believed that the AGB acts purely through physical restriction. A great majority (82%) reported previous traumatic experiences of difficult port access in other clinics. Most claimed never having had conversations with clinic staff about psychological aspects of dysfunctional eating behaviours (77%), never having spent what they considered sufficient face time with aftercare providers (81%), and having experienced difficulties booking emergency appointments when excessively restricted (69%).

Conclusion

Our patient cohort evidences the difficult situation AGB patients, through no fault of their own, are finding themselves in. Most may have never been provided with sufficient or accurate information regarding gastric band function and band-appropriate behaviours. Their statements about technical, patient care, and risk management aspects of their previous aftercare paint a worrying picture. As this large patient cohort cannot comprehensively be migrated to permanent operations, greater focus on safeguarding these patients is indicated to prevent the formation of a disgruntled patient cohort publicly hostile to bariatric surgical services.

□
P.039

IS GASTRIC BAND STILL A COMPETITIVE BARIATRIC PROCEDURE?

Adjustable gastric banding

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Introduction

Since 2010 the number of patients undergoing gastric band placement has decreased significantly and other bariatric procedures like sleeve gastrectomy and mini gastric bypass are performed more frequently. The main reason was the high number of failures regarding weight loss.

Objectives

We retrospectively evaluated the patients who underwent gastric band placement from the year 2010, to determine whether their weight loss, 5 years postoperatively, is comparable to other bariatric procedures.

Methods

Between Jan 2010 and Dec 2016, 462 patients underwent LAGB in a single center using the Helioscopie band and the pars-flaccida technique. Complications and %EWL were recorded.

Results

The mean age of patients was 37 ± 11 years (range 15-65), mean weight 130 ± 28 kgs (range 87-280) and mean BMI 45 ± 7 (range 31-75). The hospital stay was 24 hrs, 6% of patients were discharged home on the same day. There was neither mortality in this group of patients nor any early complications. Regarding late complications, erosion was 0%, slippage 4.8% and pouch dilatation requiring reoperation was 3.2%. Mean excess weight loss was 49% 1 year postoperatively and then at 5, 6 and 7 years it was 54%, 52% and 58% respectively. Failure (EWL < 50%, band explantation, lost to follow-up) was seen in 35% and 38% of patients, at 6 and 7 years postoperatively. However, excluding the patients who were lost to follow-up the failure was 22% and 21%.

Conclusion

LAGB has always been a safe procedure, reversible and approximately 80% of patients, 7 years postoperatively can have a satisfactory weight loss comparable to other bariatric procedures

P.040

INDICATIONS FOR GASTRIC BAND REMOVAL AND IT'S CONVERSION RATE

Adjustable gastric banding

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Introduction

Bariatric Surgeons are gradually shifting away from the Laparoscopic gastric banding procedure (LAGB) towards other bariatric procedures. This is mainly due to the high rates of patient dissatisfaction and subsequent complications

Objectives

To demonstrate the outcomes of a long term follow up of 1800 gastric band patients.

Methods

In the time period 2001-2015, we have performed 1800 LAGB-operations. 81% of the patients (1460 patient) were followed up. The data were collected prospectively. Preoperatively recorded data included age, sex, comorbidity, body mass index (BMI). Postoperatively recorded data included, intra-and post operative morbidity and mortality, The rate of removal or conversion of gastric bands and the percentage of excess weight loss (%EWL) at 3,6,12-months and then annually up to 15 years postoperatively.

Results

1460 patients had a follow up between 1- 15 years. Of these, 570 patients (39%) had their band removed or converted to other bariatric procedure. Reason for removal were discomfort and insufficient weight loss in 302 (53%) cases, band slippage in 180 (31.5%) cases, band intolerance 32 (5.6%) cases, band erosion in 26 (1.75%) cases, private reasons in 30 (5.2%) cases. These Incidences have increased with longer follow up.

The Mean BMI decreased mostly with more satisfaction in the first 5 years postoperatively. Only 48% of the patient achieved an excess weight loss >50% with a follow up 10 years or more.

Conclusion

Laparoscopic adjustable gastric banding seems to be an effective treatment for morbid obesity in the early years postoperatively. However, the removal and conversion rates increase with longer follow ups.



P.041

THE BAND WILL PREVAIL IN SUBSPECIALISED BARIATRIC UNITS

Adjustable gastric banding

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Background

The adjustable gastric band has declined in popularity in recent years. We suggest this might be because it requires high volume subspecialised units to care for these patients.

Introduction

The gastric band lies between the impotence of medical therapy and the aggression of stapling therapy for obesity. The band is safer, but gives slower and less weight loss than the staplers.

Objectives

Assess outcome of gastric banding in subspecialised high volume unit.

Methods

Retrospective analysis of prospectively collected electronic data from a new bariatric unit that was based on experience of more than 5000 gastric bands in different units. Data was collected from November 2007 for the subsequent 9 years. Demography, weight, BMI, excess weight loss, complications, reoperations and band removals were studied in patients with BMI between 30 and 45.

Results

729 patients were operated as a day case, 89% women, average age 41, start weight 111 kg and starting BMI 38.7. There was no mortality. %EWL for the first subsequent 6 years: 43, 52, 56, 63, 50 and 63, respectively. 6/729 (0.8%) had band infections and the band removed. 11/729 (1.5%) leaks from tube, port or band and were repaired. 12/729 (1.8%) were treated conservatively for oesophageal dilatation. 14/729 (1.9%) had reoperation for symmetrical pouch dilatation or slippage. 3/729 (0.4%) have been converted to sleeves due to pouch dilatation. 2/729 (0.2%) had band removed at the patient's request. Total reoperation rate 36/729 (4.9%) or one every 27 patient years.

Conclusion

Good results can be achieved in large volume subspecialised bariatric units with gastric banding.

□
P.042

LIFE WITH A GASTRIC BAND. LONG-TERM OUTCOMES OF LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING.

Adjustable gastric banding

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Introduction

Laparoscopic adjustable gastric banding (LAGB) is the third most popular bariatric procedure worldwide. Various authors present ambivalent long-term follow up results.

Objectives

To evaluate long-term clinical outcomes of LAGB regarding weight loss and complaints of gastroesophageal reflux disease (GERD) in patients living with the gastric band.

Methods

We revised records of the patients who underwent LAGB between 2003-2006. Patients with outdated details were tracked with the national health insurance database and social media (facebook). An online survey was sent. The patients who did not have their band removed were included in this study. We calculated the percent Total Weight Loss (%TWL) and percent Excess Weight Loss (%EWL). Satisfactory weight loss was set at >50% EWL (for BMI=25 kg/m²).

Results

107 patients underwent LAGB from 2003 to 2006. The mean follow-up time was 11.2 (±1.2) years. 11% of patients were lost to follow up (n=12). There was one perioperative death. 54% of patients (n=57) had their band removed. 37 patients still have the band (39%) and were included in the study. The mean %EWL was 27% (-56%-112%) and %TWL was 11% (-19%-53%). 12 patients achieved %EWL>50% (32%). 32 patients still suffer from obesity. Eight patients (22%) gained additional weight. Patients with %EWL>50% suffered less from gastroesophageal reflux disease symptoms, than those with EWL<50% (p<0.05).

Conclusion

Out of 107 cases only 11.2% of patients with gastric band (n=12) achieved satisfactory %EWL. 22% of patients regained their weight or even exceeded it. Overall results suggest that LAGB is not an effective bariatric procedure in long term observation.

□
P.043

LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING: A 10 YEAR FOLLOW UP

Adjustable gastric banding

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Introduction

Treatments for morbid obesity should result in durable weight loss. Laparoscopic adjustable gastric band (LAGB) is a common bariatric procedure performed however little is know about the long-term (>10 years) outcomes.

Objectives

Determine the long-term efficacy of LAGB for morbid obesity.

Methods

A retrospective review of all patients who underwent primary LAGB at a single institution from January 2001 to December 2007. The main outcomes analyzed were body mass index (BMI) and % weight loss (WL) at 1-year, 2-year, 5-year, and 10-year follow-up as well as the number of patients who underwent band removal.

Results

The cohort included 2,798 patients (68.08% females, 84% Caucasian, mean age 42.6 years, mean BMI 45.49). The operation was completed laparoscopically in 99.89% of cases with a mean OR time of 49.29 minutes. The initial band types were predominantly Inamed 10cm (34.6%), Inamed 9.75cm (24.5%), and Vanguard (25.8%). At 10-years post band, 10.8% (n=302) had band removed (at mean 6.6 years), 53.7% still had their band, and 35.5% were lost to follow-up. In the 53.7% of patients who still had their band at 10 years, mean BMI initially was 45.04, at 1-year 34.52, 2-years 32.98, 5-years 33.89, and 10-years 34.55. Additionally, these patients had a mean % WL of $23.39 \pm 8.32\%$ at 1-year, $26.48 \pm 9.77\%$ at 2-years, $24.37 \pm 11.09\%$ at 5-years, and $23.06 \pm 12.30\%$ at 10-years.

Conclusion

Based on a follow-up of 53.7% of patients, LAGB results in a durable mean % WL of 23.06% after 10 years of follow-up with 10.8% undergoing band removal.

□
P.044

COMPARISON OF 30 DAY RE-ADMISSION RATES POST LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING PRE AND POST INTRODUCTION OF A DAY-CASE SURGERY POLICY.

Adjustable gastric banding

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Introduction

Feasibility of Laparoscopic Adjustable Gastric Banding (LAGB) as a day case procedure is well established. As a part of an Enhanced Recovery Programme introduced in January 2012 we adopted a day case surgery policy for LAGB.

Objectives

This study aimed to compare 30 day re-admission rates of patients pre and post the introduction of this day case policy as a measure of the safety of the policy.

Methods

We retrospectively reviewed the medical and prospective database records of all LAGB patients since 2009. Readmission rates of patients with operation dates after the introduction of the day-case surgery policy were compared to those of patients with operation performed prior to the policy's introduction. Rates were compared using the chi square test (SPSS for Windows).

Results

132 LAGB operation were performed; 76 prior to day-case policy introduction. 30 day re-admission rate was 17% (13 cases) pre day-case policy and 12.5% (7 cases) following the introduction of the day-case policy. There was no significant difference between the two rates of readmission ($p > 0.05$).

Conclusion

Performing LAGB as a day-case procedure is not associated with increased readmission rates. This can be taken as a proxy marker for the safety of a day-case policy. Day-case LAGD is safe.

□
P.045

OUTCOME OF GASTRIC BANDS VS. SLEEVE GASTRECTOMIES AT GLASGOW

Adjustable gastric banding

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Background

Bands were introduced in 2009, sleeve gastrectomies in 2012.

Introduction

Patients referred from Weight Management if suitable.

Objectives

Compare short and medium-term outcomes of bands vs. sleeves

Methods

Retrospective analysis in March 2017. 2-yr follow-up data available for 74 band patients (total 83) and 1-yr data for 20 sleeve patients (total 42).

Results

Bands vs. sleeves

Comparing bands to sleeves, there were no statistically significant differences in age (48.1 ± 1.13 vs. 47.4 ± 2 yrs), BMI (48.55 ± 1.43 vs. 43.61 ± 2.65) or excess body weight (EBW) (66.15 ± 3.55 vs. 58.75 ± 4.06 kgs). Hospital stay was significantly lower in bands (1.10 ± 0.10 vs. 5.00 ± 0.76 , $p < 0.001$). %EBW loss at one year was significantly less in bands ($22.69\% \pm 2.72$ vs. $52.39\% \pm 5.45$, $p < 0.001$). Clinic appointments per year post-op was significantly higher in bands (4.19 ± 0.22 vs. 2.58 ± 0.30 , $p < 0.001$). Hospital admission per year was similar (0.15 ± 0.04 vs. 0.15 ± 0.12 , $p = 0.093$). One mortality in sleeves noted.

Bands alone (2yr follow-up)

Mean weight loss was $24.69\% \pm 2.8$ of EBW. Only 13.5% achieved $>50\%$ EBW loss. For 45 patients (60%), we had documented weight loss at three years - $25.5\% \pm 3.65$ of EBW.

33 readmissions were recorded due to nausea, vomiting or regurgitation. 41% had reflux post-op. 25 endoscopies 34 contrast studies and 9 CT scans were performed. 18 patients (24%) had their bands removed, one band replacement, one band re-positioning and one port re-positioning.

Conclusion

Gastric bands produce sub-optimal weight loss and incur significant follow-up costs



P.046

DOWN THE HATCH: BAND EROSION AND MIGRATION AFTER ROUX-EN-Y GASTRIC BYPASS

Adjustable gastric banding

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Introduction

Laparoscopic adjustable gastric banding (LAGB) is considered a safe method for obesity treatment. Despite its safety, patients with LAGB can manifest unique complications. LAGB following a Roux-en-Y gastric bypass (RYGB) is being performed with more frequency, yet these complications are far less described.

Objectives

To detail band erosion and migration in a patient who has undergone LAGB following RYGB.

Methods

A case report of a 43-year-old male patient who presented in 2017 with abdominal pain and weight recidivism following a LAGB over RYGB that he underwent in 2008 and 2004, respectively. An abdominal X-RAY revealed a malpositioned band, and a CT scan demonstrated the band at least 50cm distally within the lumen of the Roux limb. Endoscopy was performed revealing no evidence of the band, tubing, or erosion.

Results

An exploratory laparotomy was performed revealing stable adherence of the stomach to the abdominal wall without perforation, however the band was not present. A protuberant, but mobile object was identified distally in the Roux limb. The port was removed and the connective tubing cut at the level of the subcutaneous tissue to avoid disrupting the stable inflammatory mass in the superior abdomen. The bowel encasing the object was viable, and electrocautery was used to create an enterotomy. The LAGB was extracted through the enterotomy without difficulty and the enterotomy was closed with a GIA stapler. Post-operatively, the patient reported improvement in pain and tolerated a diet upon discharge.

Conclusion

This case report demonstrates a unique complication that arose in the setting of LAGB following RYGB.

□
P.047

COMBINED ENDOSCOPIC AND LAPAROSCOPIC PIECEMEAL REMOVAL OF ADHERENT ERODED GASTRIC BAND

Adjustable gastric banding

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Background

Revisional bariatric surgery can no doubt be challenging. Careful pre-operative investigations are required for surgical planning. On occasions more than one plan or technique is required to address the issue. We illustrate a case of a very challenging removal of an eroded gastric band.

Introduction

A 53 year old female patient had a gastric band inserted 12 years ago. She suffered from a port site infection but refused band removal. She re-presented with worsening reflux and dysphagia to solid foods.

Objectives

Retrieval of completely eroded gastric band.

Methods

Gastroscopy and barium swallow confirmed an eroded band. An endoscopic cutting device (CJMedical) was used to divide the band. Attempts at removal of the eroded band lead to pieces of the gastric band being broken off and taken out. A portion of the band became stuck above the GOJ.

Complete endoscopic removal was not possible and laparoscopy was performed. The extra-gastric portion of band and tubing was encased in dense adhesions, omentum around left lobe of liver, and hiatus. Significant adhesiolysis and a vertical gastrotomy was required to safely remove the eroded gastric band, this was closed with ethibond and an omental patch

Results

Multiple fragments of the eroded band was removed safely endoscopically, the remaining adherent intra-abdominal portion of the band required laparoscopy for safe removal. The patient progressed well and was discharged after 5 days.

Conclusion

In difficult circumstances, eroded gastric bands can be safely removed with a combination of endoscopic and laparoscopic techniques.

□
P.048

LONG-TERM FOLLOW-UP OF ADJUSTABLE GASTRIC BANDING

Adjustable gastric banding

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Background

Laparoscopic adjustable gastric banding (LAGB) has been a common bariatric procedure in the world. However, the number of LAGB placements has progressively decreased in recent years.

Introduction

This trend most likely reflects concerns of poor long-term outcomes and frequent necessity for revision or removal.

Objectives

The aim of our study was to determine the long-term outcome after LAGB in our institution.

Methods

Following IRB approval, we tracked patients who underwent LAGB between 1999 and 2004. Weight loss parameters, preoperative comorbidities were compared to the follow-up data.

Results

In total 74 patients underwent LAGB. Mean age was 50.5 ± 9.6 years and Body Mass Index (BMI) 45.5 ± 4.8 Kg/m². Preoperative comorbidities rate included diabetes mellitus (13.5%), hypertension (32%), hyperlipidemia (12.1%), obstructive sleep apnea (5.4%), joints disease (10.8%), mood disorders (5.4%) and dyspeptic disorders (8.1%). Mean length of follow-up was 162.96 ± 13.9 months. Forty-four (59%) had their band removed and 22 (30%) had a revisional bariatric surgery. Follow-up BMI was 35.7 ± 6.9 Kg/m² ($p < 0.001$). There was no significant improvement in any of the comorbidities. Dyspeptic disorders increased to 29 (39%) ($p < 0.001$). Undergoing another bariatric procedure was associated with a significant higher weight loss [odds ratio 12.8, CI (1.6-23.9), $p = 0.02$].

Conclusion

LAGB required removal in the majority of our patients. It showed poor resolution of comorbidities and even increase in dyspeptic disorders. A revision to another bariatric procedure was associated with a better long-term weight loss.

□
P.049

GASTRIC BAND REVISIONAL SURGERY. A HIGH VOLUME TERTIARY REFERRAL CENTRE'S THREE YEAR EXPERIENCE.

Adjustable gastric banding

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Introduction

The number of gastric bands being placed worldwide is decreasing. However a small number are still being fitted in the NHS and private sector. Despite this overall decrease; a significant proportion of our elective and emergency theatre time is burdened with revisional operations on patients with gastric bands.

Objectives

We sought to identify the percentage of our total bariatric procedures that were revisional gastric band procedures, and looked at the reasons patients' bands were problematic.

Methods

We retrospectively identified all patients presenting to our tertiary referral centre electively and emergently, for revisional gastric band operations over a three year period. We assessed patient demographics, reason for surgery, procedure performed, and post operative complications. We also looked at the number of repeat revisions.

Results

Elective re-do operations on gastric bands between April 2013 and May 2016 accounted for 13% of all of our bariatric procedures during this period. Emergency revisions counted for a further 4%. The majority of bands had not been placed in our institution. 90% of patients were female. Average age at time of re-operation was 47yrs (range;23-74yrs). 22 of our patients had already had 1 or more prior revisions. Main reasons for re-operation were slippage and intolerance. The commonest revisional procedure was removal of the band (72).

Conclusion

The majority of our patients' bands were placed privately. This suggests an imbalance in aftercare that the NHS ultimately has to deal with. Despite reducing numbers of revisional procedures; there continues to be an impact on our ability to offer primary bariatric procedures.



P.050

RETRIEVAL OF ERODED ADJUSTABLE GASTRIC BANDS: SHOULD AN ENDOSCOPIC/LAPAROSCOPIC TRANSGASTRIC APPROACH BE THE STANDARD PRACTICE?

Adjustable gastric banding

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Background

Despite the well-documented efficacy of laparoscopic adjustable gastric banding as an effective technique for ensuring weight loss, it is associated with a significant rate of pathological symptoms due to band migration and complications such as band erosion.

Introduction

Upon detection of gastric band erosion, their immediate removal is advocated, as their delay is associated with significant mortality and morbidity.

Multiple techniques for band removal have been described. These include endoluminal, laparoscopic, combined laparoscopic and endoluminal, and open surgery. The endoluminal approach is the least invasive of all and the first line of treatment; however, this might not be feasible and applicable in all cases.

Objectives

When the anterior wall of the stomach is densely scarred, with presence of adhesions and when earlier retrieval techniques have failed to prevail, a laparoscopic transgastric approach through a "virgin" area of the anterior gastric wall seems to be an effective technique of safe band removal. This will also avoid the risk of leakage associated with cutting and suturing at the hard capsule area around the band.

Methods

We report a successful removal of an eroding adjustable gastric band via a combined endoscopic – transgastric laparoscopic approach with its technical suggestion in a 43-year-old female, 22 months following its placement. Similar attempts have been previously described.

Results

This approach has been proven safe and reproducible, with low complication rate and easy to perform by general surgeons dealing with bariatric emergencies.

Conclusion

We advocate the transgastric approach as the standard practice for eroded gastric bands when endoscopic removal is not feasible.

□
P.051

FACTORS PREDICTING SURGEON SATISFACTION ABOUT WORKSPACE IN LAPAROSCOPIC BARIATRIC SURGERY

Anaesthesia and bariatric surgery

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Background

There are contrasting results from literature about the role of deep neuromuscular blockade (NMB) in ensuring adequate surgical space during laparoscopic bariatric surgery.

Introduction

NMB level is probably not the only causing factors of surgeon satisfaction about workspace. The role of patients-related factors have never been investigated.

Objectives

Aim of this study was to assess patients-related factors affecting surgeon satisfaction regarding surgical space during maintenance of a deep NMB in obese patients undergoing laparoscopic gastric by-pass.

Methods

After Ethics Committee approval, 225 scheduled for laparoscopic bariatric surgery were enrolled. Anaesthesia was standardized. Neuromuscular block was provided by rocuronium administration of 1.2 mg/kg (ideal body weight, IBW) and additional doses (0.15 mg/kg IBW) in order to maintain a profound NMB (post-tetanic count, PTC<2) during surgical procedure. Immediately, after surgery, the surgeon was invited to state his satisfaction with the surgical space through a verbal numeric scale (VNS) ranging from 1 to 10, with 1=extremely poor space and 10=optimal space.

Results

VNS was positively correlated with female gender and inversely correlated with BMI, age, surgery duration and total dose of rocuronium/IBW (p<0.01). Surgeon satisfaction was predicted by gynoid obesity, lower patient's age and lesser preoperative BMI (p<0.0001).

Conclusion

This study showed that gynoid obesity, lower patient's age, lesser preoperative BMI were all factors predicting high surgeon satisfaction levels about work space, at profound NMB. Correlation between a high VNS and a shorter surgery duration or a smaller total rocuronium dose confirms the presence of non modifiable factors in affecting surgical space.

□
P.052

DOES PREINCISIONAL INFILTRATION WITH BUPIVACAINE REDUCE POSTOPERATIVE PAIN IN LAPAROSCOPIC BARIATRIC SURGERY?

Anaesthesia and bariatric surgery

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Introduction

Current evidence suggests that local anesthetic wound infiltration should be employed as part of multimodal postoperative pain management. There is scarce data concerning the benefits of this anesthetic modality in laparoscopic weight loss surgery.

Objectives

Study the influence of trocar site infiltration with bupivacaine on the management of postoperative pain in laparoscopic bariatric surgery.

Methods

This retrospective randomized study included 47 patients undergoing primary obesity surgery between January and September 2014. Laparoscopic gastric bypass was performed in 39 cases and sleeve gastrectomy in 8 cases. Patients were stratified into two groups depending on whether preincisional infiltration with bupivacaine and epinephrine was performed (study group, 27 patients) or not (control group, 20 patients). Visual analogue scale (VAS), International Pain Outcomes questionnaire, and rescue medication records were reviewed to assess postoperative pain.

Results

VAS scores in the study group and sleeve gastrectomy group were lower than those in the control and gastric bypass groups in the first 4 h postoperatively without reaching statistical significance ($p>0.05$). VAS scores did not differ in any other period of time. No statistically significant differences in pain perception were registered according to the patient's pain outcomes questionnaire or the need for rescue medication.

Conclusion

The present study did not conclusively prove the efficacy of bupivacaine infiltration by any of the three evaluation methods analyzed. Nevertheless, preincisional infiltration provides good level of comfort in the immediate postoperative period when analgesia is most urgent.

P.053

THE USE OF A PRE-OPERATIVE RISK STRATIFICATION TOOL IN PATIENTS UNDERGOING BARIATRIC SURGERY

Anaesthesia and bariatric surgery

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Introduction

Following local service reconfiguration, bariatric operations are either performed in a large acute hospital with access to critical care; return to theatre and transfusion services, or at an elective only base site (BS) with none of the acute services. To mitigate risk, cases are discussed in a joint surgical and anaesthetic planning meeting. Cases are risk-stratified and a score > 4 for Obesity Surgery Mortality Risk Score, score > 2 for Lee's Revised Cardiac Risk Index, BMI > 50, score > 3 on STOP BANG questionnaire and presence of obstructive sleep apnoea would require patients to have surgery in the acute hospital.

Objectives

To ascertain safety and efficacy of risk stratification.

Methods

All patients undergoing surgery in 2016 were included.

Results

There were 120 cases in total. Of these, 50 patients were discussed and 43(86%) deemed suitable for base site. There was higher rates of transfer and reoperation in non-discussed pts. Two patients in the BS group who were discussed developed complications (post-operative bleeding, small anastomotic leak) but were treated conservatively. There were no deaths.

Discussed	No (n=70)		Yes (n=50)	
Site	Acute hospital (n=10)	Base site (n=60)	Acute hospital (n=7)	Base site (n=43)
BMI>50	1	6	1	0
Revisional surgery	2	3	2	2
Median length of stay (days)	1	1	2	1
Median length of critical care stay (days)	1	0	0	0
Complications	-	6.6%	-	2.3%

Conclusion

Most patients are suitable for BS surgery. Pre-operative risk stratification enhances safety. All cases should be discussed. Revisional surgery appears to be safe at BS.



P.054

BARIATRIC SURGERY: STOP BEFORE STAPLING

Anaesthesia and bariatric surgery

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Background

Stapling of oro/nasogastric tubes or probes within the stomach while performing bariatric surgery although an infrequent event, has potentially serious consequences.

Introduction

Patient safety strategies including the WHO Checklist for wrong site surgery and anaesthesia have been widely adopted. We propose the concept of 'STOP before stapling' as a patient safety strategy.

Objectives

To raise awareness of the possibility of stapling tubes/probes within the stomach amongst the UK bariatric surgery community.

Methods

Retrospective case review of all adult and adolescent laparoscopic sleeve gastrectomy/bypass from February 2015 to March 2017 at a single centre. Data is presented as mean (range).

Results

Three patients sustained a stapling event, all female, 32 years (17-48), BMI 46 (43-49). In two events, the NG was stapled, in one the temperature probe. All incidents were recognised intra-operatively and resolved laparoscopically. The mean operative time was 171 minutes (154-195).

Conclusion

Adverse oro/nasogastric tube or probe stapling within the stomach should be a never event. We propose the concept of 'STOP before stapling', a planned anaesthetic and surgical pause to re-assess and to confirm the absence of tubes and probes within the stomach.



P.055

INTRAOPERATIVE CLONIDINE BUT NOT KETAMINE, LIGNOCAINE OR NERVE BLOCKS REDUCES OPIOID CONSUMPTION IN PRIMARY BARIATRIC SURGERY

Anaesthesia and bariatric surgery

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Background

Opioid consumption is associated with post-operative respiratory complications in the bariatric surgical population. National guidelines recommend opioid-sparing, multimodal analgesia for this population, but there is a paucity of evidence favouring any specific approach over others.

Introduction

At our institution there are seven Consultant Anaesthetists who routinely provide intraoperative care, each using a different multimodal intraoperative technique.

Objectives

We set out to determine whether intraoperative management affected opioid consumption and length of hospital stay in our patients having bariatric surgery.

Methods

A retrospective analysis of intraoperative analgesia, cumulative opioid consumption, and length of hospital stay was conducted for 138 (109 female) consecutive patients undergoing sleeve gastrectomy or gastric bypass as their primary bariatric operation. Cumulative opioid consumption was defined as the sum of intraoperative opioid consumption and opioid consumption in the first 24 post-operative hours. Opioids were converted to intravenous morphine equivalents using standard conversion tables.

Results

Cumulative opioid consumption was lower for patients given intraoperative clonidine (22.4mg vs 35.9mg, $p < 0.00001$). There was no effect on cumulative opioid consumption of intraoperative ketamine, lignocaine, remifentanil infusion or regional anaesthesia. Post-operative length of stay was greater for those receiving clonidine (2.1 vs 1.8 nights, $p = 0.03$), ketamine (2.0 vs 1.4 nights, $p = 0.03$) or remifentanil (2.1 vs 1.7 nights, $p = 0.046$) but reduced for those receiving regional anaesthesia (1.5 vs 2.0 nights, $p = 0.008$).

Conclusion

Clonidine may reduce cumulative opioid consumption but also slightly increase length of hospital stay in patients undergoing bariatric surgery.

□
P.056

EVOLUTION OF THROMBOPROPHYLAXIS PRACTICE AFTER SLEEVE GASTRECTOMY (SG) AND GASTRIC BYPASS (GBP) WITH ENHANCED RECOVERY AFTER SURGERY (ERAS) PROTOCOL.

Anaesthesia and bariatric surgery

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Background

Out patient surgery and ERAS is increasing in bariatric surgery like in all others speciality. We are reporting, based on our own experience, the evolution of our thromboprophylaxis protocol after SG and GBP.

Introduction

As presented last year at the IFSO's congress, postoperative hemorrhages after SG and GBP was 2% with a standard thromboprophylaxis protocol.

Objectives

The aim of this study is to report the results of 235 patients operated with ERAS protocol modified using the Caprini score.

Methods

From January 2016 to July 2016, 235 patients were operated with ERAS protocol : 134 had an omega loop gastric bypass and 101 had a sleeve gastrectomy. The Caprini score estimates the post operative thromboembolic risk according to sex, age, co morbidities, operative time. For each patient, Caprini score was calculated at the end of the surgery. Low Molecular Weight Heparin (LMWH) was prescribed if Caprini score was higher than 3. The first injection of LMWH was done at day one if patient showed no biological or clinical bleeding signs.

Results

There were no reports of peripheral thromboembolic events or pulmonary embolism. Two patients developed a partial portal thrombosis after SG. No patients was re operated for a postoperative hemorrhage.

Conclusion

Early patient mobilization after SG an GBP and Caprini score less than 3 allowed to avoid a systematic postoperative treatment with LMWH. Since the amendment of the thromboprophylaxis protocol, we have had substantially less hemorrhagic complications without increasing thromboembolic events.

□
P.057

EFFECT OF SLEEVE GASTRECTOMY ON SERUM ZINC, ZINC ALPHA-2 GLYCOPROTEIN, PEROXISOME PROLIFERATOR-ACTIVATING RECEPTOR-GAMMA, NUCLEAR FACTOR KAPPA-B IN MORBID OBESE PATIENTS

Anaesthesia and bariatric surgery

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Introduction

Laparoscopic sleeve gastrectomy (LSG) is based on a restrictive principle and more commonly used in the last years, which is an effective and easily applied surgical method in patients with high body mass index and comorbidity rate.

Objectives

Serum zinc, Zinc, zinc alpha 2 glycoprotein (ZAG), peroxisome proliferator-activated receptor- γ (PPAR- γ) and Nuclear Factor kappa B (NF- κ B) levels in the morbid obese patients who undergone LSG operations and control group are measured and a comparison of changes in level after weight loss are presented as a randomized prospective clinical study.

Methods

30 healthy individuals as control group and 30 morbidly obese patients who had undergone LSG procedure are included in the study. Serum levels of parameters are measured using ELISA method in venous blood samples of both groups before and 1 and 12 months post-op patients.

Results

Significant weight loss was achieved at 1 and 12 months after surgery. Serum ZAG and PPAR- γ levels were lower, while NF- κ B levels were higher in morbidly obese patients compared with the control group. Serum ZAG and PPAR- γ levels increased, NF- κ B levels decreased 1 month and 12 months after surgery

Conclusion

In our study, it was observed that there is a statistically significant increase in ZAG and PPAR- γ and decrease in NF- κ B levels in the 12th month based on the weight loss after the LSG. These findings show; LSG technique regulates the fatty acid metabolism, energy balance, insulin sensitivity and glucose levels in morbid obese patients.

□ **P.058**

SHORT-TERM CHANGES IN CARDIOVASCULAR HEMODYNAMICS IN RESPONSE TO BARIATRIC SURGERY AND WEIGHT LOSS USING THE NEXFIN® NON-INVASIVE CONTINUOUS MONITORING DEVICE: A PILOT STUDY

Anaesthesia and bariatric surgery

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Background

Compared to healthy individuals, obese patients have significantly higher systolic and diastolic blood pressure; mean arterial pressure, heart rate and cardiac output. Aim of this study was to evaluate cardiovascular hemodynamic changes before and 3 months after bariatric surgery.

Methods

Patients scheduled for bariatric surgery between the 29th of September 2016 and the 24th of March 2016 were included and compared with 24 healthy individuals. Hemodynamic measurements were performed preoperatively and 3 months after surgery, using the Nexfin® non-invasive continuous hemodynamic monitoring device (Edwards Lifesciences / BMEYE B.V., Amsterdam, the Netherlands).

Results

Eighty subjects were included in this study, respectively 56 obese patients scheduled for bariatric surgery and 24 healthy individuals. Baseline hemodynamic measurements showed significant differences in cardiac output (6.5 ± 1.6 versus 5.7 ± 1.6 l/min, $p=0.046$), mean arterial pressure (107 ± 19 versus 89 ± 11 mmHg, $p=0.001$), systolic (134 ± 24 versus 116 ± 18 mmHg, $p=0.001$) and diastolic blood pressure (89 ± 17 versus 74 ± 10 mmHg, $p=0.001$) and heart rate (87 ± 12 versus 76 ± 14 bpm, $p=0.02$) between obese and healthy subjects. Three months after surgery, significant changes occurred in mean arterial pressure (89 ± 17 mmHg, $p=0.001$), systolic (117 ± 24 mmHg, $p=0.001$) and diastolic blood pressure (71 ± 15 mmHg, $p=0.001$), stroke volume (82.2 ± 22.4 ml, $p=0.03$) and heart rate (79 ± 17 bpm, $p=0.02$)

Conclusion

Three months after bariatric surgery significant improvements occur in hemodynamic variables except cardiac output and cardiac index, in the patient group.

□
P.059

OUTCOMES OF CHOLECYSTECTOMY IN PATIENTS NOT SCREENED FOR OBSTRUCTIVE SLEEP APNOEA - DOES BODY MASS INDEX MATTER?

Anaesthesia and bariatric surgery

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Introduction

Obstructive sleep apnoea (OSA) is common in obese patients. Untreated OSA is thought to cause more peri-operative cardiopulmonary complications, and so pre-operative sleep studies are advised prior to bariatric surgery. Awaiting sleep study conduction and interpretation however, places high demand on resources and may delay surgery.

Objectives

To compare outcomes of patients with BMI <35 and BMI ≥35 not screened for OSA undergoing laparoscopic cholecystectomy (LC) and a high volume UK bariatric centre.

Methods

A retrospective search was performed of prospectively maintained database. All patients undergoing LC with a BMI 20-75 who had anaesthetic pre-assessment within 30 days pre-operatively were included. Patients with known OSA were excluded. The following data was gathered: Age, BMI, length of stay (LoS), ITU admission, 30-day re-admission, and mortality.

Results

1295 patients were included: 969 with BMI <35; 326 with BMI ≥35. Median age for those with BMI <35 was 54 (mean 52.5) compared to 44 (mean 44) for those ≥35. Mean LoS (0.79 days in BMI <35, 0.65 in BMI ≥35), percentage of cases performed as day case (58% BMI <35, 51% BMI ≥35), ITU admissions (1 in BMI <35, 0 in BMI ≥35) and readmissions (7% BMI <35, 6% BMI ≥35) were similar between groups. There were no mortalities.

Conclusion

This study shows that the outcome of LC for patients with BMI ≥35 who are not screened pre-operatively for OSA is similar to that of those with BMI <35. This suggests that current trend of screening all patients undergoing bariatric surgery for OSA may need further evaluation.

□
P.060

COMPARISON OF THE HEMODYNAMIC EFFECTS OF LAPAROSCOPIC SURGERY AMONG PATIENTS OF NORMAL WEIGHT AND OF PATIENTS WITH MORBID OBESITY.

Anaesthesia and bariatric surgery

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Introduction

Laparoscopic bariatric surgery in patients with impaired cardiovascular function, is limited by the potential adverse hemodynamic impact.

Objectives

We assessed the influence of various laparoscopic procedures on selected cardiac functions in significantly obese patients and in patients with normal body weight.

Methods

We studied 20 patients with normal body weight (mean BMI 25.3 +/- 3.6 kg/m²), and 18 morbidly obese patients (mean BMI 45.8 +/- 7.5 kg/m²), undergoing various laparoscopic procedures. Heart rate (HR), blood pressure (BP), stroke volume (SV) and cardiac output(CO) were measured using EDWARDS VIGILEO MONITOR 4th generation. Parameters were recorded at baseline before the operation(BL), before intubation(BI), after installation of capnoperitoneum(CP), and after positioning the patient for surgery(SP).

Results

Demographic data were similar in both groups. Procedures included colectomies, gastrectomies, adrenal resections and sleeve gastrectomies. Duration of surgical procedure was similar to both groups. Compared to BL, CP and SP were characterized by an increase in HR and BP in both groups. As SV did not change significantly, the HR changes were accompanied by an increase in CO: (BL 6.3 +/- 2.1 l/min, CP 6.7 +/- 2.4 l/min, SP 6.9 +/- 2.8 l/min, p < 0.05 BL vs CP and SP). Hemodynamic changes in subgroups with normal body build and in the obese patients were comparable. There was an increase in CO and pressure-rate product in obese individuals.

Conclusion

Our results suggest that the hemodynamic response to laparoscopic surgery is characterized by an increase in CO, probably due to increased HR. Similar results were observed in obese and non-obese patients.

P.061

CONVENTIONAL VERSUS FAST TRACK ANESTHESIA IN AN UNSELECTED GROUP OF PATIENTS UNDERGOING REVISIONAL BARIATRIC SURGERY

Anaesthesia and bariatric surgery

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Background

Fast track care has proven to be safe and effective in primary bariatric procedures. The number of more complex revisional procedures is expected to rise over the next years.

Objectives

The aim was to evaluate the potential benefits and safety of a fast-track protocol in an unselected group of patients undergoing Roux-en-Y Gastric Bypass (rRYGBP) as revision.

Methods

For this retrospective study, all patients undergoing rRYGBP between January 2005 and December 2013 were included and categorized between conventional care (CC) and fast track care (FT). Patient characteristics, operative details and intra- and early postoperative complications < 30 days were analysed.

Results

A total of 407 patients were included for analysis. 303 patients (74.4%) received peri- and postoperative treatment according to the fast track protocol. Mean age of the study population was 44.0±8.9 years; mean pre-primary procedure BMI was 45.7±7.0 kg/m². A total of 54 (13.3%) postoperative complications were registered (CC 19.2% vs FT 11.2%; p = 0.038). Both operative time (CC 135.3±42.6 minutes vs FT 79.3±29.3 minutes; p <0.001) as well as hospital stay (CC 5.1±6.3 days vs FT 3.1±5.3 days; p <0.001) were significantly shorter in the FT group. A multivariate analysis on postoperative complications showed that fast track was not predictive for the occurrence of complications (OR= 0.853; 95% CI [0.403-1.804]; p = 0.677).

Conclusion

Fast track care appears to be safe and efficient for patients undergoing revisional Roux-en-Y gastric bypass, but postoperative outcome may be highly dependent on surgical experience.

P.062

BANDED GASTRIC BYPASS, RESULTS AND POTENTIAL COMPLICATIONS AFTER 4 YEARS FOLLOW UP

Banded procedures

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Background

Gastric bypass is currently the gold standard for the treatment of morbid obesity and its co-morbidities. However, even bypass patients can regain weight in time (up to 30%).

Introduction

A banded gastric bypass is suggested to reduce long term weight regain in morbidly obese patients. Disadvantage may be the band related risks such as erosion, excessive weight loss, dysphagia and frequent vomiting. Result with up to 4 years follow up from a single institution are presented. In addition results of the banded bypass are compared with standard bypass from clinics with a similar perioperative regime (Dutch Obesity Clinics)

Objectives

Outcome in terms of weight loss. Evaluate risk of band and bypass related complications short and long term. Compare results with standard bypass procedures.

Methods

Retrospective review of prospectively recorded data from a single institution. Prospective analysis of the results of a multicenter organisation, the Dutch Obesity clinics.

Results

98 patients operated in 2011-2012 were included. %EWL 1y 81.6% 2y 79.9%, 3y 79.6% 4y 80.4%. Band related complications: excessive weight loss 3 (laparoscopic band removal) overall complications blind loop 5, internal hernia 3, leak (band removal) 1, food impaction 1 revision gastroenterostomy 1. Comparing results with Dutch Obesity Clinics 2013-2014 2y follow up: Own results (N=373) %EWL 1y 84.5% 2y 80.4% Total (N=7132) 1y 74.1% 2y 74.8%

Conclusion

Banded gastric bypass results in a significant better weight loss 1 and 2 years after the operation which is sustained at least until 4 years post operative. The procedure is safe with sofar limited band related complications.



P.063

BANDED VERSUS NON-BANDED LAPAROSCOPIC GASTRIC BYPASS: 432 CONSECUTIVE PATIENTS WITH A MINIMUM 5 Y FOLLOW-UP.

Banded procedures

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Introduction

Weight regain after a standard gastric bypass is a well-known problem in around 30 % of these patients.

Objectives

We started with the banded gastric bypass (BGB) in 2006.

Methods

Between June 2002 and March 2015, 1288 GB operations were performed: non-banded gastric bypass (NBGB) in 316 patients and BGB in 972 patients. We present a cohort study comparing 432 consecutive patients (254 NBGB / 178 BGB) with a minimum follow-up of 5 years.

Results

: The evolution of % excess weight loss: at 1 y 73 / 76, at 2 y 74 / 78, at 3 y 71 / 78, at 4 y 69 / 77 and at 5 y 66 / 79. From the 3rd year there was a weight regain in de NBGB group which continued till the 5th year. There was none important weight regain in the banded group with the band intact. The late dysphagia was acceptable and patient appreciation was rated 'very good' in 95% of banded surgery.

Conclusion

These results show that the weight loss at 5 years is better after a BGB. There were no re-operations in the BGB group because of weight regain in 5 years against 5% in the NBGB group. Since the low percentage of band related problems (no migration in our study and only 3 bands removed) we suggest always performing a BGB which is now the policy in our bariatric centre.

□
P.064

BANDED LAPAROSCOPIC SLEEVE GASTRECTOMY – TWO YEAR RESULTS.

Banded procedures

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Background

Durability of sleeve gastrectomy as a bariatric procedure is diminished by the stretch of the sleeve pouch. Banding of roux-en-Y gastric bypass has shown superior longer term weight loss results. Will applying the same procedure to a sleeve gastrectomy be as favourable?

Introduction

Will adding a band around the sleeve gastrectomy improve long term outcomes.

Objectives

The aim of this study is to assess the efficacy of this Banded LSG (BLSG) in terms of weight loss and to determine what the effect of the band on weight loss.

Methods

44 patients who received a BLSG were compared to 13 patients who received a LSG. All data of the included patients was retrospectively collected from personal health records and completed with data from phone calls with the patients. Differences in Body Mass Index, Total Body Weight Loss were analysed.

Results

Mean BMI was 42.3 (31.2-76.0) for BSLG compared with 45.1 (38.3-54.6 for LSG. There were no intraoperative complications. At 24 months there was 80% Excess weight loss with LBSG compared with 70% with the LSG.

Conclusion

The BLSG is an effective bariatric procedure in terms of weight loss after two-year follow-up with results better than LSG alone. This study suggests that banding a sleeve gastrectomy may reduce stretch of the sleeve and create a more durable operation. Further prospective, randomized controlled trials need to be performed to make a definitive conclusion about the reflux subject and long-term studies need to be performed to evaluate if the band reduces pouch dilatation and thus reduces weight regain.

□
P.065

USE OF FIXED RING IN RYGB FOLLOWING FAILED GASTRIC BAND - WHO BENEFITS MOST?

Banded procedures

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Background

Adjustable Gastric banding (AGB) is widely performed. This paper explores conversion of AGB to Roux En Y Gastric Bypass (RYGB) with a fixed ring

Introduction

It is widely accepted that RYGB as a revisional procedure results in less EWL than a primary RYGB. We would like to explore whether the placement of a fixed ring around the gastric pouch changes this.

Objectives

1. Safety and efficacy of fixed rings in RYGB
2. Excess Weight loss compared to historical data
3. Examine whether there is a subset of patients that do best with fixed rings after failed AGB

Methods

prospective study recruiting 158 patients over a 24 month period 1/2014 until 1/2016.
80 Patients had esophageal dilatation , 46 for failure to lose weight and 32 for complications
Patients underwent removal of their AGB and conversion to RYGB. A fixed ring (minimiser ring) was placed

Results

184 patients had a fixed ring
80 patients for ED, 46 for Failure to lose weight and 58 for complications
The patients with ED lost 84% EW (min 1 year). There were no complications and QOL was excellent.
The patients who failed to lose weight lost a mean of 49% EWL. There were no complications
The patients who had complications of the band lost 76% EWL

Conclusion

Adding a fixed ring to a RYGB shows promise in EWL in the 1st 12-24 months. Esophageal dilatation cases and band complications do well . The most disappointing results are patients who failed to lose weight. Complications were low and QOL excellent



P.066

ONE ANASTOMOSIS GASTRIC BYPASS (OAGB) WITH INSERTION OF THE MINIMIZER RING (MMR); EARLY RESULTS.

Banded procedures

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Introduction

OAGB is a safe and effective primary and revision bariatric procedure. The safety of the addition of a MMR to improve durability of weight loss is unreported following OAGB.

Objectives

To review early results of the safety of insertion of a MMR during primary and revision OAGB.

Methods

Retrospective analysis of our prospective database from March 2015 to February 2017. We assessed early (within 30 days) and late morbidity and mortality.

Results

We identified 122 patients who underwent OAGB. Eighteen patients had OAGB + MMR: primary OAGB + MMR (n = 5; mean age 41 years, 4 female, 1 male, mean BMI 51.4 kg/m²), single-stage revision surgery to OAGB + MMR (n = 12; previous gastric band = 5; previous sleeve gastrectomy = 7; mean age 44 years, all female, mean BMI 44.3 kg/m²) and 2-stage revision surgery from band to OAGB + MMR (n = 1; age 38 years, female, BMI 57 kg/m²). One patient re-presented following primary OAGB + MMR with dysphagia and functional hold up at the MMR. Three patients re-presented following revision OAGB + MMR; intractable bile acid reflux requiring conversion to RNYGP (n = 1); small bowel obstruction with port site hernia (n = 1) and dysphagia secondary to stenosis at the gastro-enterostomy (n = 1). There were no deaths. No patients required removal of MMR following a median follow up period of 3 months.

Conclusion

Our early results suggest MMR can safely be inserted at the time of primary or single-stage revision OAGB.



P.067

LONG TERM OUTCOMES FROM GASTRIC BANDS - A SINGLE CENTRE EXPERIENCE

Banded procedures

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Introduction

Gastric band is an established method for treating morbid obesity. Compared to other forms of weight loss surgery it does not involve removing part of the digestive tract and it is potentially reversible. Patients with gastric band however tend to lose less percentage of their excess weight (EWL). Complications include regurgitation, gastritis, erosion, slippage and port-side infections.

Objectives

To present outcomes of patients with gastric band during a 10-year period, that were followed-up at our centre.

Methods

A prospectively maintained database of patients with gastric bands inserted during the period 01/01/2004 – 01/04/2007 and subsequently followed-up in our centre. The outcomes measured were number and reasons for gastric band adjustment, percentage of expected weight loss (%EWL), gastric band slippage or removal and conversion to gastric bypass.

Results

204 patients (183 female) with various types of gastric bands (40% VG band) were examined. An average of 7.64 re-adjustments were performed with the first one taking place after 3 years. The main reasons were absent satiety and reaching weight plateau. The mean %EWL ranged from 17 – 33 with the peak being at 4.5 years following banding. There were 21 band slippages, 3 bands were removed for various reasons and 11 patients had gastric bypass surgery.

Conclusion

Our centre's experience shows that gastric band is a safe procedure however it has limited effect on weight loss compared to other bariatric procedures. There is declining EWL after 5 years and patient require regular band re-adjustments to ensure satisfactory results.

□
P.068

OBESITY SURGERY MAKES PATIENTS HEALTHIER AND MORE FUNCTIONAL – ANALYSIS OF THE UNITED KINGDOM NATIONAL BARIATRIC SURGERY REGISTRY

Bariatric registries

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Introduction

The National Bariatric Surgery Registry (NBSR) is the largest and most holistic bespoke database in the field in the UK.

Objectives

This NBSR analysis examined the disease burden of the UK surgical bariatric population and the effects of obesity surgery up to 5 years post-operatively.

Methods

NBSR entries between 2000 and 2015 were analysed retrospectively. Type of operation, demographic data, patients' weight, Body Mass Index (BMI), functional status, comorbidities and yearly changes in these baseline characteristics up to 5 years post-operatively were analysed.

Results

50,782 procedures were recorded in the NBSR over 15 years. The cohort consisted predominantly of middle age (mean 45±11years) female patients (78%) of Caucasian ethnic background with a mean BMI of 48±8kg/m². 83% had at least one obesity-related comorbidity at baseline. The commonest operation was Roux-en-Y Gastric Bypass (RYGB) (51.4%). The peak weight loss of 30±12% was recorded 2 years postoperatively. Over 5 years of follow up, statistically significant reductions were observed in the rates of type 2 diabetes mellitus, hypertension, dyslipidaemia, sleep apnoea, asthma, functional impairment, arthritis and gastro-oesophageal reflux disease. Obesity surgery was particularly effective on functional impairment and diabetes with almost a doubling of patients able to climb 3 flights of stairs and halving of the patients with diabetes related hyperglycaemia compared to pre-operatively. Obesity surgery was safe with morbidity of 3.1% and mortality of 0.07%.

Conclusion

Obesity surgery in the UK not only causes weight loss, but also substantial improvements of obesity related comorbidities. Patients suffer less, become healthier and more functional.

□
P.069

LONG-TERM METABOLIC EFFECT AFTER BARIATRIC SURGERY: ANALYSIS OF THE INSURANCE DATABASE ON 2.500 PATIENTS.

Bariatric registries

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Background

LONG-TERM METABOLIC EFFECT AFTER BARIATRIC SURGERY:ANALYSIS OF THE INSURANCE DATABASE ON 2.500PATIENTS.

Introduction

The metabolic effects of bariatric surgery are well known in the short and medium term, but over 5years they are less well described in the literature.

Objectives

Analysis of the evolution of comorbidities of obesity after 5years of surgery.

Methods

We have analyzed the Generalized Beneficiary Sample(GBS), of the Health Insurance database. We have included adult patients operated of bariatric surgery between2003and2016and we followed the consumption of4categories of drugs: Anti-diabetic, antihypertensive, statin and antacids. The analysis of drug consumption was stratified according to the type of intervention performed: adjustable gastric band(AGA), sleeve gastrectomy(SG) or gastric bypass(BG).

Results

We identified a sample of 2349 patients. Preoperative consumption of antidiabetics was identified in 10% of patients, antihypertensives in 31.4%, statins in 12.5% and antacids in 61%. The percentage of diabetic patients remaining on treatment is 38%and47% at 5and 7years respectively. The consumption of antihypertensive drugs is 44%and41% at 5 and 7years. The consumption of statins is 28% and 33% at 5and 7years. Antacids consumption remains above 50%. There is a significant difference depending on the type of bariatric intervention performed: the gastric bypass shows a better efficiency in the decrease in consumption of all the drugs analyzed, followed by the SG and finally the AGA.

Conclusion

Bariatric surgery confirms its long term metabolic efficacy, especially in patients with type 2diabetes and dyslipidemia. There is an increase in drug consumption after 5years. There is an important heterogeneity between surgical techniques in terms of metabolic results.

P.070

FEASIBILITY OF DEFINITIVE PRIMARY BARIATRIC SURGERY IN THE MEGA-OBESE (BMI>70)

Bariatric registries

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Introduction

The feasibility and safety of primary definitive bariatric surgery in the extremely obese is poorly characterised in the literature.

Objectives

To characterise the surgical profile and safety of primary bariatric surgery in mega-obese patients (BMI >70) using a national database registry.

Methods

The UK National Bariatric Registry (NBSR) was interrogated to identify patients with a BMI >70 who underwent definitive primary bariatric surgery between January 2009 and June 2014. The demographic, peri-operative, and post-operative outcomes were collected and analysed.

Results

A total of 483 patients were identified, of whom 29 underwent placement of adjustable gastric band (AGB), 232 sleeve gastrectomy (SG) and 222 Roux-en-Y gastric bypass (RYGB). There were no significant pre-operative BMI differences in the three groups.

	AGB (n=29)	SG (n=232)	RYGB (n=222)
Length of hospital stay (day; inter-quartile range)	1 (0-1)	2 (2-3)	2 (2-3)
Re-admissions (number, %)	0 (0.0)	3 (1.3)	10 (4.5)
Re-operations (number, %)	0 (0.0)	0 (0.0)	6 (5.3)
Complications (number, %)	0 (0.0)	13 (5.6)	7 (3.2)
Mortality (number, %)	0 (0.0)	1 (0.4)	1 (0.9)

Conclusion

Bariatric surgery can be achieved in the mega-obese with a low complication rate. AGB is associated with a safer peri-operative profile when compared with SG and RYGB.

□
P.071

A 90-DAY PROSPECTIVE FOLLOW UP OF EMERGENCY VISITS AND READMISSION AFTER BARIATRIC SURGERY IN A HIGH VOLUME CENTER

Bariatric registries

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Introduction

Hospital readmissions have become an important surrogate of patient care quality. However, the majority of studies are retrospective in design with a short follow up.

Objectives

We sought to evaluate 90-day emergency department (ED) visits and readmission rates in high volume center.

Methods

We conducted a prospective follow-up of consecutively operated patients that underwent Roux-en-y gastric bypass (RYGB) or Sleeve Gastrectomy (SG) between June-December 2015. Patients with ED visits and/or readmission were identified from hospital records up to 90 days after discharge from index operation. Patients who did not live in Santiago, <18 years old or underwent revisional surgery were excluded. Univariate and multivariate analysis was performed to identify clinical variables associated with ED visits or readmission.

Results

We identified a total of 173 patients, 73% were females with an average age and BMI of 38.7 ± 11.8 years and 36.5 ± 6.1 kg/m², respectively. Eighty-two (47.3%) patients had RYGB and 91(52.6%) patients had SG. The overall 90-day ED visits rate was 18.5%(n=32), the most common cause for ED visit was abdominal pain. There was no difference in ED visit rate between RYGB and SG patients (23%vs17.6%, $p > 0.05$). 90-day readmission rate was 5.8%(n=10), with intestinal obstruction been the most common cause. Readmission rate was higher in RYGB compared to SG patients (11%vs2.2%, $p < 0.05$). Univariable and multivariate analysis revealed postoperative complication to be independently associated with readmission (OR:10,CI95%;1.61-62.85). Readmitted patients did not require endoscopic or surgical intervention.

Conclusion

RYGB patients have a greater risk of readmission, however the majority will require only conservative management.

□
P.072

LONG TERM WEIGHT LOSS AFTER BARIATRIC SURGERY FROM THE COMMUNITY; FROM THE CLINICAL PRACTICE RESEARCH DATALINK

Bariatric registries

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Background

The CPRD is an ongoing primary care database as a validated rich source of health data research tool.

Introduction

Body Mass Index (BMI) and weight loss are an important primary outcome for the effectiveness of Bariatric surgery, but there is a paucity of long term follow up.

Objectives

The aim was to demonstrate long term follow up of relative BMI loss for various Bariatric procedures from the community (CPRD) due to paucity of tertiary follow up.

Methods

The CPRD was statistically longitudinally examined.

Results

A total of 4,414 (1.1%) patients had a medcode for Bariatric surgery. There were 24,715 BMI measurements for 3,870/4,414 (87.7%) patients. Follow up BMI recorded post Bariatric surgery ranged from 0 to 470 months (Mean 41.2 months SD 38.7). 20.9% of measurements were within the first year, 54% were within 5 years and 24% more than 5 years. Paired sample T test was used to compare first and last BMI measurement after Bariatric surgery, first (mean 39.3Kg/m² SD 8.3) and last (mean 36.5 Kg/m² SD 7.9) with a difference of 2.75 Kg/m² SD (p=0.00). BMI loss was more prominent in 1577 gastric bypasses (13.6Kg/m² SD 6.5) with average percent loss of 27.1% (SD 11.4%), 576 sleeve gastrectomies (12.0Kg/m² SD 6.4) percent loss 23.8% and 1474 gastric bands with 21.6% loss.

Conclusion

There is a paucity of long term results for Bariatric patients through tertiary databases. The data displayed through the community is the largest UK follow up to date and replicates the evident BMI and weight loss from large European studies.

□
P.073

3 YEARS OUTCOMES OF BARIATRIC SURGERY PRACTICE IN DISASTER SITUATION DURING ISIS ERA

Bariatric registries

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Introduction

Mosul city likes Iraqi governorate suffer from increased incidence of obesity and fighting obesity started late in 2012 by Nenavah bariatric committee and National Center of Obesity.

Objectives

This study performed to analyze 3 years outcomes of bariatric surgery during the ISIS disaster situation.

Methods

3543 patients involved (2154 females, 1389 male) 2073 treated by diet only because they don't want surgery or lack of instruments; while 610 underwent intra gastric balloon ,175 underwent laparoscopic sleeve gastrectomy LSG and 6 redo surgery.

Results

175 patients underwent LSG (122 females and 53 males), the initial body weight 70-203(average126Kg); BMI 31.8-69.9 (52Kg/m²); 3 patients with diabetes mellitus and BMI less than 35Kg/m² included; the average weight loss assessed and found to be (15.3, 34.4, 43.6 and 52.3 Kg) in 1st, 3rd, 6th and 12th month interval; the BMI reduced from 52 to 33 and 26 at 6th and 12th months.

IGB performed for 610 patients (396 females and 214 males), their age 14-67 (mean 34 years) and data analyzed after ballon extraction. Their weight 72-229 (average131); the patients loses 2-85 (average22Kg) which was equal to 1.6 – 114.2(average 42) percent of excess weight and their BMI reduced 0.6-21 (average 8.5) kg/m².

Conclusion

In spite of the disaster situation and difficulty to obtain devices; these results are acceptable and comparable with best centers.

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P.074

PREDICTIVE FACTORS FOR EXCESS WEIGHT LOSS, REMISSION OF COMORBIDITIES AND RISK OF COMPLICATIONS AFTER BARIATRIC SURGERY

Bariatric registries

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Introduction

Bariatric surgery has proven successful for weight loss and resolution of comorbidities. Yet, there is little evidence on prediction of success and risk of complications.

Objectives

To evaluate the role of age of onset of obesity (AOO), years of obesity (YOO), preoperative BMI, Edmonton Obesity Staging System (EOSS) and age as predictors for weight loss, resolution of comorbidities and risk of complications.

Methods

Patients with Roux -Y Gastric Bypass (RYGB) and Sleeve Gastrectomy (LSG) from a prospective database were analyzed. Multiple regression analyses were used to predict preoperative comorbidities, %EWL and total weight loss (TWL) at 12 months after surgery, as well as resolution of comorbidities and risk of complications using the predictors AOO, YOO, age, EOSS and BMI.

Results

180 patients with a mean age of 46.8 ± 11.1 years and pre-operative BMI of 49.5 ± 7.5 kg/m² matched the criteria. The number of pre-operative comorbidities was higher for older age ($p=0.023$) and higher BMI ($p=0.036$), but was not related with AOO and YOO. Higher preoperative BMI was negatively associated with %EWL ($p<0.001$) but positively with TWL ($p<0.001$). Post-operative complications were positively associated with EOSS (OR=1.147; $p=0.042$) and BMI (OR=1.010; $p=0.020$), but not with age. AOO and YOO were not related to postoperative outcome.

Conclusion

Higher BMI was associated to lower %EWL but higher TWL. YOO and AOO did not influence outcome. Age, BMI and EOSS were the most important predictors for risk and success after bariatric surgery.

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P.075

COMPARING NON-INVASIVE BLOOD PRESSURE MONITORING ON UPPER ARM AND FOREARM WITH INVASIVE BLOOD PRESSURE MONITORING DURING BARIATRIC SURGERY

Bariatric registries

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Introduction

Intra-operative blood pressure (BP) monitoring in morbidly obese patients using standard non-invasive blood pressure (NIBP) oscillometric technique with upper arm cuffing is often inaccurate. Invasive arterial blood pressure (IABP) monitoring is the gold standard but not without risks.

Objectives

To assess the degree of agreement between forearm and upper arm NIBP with the IABP and to study the effect of pneumoperitoneum on blood pressure measurements.

Methods

A total of 36 obese patients awaiting bariatric surgery were prospectively recruited. At the time of surgery, the radial artery was cannulated for IABP monitoring on one upper limb whilst NIBP monitoring was done simultaneously on the contralateral upper arm and forearm. The NIBP and corresponding IABP readings were recorded at 10 minutes post-induction; 5, 15 and 30 minutes post-insufflation and 15 minutes post-exsufflation.

Results

Similar patterns of change in BP were observed across all three modalities at all time points. Forearm NIBP was shown to overestimate whilst upper arm NIBP underestimated the IABP therefore measurements using forearm and upper arm cuffing are not interchangeable intraoperatively. The forearm NIBP however showed better agreement to IABP as compared to upper arm NIBP.

Conclusion

The outcome of our study suggest that forearm NIBP is a viable alternative for BP measurement in obese individuals during laparoscopic bariatric surgery.



P.076

LONG-TERM FOLLOW-UP OF SILASTIC RING VERTICAL GASTROPLASTY

Bariatric registries

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Background

Silastic Ring Vertical Gastroplasty (SRVG) was a popular restrictive procedures 2 and 3 decades ago.

Introduction

SRVG was associated with high rate of reoperations for failure and severe complications. Long term out-come of those patients is limited.

Objectives

The aim of our study was to determine the long-term outcome (over 10 years) after SRVG in our institution.

Methods

Following IRB approval, we tracked patients who underwent SRVG between 1996 and 2001. Weight loss parameters, preoperative comorbidities were compared to the follow-up data.

Results

In total 89 patients underwent SRVG. Mean age was 52.4 ± 10.6 years and Body Mass Index (BMI) 46.1 ± 6.5 Kg/m². Preoperative comorbidities rate included diabetes mellitus (19.1%), hypertension (32.5%), hyperlipidemia (21.3%), joints disease (6.7%), mood disorders (7.8%) and dyspeptic disorders (3.3%). Mean length of follow-up was 208.5 ± 16.8 months. Thirty eight patients (43%) had to be reoperated for complications and 24 (30%) had another bariatric surgery. Follow-up BMI was 34.2 ± 9.8 46.1 ± 6.5 Kg/m² ($p < 0.001$). There was no improvement in any of the comorbidities. Joint disease and dyspeptic disorder were significantly higher at the follow-up.

Conclusion

SRVG showed a significant reduction of BMI in the long term follow-up. However, high rates of reoperations and revisions were recorded. The majority of our patients showed poor resolution of comorbidities and even worsening of Joints disease and dyspeptic disorder. Conversion to another bariatric procedure was not associated with a better long-term weight loss.

□
P.077

MORBIMORTALITY OF BARIATRIC SURGERY BY BARIATRIC GROUP IN MEXICO

Bariatric registries

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Background

The most bariatric procedure performed in Mexico is gastric sleeve, followed by malabsorption procedures. They offer favorable results for the control and management of obesity and comorbidities with a low risk.

Introduction

The global prevalence of obesity has doubled; 39% of adults are overweight and 13% are obese. In Mexico, 70% of adults are overweight or obese. Bariatric surgery offers solutions for the management and control of obesity and metabolic diseases through different techniques, safe and effective.

Objectives

To demonstrate that bariatric surgery is an effective and low-mortality alternative for the management of obesity

Methods

1477 procedures were performed from 2012 to 2016 in Mexico by 3 different surgeons under the same techniques, gastric sleeve, gastric bypass, SADI-S, Duodenal Switch. Patients not approved by multidisciplinary committee were excluded

Results

1477 patient's procedures were performed, 114 (75%) were female, 365 (25%) were men. The mean age was 33 (12-72) years; BMI 41.77kg/m² (35-101.3). Diabetic patients were 130 (4.7%); Hypertensive patients (13%). 1040 (70%) were gastric sleeves; 358 (24%) gastric bypass; Duodenal switch 50 (3.3%); SADI-S 23 (1.5%). Morbidity: Bleeding 40 (2.7%); Surgical wound infections 20 (1.3%); Leakage 16 (1%); Fistulas 4 (0.2%). Thrombosis 1 (0.06%). The mortality rate was 0.3% (5) all after gastric bypass procedure.

Conclusion

Bariatric surgery is a safe and effective technique in the treatment of obesity and its comorbidities, since even the risk of sudden death of an obese person is greater than the mortality of bariatric surgery, When the procedures are performed by an experienced surgical medical team.

P.078

INITIATION OF THE NATIONAL ISRAEL BARIATRIC SURGERY REGISTRY (IBSR)

Bariatric registries

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Introduction

The number of bariatric surgeries in Israel increased 4-fold between the years 2006-2013. However, on a national level, there was limited data on patient characteristics and surgery outcomes. .

Objectives

Establishment of a national bariatric surgery registry was essential for public health monitoring and surveillance

Methods

In June 2013 the Israeli Bariatric Surgery Registry (IBSR) was established by the Israel Center for Disease Control, Ministry of Health in collaboration with the Israeli Forum of Bariatric Surgery . Reporting of all bariatric procedures has been mandatory since. Data regarding pre-operative health status as well as perioperative information is submitted to the registry. Long-term outcome measures are retrieved from Health Maintenance Organizations' electronic records. Completeness of the registry is evaluated by cross-check with hospital medical records (HMR) using ICD9 codes of the bariatric procedures. For Ministry of Health certification, reporting to the registry was set at a minimum of 90% of bariatric procedures performed.

Results

All thirty-one participating hospitals reported to the national registry. Cross matching with HMR showed an increase in response rates from 48.5% in 2013 to 94% in 2015. The Ministry of Health has been using the registry data since to monitor the bariatric centers while, bariatric surgeons and other health professionals have been using the registry data for research.

Conclusion

The National IBSR is a comprehensive, validated database, which already made a valuable contribution to health care planning and improvement of quality of care. At the same time health care professionals are welcome to use the data for clinical research.

□
P.079

IS USE OF URSODEOXYCOLIC ACID OR PROPHYLACTIC CHOLECYSTECTOMY JUSTIFIABLE IN RYGB PATIENTS?

Bariatric registries

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Introduction

Studies have note increased incidence of Gall stones[1], cholecystectomies and related complications post RYGB^[2]. However the true increase in incidence is unclear. The use of Ursodeoxycolic acid has been suggested to decrease the incidence of gallstone formation post RYGB but their true impact on the incidence of cholecystectomies and related complications are unknown. Given these uncertainties should prophylactic cholecystectomy or use of ursodeoxycolic acid justifiable for patients undergoing RYGB.

Objectives

Incidence of cholecystectomy and related complication in our RYGB patients

Compare post cholecystectomy complication rate between our RYGB patients and our general population

Evaluate need for ursodeoxycolic acid use or prophylactic cholecystectomy based on results

Methods

Retrospective collection of cholecystectomy and related complications data from theatre register and hospital bariatric database from 2012 till February 2017. Analysis and comparison of this data with hospitals prospectively collected data for cholecystectomies on general population.

Results

We have carried out 341 RYGB. Of these 49(14.36%) had Cholecystectomy{Before - 18(5.27%) and After - 31(9.09%)}

Post cholecystectomy complication included bile leak, bleeding, infection, readmission, CBD stone or CBD injuries seen in

6.12% in the RYGB group and 7.89% in non RYGB cholecystectomy group.

Conclusion

Our incidence of cholecystectomies and related complications in RYGB patients are relatively lower than reported studies. Our post cholesectomy complication rate in RYGB patients are lower than our general population. Therefore we are not justified the need for routine ursodeoxycolic acid or prophylactic cholecystectomies in RYGB patients. To conclude we recommend cholecystectomy in RYGB patients be considered based on symptoms as with general population.

□
P.080

OBESITY AND METABOLIC SURGERY IN OMAN- MEETING THE CHALLENGES ON THE LONG JOURNEY.

Bariatric registries

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Background

The rising tides of global Obesity and metabolic diseases, has affected significantly the shores of the Arabian Gulf and Oman. Obesity is seen in around 40% of females and 25% of males. The Metabolic syndrome prevails in around 25%.

Introduction

At the Royal Hospital, Bariatric services started in 2012. This remains the biggest referral centre in the country. The patient load, is exponentially increasing with time.

Objectives

To shed a light on the standing of surgery in managing the disease and to emphasise the aspects of our practice that are unique to the setting in Oman.

Methods

Retrospective study from a prospective data base of all Bariatric procedures done at the Royal Hospital between 2012 and end December 2016.

Results

237 cases of Sleeve Gastrectomy were done. 8 of these also had a Duodeno-jejunal bypass. The Average pre-op weight of 130kg and BMI of 47 came down at 2 years follow up, to 82 kg and 30 respectively. Simultaneous surgery for other pathologies was done in 42%. There were no mortalities, no conversions, no anastomotic leaks, and no stenoses. Diabetes was in 35% of the group for whom resolution was seen in 85%.

Conclusion

With rising prevalence of Obesity and its complications in the region, managing this problem has risen to demand the highest planning priorities in the health services.

The choice of Bariatric surgery type in Oman takes in view, uniquely, the high prevalence of Gastric cancer in the country. The results to date offer an encouraging trend with positive early results in both weight loss and resolution of Metabolic problems.

□
P.081

BARIATRIC SURGERY AS A PART OF THE MULTIDISCIPLINARY TREATMENT OF MORBID OBESITY

Bariatric registries

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Introduction

Obesity is a chronic, progressive, multifactorial disease; which represents a high cost in public health. Because of its association with chronic diseases, it leads patients to worsen the quality of life, as well as to diminish the expectations of it.

Today is more than clear that the approach to this disease should be made by a multidisciplinary team, and only surgical treatment must reach only those patients with specific indications.

Objectives

Present our results of four years

Methods

1234 morbidly obese patients in multidisciplinary centers were analyzed. Were selected those who did not reach the expected weight loss. A total of 316 (27%) were submitted to laparoscopic gastric sleeve; from May 2012 to April 2016.

All of them were treated pre- and post-surgery by the multidisciplinary team.

Results

366 obese patients with average Body mass index of 46.5 kg/m² and weight of 134 kg, were operated. Weight-loss percentage at first year was 64%, and a BMI of 33 Kg/m², were found. We observed 6 main complications(2 %): 4 gastric leakage, 1 splenectomy and one reintervention by hemoperitoneum. No mortality was found.

Every patient were subjected to an intensive multidisciplinary treatment two months before surgery, last 15 days before it a liquid diet was established.

Conclusion

In every multidisciplinary team to treat morbid obesity disease, must be included a surgeon, and every surgeon who performs bariatric surgery should be supported by an interdisciplinary team; neither of them could get good results working alone.

□
P.082

LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS VERSUS LAPAROSCOPIC SLEEVE GASTRECTOMY: A SINGLE CENTER EXPERIENCE

Bariatric registries

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Introduction

Laparoscopic Roux-en-Y gastric bypass (LRYGB) and laparoscopic Sleeve gastrectomy (LSG) are the most common bariatric procedures.

Objectives

We report our experience after 180 consecutive patients who underwent either LRYGB or LSG, comparing safety, efficacy and effectiveness of these two bariatric procedures.

Methods

All patients that underwent either LRYGB or LSG in our bariatric department between January 2007 and December 2012 were included in this study. Technical aspects of the operations, results concerning morbidity, progressive weight loss and resolution of co-morbidities were recorded.

Results

From 180 patients 107 underwent LSG and 73 LRYGB. Excess weight loss (EWL%) for LRYGB at 6 months, 1 year, 3 years and 5 years was 56.1%, 73.4%, 74.6% and 78.4% respectively. EWL% for LSG at 6 months, 1 year, 3 years and 5 years were 53%, 65.2%, 66.5% and 55.8% respectively. Patients' highest rate of excess weight loss was achieved 5 years postoperatively for LRYGB and 18 months postoperatively for LSG. LSG with a BMI between 35 and 55 achieved a similar %EWL to LRYGB in the first 12 months ($p < 0, 05$). However, %EWL for LRYGB was significantly higher than LSG at the next 4 years. Thirty-day complication and readmission rates for LRYGB were 2% and 1% whereas in LSG were 0.6% and 0.3 %.

Conclusion

LSG has a similar safety profile comparing to LRYGB when performed from the same surgical team. However, after the first year, LRYGB patients achieved a considerably higher EWL compared to LSG patients. Randomized clinical trials are needed to better elucidate our findings.

□
P.083

A SMOOTH TRANSITION AFTER A NOT SO EXPERIENCED BARIATRIC SURGEON TAKES THE LEAD. A SINGLE CENTER EXPERIENCE.

Bariatric registries

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Introduction

Bariatric surgery is associated with a significant learning curve, especially when performing advanced procedures such as LRYGB.

Objectives

The aim of this study is to report our initial experience after a not so experienced bariatric surgeon took the lead of the bariatric department, since the retirement of the previous chief surgeon.

Methods

All patients that underwent bariatric procedure in our bariatric department between September 2015 and December 2016 were reviewed. Perioperative complications, mortality and postoperative data were recorded and a comparison with previous results were performed.

Results

27 bariatric procedures were performed (17 Laparoscopic sleeve gastrectomy- LSG, 3 laparoscopic Roux-en-Y gastric bypass-LRYGB, 6 laparoscopic gastric band removal-LGBR and 1 endoscopic gastric band removal). Mortality was 0%. Four patients needed reoperation (14,8%) with 2 of them treated by laparoscopy and 2 by laparotomy. EWL% and remission of comorbidities were similar to our previously published results.

Conclusion

Although higher rates of reoperations can be initially recorded in the learning curve of a surgeon, the safety and efficacy of bariatric procedures remains high and the transition from the "old" to "new" was crowned with success.

□
P.084

THE TREATMENT OF OBESITY IN YOUNG PEOPLE - A SYSTEMATIC REVIEW AND META ANALYSIS

Bariatric surgery in children, adolescents and young adults

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Background

Obesity in the young population is increasingly prevalent. It is associated with significant short- and long-term health consequences. Early and effective interventions are vital to prevent these sequelae.

Introduction

Treatment options are: lifestyle modifications, pharmacological therapies, endoscopic treatments and bariatric surgery. However, the comparative efficacy of these four interventions at achieving weight loss remains unclear in this younger cohort.

Objectives

To systematically identify and meta-analyse studies evaluating weight-reducing treatments in overweight and obese young people.

Methods

A systematic literature review of EMBASE and MEDLINE databases was conducted. Studies were included/excluded based on pre-specified eligibility criteria. Included patients were 21 years or younger. Lifestyle modification and pharmacological therapy searches were restricted to randomised control trials.

Results

The systematic search revealed 16,372 studies. 80 studies had complete data for meta-analysis. Bariatric surgery caused the most weight loss in the short- and medium-term [pooled estimate of mean body mass index (BMI) loss: 13.77kg/m² at 12 months postoperatively]. Lifestyle modifications and pharmacological therapy had a more modest impact on weight [pooled estimate of mean BMI loss: 0.99kg/m² and 0.94kg/m² respectively]. Endoscopic treatment showed statistically significant short-term weight loss, but there was insufficient data to meta-analyse.

Conclusion

Currently, bariatric surgery is rarely considered in this young cohort. Due to its high efficacy, physicians and patients should have a lower threshold for considering bariatric surgery when lifestyle and pharmacological interventions have failed. These non-surgical interventions provide smaller but significant impacts on BMI reduction. This knowledge will assist clinicians in determining a holistic, patient-centred treatment programme for young obese patients.

□
P.085

7-YEAR FOLLOW-UP OUTCOMES OF BARIATRIC SURGERY IN PRADER WILLI SYNDROME

Bariatric surgery in children, adolescents and young adults

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Introduction

Extreme obesity is a leading cause of death in Prader Willi Syndrome (PWS). While bariatric surgery has been established for morbid obesity, its role in PWS is yet to be supported due to the lack of long-term follow-up data.

Objectives

This study aims to investigate the long-term outcomes of bariatric surgery in PWS.

Methods

This was a prospective observational study on consecutive PWS patients who received bariatric surgery and multidisciplinary follow-up programs in our unit. Postoperative changes in weight parameters were evaluated.

Results

Between 2008 and 2013, five PWS patients (2 males and 3 females) with mean age of 18.8 ± 3.3 years and body weight of 96.6 ± 18.8 kg received sleeve gastrectomy (n=2), mini-gastric bypass (n=2) and Roux-en-Y gastric bypass (n=1). The mean follow-up duration was 6.4 ± 1.8 years. Their mean body-mass-index changed from 47.3 ± 6.9 kg/m² preoperatively to 36.5 ± 5.7 kg/m² at 1 year, and 35.3 ± 4.8 kg/m² at 2 years, but rebounded back to 36.0 ± 4.3 kg/m² at 3 years, 38.9 ± 6.9 kg/m² at 4 years, 42.7 ± 8.3 kg/m² at 5 years, 46.0 ± 9.5 kg/m² at 6 years, and overshoot to 48.4 ± 8.9 kg/m² at 7 years. Their percentage of excess weight loss reached 50.5% at 2 years but decreased to 48.1% at 3 years, 28.8% at 4 years, 11.1% at 5 years, 7.3% at 6 years, and 1.0% at 7 years. Two patients had complete weight rebound by 7 years.

Conclusion

Although bariatric surgery for PWS was effective in the initial postoperative period, remarkable weight rebound was observed after 2 years. The weight reduction effect of bariatric surgery in PWS was not sustainable and was completely lost over long-term follow-up.

□
P.086

ATTITUDES TOWARDS BARIATRIC SURGERY IN CHILDREN; A SURVEY AMONG GENERAL PRACTITIONERS

Bariatric surgery in children, adolescents and young adults

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Introduction

Over the past decades, the prevalence of obesity and morbid obesity in pediatric populations increased rapidly in Europe. In the Netherlands, pediatric obesity is treated with multidisciplinary lifestyle interventions, however long term benefits of these interventions are insufficient for most children. Bariatric surgery is only allowed in research settings.

Objectives

To investigate whether Dutch general practitioners (GPs) consider bariatric surgery as possible end-stage treatment in morbidly obese children and adolescents.

Methods

Invitations for an online, anonymous questionnaire were sent to all general practitioners enlisted in the local registries of two nationally representative Dutch medical centers.

Results

Among 490 invited general practitioners, 186 (38.0%) completed the survey. 124 GPs (66.7%) believed bariatric surgery could be effective after failure of multidisciplinary conservative treatment. However, 62 respondents (33.3%) would not consider referring for bariatric surgery, 46 GPs (24.7%) would refer only if obesity associated comorbidities are present. Amongst all physicians, the most frequently mentioned reasons for a secretive attitude towards surgery were uncertainty about long-term complications (n= 134, 72.0%) and long-term efficacy (n= 121, 65.0%). Of those who would consider referral, 22 GPs (28.9%) regarded bariatric surgery as symptom management, compared to 63 (58.3%) of those who would not consider referral (p < 0,001).

Conclusion

The majority of GPs believes bariatric surgery could provide additional value in the treatment of morbidly obese children and adolescents. Most GPs would consider referral, albeit only in the presence of comorbidities. The notion of bariatric surgery as symptom management and doubts about long-term complications and efficacy should be addressed.

□
P.087

OUTCOME OF LAPAROSCOPIC SLEEVE GASTRECTOMY IN ADOLESCENTS: A STUDY FROM QATAR

Bariatric surgery in children, adolescents and young adults

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Introduction

The year 2015 witnessed an increase in the number of bariatric surgery for adolescents.

Objectives

Evaluate the outcome of Laparoscopic Sleeve Gastrectomy (LSG) in patients less than 18 years of age.

Methods

The study uses retrospective analysis of all adolescents who underwent LSG, performed by a single-surgeon in 2015. Medical history and surgical outcome were analyzed. Data evaluated for one year included Weight Lost (WL), %Excess Weight Loss (%EWL), %Body Mass Index Loss (%BMIL), Mortality, and Complications. Descriptive statistics and t-test of mean analysis were used to analyze the data using SPSS software version 22.

Results

A total of 130 adolescents underwent LSG during 2015, comprising of 72 (55.4%) females with a mean age of 16.48 years (12-18), and mean BMI of 44.4 kg/m² (35 – 63.3). The percent excess weight loss at 1 month, 3 months, 6 months, and 1 year postoperatively was 16.6%, 33.0%, 53.3%, and 73.0% respectively. After one year post-sleeve, data revealed that the BMI dropped to an average of 13.4 kg/m².

Comparing genders, the female group had a lower WL (16 kg) with higher %EWL (83%). Also, BMI comparison shows that adolescent with BMI 40 and above had a higher WL (20.7 kg) with lower %EWL (33%). There were no complications and mortality reported.

Conclusion

Above findings reveal that performing LSG for a morbidly obese adolescent has a significant result in sustained weight loss and no short term complication rate. However, a long-term follow up study is needed to confirm the effectiveness of this surgery in adolescents.

□
P.088

FIVE-YEAR OUTCOME OF LAPAROSCOPIC SLEEVE GASTRECTOMY EFFECT ON PRE-DIABETIC, DIABETIC PATIENTS WITH MORBID OBESITY; A COMPARISON BETWEEN ADULTS AND ADOLESCENTS.

Bariatric surgery in children, adolescents and young adults

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Introduction

42% of all Qataris are obese with 7.9% prevalence in adolescents. Earlier effective treatment of obesity in adolescent population can potentially reduce the risk of developing obesity-related complications during adolescent life and later on adulthood.

Objectives

Comparing outcomes of Laparoscopic Sleeve Gastrectomy in adult vs adolescent at one and five years; along with obesity related comorbidities.

Methods

Retrospective analysis of prospectively collected database of 139 adult vs 91 adolescent patients at one and five years post-operatively.

Results

Average age for adults and adolescents was (37.4±11.4SD vs 17± 1.5SD), while pre-operative BMI was (48.4± 8.7 vs 47.6±7.5). At one year postoperative outcomes for adults and adolescents showed; BMI: 34.9±7.2SD vs 36.4±7.3SD, %EWL: 54.8±29 vs 49.48±25.8. At 5 years EWL% and TWL% dropped to 78± 12 for adolescents and 35.8± 11.5 for adults (P= 0.0001).

44 adults and 8 adolescents were diabetics. At one-year adults' HbA1c dropped from 8.44±1.43SD to 8.23±1.91SD (p=0.015) while adolescents' HbA1c dropped from 10.67±3.6SD to 6.06±0.94SD (p= 0.04). Cure rate for adults and adolescents were 67.5% vs 57% respectively. At one year all adolescents' prediabetics normalized their HbA1c compared to 96.4% adult. Complications rate for adults and adolescents were (3.5% vs 4.4%). For adults and adolescents; post-operative bleeding (1.4% vs 0%), leak (0.7% vs 0%), and surgical site infection (0.7% Vs 0.7%) respectively. One adult developed stenosis had endoscopic dilatations.

Conclusion

At 12 months post-operatively, LSG shows comparable results in adults and adolescent in terms of weights measures and complications. After 5 years; adolescents group shows favourable results particularly for diabetes.

□
P.089

SITUATION OF BARIATRIC SURGERY IN MEXICAN TEENAGERS BY SURGICAL GROUP.

Bariatric surgery in children, adolescents and young adults

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Background

Over 30% of children and adolescents in the United States are overweight or obese. The prevalence of obesity in children under 14 years reaches 21.4%.

Introduction

In Mexico, 1 of 3 adolescents are overweight or obese, representing more than 5 million young people

Objectives

analyze the situation of bariatric surgery in Mexico as an alternative to the epidemic of obesity in adolescents

Methods

Twenty-seven adolescents between the ages of 12 and 17 were included, all of whom were carefully evaluated along with their parents by a multidisciplinary team and pediatric committee

Results

Twenty-seven patients were included, 10 (37%) were men, 17 (63%) women, mean age 15.7 years, mean BMI (35-73.2), 44, 14 (51.85%) presented insulin resistance, 1 (3.7%) patient with type 2 diabetes mellitus, 2 (7.4%) hypothyroidism, hospital stay 1-3 days (1.19). Gastric sleeve was performed in 23 (85.1%) patients, Gastric Bypass 3 (11.1%), SADI-S 1 (3.7%), minor bleeding complications 4 (14.8%), transfusion 1 (3.7%), surgical wound infection 3 (11.1%), morality 0%. The average excess weight loss was 80% after 12 months of follow-up. Glycosylated hemoglobin levels in those with insulin resistance and diabetes remained on average 5.3% at two years of follow-up; There wasn't decrease in the educational performance of each patient, nor any psychological alterations

Conclusion

Bariatric surgery in adolescents is safe and effective, it doesn't affect growth and development; it improves the quality of life and generates good habits forever.

□
P.090

NATIONAL SURVEY FOR BARIATRIC PROCEDURES IN PEDIATRIC PATIENTS: LONG TIME FOLLOW-UP

Bariatric surgery in children, adolescents and young adults

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Background

In 1998 the WHO warned that obesity was alarmingly increasing, especially in the child population.

Introduction

The role of bariatric surgery in adolescent is still under discussion worldwide.

Objectives

The aim of this study is to report a multicentric Italian survey for bariatric procedures in adolescents and the outcome with a medium and long time follow-up.

Methods

We retrospectively analyzed consecutive data added into the Italian register of the society for bariatric surgery (period 2000-2010). We evaluated all patients treated in a 10 years period with a mean follow-up of 5 years. Inclusion and exclusion criteria were created. All patients were aged between 13 and 18 yrs. We evaluated and compared clinical and surgical data.

Results

After reviewing medical charts, 173 patients were considered for the study; 85 patients were treated with AGB, 47 with intragastric balloon, 26 with SG and other 15 patients with malabsorptive techniques. Among clinical data, there was a statistical difference in term of %EWL between techniques only after 1 year post-op ($p > 0.05$); at 5 years, considering the % of patients studied, sleeve gastrectomy had the best %EWL respect to other techniques ($p < 0.05$); at 5 year more than 90% resolved their comorbidities especially hypertension, dyspnea, orthopedic problems and dyspnea.

Conclusion

This study is the first reporting a National survey in adolescent; more than 80% of patients are followed till 4 years post-op but only few patients (less than 5%) till 10 years. Our results demonstrated that sleeve gastrectomy in adolescent is safe and had a better %EWL respect to other techniques.

□
P.091

GASTRIC SLEEVE VERSUS GASTRIC BYPASS SURGERY IN ADOLESCENTS AND YOUNG PATIENTS: WHAT IS THE BETTER OPTION?

Bariatric surgery in children, adolescents and young adults

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Introduction

The prevalence of obesity in adolescents and young patients is steadily increasing and bariatric surgery has become a standard treatment for selected patients. Sleeve gastrectomy (SG) and gastric bypass (GB) are the available standard procedures for adults. However, it remains unclear which operation should be offered to adolescents/young patients.

Objectives

Therefore, we compared the results of GB and SG in adolescents/young patients.

Methods

All patients undergoing bariatric surgery <26 years were prospectively assessed between 01/2013 and 01/2017. The choice of the operation technique was based on the interdisciplinary meeting. The primary end point was weight loss at one year. Secondary end points were perioperative complications (Dindo classification) and reoperation rate.

Results

We assessed 104 patients with a mean age of 22.7 years (range 17.2-25.8 years). The mean follow up was 547 days. 87 patients underwent GB surgery and 17 had a SG. The mean BMI was 44.9kg/m² at the time of operation. Weight loss was similar in both groups at one year with a BMI of 29.5kg/m² in the bypass versus 31.9kg/m² in the sleeve group (NS). The perioperative complication rate (grade 2 or less) was 4.5% (4/87) in the bypass and 11.8% (2/17) in the sleeve group (NS). Six (6.8%) patients underwent laparoscopy for internal hernia in the GB group. No reoperation was observed in the SG patients.

Conclusion

GB and SG in adolescents and young patients are both safe and effective regarding weight loss. We observed a higher rate of reoperations in the GB group, mainly due to internal hernia.

□
P.092

SLEEVE GASTRECTOMY FOR CHILDREN AND CONVERSION RATE

Bariatric surgery in children, adolescents and young adults

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Introduction

The Incidence of childhood obesity is increasing worldwide and an early intervention is necessary to avoid any possible comorbidities.

Objectives

The aim of this study is to analyse results obtained from children aged between 8 and 12 who underwent sleeve gastrectomy at our centres.

Methods

In the time period 2006-2014, we have performed 36 sleeve gastrectomies for children aged between 8 and 12 years. 34 (94%) were available for follow up between 3-10years. We collected our data prospectively. Preoperatively recorded data included age, sex, comorbidity, body mass index (BMI). Postoperatively recorded data included, intra-and post operative morbidity and mortality, the conversion rate to gastric bypass and percentage of excess weight loss (%EWL) at 3,6,12-months and then annually for up to 10 years postoperatively.

Results

The Mean preoperative BMI was 47kg/m². 5(15%)children had Prader Willi Syndrome. Weight loss was at it's highest within the first 2 years and was followed by an increase in weight within the first 5 years postoperatively. 10 children had a conversion to omega gastric bypass within the first 5 years. All 5 children with Prader Willi Syndrom lost weight after undergoing a conversion to omega gastric bypass. Prior surgery, 30 patients (83%) had comorbidities. Following the surgery the number decreased significantly. 25 patients maintained an excess weight loss between 25-52%.

Conclusion

sleeve gastrectomy seems to be less effective in children and especially in children with Prader willi syndrome. It could however be considered as a bridging procedure. An alternative procedure to be considered is the omega bypass.

□
P.093

WEIGHT LOSS, REDUCTION OF COMORBIDITIES AND PSYCHOLOGICAL CHANGES AFTER BARIATRIC SURGERY IN YOUNG ADULTS: PROSPECTIVE COHORT STUDY

Bariatric surgery in children, adolescents and young adults

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Introduction

Amplification of the current criteria for bariatric surgery is requested, due to the increasing incidence of obesity at childhood and the modest and little to no effect of conservative treatments on the long term. Possible disadvantageous effects on growth and development are used as counter-argument. On the other hand, the consequences of obesity during puberty on several aspects of social functioning are not to be ignored.

Bariatric surgery is an important part of the treatment in adults, when the IFSO criteria are met at an age above 18 but to change the current criteria and lower age it is important to know how our youngest patients are doing after bariatric surgery.

Objectives

To evaluate the results of bariatric surgery in young adult morbid obese patients.

Methods

All preoperative and perioperative data from patients aged 18-25, between 2010 and 2014 were retrospectively collected. Follow-up data was then collected prospectively using questionnaires.

Results

78 Patients were included with an mean age of 22.4 ± 3.4 years at time of surgery. 65% underwent a Gastric Bypass (RYGB), 26% a Sleeve Gastrectomy, 6% an Adjustable Gastric Banding and 2% underwent a redo-RYGB.

Mean follow up time was 27.7 ± 9.6 months; mean %Total Body Weight Loss (TBWL) 1 and 2 years postoperatively was 31.9 ± 8.9 and 33.1 ± 10.7 respectively. Preoperatively 6 patients (7,7%) had oral-drug dependent Diabetes Mellitus, with 100% remission after 1 year.

Conclusion

Bariatric surgery is an effective and safe treatment of obesity in our youngest patients group. The results are comparable with the most operated group with an age of 35-50 years.

□
P.094

FREQUENCY OF BARIATRIC SURGERIES DEVELOPED IN BRAZIL BETWEEN 2003 AND 2012

Bariatric surgery in children, adolescents and young adults

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UnB - Brasília (Brazil)

Introduction

Obesity is a complex disease, being related to demographic, epidemiological and nutritional transitions, as well as diseases such as hypertension, diabetes, among others.

Objectives

To analyze the frequency of bariatric surgeries performed in Brazil between 2003 and 2012.

Methods

Retrospective and comparative study. Data were obtained from the Ministry of Health (MS) and the Brazilian Society of Bariatric and Metabolic Surgery (SBCBM).

Results

A total of 437.696 procedures were performed, with mean and standard deviation ($40,350 \pm 20,803,38$). Of these, 92.20% ($n = 403.500$) were performed by the private sector and 7.8% ($n = 34.196$) by the public service. The year 2012 was the one with the highest frequency, registering 17.8% ($n = 78.031$) and the lowest in 2003 with 4.05% ($n = 17.778$).

Conclusion

The study demonstrated an increase in CB in the historical and geographical clipping analyzed and also an increased implementation of this technique by videolaparotomy.



P.095

LAPAROSCOPIC BARIATRIC PROCEDURES WITH THE SURGEON IN SITTING POSITION

Bariatric surgery in children, adolescents and young adults

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Background

The advantages of Robotic surgery in comparison to standard laparoscopic surgery is the ability to do surgery in sitting position and 3D view and the ergonomic of movement and third hand assistance but the disadvantages is one field surgery, the presence of a second surgeon in the field, extra expenses, the elongated time and absence of tactile sensation and the disadvantages of standard laparoscopic surgery is increased musculoskeletal complaint.

Methods

I report my experience in the field of Laparoscopic surgery at the American University of Beirut Medical Center and affiliated hospitals where I shifted all laparoscopic procedures including Bariatric procedures to sitting position with 100% completion of the procedures in the first 600 bariatric cases.

Results

Laparoscopic sitting position will allow you to do long list surgery with decreased muscle fatigue, back and knee pain.

Conclusion

Therefore, laparoscopic surgery is feasible in the sitting position and can maintain all the advantages of standard laparoscopies and avoid the disadvantages of Robotic surgery.



P.096

OUTCOME OF BARIATRIC SURGERY IN ELDERLY PATIENTS \geq 65 YEARS OLD

Bariatric surgery in the over 65's

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Introduction

Both obesity and life expectancy is increasing worldwide.

Objectives

The aim of the present study was to report the outcomes of bariatric surgery in patient's \geq 65 years of age.

Methods

A retrospective review of prospectively collected data from patients aged \geq 65 years who underwent LRYGP and LSG in our institute from 2006 to 2016. The data analyzed included age, preoperative and postoperative weight and body mass index, postoperative complications, and co-morbidities.

Results

A total of 47 patients \geq 65 years (66.5 ± 0.2 years) underwent bariatric surgery in our institute. Of these 47 patients, 21 patients (44.68%) had undergone LRYGP, 20 patients (42.55%) LSG, and 6 patients (12.76%) conversion of gastric band (5 patients) and Maison (one patient) to LRYGP. The mean preoperative weight and body mass index was 109.06 ± 2.33 kg and 40.93 ± 0.74 kg/m², respectively. The median length of follow-up was 12 months (range 1–48). The overall complications rate was 23.4%. No mortality occurred.

For 21 patients, the mean percentage of excess weight loss and body mass index was 77.5 ± 6 % and 29.7 ± 1 at 12 months..

The resolution of diabetes mellitus, hypertension and Obstructive sleep apnea syndrome was 70%, 57%, 75% and 100 % respectively.

Conclusion

Bariatric surgery in carefully screened patients \geq 65 years can be performed safely and can achieve improvement in co-morbidities.

□
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BARIATRIC SURGERY IN ELDERLY PATIENTS (OVER OR EQUAL 65 YEARS OLD): ANALYSIS OF 28 CASES.

Bariatric surgery in the over 65's

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Introduction

Obesity and cardiovascular disease are leading causes of death and disability worldwide. Both are frequent problems in elderly patients. Weight loss induced by surgery has proven to be efficacious in treating obesity and its comorbidities. Controversy exists regarding the effectiveness and safety of bariatric/metabolic surgery in elderly patients

Objectives

To present our results of elderly patients who underwent bariatric surgery at a high volume center over the last 10 years.

Methods

From 2006 to 2015, 28 elderly patients (>65 years old) underwent bariatric surgery, at a large medical center. All of them were assessed by a multidisciplinary team and discussed in a Committee. All patients underwent laparoscopic sleeve gastrectomy (LSG) or Roux en Y Gastric bypass (RYGB).

Results

The number of patients was: 23 LSG and 5 RYGB. The average age and BMI were 67 (range 65 - 71) and 35 (range 30 - 45), similar for both procedures. All patients had 3 or more comorbidities and the most frequent were dyslipidemia and hypertension. No complications neither mortality were reported for both procedures. Mean excess weight loss at 1 year F/U was 72% for both procedures, 67% for LSG group and 77% for RYGB. Among hypertensive patients 33% achieve resolution, 50% among the dyslipidemic patients and 50% of the T2 diabetics.

Conclusion

Laparoscopic bariatric surgery is safe and effective procedure in obese elderly patients, similar to younger patients. It should be considered as a good option especially because life expectancy in western countries is well above 80 years.

□
P.098

OUTCOME OF BARIATRIC SURGERY IN ELDERLY PATIENTS \geq 65 YEARS OLD

Bariatric surgery in the over 65's

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Introduction

Both obesity and life expectancy is increasing worldwide.

Objectives

The aim of the present study was to report the outcomes of bariatric surgery in patient's \geq 65 years of age.

Methods

A retrospective review of prospectively collected data from patients aged \geq 65 years who underwent LRYGP and LSG in our institute from 2006 to 2016. The data analyzed included age, preoperative and postoperative weight and body mass index, postoperative complications, and co-morbidities.

Results

A total of 47 patients \geq 65 years (66.5 ± 0.2 years) underwent bariatric surgery in our institute. Of these 47 patients, 21 patients (44.68%) had undergone LRYGP, 20 patients (42.55%) LSG, and 6 patients (12.76%) conversion of gastric band (5 patients) and Maisson (one patient) to LRYGP. The mean preoperative weight and body mass index was 109.06 ± 2.33 kg and 40.93 ± 0.74 kg/m², respectively. The median length of follow-up was 12 months (range 1–48). The overall complications rate was 23.4%. No mortality occurred.

The mean percentage of excess weight loss and body mass index was 77.5 ± 6 % and 29.7 ± 1 at 12months.

The rate of resolution of diabetes mellitus, hypertension and obstructive sleep apnea syndrome was 70%, 57%, 75% and 100 %respectively.

Conclusion

Bariatric surgery in carefully screened patients \geq 65years can be performed safely and can achieve improvement in co-morbidities.

□
P.099

BARIATRIC SURGERY IN OVER 65 AGE GROUP GIVES GOOD RESULTS

Bariatric surgery in the over 65's

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Background

Bariatric surgery is being practiced with a lot of enthusiasm and with very good results in the Indian subcontinent for the last 12 years.

During the initial periods, all of us have taken a cut off age between 18 to 65 for the needy people.

Introduction

We have realised that there is a good group of needy population over the age of 65 with BMI of more than 35 with and without comorbidities.

With the advent of newer technology and support systems, we have ventured into doing bariatric procedures like sleeve resection, gastric bypass (both Roux-en-Y) and OAGB in these elderly.

Objectives

Objective is to check out how these elderly population behave with various bariatric and metabolic procedures compared to their younger counterparts.

Methods

We have performed 324 sleeve resections and 85 gastric bypass procedures in the last 5 years in our institution in the age groups below 65 years.

For the above 65 age group we have performed 22 sleeve resections and 6 bypass procedures in the similar period.

Results

Results

Less than 65 age - excess wt loss mean BMI 47 to 26, resolution of HTN in 88%, Resolution of DM in 77%, knee joint arthritis 90%.

Over 65 - excess wt loss mean BMI 46 to 28, resolution of HTN in 80%, resolution of DM in 75%, knee joint arthritis in 95%.

Conclusion

Bariatric surgery is very much feasible and safe in over 65 age group with comparative results to those of younger population.

□
P.100

BARIATRIC TOURISM - A SINGLE CENTRE EXPERIENCE

Bariatric surgery tourism

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Introduction

Understanding the economic implications of medical tourism has been a growing concern for the NHS. This is particularly true for bariatric services inheriting patients with post-operative complications who require long-term follow-up.

Objectives

To assess the impact of bariatric tourism on our bariatric service and resources.

Methods

Patients known to our bariatric team from 2014-2017 who had undergone their initial procedures outside of the UK were identified through MDT co-ordinator records. Clinic notes were reviewed for baseline characteristics, initial procedure, reason for referral, investigations and treatment provided. Reference costs from the Finance Department and DoH were used to estimate the cost of treating this cohort.

Results

22 patients were identified; 16 females, 6 males with mean BMI at surgery =44kg/m². Initial procedures were performed in 13 countries outside of the UK; 11 patients had laparoscopic insertion of gastric band, 3 Roux-en-Y gastric bypass, 5 sleeve gastrectomy, 1 duodenal switch and 2 loop gastric bypass. 16 patients were referred from primary care, 4 presented via A&E and 2 from other specialities. Reasons for referral included dysphagia (27%), abdominal pain (22%), weight regain (14%), routine follow-up (14%), reflux (9%) and other (14%). These patients required a total of 80 surgical, 16 dietitian and 38 specialist nurse clinic appointments with a combined cost of £17,942. 11 patients required further surgery and incurring hospital admissions. Total cost of treatment and assessment was £74,300.

Conclusion

Patients undergoing bariatric surgery require lifelong follow up and monitoring. This responsibilities falls to the NHS for patients operated outside the UK at significant cost.

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THE BURDEN OF BARIATRIC TOURISM TO THE NATIONAL HEALTH SERVICE: OBSERVATIONAL STUDY AND COST ANALYSIS

Bariatric surgery tourism

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Background

The number of patients seeking bariatric surgery abroad is on the rise. Patients who develop complications from these operations can often present to the National Health Service (NHS) as an emergency.

Introduction

The aim of this study was to characterise patients who present to NHS with complications from these operations, and assess the burden to the service.

Objectives

1. Present the case histories of patients who have undergone bariatric surgery abroad
2. Evaluate the cost to NHS providers
3. Describe the clinical impact on these patients

Methods

An observational study was conducted from October 2015 to April 2016 on patients presenting to the bariatric service at a tertiary hospital. The case histories were recorded, including the length of stay (LOS), investigations and interventions. Cost analysis was performed.

Results

Four patients were admitted during the 6 month study period, all as emergencies. Three required re-operation. All patients required multiple radiological and serological investigations. The median LOS was 9 days. One patient stayed in hospital for 42 days and was found to have an excessively narrow gastric sleeve. Two patients developed complications from operations not routinely performed in the UK – one patient developed portal vein thrombosis after gastric plication; another developed obstruction following an intra-gastric balloon that migrated. The management of all 4 patients incurred a financial loss to the hospital.

Conclusion

“Bariatric tourism” imposes substantial costs to the NHS. Unregulated, novel operations mean that patients can develop life-threatening complications which post a significant challenge to clinicians.

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INTERNATIONAL EMERGENCY BARIATRIC "TOURISM", WHAT IS THE COST?

Bariatric surgery tourism

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Introduction

Post-operative bariatric surgical complications although rare are often complex requiring specialist intervention and significant resource utilisation. As a specialist bariatric unit we provide an emergency bariatric surgery service, which although theoretically is primarily for the benefit of our local population, does accept all patients.

Objectives

To assess the volume and outcomes of "international" bariatric patients (ie patients operated on outside the UK) who presented as emergencies to our unit

Methods

Over a period of 2014-16, all patients presenting with bariatric complications who had previously had surgery abroad were prospectively recorded. The demographic and clinical profiles of these patients were analysed.

Results

A total of 7 patients were admitted to our institution with acute bariatric surgical complications related to procedures performed abroad. Of these 3 patients presented within 30 days of their primary surgery with complications (specifically leak following sleeve gastrectomy (2) and gastric bypass (1)). The remaining 4 patients presented with late complications (namely internal hernia (1); acute complications related to malnutrition (2) and obstruction secondary to migration of intra gastric balloon (1)). 4 of the 7 patients required immediate intervention (specifically balloon removal (1); Laparoscopy & washout (2) and laparotomy (1)) and 5 of the patients ended up requiring definitive revisional surgery at a later stage at our institution (stent insertion alone (1); stent insertion followed by excision of fistula tract (1);, reversal/refashioning of mini gastric bypass (2) and reversal of gastric bypass (1))

Conclusion

Although international bariatric emergencies are rare, these cases often require complex interventions with significant resource implications



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CHANGES TO TASTE AFTER BARIATRIC SURGERY: A SYSTEMATIC REVIEW

Basic science and research in bariatric surgery

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Background

Bariatric surgery is highly effective at achieving both weight-loss and metabolic improvements in obese patients. The underlying mechanisms are not yet fully understood.

Introduction

Due to the restrictive and metabolic effects of bariatric procedures, dietary changes post-operatively are common. Anecdotal evidence suggests that alterations in taste and taste perception may also contribute to dietary changes and enhance weight-loss.

Objectives

This review assesses evidence from both human and animal studies for the role of changes in taste preferences as well as taste and olfactory perception in weight-loss following bariatric procedure.

Methods

A systematic search of MEDLINE and EMBASE databases was carried out to identify all articles up to January 2017 investigating the role of gustation, olfaction and sensory perception in both animal and human studies of bariatric procedures.

Results

255 articles were returned following database searches (n=409), inclusions from bibliography searches (n=6) and deduplication (n=133). 69 articles were selected for full text review, of which 61 were included in the review. We found evidence supporting changes in taste perception and hedonic response following bariatric procedures. Changes include an increase in sensitivity to sweet and fatty taste stimuli and a decrease in hedonic response to sweet tasting and fatty taste stimuli, as well as an increase in smell acuity.

Conclusion

These findings suggest there is a change in taste perception following bariatric procedures, which may contribute to long-term weight-loss maintenance. Greater understanding of gustatory inputs in obesity and weight-loss may provide an effective adjunct in the quest to find effective non-surgical treatments for obesity.

FINANCIAL IMPACT OF CARE OF BARIATRIC SURGERIES BETWEEN 2003-2012

Basic science and research in bariatric surgery

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Introduction

The complexity of surgical treatment related to obesity is a major concern in the social, political and economic spheres, with several public policies, programs and health strategies implemented for this purpose. In this sense, bariatric surgery (BS) is constituted as a form of treatment for obesity as well as control of the innumerable related diseases.

Objectives

To analyze the financial impact in the implementation of BS implemented in "Brazil" between the years of "2003 to 2012".

Methods

Retrospective, comparative and quantitative study. The data were acquired from the General Coordination of Medium and High Complexity (CGMAC) of the Ministry of Health (MS).

Results

A total of 34.196 bariatric surgeries were identified in the historical and geographic data set, with mean, median and standard deviations of 6,217, 3,085 and 1,459,906 respectively. The year 2012 was the one that registered the highest frequency with 17.65% (n = 6.031) and the year 2003 the lowest with 5.20% (n = 1,778). In the analyzed period, R \$ 159,994,995.68 were made available, with the highest frequency being 20.50% (R \$ 32,762,588.52) and the lowest in 2003 (3.55%). \$ 5,709,696.83). The Gastroplasty procedures with intestinal shunt, Gastroplasty and vertical banded gastroplasty had respectively investments in the order of 73.40% (R\$ 117,402,720.88), 23.80% (R\$ 38,098,577.01) and 2, 80% (R\$ 4,493,697.79).

Conclusion

The study demonstrated the financial impact recorded in addition to an increase in the amount of financial resources made available for BS.

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BLOOD PHOSPHOLIPIDS PROFILE OF PATIENTS SUBMITTED ROUX-EN-Y GASTRIC BYPASS SURGERY

Basic science and research in bariatric surgery

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Introduction

Roux-en-Y gastric bypass (RYGB) is an effective method to achieve sustained weight loss. However, little is known about the metabolic adaptations patients go through after the procedure, due to remarkable changes in food intake as well as the anatomic alterations.

Objectives

We employed a metabolomics approach in 20 obese patients who underwent RYGB.

Methods

Fasting plasma samples were collected before, 15 and 90 days after surgery in order to assess clinical chemistry markers. Total blood samples (dry blood spots) were collected and subjected to phospholipid profiling using LC-MS/MS.

Results

RYGB resulted in significant weight loss with normalization of biochemical parameters. By analyzing 109 species of phospholipid in patients' blood, we found a decrease in the concentration of phosphatidylcholines (C34:2, C36:1, C36:2, C36:3, C38:3), lyso-phosphatidylcholines (C18:0, C18:2) and ether-phosphatidylcholines (C36:1, C36:2, C38:1, C38:2) early after surgery. On the other hand, sphingomyelin (C16:0, C18:0, C18:1, C24:1) levels increased. These effects remained 90 days after surgery. The decrease in triacylglycerol levels correlated positively with the decrease of PC36:3 ($r=0.65$, $p<0.0001$), PC38:0 ($r=0.59$, $p<0.0001$), PC40:1 ($r=0.53$, $p<0.0001$) and PC40:4 ($r=0.43$, $p<0.0016$). The decrease of IMC correlated positively with PC20:3 ($r=0.45$, $p<0.008$) and PCae 36:3 ($r=0.62$, $p<0.001$). The increase in Oleoyl-sphingomyelin levels correlated negatively with the decrease of Gamma-glutamyltransferase ($r=-0.51$, $p<0.02$).

Conclusion

Our data indicate that long chain fatty acid catabolism is increased in patients after RYGB as palmitic, stearic, oleic, linoleic and arachidonic acids concentration decreased in phosphatidylcholines. Catabolism of C20 fatty acids, saturated or polyunsaturated, correlated positively with triacylglycerol levels.

□
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BARIATRIC SURGERY AND EPIGENETICS OF PATIENTS WITH OBESITY AND DIABETES: A STUDY OF THE DNA METHYLATION REMODELING IN ADIPOSE TISSUE

Basic science and research in bariatric surgery

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Introduction

Epigenetic alterations, especially DNA methylation, may have an important role in the pathogenesis of metabolic diseases. Bariatric surgery is an optimal intervention, representing an opportunity to investigate epigenetic remodeling that may be related with an improved metabolic status associated to weight loss.

Objectives

Analyze the DNA methylation profiles in the adipose tissue of patients submitted to bariatric surgery (before and after surgery).

Methods

A prospective study with patients submitted to bariatric surgery carrying morbid obesity and T2DM. A subcutaneous adipose tissue (SAT) biopsy was collected at surgery. Global profiles of DNA methylation were analyzed initially and after 6 months with new SATs biopsies, and compared. We searched for differentially methylated CpG sites (DMCs).

Results

Twenty-four patients were enrolled (12 by group). Baseline characteristics were comparable, except for the metabolic parameters for the O+D group. A total of 1152 CpG sites were differentially methylated in O+D compared with OB patients. Genes with DMCs are involved in metabolic pathways related to regulation transcription ($p = <0.001$), cell adhesion ($p = 0.02$), regulation of cell proliferation ($p=0.09$) and negative regulation of macromolecules biosynthetic processes ($p=0.02$). DNA methylation after 6 months showed changes in both groups; most of DMCs reversed their differences. There was a high correlation between DNA methylation level and biochemical improvement

Conclusion

There is a remodeling of the DNA methylation profiles in SAT soon after bariatric surgery. Many genes with epigenetic remodeling were previously related to metabolic diseases, implying that weight loss could induce epigenetic changes that impact the metabolic status and health of obese patients

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ABNORMAL LIVER APPEARANCE DURING LAPAROSCOPY AND INTRAOPERATIVE IDENTIFICATION OF NASH IN THE OBESE

Basic science and research in bariatric surgery

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Introduction

Nonalcoholic steatohepatitis (NASH) is the leading cause of liver disease worldwide, partly due to the obesity crisis. An abnormal liver appearance is a common incidental finding during laparoscopy, however, its significance is not completely understood.

Objectives

We aimed to measure the validity of a visual grading score for identification of NASH in obese patients, potentially as a way to target intraoperative liver biopsies.

Methods

This is a prospective cohort study of obese adults undergoing bariatric surgery. The surgical team used a simple standardized visual grading score to evaluate the liver colour, size, and surface. This was compared to histology from an intraoperative liver biopsy.

Results

There were 151 participants, age 44.6 ± 12 years, BMI 45 ± 8.3 kg/m². Prevalence of NASH was 12.1%, with borderline NASH in 26.4%. Single visual components were not as accurate as using the total sum score of colour, size and surface texture. Presence of steatosis was the most accurately identified (AUROC 0.855, $p < 0.001$). AUROC for identification of NASH was 0.746 ($p = 0.001$). An optimal total score of ≥ 2 had a sensitivity of 75% and a positive predictive value of 23.8% for identification of NASH. Most patients with a completely normal-appearing liver will not have disease (negative predictive value 94.4%).

Conclusion

Identification of NASH intraoperatively based on visual cues is challenging. There is reasonable sensitivity for identification of disease using a visual grading score of ≥ 2 . Macroscopically normal livers are unlikely to have NASH or significant steatosis, and these patients do not benefit from routine biopsy.

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ROUX EN Y GASTRIC BYPASS, BUT NOT SLEEVE GASTRECTOMY, DECREASES PLASMA PCSK9 LEVELS

Basic science and research in bariatric surgery

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Introduction

Pro-protein convertase subtilisin/kexin type 9 (PCSK9) is a critical regulator of LDL cholesterol metabolism, acting as an endogenous inhibitor of the LDL receptor. While it has been shown that bariatric surgeries differentially affect LDL-C homeostasis, little is known about their effects on plasma PCSK9 concentrations.

Objectives

We aimed to investigate the relationship between circulating PCSK9, anthropometric and metabolic parameters after sleeve gastrectomy (SG) and Roux en Y gastric Bypass (RYGB).

Methods

We pooled the results of 2 prospective French study conducted in three centers (Nantes, Tours and Colombes). Patients under lipid lowering therapies were excluded. Plasma PCSK9 concentrations were measured by ELISA.

Results

105 patients (91% women) were included: 41 SG and 64 RYGB. Baseline characteristics were: body mass index (BMI): 46.8 ± 6.3 kgs/m², total cholesterol (TC): 205 ± 47 mg/dL, HDL-cholesterol (HDL-C): 46 ± 14 mg/dL, triglycerides (TG): 173 ± 137 mg/dL, LDL-C: 128 ± 37 mg/dL and PCSK9: 313 ± 160 ng/ml.

Plasma PCSK9 and LDL-C levels were significantly reduced after RYGB (-11,3%, $p=0.0001$; -7%, $p=0.0003$; respectively) but not after SG (+5,7%, $p=0.46$; +10,4%, $p=0.21$). However, there was no correlation in RYGB group between the variation of PCSK9 and the variation of LDL-C. In SG group only, there was a positive correlation between the reduction of PCSK9 and the reduction of TG after surgery ($r=0.33$, $p=0.047$).

Conclusion

This study demonstrates that RYGB, but not SG, reduces plasma levels of PCSK9. However, the regulation of PCSK9 does not explain the hypocholesterolemic effect of RYGB.

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HISTOPATHOLOGICAL, INFLAMMATORY AND HORMONAL CHANGES AFTER SLEEVE GASTRECTOMY AND VERY LOW CALORIE DIET IN AN ANIMAL MODEL OF NON-ALCOHOLIC FATTY LIVER DISEASE

Basic science and research in bariatric surgery

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Introduction

Non-alcoholic fatty liver disease (NAFLD) is nowadays the most prevalent chronic liver disease. Recent evidence based on observational data suggests that bariatric surgery could be an effective treatment not only via weight reduction but also by ameliorating NAFLD-related pathophysiological phenomena.

Objectives

The aim of this study is to compare the effect of very-low calorie diet (VLCD) and SG on NAFLD, in a high-calorie diet-induced animal model.

Methods

Thirty-five Wistar rats were divided in: control rats (n=7) and obese rats fed with a high fat diet (HFD). After 10 weeks, obese rats were subdivided in 4 groups: HFD (n=7); VLCD (n=7); and rats submitted to either sham operation (n=7) or SG (n=7). Both liver tissue and blood samples were processed to evaluate: steatosis and NASH changes on histology (Oil Red, Sirius Red and H&E); presence of endothelial damage (Rock2, moesin/p-moesin, Akt/p-Akt, eNOS/p-eNOS, CD31), oxidative stress (iNOS) and fibrosis (α SMA, col1, PDGF, VEGF) proteins on liver tissue; and inflammatory (IL6, IL10, MCP-1, IL17 α , TNF α), liver biochemical function and hormonal (leptin, ghrelin, visfatin and insulin) alterations in plasma.

Results

Both VLCD and SG were able to improve histological changes, but only SG induced a significant weight loss, improved endothelial damage and decreased cardiovascular risk by reducing IR (measured by HOMA-IR index), leptin, total cholesterol and triglyceride levels. No remarkable differences in inflammatory or fibrosis markers were found.

Conclusion

Our results suggest a slight superiority of SG over VLCD by improving histology, IR and cardiovascular risk related to NAFLD.

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EXPLORING THE VARIATION IN BARIATRIC SURGERY ACROSS LONDON: DOES ACCESS FOLLOW NEED AND TO WHAT EXTENT DO INEQUALITIES EXIST?

Basic science and research in bariatric surgery

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Background

Obesity is a significant public health challenge. Bariatric surgery (BS) is a proven and cost effective surgical intervention leading to sustained weight loss.

Introduction

In London, BS increased until 2013 when commissioning moved from local to regional arrangements. At this time guidance was also introduced, recommending individuals undergo 24 months of multidisciplinary weight management before BS.

Objectives

For each London borough this study aims to: (1) estimate the need for BS (2) identify 2011-2015 trends in BS (3) calculate crude BS rates per eligible 100,000 population (4) examine rates and discuss geographical, gender, ethnic and socio-economic disparities pre and post-2013.

Methods

NHS bariatric procedures were analysed using Hospital Episodes Statistical data from 2011-2015. The Active People Survey was analysed to determine eligible population for bariatric surgery. Surgery rates were calculated per eligible 100,000 population for each borough. An Ordinary Least-Squares regression model was fitted to the data. The gradient was tested for significance using a t-test.

Results

A negative linear relationship between BS rates in London boroughs and estimated need existed pre and post 2013. Variation in surgery rates existed in both periods however, a threefold decrease in variation occurred post 2013. Less than 1% of the eligible population accessed treatment over the study period. Ethnic, gender and geographical inequalities were evident but no relationship between surgery rates and deprivation.

Conclusion

Variation in BS rates and substantial unmet are evident in London. Neither local nor regional commissioning has affected access. However, the 2013 guidance appears to have limited access even further.

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"OBESITY PARADOX": DIFFERENTIAL EXPRESSION OF NRF2-DEPENDENT OXIDATIVE DEFENSE GENES IN OBESE COMPARED TO NON-SEVERELY OBESE PATIENTS WITH TYPE 2 DIABETES

Basic science and research in bariatric surgery

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Background

Although obesity is a strong risk factor for type 2 diabetes mellitus (T2DM), obese patients with T2DM have fewer diabetic complications. This counterintuitive observation has been coined the "obesity paradox".

Introduction

The underlying causes of the "obesity paradox" is unclear. Oxidative stress is one of the central players in the development of diabetic complications and may be different in obese and non-severely obese diabetic patients.

Objectives

To assess the defense systems for oxidative and carbonyl stress in the subcutaneous adipose tissue of patients with T2DM.

Methods

Fourteen obese and ten non-severely obese patients (Body Mass Index (BMI) $<35\text{kg/m}^2$) with T2DM were investigated. Subcutaneous adipose tissue was collected intraoperatively and RNA was isolated. The expression of various genes from the oxidative and carbonyl defense were examined and compared using real-time polymerase chain reaction (rt-PCR).

Results

Mean BMI of the obese patients was $49.8\pm 9.3\text{kg/m}^2$ compared to $32.8\pm 2.1\text{kg/m}^2$ in the non-severely obese group ($p<0.0001$). The transcription factor NRF2 (Nuclear factor (erythroid-derived 2)-like 2) was significantly higher expressed in obese patients than in non-severely obese patients (Fold Change 1.77 ± 1.48 vs. 0.32 ± 0.32 ; $p<0.05$). The NRF2 dependent genes (NQO1, GLO1, HMOX1) were all also significantly lower expressed in the non-obese patients ($p<0.05$). In contrast, SOD2 was similarly expressed in obese and non-severely obese diabetic patients.

Conclusion

Obese and non-severely obese patients with T2DM differ significantly in the expression of the master regulator of oxidative/carbonyl defense NRF2 and its dependent genes. A reduced anti-oxidative capacity may be the underlying cause of the "obesity paradox" regarding diabetic complications.

P.113

THE PREVALENCE OF NATIONAL OBESITY AND BARIATRIC PROCEDURES BETWEEN 2006 TO 2015: RESULTS FROM ISRAELI NATIONAL COLLECTIVE DATABASE.

Basic science and research in bariatric surgery

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Introduction

Background: Israel has one of the highest national rates of bariatric procedures (BP).

Objectives

The study investigated trends in obesity and BP over time

Methods

Methods: We linked 3 main Israeli national databases to assess the annual obesity prevalence (%) and incidence per 1 million inhabitants (p/M) of sleeve gastrectomy (SG), roux-en-Y gastric bypass (RYGB), adjustable gastric banding (AGB) and omega loop gastric bypass (OLGP) between 2006 and 2015. Time trends were analyzed using linear regression, assuming a Poisson distribution.

Results

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
*Obesity prevalence (%)	12.2		14.7			15.7		15.6		17.8
**Procedures Primary and recurrent not revision (p/M)	388.6	461.5	537.0	783.3	951.4	1278.1	1583.6	1692.6	1585.1	1624.7
All procedures	1830	2213	2621	3950	4882	6673	8412	3149	8726	9117
SG	44	200	388	1431	2674	4016	5967	6948	7215	6859
ABG	1573	1699	1857	2063	1740	2110	1658	1298	619	521
RYGB	213	314	376	456	468	547	787	903	892	1039
OLGB	0	0	0	0	0	0	0	0	0	699

*P for trend of obesity < 0.01 (rates were retrieved from national surveys in Israel conducted by Israel Center for Disease Control, Ministry of Health)

**P for trend of procedures per 1 M < 0.0001

Conclusion

Conclusions: The SG replaced AGB as the leading weight-loss procedure in Israel and was the main reason for the surge in BP incidence nationwide. At the same time frame, obesity epidemic continued to increase.

P.114

SIMPLE SCORE GRADING SYSTEM OF NON-ALCOHOLIC FATTY LIVER DISEASE IN AN OBESE POPULATION: EXPECTED VERSUS ACTUAL CORRELATION

Basic science and research in bariatric surgery

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Introduction

Nonalcoholic fatty liver disease (NAFLD) is the most common liver disorder in Western industrialized countries. Because of its established association with central obesity, systemic hypertension, dyslipidemia, and insulin resistance in the literature, NAFLD is thought to be the manifestation of the metabolic syndrome within the liver. Several studies have demonstrated a correlation between Body Mass Index (BMI) and NAFLD. However, a direct causal correlation may not exist in obese populations.

Objectives

The purpose of the following study is to examine the degree of NAFLD with respect BMI and overall liver size in patients who underwent liver biopsy during weight loss surgery.

Methods

The following study consists of one-hundred-sixty-three (n=163) bariatric patients (Male=65 Female=98) with ages ranging from 16-59 years of age who received various bariatric procedures. Pathology reports of liver wedge biopsies were quantified using a simplified NAFLD scoring system with values (0=no presence 1=mild/moderate 2= severe/chronic) categorized by degree of inflammation, steatosis, and fibrosis for a total maximum NAFLD score of six (6).

Results

Using a Pearsons moment correlation test, BMI and degree of NAFLD as quantified by our NAFLD simple scoring systems were plotted.

N	BMI Range	Inflammation (0-2)	Steatosis (0-2)	Fibrosis (0-2)	NAFLD Aggregate Score (0-6)	R-Value
36	≤ 40	0.444	0.920	0.333	1.694	0.1201
78	40<50	0.602	0.871	0.230	1.705	0.1104
49	≥ 50	0.408	0.836	0.326	1.570	- 0.0607
163	≥ 26.6	0.485	0.876	0.296	1.656	- 0.0357

Conclusion

NAFLD although commonly associated with increased BMI is not directly correlated to the severity of NAFLD. This is not to be confused with the onset of NAFLD, with nearly 75% of our obese subjects having some degree of NAFLD. As such, differentiation in severity of fatty liver should be further researched to determine the etiology of NAFLD.

□
P.115

IMPROVEMENT OF VOIDING CHARACTERISTICS IN MORBIDLY OBESE WOMEN AFTER BARIATRIC SURGERY: A SINGLE-CENTER STUDY WITH A 1-YEAR FOLLOW-UP

Basic science and research in bariatric surgery

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Background

It is well known that morbid obesity in women is related to lower urinary tract symptoms(LUTS), including urinary incontinence.

Introduction

Although several studies have reported on the improvement in urinary incontinence after bariatric surgery, few reports have focused on the detailed changes in other voiding characteristics.

Objectives

To demonstrate the real benefit of bariatric surgery on LUTS.

Methods

From August to December 2012, a total of 57 women out of 183 women who underwent gastric bypass agreed to be assessed for voiding dysfunction during their preoperative and 1-year postoperative evaluation using the international prostate symptoms core, quality of life score, an overactive bladder symptom score, a patient perception of bladder score, and a Sandvick questionnaire for urinary incontinence. For statistical analysis, the Wilcoxon sign rank and Fisher's exact tests were used to assess a significant change in voiding status.

Results

The mean age was 38.5 ± 9.5 and their mean BMI was 37.5 ± 5.9 . One year after, BMI showed a significant change, 9.5 ± 3.5 . For specific characteristic changes in voiding status, the international prostate symptom score, quality of life score, overactive bladder symptom score, and patient perception of bladder score revealed significant improvement over baseline: 3.2 ± 4.0 , $.6 \pm .9$, 1.6 ± 2.3 , and $.5 \pm 1.0$, respectively. For stress-related urinary incontinence as assessed using the Sandvick questionnaire, preoperative evaluation demonstrated the prevalence to be 40.74%, and 18.51% postoperatively.

Conclusion

At a 1-year postoperative follow-up after gastric bypass, there were significant improvements in voiding status as assessed by several standard urologic voiding questionnaires/indices.

□
P.116

EFFECT OF ROUX-EN-Y GASTRIC BYPASS SURGERY ON INTESTINAL AKKERMANSIA MUCINIPHILA

Basic science and research in bariatric surgery

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Introduction

Though the effect of Roux-en-Y gastric bypass (RYGB) surgery on type 2 diabetes mellitus(T2DM) is reliable,the mechanism is not clear.

Objectives

This study investigated changes in intestinal Akkermansia muciniphila and explored the mechanism underlying the effects of RYGB surgery on T2DM in diabetic Goto-Kakizaki (GK) rats.

Methods

Male diabetic GK rats (n=30) aged 8 weeks were randomly assigned to the surgery group (GK-RYGB) or sham surgery group (GK-Sham) (n=6 per group), 6 male Wistar rats aged 8 weeks served as controls (WS-Sham). Fasting blood glucose (FBG) levels, serum insulin, glucagon-like peptide-1 (GLP-1) , and the amount of A. muciniphila in stool were determined. Insulin and GLP-1 were measured by enzyme-linked immunosorbent assay, and A. muciniphila were detected by fluorescence-based quantitative polymerase chain reaction.

Results

The FBG was improved, serum GLP-1 and insulin increased significantly ($P<0.05$) in the GK-RYGB group after surgery compared to GK-Sham group. Before surgery, the amounts of A. muciniphila in the GK groups were significantly lower than in the WS group ($P<0.05$). After surgery, the amount of A. muciniphila in the GK-RYGB group increased markedly compared to that before surgery and to that in two Sham groups ($P<0.05$). In addition, the A. muciniphila amount was positively related to GLP-1 ($r=0.86$, $P<0.05$).

Conclusion

Our results demonstrated RYGB surgery may increase GLP-1 secretion, elevate serum insulin, thereby contributing to a significant reduction in blood glucose. The increased amount of A. muciniphila after RYGB surgery may be related to elevate GLP-1 secretion.

□
P.117

SLEEVE GASTRECTOMY STRENGTHENS INTESTINAL EPITHELIAL BARRIER IN OBESE RATS

Basic science and research in bariatric surgery

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Introduction

Obesity increases the intestinal permeability and induces subclinical endotoxemia. The level of endotoxemia in obese subjects is decreased after sleeve gastrectomy (SG), but the etiology is still obscure.

Objectives

To evaluate the change of epithelial barrier of intestine in high-fat diet-induced obese (DIO) rats receiving SG, sham operation (SO), and pair-fed (PF) SO.

Methods

Sprague-Dawley DIO rats are randomly assigned to SG, SO, or PF groups. Tissues of the proximal jejunum and distal ileum are collected 2 weeks after operation. Intestinal permeability is determined by mucosal-to-serosal dextran flux measured in Ussing chambers. Histologic structures of the small intestine stained with hematoxylin and eosin are observed by a light microscope. Expression of occludin in the intestinal mucosa is examined by western blots.

Results

The body weight is reduced after SG and PF compared with SO. Reduced dextran permeability is found in the distal ileum after SG. The mucosal level of occludin in distal ileum is also higher after SG. Moreover, increased villus height and crypt depth are found in the distal ileum of rats receiving SG.

Conclusion

SG strengthens intestinal epithelial barrier in DIO rats. The finding may explain why SG decreases the serum level of endotoxemia.

□
P.118

DEVELOPMENT OF INSULIN RESISTENCE IN OBESE WISTAR MODEL AND THE ROLE OF SLEEVE GASTRECTOMY SURGERY IN GLUCOSE METABOLISM

Basic science and research in bariatric surgery

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Background

Obesity and its comorbidities, including type 2 diabetes, have been promoting important changes in the morbimortality profile of the human population, and have a direct impact on life expectancy.

Introduction

Sleeve gastrectomy has been demonstrating not only rapid weight loss but also improved glycemic control in obese animal models.

Objectives

Verify the development of insulin resistance in high-fat diet-induced obesity rat model and investigate the role of vertical sleeve gastrectomy (VSG) on glucose metabolism.

Methods

Thirty-six Wistar rats were fed during 6 months on a high-fat diet and fructose at 20% to induce obesity. At 28-week-old the obese rats were divided into three groups: sleeve gastrectomy (SG), pair fed (PF) and ad libitum (AL), being the SG group undergoing VSG, while the others to the exploratory laparotomy without gastric intervention. Blood fasting glucose as measured weekly, before and after the surgery, as well as their levels after the oral glucose tolerance test (OGTT). Other measurements included daily body weight and food intake.

Results

After 24-week of high-fat diet-induced, 78% of the animals developed insulin resistance with values above 140mg/dL and there was a p: 0,01 between SG an PF glycemic curves in the 7, 14 and 21 weeks of surgical postoperative period.

Conclusion

High-fat diet-induced obesity model is efficient in the development of overweight as well as insulin resistance. The results suggest that the observed changes in the glucose metabolism in SG group occur directly due to the surgical factor, independent of weight loss.

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P.119

EXPRESSION OF CHOLESTEROL TRANSPORT PROTEINS IN VISCERAL AND SUBCUTANEOUS ADIPOSE TISSUE OF MORBIDLY OBESE PATIENTS

Basic science and research in bariatric surgery

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Background

Lipids metabolism is a main feature of obesity.

Introduction

For unclear reasons only a part of obese patients develop metabolic complications.

Objectives

Our aim was to assess total and membrane expression of protein cholesterol transporters: SR-BI, ABCA1 and ABCG1 in both visceral adipose tissue (VAT) and subcutaneous adipose tissue (SAT) of obese subjects, treated surgically.

Methods

We studied 24 patients with BMI>35 undergoing bariatric surgery, divided into those with metabolic syndrome MetS+ (n=12) and without it (MetS-) (n=12). The control material was collected from 10 lean subjects (BMI≤26), undergoing elective laparoscopic cholecystectomy. The samples of VAT and SAT were collected from the upper abdomen, frozen, then divided into two parts to obtain tissue homogenate and plasma membrane fraction. Protein expressions of ABCA1, ABCG1 and SR-BI were determined using Western blot techniques. Plasma triglycerides, total cholesterol, LDL and HDL cholesterol, glucose and insulin were also assessed. The results were statistically analyzed with values of p<0.05 considered significant.

Results

We found a decreased total ABCG1 expression in VAT and SAT of MetS+ compared to MetS-. The plasma membrane ABCG1 expression in VAT decreased in MetS+ as compared to the lean subjects. The plasma membrane ABCA1 expression in VAT decreased in MetS-, compared to lean subjects. We did not observe any significant differences in the total or plasma membrane expression of SR-BI.

Conclusion

As ABCG1 is known to release cholesterol stored in the cells to constitute HDL fraction, decreased plasma expression of ABCG1 in VAT of MetS+ may contribute to metabolic complications in this subset of obese subjects.

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IMPROVEMENT IN NON-ALCOHOLIC FATTY LIVER DISEASE SCORE CORRELATES WITH WEIGHT LOSS IN ASIAN OBESE UNDERGOING BARIATRIC SURGERY

Basic science and research in bariatric surgery

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Introduction

Morbidly obese patients are at increased risk of non-alcoholic fatty liver disease (NAFLD). The non-invasive NAFLD score has a strong predictive value for liver fibrosis in patient's undergoing bariatric surgery.

Objectives

Study in Asian Obese the short term impact of bariatric surgery in improving NAFLD and correlation to weight loss

Methods

121 patients who underwent BS 2012 - 2015 were reviewed prospectively. Multivariate analysis was performed using pre-operative patient characteristics, biochemical markers and TANITA body analysis measurements to determine significant risk factors for a NAFLD score > 0.675. Additionally, the NAFLD score was calculated at 6 months and 1 year post-operatively to determine correlation with weight loss.

Results

Pre-operatively, 13.2% of our patient's had significant fibrosis by NAFLD score. Multivariate analysis showed that high BMI and low albumin level were associated with NAFLD score > 0.675. The mean decrease in NAFLD score after BS was -0.47 ± 0.96 and -0.52 ± 0.94 at 6 months and 1 year. This was significantly correlated with the amount of weight loss (kg) with an R coefficient = 0.419 ($p < 0.001$) and 0.345 ($p < 0.001$) respectively. Change in fibrosis score = $0.624 + (-0.042 [\text{weight loss in kg}])$. 75% of patients with NAFLD score >0.675 achieved resolution by 1 year post-operatively. Multivariate analysis for non-resolution of advanced fibrosis showed a lower platelet count to be of significance ($p = 0.04$).

Conclusion

Bariatric surgery in Asians obese significant improves NAFLD score and consequently, NAFLD. This correlates with the quantity of weight loss achieved.

□
P.121

IS SLEEVE SHAPE IN UPPER GASTROINTESTINAL SERIES RELATED TO GASTROESOPHAGEAL REFLUX DISEASE POST LAPAROSCOPIC SLEEVE GASTRECTOMY?

Basic science and research in bariatric surgery

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Introduction

LSG increases the risk of de novo GERD development, while fading out antireflux mechanisms, but can also act in protective manner against GERD. Sleeve formation is standardized on bougies, yet postoperatively in upper gastrointestinal series (UGIS) a few different shapes of sleeve can be distinguished after LSG.

Objectives

The aim of the study was to determine possible relationship of gastric sleeve shape in UGIS on POD1 to the incidence of GERD.

Methods

This prospective, observational study included patients aged 18-65 that underwent LSG in tertiary referral, academic center. On POD1 the UGIS was performed and sleeve shape was classified as: tubular; upper pouch; lower pouch; dumbbell; pseudodiverticular. Three months after the procedure patient completed "GerdQ" questionnaire and history of symptoms was taken. Endpoint was to analyze the influence of sleeve shape on risk for development of GERD in 3 month postoperative period. From 2015 to 2016, 47 patients completed follow-up [31 females, 16 males, median age 46].

Results

3 months after procedures GERD was found in 18 patients (38%). Identified sleeve shapes were upper pouch (32%), lower pouch (30%), dumbbell (21%), tubular (13%), pseudodiverticular shape (4%). In multivariate logistic regression sleeve shape did not contribute to postoperative GERD development (OR: 1.16; CI: 0.73-1.87) and other potential risk factors remained nonsignificant (age, BMI, alcohol, smoking, medications decreasing LES tone, hiatal hernia, DM2, hormonal disorders). The only significant factor was female gender (OR: 6.50; CI: 1.01-41.75).

Conclusion

The sleeve shape in UGIS on POD1 is not likely related to risk for postoperative GERD.

P.122

THE EFFECT OF BARIATRIC SURGERY ON IRISIN, PREPTIN AND ADROPIN SERUM LEVELS IN OBESE PATIENTS AFTER SIX-MONTH-FOLLOW-UP

Basic science and research in bariatric surgery

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Introduction

Irisin, preptin and adropin are peptides critical for regulating energy metabolism.

Objectives

To assess the serum levels of the three peptides in obese patients and the changes resulting from bariatric surgery.

Methods

Serum levels of irisin, preptin and adropin were measured by immunoassay before and after six months after bariatric surgery in 55 (45 women, mean age 42.4 ± 9.7 yrs, mean BMI 45.7 ± 5.8 kg/m²) obese patients qualified to bariatric treatment (30 to LAGB, and 25 to LSG). 15 healthy non-obese subjects (7 women) constituted the control group.

Results

Bariatric surgery resulted in reduction in BMI by $10,6 \pm 6.4$ kg/m². Before bariatric surgery serum level of irisin in obese patients was significantly lower than in controls (1.5 ± 0.4 vs. 1.9 ± 0.59 µg/ml; $p = 0.02$) and after six-month-follow-up significantly raised to 1.8 ± 0.8 µg/ml ($p = 0.02$) and was comparable to controls. Serum level of adropin before surgery was comparable to controls (264 ± 141 vs. 260 ± 102 pg/ml, $p = n.s$) and after six months significantly raised to 562 ± 262 pg/ml ($p = 0.000001$ vs. pre-operative results and $p = 0.0001$ vs. controls). Serum level of preptin in obese patients before surgery was non-significantly lower than in controls and non-significantly raised after treatment. The type of used bariatric surgery did not influence the serum levels of the peptides both before and after six months after operations.

Conclusion

Bariatric surgery may restore the normal level of irisin in obese patients. It also may increase the level of adropin. These changes may improve the energy metabolism, enhancing the effect of surgery.

P.123

VISUAL ANALYSIS OF BIOMARKERS IN PRE- AND POST-GASTRIC SLEEVES AND BYPASSES USING BEANPLOTS.

Basic science and research in bariatric surgery

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Introduction

In a high volume bariatric center, extensive laboratory panels are used to monitor patients prior and after surgery, e.g. to detect nutrient deficiencies. These parameters allow exploring the health state of bariatric patients and comparison of different patient groups.

Objectives

Visual analytics was used enabling comparison of biomarker distributions over time in patients who underwent either bypass or sleeve surgery.

Methods

Visual analytics through beanplots was applied to comprehensive laboratory data, collected from 2,367 bariatric patients containing both pre- and post-surgical data (6, 12 and 24 months). A beanplot is an alternative to the boxplot for visual comparison of univariate data between groups. For different laboratory markers their distribution and evolution before and after surgery were compared between two subgroups of interest, i.e. primary bypass and sleeve, in asymmetric beanplots.

Results

The sleeve and bypass groups were comparable in age and prevalence of comorbidities. Mean pre-operative BMI and percentage males were higher in the sleeve group. The effect of surgery on lowering HbA1c was similar for both surgery types. However, after bypass surgery the shift in distribution of cholesterol levels towards lower values was larger compared to sleeve. Enzyme levels of ASAT, ALAT, and alkaline phosphate in sleeve patients were higher presurgically but lower post-surgically compared to bypass.

Conclusion

Although retrospectively, visual analysis of these large population-based data using beanplots showed comparable results in reducing diabetes in both groups. Improved results for dyslipidemia are in favor of the gastric bypass. Whether sleeve is more effective in NASH treatment is subject for further investigation.

□
P.124

THE EFFECT OF THE BILIOPANCREATIC LIMB ON ENERGY EXPENDITURE AFTER DUODENAL-JEJUNAL BYPASS IN DIET INDUCED OBESITY RATS.

Basic science and research in bariatric surgery

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Introduction

The obesity epidemic continues to spread worldwide and bariatric surgery is effective therapy for sustained weight loss in obese patients. Our previous study shows that biliopancreatic limb (BPL) plays an important role in the control of weight gain, glucose tolerance, and increase of plasma bile acid levels after duodenal-jejunal bypass (DJB) in Otsuka Long-Evans Tokushima Fatty (OLETF) rats. However, the effect of BPL on energy expenditure is undetermined.

Objectives

Our objectives was to investigate energy expenditure in diet induced obesity (DIO) rats after DJB.

Methods

Male Wistar rats fed with high-fat diet were divided into the following three groups: DJB with a short alimentary limb (AL) and long BPL (long-DJB group), DJB with jejunectomy (short-DJB group) in which the entire length of the jejunum used for the BPL of the L-DJB group, and sham group. Body weight, food intake, glucose tolerance, fecal output, fecal fat, and energy expenditure were assessed postoperatively.

Results

In the long-DJB group, the weight gain was suppressed, and fecal output and fecal fat were increased compared to the sham group. Those effects shown in the long-DJB group were cancelled in the short-DJB group. There was no difference of the energy expenditure in the whole day between the three groups, however, glucose oxidation increased and lipid oxidation decreased in the long-DJB group.

Conclusion

The BPL plays an important role in the change of the energy balance with fat malabsorption in DIO rats. Especially, increased glucose oxidation may contribute to improvement of glucose metabolism.

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CONTRADICTION THE IFSO-STATEMENT: WEIGHT LOSS DOES NOT PREDICT IMPROVEMENT OF GENERIC QUALITY OF LIFE

Basic science and research in bariatric surgery

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Background

The International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO) states that: "...weight loss has a beneficial effect on HRQL [health related quality of life] that is directly proportional to the amount of weight lost."

Introduction

HRQL is a multidimensional construct comprising many dimensions of life and is measured with both generic and diagnose (obesity) specific questionnaires.

Objectives

We aimed to test the IFSO statement on the association between weight-loss and the generic RAND-36 questionnaire and the total scores of the obesity specific IWQOL-lite and PROSURG questionnaires

Methods

A longitudinal cohort study was conducted at the Department of Surgery at Haugesund Hospital (Norway) between 2007 and 2013. Of consenting patients (n=267) 206 (77%) answered mean (SD) 4.4 (1.1) years after surgery. Missing responses were imputed through multiple imputation. Blocks (time since surgery, personal characteristics, socioeconomic, comorbidities, surgical complications, post-operative contact, life crisis, and weight-loss) of variables were entered into hierarchical regression models with the HRQL-scales as dependents. The accumulated explained variance (r^2) and increase in r^2 after entry of each block of variables is reported.

Results

The generic RAND-36 physical and mental composite scores were significantly associated ($p < .05$) with socioeconomic ($r^2 = .145/r^2\text{-change} = .125$ and $r^2 = .172/r^2\text{-change} = .131$), comorbidities at baseline ($r^2 = .235/r^2\text{-change} = .090$ and $r^2 = .263/r^2\text{-change} = .091$) and surgical complications ($r^2 = .270/r^2\text{-change} = .035$ and $r^2 = .289/r^2\text{-change} = .026$). The obesity specific IWQOL-lite and PROSURG total-scores were significantly ($p < .05$) associated with weight-loss ($r^2 = .358/r^2\text{-change} = .129$ and $r^2 = .321/r^2\text{-change} = .068$).

Conclusion

Our study indicates that obesity specific HRQL is significantly associated with post-operative weight-loss, but generic HRQL is not. The statement that improved HRQL is directly proportional to weight-loss may be nuanced.

□
P.126

LIPID BLOOD SPECTRUM IN PATIENTS WITH METABOLIC SYNDROME AFTER BARIATRIC GASTRIC BYPASS SURGERY

Basic science and research in bariatric surgery

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Introduction

Elevated concentrations of low-density lipoproteins contribute to the development of atherosclerosis and its clinical consequences. High-density lipoproteins are still considered as "good cholesterol".

Objectives

The aim of the study was to evaluate changes in lipid spectrum parameters in patients with obesity and metabolic syndrome after laparoscopic gastric bypass.

Methods

The study is prospective, randomized, controlled. 107 patients (94 women and 13 men) were examined by random sampling for lipid spectrum analysis. All performed laparoscopic gastric bypass. The average age of the patients was 42.4 ± 5.7 years (15-69). BMI is 44.8 ± 4.3 kg/m². The mean follow-up period was 12 months.

Results

Before the operation, an increase in the average level of total blood cholesterol up to 5.9 ± 0.1 mmol/l. After the operation, it decreased to 5.14 ± 0.1 mmol/l ($p < 0.05$). The average levels of low density lipoprotein in patients before surgery was equal to 4.2 ± 0.1 mmol/l, after operation decreased to 3.7 ± 0.1 mmol/l ($p < 0.05$). Levels of very low density lipoproteins was within 0.35 ± 0.3 mmol/L. After the surgery is lowered slightly to 0.33 ± 0.1 mmol/l. This indicating a downward trend in lipoprotein measures ($p < 0.05$). Average blood level of high density lipoprotein before and after surgery was 1.2 ± 0.01 mmol/l and 1.67 ± 0.01 mmol/l respectively ($p < 0.05$). The average value of triglycerides before operations was $2.3 \pm 0,1$ mmol/l. After the surgery, all patients demonstrated a statistically significant decrease in their levels to $1,9 \pm 0,1$ mmol/l ($p < 0.05$).

Conclusion

Gastric bypass surgery improved the lipid profile with a statistically significant increase in high-density lipoprotein, lowering of low-density lipoproteins.

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RESTING METABOLIC RATE DECREASES PROPORTIONALLY TO BODY WEIGHT AFTER INTRAGASTRIC BALLOON INSERTION

Basic science and research in bariatric surgery

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Introduction

It was reported that obese individuals have a lower metabolic factor (MF), calculated by dividing resting metabolic rate (RMR) by current weight, than overweight individuals and individuals at healthy weight. Weight reduction leads to a decrease in RMR. It was found that lower RMR is a risk factor of weight gain among patients after RYGB. There are no studies evaluating the influence of intragastric balloon (IGB) on RMR.

Objectives

To evaluate changes in RMR and MF before and three months after IGB insertion.

Methods

RMR was assessed among thirteen morbidly obese patients (average weight: 145.7 ± 21.1 kg, BMI = 43.4 ± 8.0) before and three months after IGB insertion. RMR was measured using the expiratory collection open-circuit system.

Results

Three months after balloon placement, the weight loss on average was 15.0 ± 9.5 kg, range: 6–35 kg, 18.7 ± 11.8 percent excessive weight. RMR decreased by 9% ($p = 0.02$), similar to changes in body weight. MF did not change.

Conclusion

These results suggest that patients do not “switch” into an energy conserving state adapting to restricted consumption. An evaluation of whether individual changes in RMR and MF predict weight changes after removal of IGB should be undertaken.

This study was supported by the Polish National Science Centre: grant 2013/09/B/NZ7/03763.

□
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BARIATRIC SURGERY AS AN EMERGENCY PROCEDURE

Basic science and research in bariatric surgery

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Introduction

Bariatric Surgery has been advocated as a life-saving procedure for many threatening comorbidities. However, its use in an emergency set-up in a critically ill patient has been a controversy due to its high morbidity / mortality.

Objectives

To discuss the outcome of three morbid obese patients admitted to Critical care unit with respiratory arrest who underwent bariatric surgery in the emergency set-up.

Methods

There has been three references from the intensive care department for patients with morbid obesity and life threatening comorbidities who were admitted with complaint so f respiratory failure. Two of them were not able to be extubated and were performed tracheostomy. After metabolically optimising these patients, they were subjected to bariatric surgery. One patient underwent sleeve gastrectomy and two of them underwent one anastomosis gastric bypass.

Results

All three patients had an eventful post-op recovery, however recovered from their respiratory depression and were out of their ventilatory support and tracheostomy with in a week after surgery and out of Bi-Pap at the end of the first month post-op. They had comparable %EWL and resolution of comorbidities similar to an elective bariatric surgery patients.

Conclusion

Bariatric surgery as an emergency needs a dedicated intensive care, pulmonology & cardiology team to support the bariatric surgeon. The results are far more superior with regards to quality of life and compliance from the patient. However, it needs to be recommended only in a center of excellence.

□
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SUSCEPTIBILITY OF GASTRIC CANCER ACCORDING TO LEPTIN AND LEPTIN RECEPTOR GENE POLYMORPHISMS

Basic science and research in bariatric surgery

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Background

Leptin is secreted by adipocytes. Plasma leptin levels reflect the size of fat stores. Leptin also acts as a growth factor promoting the proliferation of cells.

Introduction

Among leptin polymorphisms, a common G-2548A leptin promoter variant, has been shown to be associated with either variations in serum leptin levels or the degree of obesity.

Objectives

The present study is a case-control study of gastric cancer among pre-treatment patients. We assessed the serum leptin levels and leptin and leptin receptor polymorphisms in Korean gastric cancer patients to clarify the role of leptin in relation to gastric cancer.

Methods

We measured the serum leptin concentrations of 48 cases and 48 age- and sex-matched controls. By polymerase chain reaction-restriction fragment length polymorphism, we investigated one leptin gene promoter G-2548A genotype and four leptin receptor gene polymorphisms at codon 223, 109, 343, and 656.

Results

There was no significant difference between the mean leptin concentrations of the patient and control groups, while BMI was significantly lower in gastric cancer cases. There was significant association between the *LEPR* Lys109Arg genotype and gastric cancer risk, heterozygotes for GA genotype had been proved to increase the risk of gastric cancer, and its corresponding odds ratio was 2.926.

Conclusion

This study has demonstrated a modestly increased risk of gastric cancer in cases harboring the *LEPR* 109Arg allele of the *LEPR* Lys109Arg polymorphism of the leptin receptor gene.

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DUMPING SYNDROME AFTER ROUX-EN-Y GASTRIC BYPASS: TOWARDS PATIENT TAILORED GUIDELINES

Basic science and research in bariatric surgery

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Background

The pathophysiology of dumping syndrome (DS) after Roux-en-Y Gastric Bypass (RYGB) is heterogeneous.

Introduction

The 2014 Interdisciplinary European Guidelines on Metabolic and Bariatric Surgery (IFSO-EC, EASO and EASO OMTF) recommend basic work-up for all patients. However, indications for detailed analysis are less well defined.

Objectives

We suggest a more patient-tailored approach.

Methods

A comprehensive search was performed in Cochrane, Google Scholar, PubMed, and ResearchGate on the guidelines for DS and potential indications for detailed analysis.

Results

Early DS (within 15 minutes after a meal) is primarily diagnosed on clinical grounds and detailed history. Gastric emptying studies have been used to support the diagnose, however in most cases dietary changes give immediate (<7-15 weeks) relieve and further investigation is considered unnecessary.

Late DS is encountered in the minority of patients and is supposed to be due to insulin response leading to hypoglycemia (2 to 3 hours after a meal). The exact underlying morphological substrate is still under investigation. Especially when presented as a late, fulminant and/or refractory complication with an abrupt beginning, these patients should not be labeled DS purely based on suggestive symptomatology. Detailed (pancreatic) analysis is justified to exclude other rare causes of hyperinsulinemic hypoglycemia, i.e. nesidioblastosis or (multifocal) insulinoma. In literature, there seems to be a female predominance for these rather unusual complications.

Conclusion

Especially in female patients who encounter late DS as a late complication of RYGB with an abrupt beginning, a low threshold for further analysis of hyperinsulinemic hypoglycemia should be maintained.

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PROFILE OF PARENTS OF PEOPLE UNDERGOING BARIATRIC SURGERY

Basic science and research in bariatric surgery

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Introduction

Bariatric surgery (BS) represents a treatment method in the fight against obesity and the existing comorbidity, being this procedure performed, presenting numerous results and improvement in the quality of life of the people submitted .

Objectives

To analyze the profile of the parents and the mothers of people submitted to BS.

Methods

Cross-sectional, comparative and quantitative study. We interviewed a universe of fifty (50) surgeries. Descriptive and inferential statistical analysis was performed by SPSS® software 20.0.

Results

The highest frequency, 96% (n=48) denied university education, 78% (n=39) denied exercise, 84% (n=42) denied disease (n=26) denied medication, 52% (n=26) denied smoking, 52% (n=26) denied alcoholism, 80% (n=40) denied cardiopathy, 60% (n=30) denied hypertension, 86% (n = 43) diabetes, 82% (n=41) denied neoplasia. Regarding mothers, 94% (n=47) denied university education, 80% (n=40) denied exercise, 88% (n=44) denied disease, 78% (n=43) denied alcoholism, 52% (n=26) denied hypertension, 74% (n=37) denied diabetes, 84% (n=42) denied neoplasia, 82% (n=41) denied cardiopathy. A statistical association (P=0.021) was identified in the education category in relation to the parents of the people submitted to BS.

Conclusion

The study demonstrated that the parents and the mothers of people submitted to BS had factors related to obesity and morbid obesity. The presence of other related chronic disease has also been identified.

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EXPLORING MAMMALIAN HIBERNATION AS A PERSPECTIVE MODEL FOR WEIGHT LOSS SURGERY – CONSTRUCTION OF A MEDICAL HYPOTHESIS

Basic science and research in bariatric surgery

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Introduction

Western man has developed a lifestyle of constant food intake, with gradual and constant increases in body mass. Just like obese individuals, hibernating animals deposit large amounts of fat in existing adipocytes (preparing for the winter). At this point, prior to hibernation, there is evidence for the development of increased peripheral insulin resistance, decreased glucose utilization and leptin resistance, as we find in human metabolic diseases such as type 2 diabetes mellitus (T2DM).

Objectives

Review the control mechanisms of food intake and body weight of seasonal mammals and propose a correlation with the physiological modifications of the patient submitted to bariatric surgery.

Methods

A Pubmed database search using keywords obesity, bariatric surgery and hibernation was performed.

Results

Prior to hibernation, seasonal animals increase their body weight up to 40%, an obesity-like state, as a result of naturally induced insulin resistance during hyperinsulinemia, as well as an increase in adipocyte diameter. It is hypothesized that the reversal of insulin resistance takes place during the hypometabolic state as well as the weight loss that will occur until they arouse from hibernation. This metabolic cycle is very similar to obese patients undergoing weight loss surgery and should probably share endocrine pathways.

Conclusion

The mechanisms utilized by the hibernators to actively regulate adipose metabolism during torpor may provide an understanding of the basis of reversible insulin resistance and weight loss observed in bariatric surgery.



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BARIATRIC SURGERY IN THE ELDERLY: A SYSTEMATIC REVIEW.

Basic science and research in bariatric surgery

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Introduction

The issue of obesity constitutes a noisy public health problem. In this sense, obesity per se continues to contribute to mortality in the elderly.

Objectives

To perform a systematic review on the issue of bariatric surgery (BS) performed in elderly people.

Methods

Its coverage consists of productions performed between 2004 and 2014, using four (04) electronic databases (Cochrane®, Lilacs®, Medline® and PubMed®) and as descriptors purchased from MeSH® (Medical Subject Headings), obesity, aged, bariatric surgery.

Results

After the computerized electronic bibliographic surveys were carried out with the computerized databases, a universe of 379 abstracts were acquired. In this way, twelve (12) articles were elected, which met all criteria established in this research. The complexity of the BS in elderly people, because it is an invasive procedure, as well as, due to the fact that it is an elderly and obese person, in addition, in many cases, it is a carrier of diseases such as diabetes Mellitus to arterial hypertension, among other diseases. In the postoperative period of BS there is a need for follow-up, in addition to dietary supplementation therapy due to nutrition related abnormalities, mainly with low iron concentration, vitamin B-12, and osteoporosis.

Conclusion

After BS, elderly people achieved significant reduction of their body weight, besides control of comorbidities associated with obesity.

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CURRENT DEFINITION OF DUMPING SYNDROME: LACK OF CONSENSUS, MISLEADING AND OUT-OF-DATE

Basic science and research in bariatric surgery

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Background

No real consensus regarding the definition of dumping syndrome (DS) seems to exist and few subtyping is used in clinical practice.

Introduction

Knowledge is needed for correct design of trials and establishment of uniform treatment strategies.

Objectives

The aim of this study was to explore the distribution and clinical characteristics of the subtypes of DS.

Methods

A comprehensive search was performed in Cochrane, Google Scholar, PubMed, and ResearchGate. Data were collected on the definition of DS used in each study.

Results

Mostly, an ambiguous differentiation is made between early and late dumping based on arbitrary timing since the last meal.

Early DS involves rapid gastric emptying and was first described in 1913 by Hertz. In 1922 the term "dumping stomach" was stated by Mix, and in the early 1940's, these symptoms were brought together under the so-called "post-gastrectomy syndrome". The loss of the pyloric muscle and/or vagotomy was the suggested morphological substrate.

In current literature, late DS is often synonymized with "post-gastric bypass hypoglycemia". It was first described in German literature in 1933 and biochemical analysis was first published in 1947 by Gilbert and Dunlop. It was assumed to be the result from hypoglycemia following a postprandial insulin peak, however current literature suggests a complex multifactorial etiology.

Conclusion

Systematic review shows that DS is poorly defined in a large majority of bariatric literature and most criteria are based on studies performed in the 20th century on patients following gastrectomy for obsolete indications. The lack of consensus remains a problem in current research.

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DOES SLEEVE SHAPE IN UPPER GASTROINTESTINAL SERIES CORRELATES WITH EARLY WEIGHT LOSS POST LSG – A PILOT STUDY?

Basic science and research in bariatric surgery

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Introduction

Despite gastric sleeve during LSG is formed on bougies, postoperatively in upper gastrointestinal series (UGIS) a few different sleeve shapes can be distinguished after LSG.

Objectives

The aim of the study was to determine the relationship of sleeve shape in UGIS on POD 1 to weight loss effects 1 and 3 months post LSG.

Methods

This prospective, observational study included patients aged 18-65, who underwent LSG in tertiary referral, academic center. On POD1 the UGIS and gastric sleeve shape was classified as: tubular; dumbbell, upper pouch; lower pouch; pseudodiverticular. The aim of classification was to determine the influence of postoperative sleeve shape on early weight loss. From 2015 to 2016, 47 patients were enrolled and completed 1 and 3 months follow-ups [31 females, 16 males, median age 46].

Results

Table 1.

Sleeve shape	Median %WL (IQR)		Median %EWL (IQR)		Median %EBMIL (IQR)	
	1mo	3mo	1mo	3mo	1mo	3mo
All, n=47	9.5 (8.0-11.3)%	17.2 (13.8-20.4)%	18.70 (15.31-23.32)%	36.0 (27.2-41.8)%	21.8 (17.7-28.6)%	40.4 (28.8-51.3)%
Upper pouch, n=15	9.6 (8.1-11.3)%	17.2 (14.3-197.5)%	18.9 (15.3-23.5)%	29.6 (27.4-40.1)%	21.8 (16.9-27.5)%	34.8 (28.8-47.2)%
Lower pouch, n=14	8.4 (8.0-10.1)%	15.1 (11.7-19.7)%	18.0 (16.1-21.2)%	33.4 (26.3-38.6)%	21.5 (18.9-28.5)%	39.2 (28.5-48.8)%
Dumbbell, n=10	10.3 (8.8-12.5)%	18.5 (14.9-20.0)%	21.7 (17.7-25.7)%	39.7 (25.6-46.6)%	23.8 (19.4-32.8)%	47.8 (28.2-59.6)%
Tubular, n=6	8.4 (6.0-11.4)%	20.0 (15.9-25.4)%	15.4 (10.1-20.2)%	37.1 (28.3-52.3)%	17.9 (11.4-23.2)%	43.2 (32.4-63.1)%
Pseudodiverticular, n=2	10.1 (9.3-10.9)%	19.2 (17.4-20.9)%	21.4 (19.5-23.3)%	40.5 (36.3-44.7)%	25.1 (21.5-28.6)%	47.5 (40.1-54.8)%
	P=0.845	P=0.464	P=0.372	P=0.514	P=0.892	P=0.947

Conclusion

In this pilot study, there was no correlation between sleeve shape and %WL, %EWL, %EBMIL.

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CURRENT ROLE OF CONTINUOUS GLUCOSE MONITORING IN PATIENTS WITH DUMPING SYNDROME AFTER ROUX-EN-Y GASTRIC BYPASS

Basic science and research in bariatric surgery

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Introduction

An estimated 5-20% of patients who undergo Roux-en-Y Gastric Bypass (RYGB) (sometimes) experience a rather vague constellation of postprandial (upper) gastro-intestinal (inc. nausea, bowel spasms and diarrhea) and vasomotor symptoms (inc. sweating and flushing) often referred to as dumping syndrome (DS).

Objectives

Because these symptoms are usually nonspecific and therefore, difficult to diagnose, the use of continuous glucose monitoring (CGM) might have an additional value.

Methods

A comprehensive search was performed in Cochrane, Google Scholar, PubMed, and Research gate on the use of continuous glucose monitoring in patients suffering from DS after RYGB. 16 eligible articles were taken into account.

Results

Traditional work-up for DS consists of detailed history and dietary anamnesis.

CGM has no role in the detection of early DS (within 15 minutes after a meal). Contrast swallow or gastric emptying studies have been used to confirm the diagnosis.

Recent CGM studies show high glycemic variability after RYGB. Under real life conditions, hypoglycemia was found more frequently than expected using CGM. There is no literary consensus regarding a cut-off value defining "hypoglycemia" after RYGB. Furthermore, the role of hormonal dynamics in the multifactorial etiology of DS is not at all understood. Therefore, the use of CGM for the diagnose of late DS remains controversial. CGM might have a role in the evaluation of therapeutical interventions for hypoglycemia in late DS ranging from conservative therapy to surgery.

Conclusion

Hypoglycemia should not be considered an absolute criterion of late DS. The role of CGM as a diagnostic tool should be further investigated.

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WEIGHT LOSS AFTER BARIATRIC SURGERY IMPROVE COAGULATION PROFILE AS MEASURED BY THROMBOELASTOGRAPHY

Basic science and research in bariatric surgery

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Introduction

Morbid obesity is considered as a risk for thromboembolic events. Bariatric surgery achieves excess weight loss and control of related co-morbidities but it is not clear if it improves the coagulation profile in these patients.

Objectives

To evaluate the coagulation profile by Thromboelastography in bariatric patients group after weight loss

Methods

Coagulation profile was measured by Thromboelastography in patients two years after bariatric surgery in an earlier study group. These patients were evaluated for coagulation profile by TEG as baseline before surgery and in the early post-operative period.

Results

The average age was 39, and the average time after surgery was 25 months. The average BMI was 28 and the average BMI reduction was 14.

Our findings demonstrate significant improvement in regard to parameters that represent the platelet activity- MA and G. The average of these parameters was in the normal range after surgery and there was a statistically significant reduction in the pathological MA and G values.

Conclusion

Weight loss after bariatric surgery improves the altered coagulation profile as measured by TEG and can probably eliminate of the thromboembolic risk in most of these patients.

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HYOSCINE BUTYLBROMIDE: A STUDY OF ITS USE AS AN ANTISPASMODIC IN BARIATRIC SURGERY.

Basic science and research in bariatric surgery

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Background

During bariatric surgery one of the challenge is spasm of stomach and small intestine especially during measuring the exact length of small intestine.

Introduction

Pharmacological studies revealed that hyoscine butylbromide is an anticholinergic drug with high affinity for muscarinic receptors located on the smooth-muscle cells of the GI tract that cause smooth-muscle relaxation

Objectives

This study focuses on effect of Hyoscine butylbromide as an antispasmodic drug and is helpful during bariatric surgery to relax the tonicity of stomach and small intestine

Methods

We started use of Hyoscine butylbromide since march 2016 and applied for 20 patients randomly and compare with control group .Our comparative factors were number of staplers,number of endoclips for hemostasis, time of surgery.Dose of hyoscine 40 mg in 100 cc N/S,10 minutes before stapling till 30 minutes.

Results

From 20 patients under study average BMI 43.3,female 13,male 7,average age 34,sleeve 7,MGB 10, RNYGBP 3,average time of surgery sleeve 45 min,MGB 48 min,RNYGBP 66 min.Average number of stapler sleeve 5,MGB 5,RNYGBP 4.Average number of endoclips in sleeve 4,MGB 7,RNYGBP 5.In control group from 20 patients average BMI 42.5,female 12,male 8,average age 35.6,number of sleeve 8,MGB 9,RNYGBP 3,average time of surgery sleeve control group 53 min,MGB 58 min,RNYGBP 78 min.Average staplers sleeve control group 6,MGB 6, RNYGBP 4.Average number of endoclips sleeve control group 13,MGB 16,RNYGBP 10

Conclusion

These clinical results support the use of Hyoscine in a range of indications related to spasm of GI tract during bariatric surgery, than stapling of stomach and measurement of small intestine become much easy and exact.

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KNOWLEDGE OF UNIVERSITY STUDENTS ABOUT BARIATRIC SURGERY

Basic science and research in bariatric surgery

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Introduction

Bariatric surgery is an efficient method to treat obesity and its comorbidities, allowing weight loss and regulation of various parameters related to body functioning.

Objectives

To analyze the knowledge of students of a higher education institution (HEI) based in Brasília (D.F.) on bariatric surgery.

Methods

Cross - sectional and quantitative study. The present study was submitted to bioethical evaluation and treatment, being approved by the Ethics and Research Committee of the University Center of Brasília (CEP / UNICEUB), with the CAAE number "50679015.6.0000.0023".

Results

Four hundred (400) students were interviewed; 48% (n=192) attended "nursing", 24% (n=96) attended "nutrition", 15.50% (n=62) attended "medicine", 8,25% (n=33) studied "biomedicine" and 4.25% (n=17) studied "biology". The profile of the social actors participating in the present study was 78.75% (n=315) female, 87.75% (n=351) single, 70.75% (n=283) (n=372) deny smoking, 78% (n=312) deny medication use, 93% (n=373) deny alcoholism, 94%, 25% (n=397) denied arterial hypertension, 100% (n=400) denied diabetes mellitus.

Conclusion

It was also identified a reduced knowledge among the interviewees, only in the analytical category related to the need of food supplementation using multivitamins after bariatric surgery.



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THE MECHANISM OF METABOLIC SURGERY: GASTRIC CENTER HYPOTHESIS

Basic science and research in bariatric surgery

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Introduction

There is growing evidence that bariatric surgery can lead to remission of metabolic syndrome. But the mechanism by which bariatric surgery alleviates metabolic syndrome is unclear.

Objectives

Discuss a new hypothesis for metabolic surgery: gastric center hypothesis.

Methods

Several present hypotheses which include decreased caloric intake following the surgeries, foregut and hindgut hypothesis, bile acid and bacterial flora changes, and proposed gastric center hypothesis were discussed.

Results

None of the currently available hypotheses is solely capable to lead to a reasonable explanation regarding improvement of metabolic syndrome by various bariatric surgical procedures. Proposed gastric center hypothesis could give a better explanation of the mechanism.

Conclusion

All the present bariatric surgeries are involved in changes of the stomach. There could be some particular cells on the stomach, which could secrete unknown special hormones, and then lead to control the metabolic process.

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AGREEMENT BETWEEN FIBROSCAN AND HEPATIC HISTOLOGY IN PATIENTS WITH NAFLD SUBMITTED TO BARIATRIC SURGERY AFTER ONE YEAR OF FOLLOW-UP

Basic science and research in bariatric surgery

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Introduction

The Non-alcoholic fatty liver disease (NAFLD) is an entity that involves in its evolutionary spectrum some conditions described as steatosis, steatohepatitis, cirrhosis up to hepatocellular carcinoma. Etiologically, the obesity has a strong relationship with hepatic steatosis. There is a need to follow the NAFLD in its evolution, so both invasive exams and non-invasive exams can be used. The aim of the study is to compare the results of Fibroscan with hepatic histology in obese patients submitted to obesity surgery.

Objectives

To compare the results obtained through fibroscan tissue elastography with hepatic histology in obese patients with non-alcoholic fatty liver disease submitted to bariatric surgery during the period from March 2016 to March 2017.

Methods

A cross-sectional study with longitudinal follow-up performed through a database search obtained through the medical records of patients submitted to bariatric surgery, during the period from March 2016 to June 2017, by SUS, at Hospital de Clínicas de Porto Alegre, who completed 12 months of follow-up. postoperative. A fibroscan will be performed in the postoperative period, 12 months after surgery. All patients who present the confirmed diagnosis of NAFLD by intraoperative liver biopsy will be included in the study and a new postoperative liver biopsy will be done in the same period of the other exams.

Results

There are no results at this time. Our intention is to present the parcial results in the congress.

Conclusion

The conclusion will be completely done by the time we have the partial results.

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ANTHROPOMETRIC, RENAL AND INFLAMMATORY PARAMETERS OF MORBIDLY OBESE PATIENTS WITH INDICATION FOR BARIATRIC SURGERY

Basic science and research in bariatric surgery

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Introduction

The beneficial effects of bariatric surgery (BS) in severe obese patients on renal, metabolic, and inflammatory parameters have been demonstrated in prospective studies.

Objectives

To perform a preliminary analysis of anthropometric, renal and inflammatory parameters of morbidly obese patients prior to BS.

Methods

We herein describe preliminary data of morbidly obese patients, including anthropometric measurements, blood tests, albuminuria, and high sensitivity C-reactive protein (hs-PcR). These parameters were compared according to gender, body mass index (BMI) values (cut off: 49 kg/m²) and hs-PcR levels (cut off: 10 mg/L). Spearman coefficient was used for correlations.

Results

A total of 20 morbidly obese patients were evaluated. Mean age was 43.7±11 years, 75% were women, 90% white; and mean BMI was 49.1±5.7kg/m². Men had higher waist circumference compared to women (135±12 vs. 128±8cm; P=0.04). Serum glucose >99mg/dL, HDL cholesterol <45mg/dL, and albuminuria >14mg/L were found in 60%, 60%, and 40% of the patients, respectively. BMI ≥49kg/m² and hs-PCR ≥10mg/L were both present in 55% of the participants. Serum glucose were higher in patients with hs-PcR ≥10mg/L (124±25 vs. 106±31mg/dL; P=0.208) but this difference did not reach statistical significance. The weight correlated with gender (r=0.54; P=0.02), height (r=0.52; P=0.02), and waist circumference (r=0.48; P=0.04). Older participants (>49 years) had higher hs-PcR levels (49.3±3 vs. 36.9±7.8mg/L; P=0.007).

Conclusion

These preliminary results were consistent with metabolic, renal, and inflammatory disarrangements in these morbidly obese patients. A larger sample is necessary to give more robust data.

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SELECTED GUT PEPTIDES AND BLOOD GLUCOSE LEVELS FOLLOWING BARIATRIC SURGERY IN MORBID OBESITY.

Basic science and research in bariatric surgery

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Background

Surgical interventions like bariatric surgery for morbid obesity are now a recommended procedure for weight loss.

Introduction

It has been suggested that changes in hormones involved in hunger, food intake and satiety may contribute to the efficacy of bariatric procedures.

Objectives

Hence, the objective of present study was to evaluate the changes in levels of selected gut peptides (PYY, GLP-1, and Ghrelin) and blood glucose following bariatric surgery.

Methods

A total of twelve morbid obese subjects with mean BMI of 43.9 kg/m² were enrolled for this prospective study. Blood samples were collected after 12hr fasting for measurement of fasting and meal stimulated blood glucose, total ghrelin, GLP-1 and PYY at baseline, 30min and 120min before and at one and six months of surgery. A standard mixed liquid meal containing 227 kcal, with 30g carbohydrates, 10.4g protein, and 7.3g fat was used for estimation of meal stimulated gut peptides and blood glucose.

Results

There was significant weight reduction after six months of bariatric surgery ($p < 0.0001$) with mean weight loss of 7.9% and 18.2% at one and six months respectively. Significant decrease in waist circumference was also found after six months of bariatric surgery ($p < 0.0001$). PYY AUC at 6 months and GLP-1 AUC at 1 month was significantly higher than the preoperative state. Fasting ghrelin level decreased significantly after one month of surgery. Total blood glucose AUC reduced significantly at 6 months.

Conclusion

Bariatric surgery procedure result in modification of gut peptide secretions and this was considered to be a beneficial effect.

□
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A STUDY EVALUATING BARIATRIC SURGERY AS PRIMARY THERAPY FOR PATIENTS WITH MORBID OBESITY AND SEVERE OSTEOARTHRITIS OF THE KNEE

Dragons' Den meets Shark tank (proposals for randomized controlled trials)

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Background and rationale for the RCT, including existing literature reviews

Osteoarthritis (OA) of the knee is a progressive and disabling joint disease that is often associated with obesity. It is one of the most frequently occurring health problems for middle-aged and older people. Obesity is the main modifiable risk factor for knee osteoarthritis (OA). The incidence of osteoarthritis is increasing since the incidence of obesity is increasing worldwide.

The treatment of OA in obese patients is primarily conservative (mainly analgesics in combination with diet and exercise). The symptomatic treatment often fails to provide satisfactory pain relief.^{2,6}

A weight loss program is then recommended in an obese patient. The American Academy of Orthopaedic Surgeons (AAOS) in their clinical practice guideline recommends a weight loss first strategy with conventional dieting in obese patients with osteoarthritis of the knee as does the Dutch national evidenced based practice guidelines. There are three studies, which have analyzed the effect of weight loss on symptoms of OA. These studies show clinically significant improvement in knee complaints measured by a validated scoring systems. The main measure in these scoring systems is pain reported on a VAS during movement.

Two studies showed that degenerative joint disease resolved completely in 41-76% of the patients after Bariatric surgery and significantly improved in the other patients. Another study found that obese patients with moderate or severe preoperative knee and hip symptoms experienced a larger improvement of their QoL.

To date, the optimal primary treatment strategy for patients with osteoarthritis of the knee and obesity still remains unclear and is subject of debate. Should the patient receive a TKA first? Will this result in more exercise and weightloss? Or should we perform a LRYBGP first? This could result in overall health gain and postpone knee replacing surgery. A weight loss first strategy with bariatric surgery has never been investigated in a randomized controlled setting. The purpose of this study is the investigate a strategy of weight loss first with bariatric surgery compared to the gold standard of total knee arthroplasty after a failed attempt at weight loss with conservative dietary measures in a randomized controlled trial.

Overall aim in PICO (Patients, Intervention, Comparator, Outcomes) format

Patient: patients with osteoarthritis of the knee (VAS > 60 during movement, EULAR guidelines and x-ray) and morbid obesity with a BMI ≥ 35 kg/m²

Intervention: Bariatric surgery

Comparator: Total Knee Arthroplasty

Outcomes: Is the reduction of knee osteoarthritis complaints measured by the VAS during movement 1 year after surgery similar for both treatment strategies?

Trial design (selection and recruitment of patients, timing of randomization, details of the interve

Design

A study performed in a randomized manner of two treatment strategies (bariatric surgery versus total knee arthroplasty) in patients with severe OA of the knee. All patients must have undergone a recognized conservative attempt at weight loss. The patients are only eligible if this fails.

Inclusion criteria

age > 50 years

patients with osteoarthritis of the knee (VAS > 60 (scale from 0-100) during movement, EULAR guidelines and x-ray) and morbid obesity with a BMI ≥ 35 kg/m² in accordance with the IFSO criteria

Exclusion criteria

age > 65 years

previous knee arthroplasty or bariatric surgery

unable to complete a self-report questionnaire.

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APIXABAN VERSUS ENOXAPARIN FOR POSTOPERATIVE THROMBOPROPHYLAXIS AFTER SLEEVE GASTRECTOMY. A PROPOSAL FOR RANDOMIZED CONTROLLED TRIAL.

Dragons' Den meets Shark tank (proposals for randomized controlled trials)

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Background and rationale for the RCT, including existing literature reviews

Both obesity itself and bariatric surgery are independent risk factors for venous thromboembolism (VTE). Therefore, prophylactic anticoagulant treatment is recommended during the first 2-3 postoperative (PO) weeks. Nevertheless, although low-molecular-weight heparins (LMWH) are considered as standard of care for post-bariatric thromboprophylaxis, new direct anticoagulant agents such as *apixaban* have shown excellent results when indicated after orthopaedic and body-contouring procedures among others. However, information about their safety and efficacy remains scarce.

Rationale for the choice of apixaban as intervention: apixaban provides not only an excellent pharmacological profile but also additional protective effects on the endothelium that makes it an excellent choice for high-risk patients.

Rationale for the choice of control intervention: enoxaparin is a LMWH with an excellent safety and efficacy profile that is routinely employed after the vast majority of bariatric procedures. It has been widely studied in bariatric population with the strongest evidence behind, compared to other LMWH.

Rationale for the choice of endpoints and surgical procedure (sleeve gastrectomy; SG): although PO pulmonary embolism is often correlated with fatal outcome, its frequency remains low. However, the incidence of both clinical and subclinical deep venous thrombosis is higher. In addition, safety of apixaban during post-bariatric surgery period remains unknown. Moreover, some aspects of apixaban pharmacokinetics after bariatric procedures including malabsorption are not well known.

Overall aim in PICO (Patients, Intervention, Comparator, Outcomes) format

Aim: to assess the safety and effectiveness of apixaban for postoperative thromboprophylaxis after bariatric surgery compared to current standard of care.

Patients: morbid obese patients (BMI 40-50) between 18 & 65 years submitted to laparoscopic sleeve gastrectomy

Intervention: 2.5mg/12h apixaban orally during 14 days after SG

Comparator: 40mg/24h enoxaparin subcutaneously during the same period

Primary outcome: treatment safety (side-effects/complications; mainly hemorrhagic) incidence

Secondary outcomes: incidence of venous thromboembolism (either DVT or PE) during the first postoperative 60 days and cost-effectiveness analysis

Trial design (selection and recruitment of patients, timing of randomization, details of the interve

Type of study: multicentric, double-blinded (oral and subcutaneous placebo are considered), non-inferiority randomized controlled trial.

Inclusion criteria: morbid obese (BMI 40-50) patients submitted to laparoscopic sleeve gastrectomy

Exclusion criteria: revisional surgery, current anticoagulant/antiagregant therapy or any other treatment with pharmacological interactions with any of the interventions, previous DVT or TP, coagulopathy, conversion to laparotomy.

Recruitment: in 5 tertiary centers (>650 patients/year) during 6 months

Randomization: via computer-assigned numerical sequence at the time of surgery

DVT/PE screening and diagnosis: preoperative and PO1, 15, 90 lower-extremity serial ultrasonography + doppler, clinical examination and tomographic pulmonary angiography if PE is suspected

Other tests: preoperative and on PO day 1, 30 and 90 blood tests (coagulation, hematocrit, hemoglobin levels, platelet count)

Follow-up: first 90 post-operative days

Patient withdrawal: non-hemorrhagic severe postoperative complications (Clavien III-IV) or treatment-related side effects; Procedures and protocol for subject withdrawal or early study termination will be considered.

Sample size: 102 per arm (non-inferiority study; 3% assumed DVT incidence; 5% error margin, 95% confidence level, 450.000 target population, 5% lost follow-up).

Analysis populations: Intention-to-treat, per-protocol, safety analysis of all randomized subjects on an "as treated" basis.

Monitoring: external

Interim Safety Analysis/ Data Safety Monitoring Board: after the first 20 patients have completed the enrollment

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MULTICENTRE DOUBLE-BLIND RANDOMISED-CONTROLLED TRIAL OF THE EFFECT OF LIPID-LOWERING TREATMENT UPON CARDIOVASCULAR RISK FOLLOWING OBESITY SURGERY IN TYPE 2 DIABETES MELLITUS

Dragons' Den meets Shark tank (proposals for randomized controlled trials)

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Background and rationale for the RCT, including existing literature reviews

Patients with T2DM take statin therapy to minimise cardiovascular disease (CVD), irrespective of hyperlipidaemia. Multiple systematic reviews show that obesity surgery reduces morbidity and mortality from CVD and reverses dyslipidaemia of obesity. Following surgery, most physicians stop lipid-lowering medications. There could be CVD prevention benefits from the continuation of this treatment. To date there are no trials investigating this.

Overall aim in PICO (Patients, Intervention, Comparator, Outcomes) format

We hypothesise that obesity surgical patients with T2DM will have less CVD events on statin therapy, irrespective of dyslipidaemia.

Patients: Inclusions: ages 40-70yr; undergoing obesity surgery (gastric bypass [RYGB] or sleeve gastrectomy [LSG]); T2DM (ADA criteria or HbA1c>7%). Exclusions include: T1DM; BMI<35; eGFR<30; hypersensitivity to statins; myositis/myopathy. Adverse reactions to the intervention will result in discontinuation of trial drug and participant withdrawal.

The setting is secondary care with primary input if necessary (local preference). 14 visits including venesection and data collection over 10yr.

Intervention: participants randomised to treatment, statin therapy or placebo, immediately following surgery. Fasting plasma lipid profile, renal and liver profile and HbA1c levels will be taken at baseline, 1, 3, 6, and 12m, then annually thereafter. Data will be collected for CVD events and death. Should they develop any CVD event or exclusion criteria whilst in study, participation will cease.

Comparators: placebo group.

Outcomes: primary outcome: composite outcome of death from cardiovascular causes, nonfatal myocardial infarction, or nonfatal stroke; secondary outcomes: expanded macrovascular outcomes; major coronary heart disease event; stroke; CHF; health-related quality of life; cost-effectiveness; microvascular outcomes.

Trial design (selection and recruitment of patients, timing of randomization, details of the interve

A multi-centre double-blind randomised controlled trial with equal randomisation and allocation concealment. The participants will be grouped by operative procedure i.e. RYGB and LSG, 4 groups in total. Ethical and R&D approval will be obtained.

Any patient meeting the inclusion/exclusion criteria could be selected prior to admission for obesity surgery. The trial recruitment goal is 10,000 patients. Recruitment strategies include pre-trial peer review and trial awareness at IFSO and strategies which have worked for other obesity surgery studies. Informed consent, screening and baseline assessment training for each site will be provided. Participants will be enrolled preoperatively. Computer generated stratified

□ randomisation immediately after surgery and, research pharmacist assistance with allocation concealment, at each site.

The intervention is statin therapy and the comparator is the placebo group.

The primary endpoint is a statistical difference in death from cardiovascular causes, nonfatal myocardial infarction, or nonfatal stroke.

The secondary endpoints are a statistical difference in: expanded macrovascular outcomes, microvascular outcomes, health-related quality of life and cost-effectiveness. Differences in the surgical procedure relative to all endpoints.

Safety endpoints – adverse event reporting to the SMG and early meeting arrangements in place to review the study and terminate early, should the need arise.

Intention to treat analysis will be performed.

All data will be encrypted prior to transfer to co-ordinating centre. The co-ordinating centre trial management group will review interim data analysis and all safety aspects of the study. The data monitoring group can flag concerns regarding disparity between groups early. Follow-up for 10yr, unless reach their CVD event prior to this.

□
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BARIATRIC SURGERY UNDER PARAVERTEBRAL BLOCK. WHERE DO WE STAND

Emergent technology

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Background

General anesthesia in the morbidly obese carries a significant risk.

Paravertebral block is an acceptable method of anesthesia and may be a solution for the high risk patients

Introduction

Sleeve gastrectomy is being performed with increasing frequency in the world for the treatment of morbid obesity. General anesthesia carries a significant risk especially in the obese individual. We presented in this study our initial experience in 35 patients who underwent sleeve gastrectomy, under block anesthesia.

Objectives

to present our initial experience in sleeve gastrectomy under paravertebral block anesthesia and to show the outcome in terms of safety, excess weight loss and resolution of comorbidities

Methods

We reviewed retrospectively 35 patients who underwent sleeve under block anesthesia from May 2010 till May 2013. We studied the conversion rate, mortality, morbidity, EWL and the resolution of comorbidities at 20 months of follow up.

Results

one conversion of block anesthesia to general anesthesia in the study group. The overall mortality, morbidity, EWL and resolution of comorbidities matched the sleeve gastrectomy results done under general anesthesia published in the literature.

Conclusion

Early results of sleeve gastrectomy done under block anesthesia are encouraging, however more cases and more long term follow up is needed to judge the safety, efficacy and outcome of this technique.

□
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BARIATRIC SURGERY USING PURPLE SURGICAL ENDOSCOPIC STAPLING DEVICES : SAFE AND ECONOMICAL

Emergent technology

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Background

Surgeons have to consider the risks, benefits, and the cost of these surgical techniques and selectively utilise those that, in their hands, minimise morbidity while maximising clinical effectiveness. Economic pressure on many European healthcare systems and in particular on French medical institutes, have encouraged us to explore techniques and devices that allow the reproduction of results while reducing cost.

Introduction

The aim of this study was to assess the feasibility of bariatric surgery using Purple Surgical endoscopic stapling devices and to assess the short-term results.

Objectives

The objective was to test a cheaper new Device

Methods

Sleeve gastrectomy (SG) and gastric bypass (Roux-en-Y gastric bypass : RYGBP) were performed using a 5 trocar technique. Gastric divisions were performed using the Purple Surgical® Ultimate Endoscopic stapler with 60 mm reloads (green or blue). The bowel openings were closed with a V-
Loc® (Medtronic).

Results

471 patients underwent laparoscopic bariatric surgery in two private institutes by three surgeons between January 2014 and April 2017 (56 RYBP, 415 SG). Average patient BMI was 42 kg/m² (35-69) and surgery lasted for an average of 100 minutes (60-120). There were 2 postoperative haemorrhages after SG (0,4%), 2 fistula after SG (0,4%), 1 ulcer after RYBP (1,7%). There were no deaths. The average length of hospital stay was 3 days (1-5 days).

Conclusion

Bariatric surgery with Purple Surgical endoscopic stapling devices is a safe and economical technique. This is an alternative to other brands, which are generally more costly. A comparative prospective randomised study is currently underway.

□
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ROLE OF INDOCIANINE GREEN IN THE PREVENTION OF ANASTOMOTIC DEHISCENCE OR LEAKAGE IN OBESITY SURGERY: PILOT STUDY AND EARLY RESULTS.

Emergent technology

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Background

Based on tissue diffusion capacity using indocyanine green (ICG) and Near InfraRed (NIR) technology, could be relevant in bariatric surgery.

Introduction

Nowadays, and with the advances of laparoscopy, imaging has experienced a great development in its quality and characteristics. Laparoscopic surgery includes the use of high definition, 3D and 4K imaging and more recently the use of ICG in routine clinical practice.

Objectives

We propose a study aimed at demonstrating the relationship between quantity and quality of fluorescence to measure and predict cases of anastomotic dehiscence or leakage in obesity surgery after performing a sleeve gastrectomy (SG), gastric bypass (GBP) or revision surgery.

Methods

Twenty-five patients undergoing surgery for obesity (SG, GBP and conversion from SG to GBP) were included. ICG was injected and endoscopes available for NIR imaging were used. The fluoroscopic signal was analyzed according to the degree of fluorescence captured by the camera and were classified as low, medium and high uptake.

Results

1 SG, 23 GBP and 1 SG to GBP conversion were performed. No intra- or postoperative complications appeared. The uptake of images after the injection was classified as high uptake (n=23) and medium uptake (n=2). There was no low uptake.

Conclusion

Regarding the good results obtained and the low complication rate, it seems difficult to determine the criteria of poor vascularization or probability of anastomotic leakage. However, this technology demonstrates to be better informed about the quality of blood flow. It seems that NIR imaging as a complement to conventional laparoscopic imaging is worthy of study and analysis.

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LAPAROSCOPIC-TRANSGASTRIC ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY FOLLOWING ROUX EN-Y GASTRIC BYPASS – A CASE SERIES.

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Endoscopic retrograde cholangiopancreatography (ERCP) remains technically challenging following Roux-en-Y gastric bypass (RYGB), but is sometimes deemed necessary.

Objectives

To describe our experience in the application of laproscopic-transgastric ERCP (LTERCP).

Methods

A case series of patients with a history of RYGB who underwent LTERCP through the gastric remnant. After establishing a pneumoperitoneum, 1 x 12-mm and 2 x 5-mm trocars are positioned. With the aid of two stay sutures, a gastrotomy is made on the anterior surface of the gastric body. A left upper quadrant 15-mm trocar is then placed and advanced into the gastrotomy, allowing access for the ERCP scope. A two-layer absorbable suture is subsequently performed for gastrotomy closure

Results

Six patients (five female, 1 male) underwent LTERCP between October 2012 and December 2016. Mean (range) for age and BMI were 59 yrs (32-81) and 36.2 kg/m² (25.5-46), respectively. One patient had a previous open RYGB while five patients had prior laparoscopic RYGB. Indications for LTERCP were choledocholithiasis and previous open surgery (1 patient), cholangitis (2 patients), bile leak following laparoscopic cholecystectomy (LC) (2 patients) and sphincter of Oddi stricture (1 patient). Two patients underwent simultaneous LC and LTERCP. All patients had successful biliary cannulation and sphincterotomy but no stents were deployed (to avoid need for removal). Median (range) length of hospital stay was 5 days (1 - 33). There were no complications.

Conclusion

In our series, LTERCP is a safe and reliable approach for the evaluation and management of biliary pathologies in patients with prior history of RYGB.

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ASPIRATION THERAPY IN SUPER OBESE PATIENTS – PILOT TRIAL, 3-YEARS DATA

Endoscopic and Percutaneous Interventional Procedures

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Background

The AspireAssist System (Aspire Bariatrics, Inc. King of Prussia, PA) is a device to help people with obesity lose weight, consisting of a customized percutaneous endoscopic gastrostomy (PEG) tube and an external device to facilitate removal of approximately 30% of ingested calories consumed in a meal, in conjunction with lifestyle (diet and exercise) counselling.

Introduction

While bariatric surgery is the best option for weight loss in the super-obese population, patients with BMI > 50 kg/m² have a substantially higher rate of perioperative mortality.

Objectives

We evaluated a new device for the treatment of obesity, the AspireAssist® Aspiration Therapy in super-obese patients BMI > 55 kg/m².

Methods

From September 2012 to June 2014, 11 subjects, average age 44,9 years (32-63 years) were enrolled at 3 centres. The mean initial weight of the subjects was 196,1 kg (143 to 290); the mean BMI 66,53 kg/m² (55 -80,4). Lifestyle intervention was provided as a 10-session diet and behavioral modification program.

Results

Mean weight loss after 6 months was 29,3 kg, 14,5%TBWL, 28,5%EWL, after 1 year of 42,1 kg, 21,9%TBWL, 34,1%EWL, in 2 years 45 kg, 25,5%TBWL, 38,8 %EWL, in 3 years 45,7 kg, 25,7%TBWL, 39,0 %EWL. No serious adverse events occurred. Three minor adverse events were reported: all minor infections at the wound site, resolved by local ATB. Procedural success was 100%.

Conclusion

The results from this study demonstrate that the AspireAssist is technically feasible, safe with a low complication rate, and effective in the super-obese, either as a long-term therapy or a bridge therapy to bariatric surgery.

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SURPRISES WITH INTRA GASTRIC BALLOON (IGB)

Endoscopic and Percutaneous Interventional Procedures

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Introduction

The use of (IGB) to treat obesity becomes popular because of their efficacy and safety; the results and complication are widely variables and complications (even life threatening complication) may occur.

Objectives

to summarize the unexpected results and recorded cases of 610 patients with IGB.

Methods

610 patients (396 females and 214 males), their age 14-67 (mean 34 years); their weight 72-229 kg (average 131) underwent the procedure and their balloon removed and data analyzed.

Results

Three patients lose more than 100% of their excess weight and maintain this loss; their average BMI after extraction was 23 kg/m².

Two patient did not lose weight while one patient gain 9 kg after 13 month of IGB (her BMI rise from 40.9 to 44.6 because she is sweet lover).

Three patients (0.49%) develops ulcer due to pressure effect of balloon.

Five cases (0.81%) of migration of IGB that causes life threatening intestinal obstruction and treated properly (three by endoscopy, 1 by laparoscopy and 1 needs laparotomy).

IGB is not found in 2 patients during extraction (0.32%) passed with stool.

Four patients (0.65%) become pregnant in spite of instruction and their balloon extracted to complete pregnancy with normal babies.

Eight patients (1.3%) can't tolerate IGB and asked for removal before completing the treatment period.

Two cases of mortality out of 610 (0.32%) were recorded in extreme obesity (BMI > 70 kg/m²), these mortality were not related to balloon itself but to the associated morbidities.

Conclusion

Anything is possible and can happen with IGB; both physician and patients should know and be ready to deal with these unexpected situation.

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P.155

INTRAGASTRIC BALLOON THERAPY FOR OBESE AND OVERWEIGHT PATIENTS: RESULTS IN 390 CASES

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Indication for intra-gastric balloon is weight reduction for mild to severe obesity. Currently this indication has also been offered for cosmetic reasons in overweight patients.

Objectives

We evaluated the tolerance and efficacy of the intragastric balloon (IGB) in our patients

Methods

From January 2002 to September 2016, 390 patients went to endoscopically intragastric balloon placement, under sedation, mean BMI 30.6 kg/m² (25.5-60). Ballons were filled with 600 ml of saline solution. Removal was done 6-7 months after insertion, under general anesthesia (airway protection). No hospital stay was needed.

Results

Strictly followed by dietitians, 330 female (84.7%) and 60 male (15.3%) underwent uneventful IGB placement. Mean age 34 (12-67). Mean time for insertion-extraction was 20 minutes. 38 (9,7%) patients didn't complete the 6 months for intolerance or complications that required removal, majority within the first 6 weeks. There was 1 gastric perforation (0.25 %), 2 days after IGB placement, in a patient with previous anti-reflux procedure. Median weight loss was 11.1 kg (0.2-28.5 kg.). mean BMI loss 3,3 points. Mean EWL was 41 % over 6 months.

Conclusion

The IGB appears to be safe, but may have serious complications. It is an absolute contraindication in patients with prior gastric surgery. Its efficacy to reduce weight in association with a well-supervised nutritional guidance might be a good indication for the mildly obese patient and even for cosmetic reasons in the overweight patient.

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IMPROVED POSTPRANDIAL GLP-1 PRODUCTION AND GLUCOSE MALABSORPTION AFTER ENDOSCOPIC GASTRO-INTESTINAL BYPASS USING THE COUSIN STENT IN THE MINI-PIG

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Endoscopic techniques have demonstrated their effectiveness, notably through a gastrointestinal liner with a less invasive approach than conventional surgery.

Objectives

Our study evaluates the safety and metabolic impact of Endoscopic Gastro-Intestinal Anastomosis (EGIA) using a lumen-apposing stent to secure Gastro-Intestinal Anastomosis (GIA).

Methods

EGIA was performed using the transgastric approach with a 2-channel endoscope using an original stent (Cousin-Biotech®). First, a safety study was performed on 5 piglets with a follow-up up of 12 months. Then, metabolic changes were investigated in the minipig model (n=10) before and after EGIA and laparotomic GIA (LGIA).

Results

The EGIA was technically successful with no complications observed during the first part of the study. The Endoscopic and Postmortem examinations showed complete fusion between gastric and intestinal tracts without any dehiscence. In the second part of the study, Minipigs subjected to both EGIA and LGIA exhibited increased postprandial GLP-1 production (incretin secretion) and impaired D-Xylose absorption (glucose malabsorption effect).

Conclusion

Performing EGIA using a dedicated stent appears safe, technically feasible, durable, and reproducible in providing a simple and effective endoscopic gastrointestinal bypass capable of ensuring metabolic effect.

MANAGEMENT OPTIONS FOR TWISTED GASTRIC TUBE AFTER LAPAROSCOPIC SLEEVEGASTRECTOMY**Endoscopic and Percutaneous Interventional Procedures****A. Salama**

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Background

We aimed in this study to determine the incidence, etiology, and management options for symptomatic functional stenosis caused by twist of the gastric sleeve.

Introduction

This study aimed to determine the incidence, etiology, and management options for symptomatic functional stenosis caused by twist of the gastric sleeve.

Objectives

This study aimed to determine the incidence, etiology, and management options for symptomatic functional stenosis caused by twist of the gastric sleeve.

Methods

In a retrospective study we reviewed medical charts of all morbidly obese patients who underwent laparoscopic gastric sleeve. Patients who developed gastric obstruction symptoms and diagnosed as twisted sleeve were enrolled in this study.

Results

16 patients were successfully managed by endoscopic stent and 29 by balloon dilation. The average number of dilation session was 1.7 with 18 patients respond very well to a single session. 2 patients failed to respond to balloon dilation after three subsequent sessions and laparoscopic lysis of adhesions and untwist with pexy was done. Recovery was uneventful for all patients, without torsion recurrence.

Conclusion

Gastric twist after LSG is a rare complication. Endoscopic intervention is a successful way of management of twisted sleeve. Balloon dilation seems as effective as the endoscopic stent in treatment of such twist.

□
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THE IMPACT OF BARIATRIC ENDOSCOPIC PROCEDURES ON HEALTH RELATED QUALITY OF LIFE

Endoscopic and Percutaneous Interventional Procedures

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Introduction

The impact of obesity treatment by endoscopy techniques on patient reported health related quality of life (HRQL), is unclear and has been little studied

Objectives

To evaluate in terms of HRQL bariatric endoscopy procedures results

Methods

Prospective, single-center study of 107 patients (70 women), who underwent Intra-gastric Balloon (IGB) (n=79) or Endoscopic sleeve gastropasty (ESG) (n=28). A multidisciplinary team (nutritionist and psychologist) provided postprocedure care bi-weekly. We measured at baseline and during follow-up (6-9 months): HRQL using Physical Summary Component and Mental summary component of the Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36); Physical activity (PA) calculated by the International Physical Activity Questionnaire (IPAQ) short form and Weight loss by percentage of loss of initial body weight (%TBWL). Variables measured were assessed and compared using linear regression analysis

Results

After the procedures Physical, Mental and Weight loss parameters improved significantly (mean %TBWL:17.0). Factors associated with Physical improvements were the increase on physical activity ($\beta=0.001$, $P=0.001$), %TBWL ($\beta=0.398$, $p=0.041$) and lower age ($\beta=-0.376$, $p=0.010$). Factors associated with Mental improvements was the increase on physical activity ($\beta=0.004$, $p=0.001$).

Conclusion

Bariatric endoscopy procedures allowing physical activity are suitable to improve HRQL



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GASTRIC BALLOON INSERTIONS: DO PATIENTS UNDERGOING PSYCHOLOGICAL TREATMENT HAVE DIFFERING OUTCOMES TO THOSE WITHOUT? A LARGE SINGLE CENTRE BARIATRIC UNIT STUDY.

Endoscopic and Percutaneous Interventional Procedures

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Background

Intra-gastric balloons have widely been used as an adjunct to bariatric surgery.

Introduction

In the United Kingdom guidance recommends clinical psychology as part of a bariatric service.

Objectives

In this study we compared the results of patients who had undergone psychology as part of their bariatric service management verses those who did not require psychology.

Methods

Data was analyzed from a prospectively maintained database of 788 balloon insertions. 693 patients completed 6 month balloon period. 280 patients underwent specialist bariatric clinical psychology with subsequent recommendation for intra-gastric balloon insertion.

Results

Causes of early removal in the 88 patients were predominantly due to intolerance (n=33) and vomiting (n=45). When it comes to early removal we noted that 56 out of 280 (20.0%) of the balloons were in the psychology group. 32 out of 413 (7.7%) of balloon removals were in the non-psychology group.

In the psychology group BMI loss (kg/m²) results were: range -3.3 – 15.0; median 4.3: St Dev 3.0. In the non-psychology group BMI loss (kg/m²) results were: range -10.0 – 18.0; median 4.6: St Dev 3.7. In comparing the two arms of BMI loss with a t-test we found no statistical difference (p=0.22).

Conclusion

We found no statistical difference in weight and BMI outcomes between patients undergoing psychology and those not requiring psychology. We did however, find a greater likelihood of early balloon removal in the psychology group than the non-psychology group (20% vs 7.7%). We postulate that psychological factors might make patients more intolerant of the side effects associated with balloon.

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INTRAGASTRIC BALLOON: A CRITICAL VIEW IN NON ELECTIVE BARIATRIC SURGERY PATIENTS

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Bariatric surgery is established as an excellent therapy for obesity. However, lower degrees of overweight without surgical indication also impact on patients' health and quality of life, and the intragastric balloon (IGB) may be a treatment option.

Objectives

To assess the efficacy of excess weight treatment with an IGB in patients with overweight and grade I obesity at EndogastroRio Clinic.

Methods

A total of 717 patients were analyzed. A liquid filled IGB was used. The patients had initial body mass index (BMI) between 27 and 34,9 kg/m². The level of significance was set at p<0.05.

Results

615 patients were women. 131 had overweight and 586 grade I obesity. Mean age was 37.97 years(17-75). Weight loss results and treatment success rates are shown on tables 1 and 2 respectively. %EWL was higher in overweight group (p<0.0001) and %TBWL was higher in the grade I obesity group (p=0.0009). 96(73.28%) overweight patients and 131(22.35%) grade I obesity patients reached a normal BMI(<25 kg/m²).

Table 1

	Total group (n=717)	Overweight (n=131)	Grade I Obesity (n=586)
Body weight(kg)			
Baseline	88.55±10.14	78.90±6.56	90.67±9.56
Final	73.20±10.78	66.73±8.13	74.62±10.73
Reduction	15.35±6.49	12.16±4.76	16.05±6.53
%TBWL	17.36±7.08	15.51±6.11	17.76±7.11
BMI(kg/m2)			
Baseline	32.05±2.04	28.73±0.94	32.78±1.38
Final	26.46±2.43	24.26±1.85	26.95±2.51
Reduction	5.59±2.36	4.46±1.86	5.83±2.37
Excess weight (kg)			
Baseline	19.77 ±6.04	10.52 ±2.7	21.81 ±4.45
Final	4.42 ±7.44	-1.65 ±5.09	5.77 ±2.37
%EWL	83.97 ±41.89	122.77 ±57.89	75.36 ±31.33

*p<0.0001 for all comparisons between values at baseline and at the end of the study. IGB =

□ intragastric balloon; BMI(body mass index); **TBWL**(total body weight loss); EWL(excess weight loss)

Table 2

Success rates (criteria: $\geq 10\%$ TBWL or $\geq 25\%$ EWL)

	Total group (n=717)	Overweight (n=131)	Grade I Obesity (n=586)
%TBWL			
<10%	106(14.78%)	22(15.27%)	83(14.16%)
$\geq 10\%$	611(85.22%)	109(83.21%)	503(85.84%)
%EWL(n;%)			
<25%	32(4.46%)	2(1.52%)	30(5.12%)
$\geq 25\%$	685(95.54%)	129(98.48%)	556(94.88%)
BMI(n;%)			
<25kg/m ²	213(29.71%)	83(63.36%)	132(22.52%)

Conclusion

Conclusion: Endoscopic treatment of obesity with an IGB shows to be an excellent therapeutic for non surgical elective patients.

□
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ROUTINE USE OF INTRA-GASTRIC BALLOON IN THE MANAGEMENT OF THE "SUPER-SUPER-OBESE" PATIENTS: AN OBITUARY?

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Surgical management of patients with BMI \geq 60kg/m² presents a significant challenge. In our institution we have previously undertaken a two stage procedure with intra-gastric balloon insertion followed by sleeve gastrectomy. Since November 2011, we prospectively changed our policy to attempt a single-stage definitive bariatric surgery.

Objectives

To compare the outcomes of two-stage versus a single-stage procedures in the super- super morbidly obese.

Methods

A prospectively collected, single institution database of "Super-Super-Obese" (BMI \geq 60kg/m²) patients was analysed on an intention to treat basis. Outcomes in patients who underwent two-stage stage (July 2010 – October 2011) and single stage (November 2011– April 2015) were compared.

Results

29 consecutive patients in each group were compared. The starting BMI was 70.5 \pm 8.6 kg/m² and 63.5 \pm 3.7 kg/m² in the two-stage and single-stage groups, respectively. There were no significant differences in % Excess Weight Loss (44.4 \pm 15.2 versus 41.3 \pm 26.8, p=0.44) and final BMI (50.0 \pm 8.3 vs. 47.7 \pm 11, p=0.45). Total length of stay was greater in the two-stage group (3.1 \pm 1.7 versus 2.2 \pm 0.6, p=0.02). There were no significant postoperative complications in either group but there were 4 unplanned readmissions for pain and vomiting in the two stage group, compared to two readmissions for abdominal pain in the single stage patients.

Conclusion

Single-stage bariatric surgery in "Super-Super-Obese" patients (BMI \geq 60kg/m²) is a feasible strategy with comparable outcomes. There are shorter hospital stays and fewer readmissions as compared to a two-stage procedures using intra-gastric balloon as a bridge to definitive surgery.

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LIFE THREATING CONDITIONS WITH INTRAGASTRIC BALLOON IGB

Endoscopic and Percutaneous Interventional Procedures

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Introduction

The use of intragastric balloon (IGB) to treat obesity become popular because of their efficacy and safety. Life threatening conditions may occur like deflation and migration that cause intestinal obstruction, severe dehydration after nausea and vomiting also may occur.

Objectives

To present a recorded life threatening complication of IGB which include five cases out of 610 (0.81%)of digestive tract obstruction due to IGB migration and 2(0.32%) cases of severe dehydration with proper methods of treatment.

Methods

Five patients 3 males and 2 females involved ,their average age 33and their weight 97-167Kg(average121); their BMI 32.6-57.7Kg/m²(average44.3) they had IGB procedure (filled with normal saline and methylene blue) to treat obesity diagnosed as upper small intestinal obstruction after (58,143,162,177,276 days). Two cases of severe dehydration 21 and 46 years old with BMI 34.5,44.2 kg/m² reported(1st after 9 days and the 2nd after 2 months due to migration of anchoring device of spat3).

Results

Endoscopy was used in three patients and IGB in the 1st part of duodenum identified and extracted, while in the 4th patient in whom the IGB passed to the ileum laparoscopy was used to localize the site of the balloon then enterotomy and extraction of IGB with primary closure performed.Laparotomy done for the 5th patient and balloon extracted. Two cases of sever dehydration recorded ;resuscitation and electrolyte correction performed before balloon extraction

Conclusion

IGB placement regarded as a relative safe method for weight loss,but life threatening complication may occur and physicians should be aware of these complications and deal with them properly.

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ENDO BARRIER AS A PRE BARIATRIC SURGICAL INTERVENTION IN HIGH RISK PATIENTS: A FEASIBILITY STUDY

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Obesity surgery mortality risk scoring (OMRS) classifies patients into high, intermediate and low risk; based on age, body mass index, sex and other co morbidities. High risk patients not only have a higher mortality, but are more likely to develop post-operative complications. Endoscopically placed duodenal-jejunal bypass sleeve (EndoBarrier) has been designed to achieve weight loss in morbidly obese patients.

Objectives

The aim of this study was to assess if pre-operative insertion of endobarrier in high risk bariatric patients can decrease morbidity and length of stay after bariatric surgery.

Methods

Between 2012- 2014, a cohort of 11 high risk patients had an EndoBarrier inserted (ENB Group) for one year prior to definitive bariatric surgery. These patients were matched against a similar group undergoing primary bariatric surgery (PBS) during same duration. The two groups were matched for age, sex, body mass index, co morbidities, surgical procedure and OMRS using propensity score matching. Outcome measures included operative time, morbidity, length of stay, ITU stay, readmission rate and percentage excess weight loss.

Results

Patient characteristics and OMRS were similar in both Groups (Match Tolerance:0.1). There was no significant difference in total length of stay, readmission rate and percentage excess weight loss. Operative time, ITU stay, Post-operative complications and severity of complications was significantly less in ENB group ($p < 0.05$) with significant likelihood of planned ITU admissions in PBS group ($p < 0.05$).

Conclusion

EndoBarrier could be considered as a pre bariatric surgical intervention in high risk patients. It may result in decreased operative time, ITU admissions and post-operative complications.

□
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INTRA GASTRIC BALLOON IN IRAQ SUCCESS OR SATISFACTION

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Two third of Iraqi people were overweight and obese, the placement of intragastric balloon(IGB)constitutes an effective ,nonsurgical intervention to lose weight.

Objectives

This study was performed to assess the safety and effectiveness (success or satisfaction)of 610 patients had IGB to treat obesity.

Methods

This is a prospective clinical case series study which includes 610 Iraqi patients for whom IGB(554Medsil, 45Spatz3, 8Endalis, 3Heliosphere)introduced, the safety assessed for all while the effectiveness either success (defined by ASMBS as weight loss ≥ 50 percent of excess body weight(%EWL) or satisfaction (satisfaction depends on patient opinion which includes quality of life ,body shape and %EWL) for 530 patients.

Results

610 patients(396 females and 214 males), their age 14-67(average 34years)underwent the procedure and their data analyzed after balloon extraction.Their weight 72-229 kg(average 131).The patient lose 2-85(average 22 kg)which was equal to 1.6-114.2(average42)%EWL. Their BMI reduced 0.6-21(average 8.5kg/m²).

The quality of life improved in 72% of patients according to bariatric analysis and reporting outcome system(BAROS);their results were approximate 6 which mean Very good results at 6 months .

Two cases of mortality out of 610 (0.32%) were recorded in extreme obesity(BMI>70 kg/m²), these mortality were not related to balloon itself but to the associated morbidities.

Conclusion

Complication may occur with IGB like any other procedure and pre operative preparation is mandatory.Different opinion from different point of views; as most patients satisfied with IGB results (regarding %EWL and improved quality of life) most bariatric surgeons don't regard IGB as success(only 42% EWL and long term follow up not available).

□

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ENDOSCOPIC GASTRIC BOTULINIUM SAFETY AND EFFICACY

Endoscopic and Percutaneous Interventional Procedures

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Background

Since 2005, several studies evaluating the effect of Endoscopic Gastric Botulinum Toxin type A for the treatment of obesity have been published yielding conflicting results. Differences in selection of patients, doses of Botulinium and method of administration were unclear.

Botulinium has a powerful inhibiting effect on the muscular contractions of smooth and striated muscles. This property has been used in the treatment of digestive illnesses characterized by muscular spasm, particularly achalasia and anal fissures due to hypertonic anal sphinchter muscles.

Introduction

The theory behind clinical use of Botulinium injected into the gastric muscle in obese patients is to induce gastric emptying delay resulting in feeling of satiety and hence body weight reduction. This idea was reinforced from the report of Rollnik et al 2003, of a patient in whom the injection of Botulinium in the gastric antrum by endoscopy was associated with a reduction of 9 kg of body weight and 32.5% of the caloric daily intake 4 months after treatment[1]

Objectives

To assess the safety and efficacy of Endoscopic Gastric Boltulinium infiltration in patinets with overweight and obesity.

Methods

Study period from December 2012 to December 2016, 946 cases enrolled with BMI 27-45 and a follow up period of 24 months.

All patients were seen by the dietician prior to procedure and were followed up as a combined team

Results

Weight lose of upto 40% of excess weight can be acheived in compliant patients

Conclusion

Endoscopic Gastric Botulinium can be a safe treatment option for obesity in carefully selected patients

□
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COMBINED ENDOSCOPIC SLEEVE GASTROPLASTY (ESG) AND PRIMARY OBESITY SURGERY ENDOLUMINAL(POSE) , AS AN ENDOSCOPIC BARIATRIC THERAPY

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Endoscopic bariatric techniques have emerged as effective therapies in nonsurgical management of obesity. Primary Obesity Surgical Endoluminal (POSE) is an endoscopic technique that involves placement of a gastric transmural plications in the fundus and pre-antral area. Endoscopic Sleeve Gastroplasty (ESG) consists in reduction of the gastric functional volume in length and width creating a narrow luminal sleeve.

Objectives

To evaluate the safety and weight loss efficacy of the combined POSE and ESG in patients with BMI 30-40 Kg/m².

Methods

We are presenting the data of first human study of combined endoscopic suturing techniques. The procedures were performed using Incisionless Operating Platform™ (IOP) (USGI Medical) for POSE , and Apollo Overstitch™ device (Apollo Endosurgery, Inc.). Both procedures performed in same session. BMI , TBWL , adverse events were recorded.

Results

Five patients included. One patient lost the follow up. A maximum 2 months follow up was achieved on 3 patients and 1 month in 4 patients. Initial mean body mass index (BMI) was 36.4 ± 2.5 Kg/m². Absolute change in mean BMI was 3 and 4.8 Kg/m² at 1 and 2 months, respectively. Mean %TBWL was $8.3 \pm 2.4\%$ and $14.4 \pm 3.8\%$ at 1 and 2 months, respectively. There were no major intra procedural or early adverse events. Oral contrast studies at 24 hours showed no leak. Mean discharge time after the procedure was 24 hours.

Conclusion

Preliminary data of this study showed that combined endoscopic procedures POSE and ESG during same session appears to be an effective and safe tool for weight reduction without significant adverse events.

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INTRAGASTRIC BALLOON IS STILL AN OPTION, BUT WHAT ABOUT ITS EFFICACY? OUR EXPERIENCE IN DOHA, QATAR

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Intra-gastric balloon (IGB) is an alternative, non-surgical treatment for obesity, which has been developed as a temporary aid for primary weight loss in patients with lower BMI or as a first stage procedure for super obese patients

Objectives

The study was conducted to test the efficacy of air filled intra-gastric balloon in weight loss

Methods

Retrospective study reviewing all patients who underwent intra-gastric balloon placement (Heliosphere air filled balloon) from 2014 to 2016; including pre-op weight, BMI, weight loss till balloon removal, time interval between placement and removal and reasons for balloon removal

Results

A total of 87 patients had air filled gastric balloon at our institution from December 2014 to December 2016; of these 31 were males and 56 were females, with a mean age of 32 ± 9.31 years. Mean pre-operative weight and BMI were 94.29 ± 14.88 and 35.08 ± 3.51 respectively. Mean weight and BMI at time of removal was 86.86 ± 15.71 and 32.27 ± 3.99 respectively. Maximum weight loss during balloon placement was 7.69 ± 7.77 Kg. Interval time between placement and removal of balloon was 2 to 784 days with a mean of (2179.83 ± 105.64) . 53 patients had (IGB) removal on time (at 6 months), while 25 patients had premature removal due to early intolerance, severe vomiting and others had satisfactory weight loss and insisted on early removal. 4 patients had laparoscopic sleeve gastrectomy after removal of IGB due to weight regain.

Conclusion

Intra-gastric balloon is effective for short-term weight loss with a questionable long-term efficacy

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ENDOSCOPIC REVISION WITH APOLLO OVERSTITCH™ FOR WEIGHT REGAIN FOLLOWING ROUX-EN-Y GASTRIC BYPASS: INITIAL EXPERIENCE

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Roux-en-Y Gastric Bypass (RYGB) is an effective bariatric procedure with good weight loss outcomes. Nevertheless, approximately 20% of patients undergoing RYGB will experience significant weight regain. Endoscopic gastrojejunal revision has been shown to be a less invasive alternative to surgery.

Objectives

To analyze outcomes of our first series of endoscopic revision of failed RYGB

Methods

Patients presenting with weight regain and a dilated gastrojejunal anastomosis (>15mm) after RYGB that have undergone endoscopic revision using an endoluminal suturing device (Overstitch(TM), Apollo Endosurgery, Austin TX) from January 2013 to December 2016 were included in this study. Clinical data collected were age, gender, BMI, early and late complications. Weight loss was calculated as %EWL at 6 months, 1 and 3 years.

Results

Eight patients underwent endoscopic revision in the selected period. Mean initial age was 45.25±7.7 years and mean BMI was 42.84±6.1 kg/m² before RYGB. Nadir BMI after RYGB was 27.54±3.42 kg/m² with a nadir weight loss of 76 kg. Mean BMI at endoscopic revision was 33.3±3.47 kg/m². Mean BMI after the procedure were 32.3±5.04, 31.5±4.8 and 32±4.2 kg/m² and mean excess weight loss (EWL%) were 12.43±8.6%, 18.2±7.2%, 14.5±6.8% at 6 months, 1 and 3 years respectively. We report one perforation at the gastrojejunal anastomosis and a gastro-gastric fistula. For insufficient outcomes, one patient required a second endoscopic revision and one patient underwent bypass distalization.

Conclusion

Endoscopic revision is an alternative after failed RYGB determining a modest weight loss in selected patients. It is considered a safer procedure compared to surgery, although complications should not be underestimated.

□
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INTRAGASTRIC SINGLE PORT (IGS) ALLOWS FOR SAFE ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY IN ALTERED ANATOMY AFTER ROUX-EN-Y GASTRIC BYPASS

Endoscopic and Percutaneous Interventional Procedures

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Background

Bariatric patients with gallstones and choledocholithiasis after a Roux-en-Y-Gastric Bypass remain a medical dilemma.

Introduction

To relieve the cholestasis is challenging, due to the anatomical alterations isolating the remnant gastric and duodenum, making endoscopic retrograde pancreatography hazardous and often impossible.

Objectives

We describe a method for safe introduction of the endoscope into the gastric remnant through intragastric single port, thus allowing for simultaneous cholecystectomy.

Methods

Patients after RYGB which were admitted with cholestase, attempts for ERCP were frustrated due to the length of the alimentary limb. A small incision was made in the left subcostal region and a Single Port was inserted. The excluded stomach was grasped and exteriorized through the abdominal wall and fixed to the skin. The endoscope was introduced through the intragastric single port . After completion of ERCP, the device was extracted and the gastric incision was closed externally.

Results

IGS technique for ERCP was performed in 6 patients. Mean operative time was 126min. One patient had a postoperative pancreatitis that was treated conservatively. Patients were discharged on the 3rd to 6th postoperative day.

Conclusion

IGS-ERCP was simple to perform and achieved excellent result, and allows for endoscopic treatment and cholecystectomy to be performed in a single procedure.

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ENDOSCOPIC MANAGEMENT OF GASTRIC BAND EROSIONS

Endoscopic and Percutaneous Interventional Procedures

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Background

Intragastric band migration is an unusual but major complication of gastric banding.

Introduction

Band erosion is a known complication following gastric banding and physicians are increasingly being exposed to patients with this problem.

Objectives

The present study analysis the management of patients with eroded gastric bands, and specifically the endoscopic management.

Methods

We retrospectively evaluated cases of morbidly obese patients after adjustable gastric banding to identify those who experienced band erosion between January 2013 and January 2016. To remove the migrated band, we used an endoscopic approach with a Gastric Band Cutter.

Results

Band erosion occurred in 10 patients. We could not calculate the erosion rate, because some bands were placed in a different center. The median time interval from the initial gastric band placement to the diagnosis of band erosion was 32 (range 18-52) months. Upper abdominal pain, port site infection, loss of restriction and weight regain were the most common symptoms. We used the Gastric Band Cutter to remove the band endoscopically. It was able to cut the band successfully in 5 patients (50%). In 4 patients (40%), the band, after being cut, was locked in the gastric wall and required laparoscopic removal. In 1 patient, it was not possible to cut the band and laparoscopic removal was performed. There were no postoperative complications.

Conclusion

The Gastric Band Cutter was successful in dividing the band in 9 out of 10 patient, although it was not always possible to complete the procedure endoscopically. Endoscopic removal seems to be effective and safe for band erosion.

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SINGLE INSTITUTION EXPERIENCE IN USING MEGA STENT FOR BARIATERIC SURGERY COMPLICATIONS

Endoscopic and Percutaneous Interventional Procedures

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Background

In the last two years more than 2000 procedures in Alexandria were done for morbid obesity 95 % of them are sleeve gastrectomy, among them 40 cases presented with leak.

Introduction

Bariatric surgery is the commonest procedure in surgery nowadays, complications have a drastic outcomes and are sometimes fatal. Leak is the most feared one and sometimes it is associated with distal obstruction or vascular ischaemia

Objectives

To evaluate our protocols in management of leaks post-bariatric procedures in order to get the best possible results.

Methods

Retrospective study addressing post bariatric procedures leakage in patients operated between January 2015 and January 2017 who were managed primarily by mega stent. The examined group was assessed for number of patients who needed surgical intervention pre or post endoscopy management final outcome of the patients and complications of stents

Results

Complications related to stent insertion included abdominal pain (94%) & vomiting (100%) in the first 48 hours, while in the remaining period ulcer was the most common complication (100%) followed by stent migration, ulcer perforation, post-ulcer strictures, persistent hiccough and persistent vomiting in 20%, 5%, 5%, 2% and 2% respectively. Patients who needed surgical intervention were 6, 3 of them pre stenting and 3 post .Final outcome revealed complete healing in 70%, development of isolated cavity in 18%, gastro-cutaneous fistula in 7% and mortality in 5%.

Conclusion

Early detection of leak, drainage procedure, breaking of sepsis cycle and closure of defects in staple line are the pearls for saving the patients presented with leak

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ENDOSCOPIC MANAGEMENT OF GASTRIC-BAND EROSIONS

Endoscopic and Percutaneous Interventional Procedures

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Introduction

Band erosion is one of the long-term gastric -banding(LAGB) complication in 0.6-11%. Endoscopic or laparoscopic removals are the methods for treatment.

Objectives

Show the technique (endoscopic-debanding) and results

Methods

1020 LAGB-patients were studied(1998-2013). Erosion 49(4.8%), operated 45 (4.4%), endoscopic-debanding 17(38%), laparoscopic 28(62%) and 0.4% predebanding-control. Asymptomatic 50%.

Endoscopic approach with Gastric-Band-Cutter-(AMI) in outpatient-unit. The cutting-wire through the gastroscop, was passed around the band visualized in the stomach, and retracted with the gastroscop. The wire upper-ends were introduced into an external-metal-sheath and passed into handgrip-tourniquet. The metal-sheath was passed to the stomach. Twisting the handle, the band was cut under direct-vision by strangulation. By gentle traction was extracted through the mouth, while the port was removed surgically. Finally, a re-gastroscopy was done to check the integrity of gastric wall.

Results

Endoscopic removal: 17 patients; successful in 15 (88%). In 1 patient were necessary 2 steps, and in 2 has been cut by endoscopy and removed laparoscopically. As complications 1 patient had pneumoperitoneum resolved by abdominal-puncture. All patients regained weight after the procedure.

Conclusion

Endoscopic removal of erosion-migrated band is effective and safe. It avoids an operation and allows early discharge. The largest number of laparoscopic-approach was at the beginning of our series.

Possible causal factors: tight imbrication sutures-decubitus, contamination or band-infection and posterior gastric-wall injury(dissection). Actually the 1st attempt should be endoscopic(band intragastric =>30% and free-no adherence to gastric mucosa. Surgeon-experience and prevention are important. A 2nd step to perform another bariatric-surgery after debanding.

□
P.173

INITIAL EXPERIENCE WITH INTRAGASTRIC BALLOON LEXBAL ® IN THE TREATMENT OF PATIENTS WITH MILD TO MODERATE OBESITY (TYPE I-II)

Endoscopic and Percutaneous Interventional Procedures

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Background

Evaluate the effectiveness and response Gastric balloon (Lexbal) in the treatment of mild to moderate obesity

Observational and retrospective

Introduction

Descriptive observational study in which the sample is made up of the 12 patients treated with balloon LEXBAL

The variables studied were age , sex, weight , BMI, percentage of weight lost , fill volume , tolerance, satisfaction

Objectives

Evaluate the effectiveness and response balloon (Lexbal) in the treatment of mild to moderate obesity

Methods

We conducted in Hospital Paroissien an observational, retrospective study .

We have compiled the results of 12 follow intragastric balloons (Balon Lexbal) in obese patients with mild to moderate type I- II (BMI between 28 and 34.9 kg/m²) placed in 2012 and 2016 losses have been achieved over 70 % of excess weight

The variables studied were age sex, weight BMI,% of weight lost ,fill volume,tolerance, satisfaction and dietary monitoring

Results

Over 80 % degree of patient satisfaction , 70 % decrease in weight above the average (over 12 kilos) better response in those presenting adherence to nutritional treatment and no differences were observed in the volume of filling the balloon

Conclusion

Treatment with intragastric balloon, along with a nutritional monitoring allows us to re-educate the patient, and change their eating habits. • Just for gradual diet, and to adapt each phase as tolerated by the patient, helps us to improve dietary behavior and facilitates greater weight loss
The IG ballon is a safe, well tolerated, with few adverse effects

□ **P.174**

ENDOSCOPIC TREATMENT OF POST-OPERATIVE GASTRO-GASTRIC FISTULA AFTER INTERNAL HERNIATION AND SEVERE MALNUTRITION

Endoscopic and Percutaneous Interventional Procedures

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Background

Endoscopic treatment of post-operative gastro-gastric fistula after internal herniation and severe malnutrition.

Introduction

Late Bariatric Surgery ("Bypass" with ring) in January 2008. May/2015: Internal hernias and mesenteric ischemia (involving Roux's Y up to 60 cm from the ileocecal valve, and underwent six surgeries in 25 days). Gastric-gastric fistula documented (imaging and endoscopic exams) performed with pneumatic balloon dilatation, followed by two sessions of pneumatic dilatation. Severe malnutrition with multiple diarrheal episodes due to short bowel syndrome. Admission at the 9th July Hospital in March/2016 under the care of the Bariatric Endoscopy team in a multidisciplinary treatment. Reductive gastroplasty with substenosis at 3.0cm below the gastrojejunal anastomosis and at 2.0cm below the esophagogastric transection, gastric fistula in 8mm diameter. Migrated ring into the organ lumen, just the gastrojejunal anastomosis and moderate rotation of the gastric axial axis. Performed section of the migrated ring. 6 days later, hydrostatic (20mm) and pneumatic dilatation (30mm) performed in gastric fistula, under radioscopy control, nasoenteral tube passage, for nutritional supply with oral supply.

Objectives

Demonstrate the efficacy of endoscopic methods in the evaluation and treatment of different types of complications following bariatric surgery.

Methods

Endoscopic evaluation and hydrostatic / pneumatic dilatation of gastric-gastric fistula to the excluded stomach and reestablishment of food traffic.

Results

Restoration of the alimentary transit through gas-fistula, with quality nutrition, returning the quality of life.

Conclusion

The minimally invasive endoscopic treatment became effective and resolute, allowing the treatment of severe malnutrition without new surgeries and anastomoses.

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ENDOSCOPIC TREATMENT OF COMPLEX STENOSIS AFTER DISCONNECTION OF GASTROJEJUNAL ANASTOMOSIS

Endoscopic and Percutaneous Interventional Procedures

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Background

Complex stenosis of gastrojejunal anastomosis after treatment of complete disconnection of gastrojejunal anastomosis with use of fully covered self-expanding metallic stent.

Introduction

Complete disconnection of a gastrojejunal anastomosis treated with self-expanding metallic stent evolved with a complex stenosis and stenosis obstruction of the gastrojejunal anastomosis. Endoscopic treatment, such as endoscopic dilatation, implantation of a new self-expanding metallic stent, stentotomy, application of triamcinolone to the gastric stump region, and exhaustion of all the endoscopic methods described in the literature.

Objectives

Treat the complex stenosis in a minimally invasive manner, with nutritional monitoring, avoiding to evolve to a total gastrectomy and seek an improvement in the clinical symptoms.

Methods

After joint decision with surgical team, endoscopic and patient team, performed pneumatic endoscopic dilatations, implantation of new self-expanding metallic stent, this time for treatment of stenosis, stentotomy and triamcinolone application were performed in a gastric stump region under stenosis. Performed hydrostatic dilations, on average every 30-40 days, with gradual improvement of dyspeptic symptoms and endoscopic follow-up for 1 year, as previously described.

Results

Stabilization of stenosis, with improvement of dysphagia episodes in relation to frequency and intensity, allowing the evolution of oral diet, maintenance of primary surgery and significant improvement in patient's quality of life.

Conclusion

Treatment of complex stenosis requires a rigorous follow-up, patience and consensus among the teams of surgery, endoscopy, nutrition and the patient, knowing that in the medium term there is stabilization of the disease and improvement of the symptoms, making the intervals of endoscopic follow-up each the patient's discharge.

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APPLYING ERABS PROTOCOL IN CHRONICALLY DIALYSED MORBIDLY OBESE PATIENTS UNDERGOING BARIATRIC SURGERY AS A PREPARATION FOR A KIDNEY TRANSPLANTATION.

Enhanced recovery in bariatric surgery

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Background

Obesity in a group of patients with chronic renal failure may preclude access to kidney transplantation. Bariatric surgery is becoming more recognized treatment option to prepare for kidney transplantation if the weight loss is needed to qualify for transplantation. Obesity has been associated with poor graft and patient survival after kidney grafting requiring significant increase of anti-rejection drugs.

Introduction

There exists some data demonstrating efficacy of bariatric surgery for patients with renal failure, which can be a strategy for improving outcomes before and after kidney transplantation. Needful condition to be recipient is BMI < 35 kg/m², that's why bariatric surgery can be reasonable treatment option.

Objectives

Group one consists of 30 morbidly obese patients with end stage renal failure. Group two 30 patients with normal kidney function.

Methods

Patients in both groups underwent gastric bypass according to ERABS. Differences in course of bariatric treatment among both groups were analyzed using independent t tests and Chi-squared tests.

Results

Between the two groups there was no significant difference in various types of complications. The mean hospital stay in group one was significantly higher compared with group two (3.7 vs 2.1 days p < 0.001).

Conclusion

Applying ERABS for morbidly obese patients with end stage of renal failure is a safe approach only resulting in a higher length of stay.

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THE IMPACT OF BARIATRIC SURGERY ON HEALTH OUTCOMES, WELLBEING AND EMPLOYMENT RATES: ANALYSIS FROM A PROSPECTIVE COHORT STUDY

Enhanced recovery in bariatric surgery

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Introduction

Morbid obesity is associated with several comorbidities that often impair patients' ability to obtain and keep a job and that, eventually, could hinder their fitness to work

Objectives

This study aimed at determining whether the employment status of morbidly obese patients may be positively affected by bariatric surgery.

Methods

A total of 30 morbidly obese patients who underwent Roux-en-Y gastric bypass (RYGB) from March 2014 to March 2015 were prospectively evaluated. All patients underwent a pre-operative assessment including the collection of personal and occupational data and the evaluation of musculoskeletal system. All evaluations were repeated at the end of a 24-month follow up.

Results

After RYGB, employment rates increased from 15/30 (50.0%) to 25/30 (83.3%, $p = 0.012$). Patients who were working at the end of follow-up referred lower rates of comorbidities, in particular of musculoskeletal complaints (4/25 vs. 4/5, $p < 0.001$), and presented significantly increased scores of energy/vitality at SF-36 assessment.

Conclusion

Our study suggests that RYGB can increase employment rates, increasing tolerance to effort and reducing prevalence and severity of obesity-related symptoms and complaints.

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ENHANCED RECOVERY AFTER BARIATRIC SURGERY. PRELIMINARY EXPERIENCE IN AN ITALIAN BARIATRIC CENTER.

Enhanced recovery in bariatric surgery

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Background

Fast Track Protocol has been developed as a multimodal recovery programme for elective surgery; after that, it has shifted to ERAS (Enhanced recovery after surgery), a protocol more focused on patient comfort and satisfaction.

Introduction

ERAS has a role in reducing postoperative morbidity and result in an accelerated recovery. Recently, those protocols has been applied to bariatric surgery (ERABS).

Objectives

From July 2016 to February 2017 we strictly applied in our center ERABS protocol. We performed 43 operations (26 gastric bypasses and 17 sleeve gastrectomies).

Methods

We improved our preoperative management. In operating theatre, we performed laparoscopic operations with a dedicated anaesthesia, reducing intra-operative fluids and preferring a "no tubes" policy (avoidance of drains, catheters, NGT). We immediately encourage the patients to restart the oral refeeding and mobilise themself.

Results

We noticed a very good compliance by all the patients enrolled. One patient underwent to a reoperation after gastric bypass due to a complication and she was discharged more than 30 days after the first operation. There were no further perioperative minor or major complications in the group. All of them were reviewed at the outpatient clinic 1 week and 1 month after surgery. No patients were readmitted after the discharge. Median LoS in the "pre-ERAS" group was 5 days (4 to 8), and 2 days (1 to 3) in the "post-ERABS" group.

Conclusion

ERAS protocol remained the strongest predictor of early discharge after laparoscopic bariatric surgery without increasing readmission rates. In our preliminary experience, ERABS pathway seems to improve outcomes after bariatric surgery.

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23 HOUR DISCHARGE FOLLOWING BARIATRIC SURGERY

Enhanced recovery in bariatric surgery

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Introduction

Enhanced recovery programs are an increasing part of the management of general surgery patients. Bariatric patients represent a high risk cohort of patients for whom yet there is not yet an established consensus on the feasibility of enhanced recovery/single night admission for bariatric procedures.

Objectives

To assess feasibility and outcome of early discharge after laparoscopic sleeve gastrectomy (SG), mini gastric bypass (MGB) and Roux-en-Y gastric bypass (RYGB).

Methods

Retrospective analysis of prospectively collected data. Single center. All patient length of stays following bariatric surgery over a one year period were recorded and those discharged within 23 hours identified. Post-operative complications and readmissions were assessed.

Results

69 out of 159 patients were discharged on post op day 1. Twenty five patients were discharged within 23 hours of surgery. 19 were females. Mean age was 47 years (20-64 years). Mean BMI was 46 kg/m²(36.4-65.2 kg/m²). Sixteen had SG, 8 RYGB and 1 MGB. 72% had an MMOSS score > 4 indicating moderate to high risk patients. The mean operating time was 114 minutes. Mean length of stay 22.3 hours. One patient was readmitted within 30 days with a port site hernia, no other complications occurred. Delays in discharge such as dispensing of medications and specialist dietician or nurse review may mean this target is not always reached

Conclusion

23 hour discharges following RYGB, MGB and SG are feasible. A structured pathway is required and greater resources to increase the proportion of patients that can be discharged within 24 hours.

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THE EFFECT OF ENHANCED RECOVERY AFTER BARIATRIC SURGERY (ERABS) PROTOCOL ON UNSELECTED COHORT OF ONE ANASTOMOSIS GASTRIC BYPASS (OAGB) PATIENTS

Enhanced recovery in bariatric surgery

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Introduction

Enhanced recovery after surgery (ERAS) programs are well established for patients undergoing colorectal surgery.

Objectives

Relatively little is known about ERAS following bariatric surgery, especially for one anastomosis gastric bypass (OAGB).

Methods

This is a prospective, observational study of 216 consecutive patients that underwent LOAGB with ERAS in a general hospital. Primary outcome measures were length of stay (LOS), postoperative morbidity, 30-day readmissions, and reoperations.

Results

Mean±SD baseline body mass index and age were 45.1±7.2 kg/m² and 37.1±10.5 years, respectively. Twenty eight percent of the patients were on medication for hypertension and 20% for type 2 diabetes mellitus. Six cases (2.8%) were conversional surgery. In ten patients (4.6%), a simultaneous laparoscopic cholecystectomy was performed. Mean operation time was 67.6±22.2 min. (range, 35 to 168). One patient was admitted to intensive care unit immediately after surgery because of intraoperative myocardial infarction. She died at postoperative 20th day. Mean LOS was 1.2±1.3 days, median 1 day (range, 1 to 20). Of all patients, 188 (87 %) were discharged on the first postoperative day. Overall morbidity was 4.2 %. Four patients (1.9 %) had transfusion-requiring bleeding. The 30 day-readmission rate was 0.9 %, and 0.9 % of the patients had to be reoperated for acute cholecystitis. Mean follow-up and excess weight loss percent were 7.7±4.5 (range, 1 to 18 months) and 71.2±27.6 (range, 9.6 to 117.1 %), respectively.

Conclusion

Enhanced recovery following LOAGB with ERAS programs is possible and safe even in a general hospital. Early discharge does not increase postoperative morbidity or readmissions.

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ENHANCED RECOVERY AFTER SECONDARY LAPAROSCOPIC ROUX EN Y GASTRIC BYPASS: A SINGLE SURGEON, SINGLE HOSPITAL SEVEN YEAR EXPERIENCE

Enhanced recovery in bariatric surgery

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Introduction

Enhanced recovery after bariatric surgery (ERABS) is essential to improve the patients' recovery, reduce morbidity and mortality and to minimize the financial and institutional burden. Recent publications on secondary Roux en Y Gastric Bypass (sRYGB) operations still show high numbers of two step conversion with prolonged precautionary hospital stay.

Objectives

We present our results on sRYGB of the last seven years with Length of Stay (LoS), complication rate and early readmission rate as primary endpoints.

Methods

From February 9 2017 until February 4 2010 we included all patients who underwent a secondary laparoscopic RYGB after failed Adjustable Gastric Banding (AGB) or failed open Vertical Banded Gastroplasty (VBG).

Anesthesia was performed by vast protocol. Bladder catheters, deep venous catheters and nasogastric tubes were not inserted. Peroperative leaking tests were not implemented and no abdominal drains were left behind routinely. Postoperative follow-up was clinically with hemoglobin control on the first postoperative day. Standardized diet was started on the first postoperative day with only liquids.

Results

In total 230 patients were included, 194 AGB to RYGB and 36 VBG to RYGB.

Overall, 83.9% were women, mean age was 43,2y and mean BMI was 38.1 kg/m².

Mean LoS was 2.3 days.

In hospital complications rate was 2.6% (mainly postoperative anemia) and early readmission rate was 3.0% (mainly gastro-jejunal anastomotic leakage).

One step conversion rate in the AGB to RYGB group was 97.9%.

Conclusion

ERABS for sRYGB is safe and feasible and should be implemented when guided by an experienced surgeon in a specialized bariatric centre.

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THE IMPACT OF ERABS TO EARLY POSTOPERATIVE COMPLICATIONS AND QL

Enhanced recovery in bariatric surgery

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Background

Enhanced recovery and improved QL

Introduction

Preoperative multimodal patient preparation is mandatory for implementation of ERABS in clinical practise.

Objectives

Risk stratification for obesity surgery is mandatory for implementation of ERABS.

Methods

Results are limited to 1 year period and 50 operated patients (35 sleeve gastrectomy and 15 by-pass patients) in patients reached criteria for bariatric surgery; 68% have 2 or more concomitant diseases. Risk stratification, patient education, preoperative feeding formulas adoption, balanced intravenous and analgetics treatment, medication dose adjustment to BMI, early cPAP introduction in OR, enhanced physical activity, oral formula and patient independency were introduced to reduce hospital stay, overall reduction of medical complications and improved QL.

Results

ERABS protocol implementation resulted to: reduced hospital stay from day 4 to 3 (25%), ward walking hour 4 after operation (day 1 to 4 hours after operation), reduction to overall use of analgetics (opioide and nonopioide, based paracetamol and methamisole monohydrate) for 20% and average VAS score 1-2, day 1 postoperatively commercial liquid oral protein formula (330kcal, protein 20g, vitamin D and HMB), water to 800 ml, adjustment to antibiotics to BMI, and complete patient independency to nursing. Improved QL questionnaire translated to grades 0-10 graded from initial non ERABS values 4 to 8 at day 3 to value 10 day 30 postoperatively. No medical complications were observed.

Conclusion

ERABS reduce hospital stay, pain medication needs, improve QL, early independency, oral feeding schema and PA. No early and 30 days postoperative complications were observed in the cohort of patients being preoperatively motivated to ERABS protocol.

P.184**MEXICAN ENHANCED RECOVERY AFTER BARIATRIC SURGERY (M.E.R.A.B.S.) PROTOCOL. INITIAL EXPERIENCE AND CLINICAL OUTCOMES FROM A MEXICAN REFERRAL BARIATRIC CENTRE****Enhanced recovery in bariatric surgery****I. González, L. Gutiérrez, F. Campos, N. Apaez, R. Marín, R. Guzmán, R. Sanchez, C. Ramírez, G. Romero, L. Zurita****General Hospital Dr. Ruben Leñero - Mexico (Mexico)****Background**

Enhanced Recovery after Surgery (ERAS) protocols have changed the approach of perioperative care toward many major surgical procedures performed today. Strong evidence of consistent benefits of ERAS exist for colorectal, thoracic, and urological surgery.

Introduction

Our evidence-based clinical pathways focused on prehabilitation and included interventions like aggressive preoperative optimization of medical comorbidities, familiarizing with perioperative protocols, thromboprophylaxis, opioid free multimodal analgesia, and early ambulation.

Objectives

Analyze the feasibility and safety of the MERABS protocol in patients after bariatric surgery.

Methods

Prospective and descriptive study. Patients undergoing a surgical procedure as a treatment for obesity were included. The protocol was adapted and approved by the members of the multidisciplinary team. The protocol was divided into 3 stages; Preoperative, intraoperative, and postoperative. Specific measures and goals were established that were evaluated by the patient and by members of the multidisciplinary team.

Results

We included 103 patients. 79 women and 24 men. The mean age: 37.2 years (20-56). BMI: 45.3 kg/m² (35-69). Co-morbidities: Hypertension 39%, Dyslipidemia 38%, Diabetes mellitus type 2 (30%) and Obstructive sleep apnea syndrome 14%. Surgeries: RYGB 72%, SG 19%, MGB 8%, and SADI-S 1.0%. The mean surgical time was 105.6 (±21.7) minutes. Time to ambulate: 6.18 hrs on average. Length of stay 26.4 hours on average. Major complications: 4(3.8%). Reoperations 2 (1.9%) for bleeding and stenosis of the jejunum-jejunum anastomosis. Readmissions: 2 (1.9%) for GJ Leak and urological problem.

Conclusion

The MERABS protocol in patients after bariatric surgery is feasible and safe, allowed for reduced hospitalization times without increased rate of complications or readmissions.

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DAY CARE BARIATRIC SURGERY

Enhanced recovery in bariatric surgery

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Introduction

Bariatric Surgery has come a long way in having a stormy eventful post-op recovery to "Enhanced Recovery" following protocols, guidelines and less invasive techniques.

Objectives

To study the feasibility and compare the outcome of day care bariatric surgery to a regular short / medium stay bariatric surgery.

Methods

A total of 6 patients underwent both Sleeve & One anastomosis gastric bypass between March 2014 to Nov 2016 as day care surgeries. All patients were company directors or senior consultants requiring to return to their professional duty at the earliest. 3 were SILS sleeve gastrectomy, 2 SILS one anastomosis gastric bypass and one reduced port one anastomosis gastric bypass. All patients were discharged at 10 hours post operatively with fentanyl patch and TID paracetamol.

Results

One patient with SILS sleeve gastrectomy was readmitted with in 48 hours with nausea, vomiting and was managed conservatively. All other patients tolerated the liquids well after 8 hours before discharge. OAGB patients had more uneventful post-op period with better compliance. Outcome with regards to %EWL and resolution of comorbidities were similar to conventional one / two night stay protocols. However, quality of life parameters are higher though not significant to regular patients.

Conclusion

With enhanced recovery protocols been followed, recovery after bariatric surgery has been short with better patient compliance. Carefully selected patients, can be advised daycare bariatric surgery provided they have access to emergency care with in a short distance from their place of stay.

PHYSICAL ACTIVITY AND SLEEVE GASTRECTOMY

Exercise and bariatric surgery

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Introduction

Bariatric surgery is the most effective treatment for morbid obesity, yet optimal weight loss requires adherence to recommended diet and physical activity (PA). The recommended extent of for PA is ≥ 150 min/week and an optimal goal of 300 min/week.

Objectives

Assessment of postoperative PA habits and to evaluate the correlation between excess weight loss (EWL%) and PA

Methods

A retrospective analysis was performed with a mean follow up time of 3 years. Data was extracted from medical reports. At the end of follow up period telephonic questionnaires were performed.

Results

178 patients were included in the study, 41.6% of them practice PA, 90.5% of them at least twice a week. The most common type of exercise was walking (25.3% of total patients) and only 11.2% of patients practice strength training. The average time dedicated for PA was 74 min/week (range 0-630 min/week). 20.2% of patients perform PA according to the recommendation of at least 150 min/week and only 7.3% according to the goal of 300 min/week. Pearson correlation coefficient between PA weekly hours and EWL% was 0.155 ($p=0.039$). In a multivariate regression model, PA weekly hours was found as the sole positive predictor for EWL% after controlling all confounders.

Conclusion

Knowledge about physical activity habits after sleeve gastrectomy is scarce. We have found a correlation between PA weekly hours and EWL%. Only minority of the patients achieve the exercise goal for bariatric patients. Further studies may help to clarify PA implications, in order to optimize surgery results.

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MASSIVE INCREASE IN PHYSICAL ACTIVITY FOLLOWING INTRAGASTRIC BALLOON INSERTION IN MORBIDLY OBESE PATIENTS

Exercise and bariatric surgery

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Introduction

There is a growing interest in the role of physical activity (PA) and sedentary behavior in promoting long-term weight maintenance after bariatric procedures. Increasing PA may improve the outcomes of the procedures and lead to larger weight loss, as well as promote maintenance of lower weight. Maintaining sufficient levels of PA may play an important role in body weight regulation.

Objectives

To evaluate physical activity changes accompanying IGB induced weight loss.

Methods

Physical activity was assessed among thirteen morbidly obese patients (average weight: 145.7 ± 21.1 kg, $BMI = 43.4 \pm 8.0$) before and three months after IGB insertion using Metria IH1 devices that automatically evaluate physical activity duration and active energy expenditure (AEE). AEE was defined as tasks at more than 1.5 METs (1 MET = energy expenditure of a person sitting quietly).

Results

Average PA duration before IGB insertion was 74 ± 75 min/day, $5,600 \pm 1,200$ steps/day (WHO recommends 10,000 steps/day), and AEE 450 ± 340 kcal. More than three months after balloon placement, the weight loss on average was 15.0 ± 9.5 kg, range: 6 – 35 kg, 18.7 ± 11.8 percent excessive weight. Three months after insertion of the IGB, PA duration was 175% longer, 43% more steps, and AEE 125% higher than before the IGB insertion (both $p = 0.02$). These changes were driven by 86% and 33% increase in energy expenditure during moderate and light PA, respectively.

Conclusion

Massive increases in physical activity reflect the very low level at the baseline. The role of PA in weight maintenance after IGB removal needs to be evaluated.

This study was supported by the Polish National Science Centre: grant 2013/09/B/NZ7/03763.

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IMPACT OF GASTRIC BYPASS SURGERY ON BODY COMPOSITION AND FUNCTIONAL CAPACITY: A PILOT STUDY

Exercise and bariatric surgery

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Introduction

It is known that a marked weight loss occurs during the first days after gastric bypass surgery (GBS). However, GBS short-term effects on body composition and functional capacity have not been investigated yet.

Objectives

To compare functional capacity before and immediately after GBS, to identify any factors that could affect long-term recovery and should be considered in early intervention.

Methods

Ten physically inactive women (age: 35±9ys) underwent body composition evaluation (bioimpedance) and the 6 minute walk test (6MWT), 5.7±1.2 days before and 6.3±1.7 days after GBS.

Results

Average weight loss was 7.5±3.0kg (lean mass: 4.4±1.8kg; fat mass: 3.0±2.4kg). Functional capacity was better in the pre-surgery 6MWT when compared to the post-surgery test, as demonstrated by covered distance [d6MWTpre=500.3±72.1m (84.2% of predicted) vs d6MWTpost=423.3±42.4m (71.4% of predicted)]. No significant differences were found between pre- and post-surgery 6MWT peak heart rate (HR) and peak systolic blood pressure (SBP) (HRpre= 128.7±9.7bpm; HRpost= 121.1±19.2bpm; SBPpre= 142.8±10.4mmHg; SBPpost= 147.6±27.8mmHg). Additionally, when d6MWT was corrected by 6MWT peak HR, no difference was found between pre- and post-surgery (dTC6/HRpre= 3.9±0.6 e d6MWT/HRpost= 3.6±0.6).

Conclusion

Although pre- and post-surgery chronotropic demand was not statistically different, 6MWT covered distance was lower after surgery; this might be due to the loss of muscle mass that occurs in concomitance with weight loss, probably enhancing cardiopulmonary demand. This is relevant as it suggests that early intervention should focus on muscle mass and function in order to prevent functional impairment.

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GASTRIC BYPASS SURGERY SHORT-TERM EFFECTS ON RESPIRATORY EFFICIENCY IN WOMEN: A PILOT STUDY

Exercise and bariatric surgery

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UFSCar - Sao Carlos (Brazil)

Introduction

Gastric bypass surgery (GBS) has been indicated for treatment of morbidly obese patients. A marked weight loss occurs during the first days after GBS, but the GBS impact on respiratory efficiency remains unclear.

Objectives

To compare ventilatory variables in GBS patients, before (preGBS) and after surgery (postGBS), and in overweight and obese patients who did not undergo GBS (noGBS).

Methods

Sixteen physically inactive women [age: 35 ± 7 ys (preGBS: $n=8$, BMI: 35.6 ± 3.3 kg/m²; noGBS: $n=8$, BMI: 31.1 ± 3.1 kg/m²; $p < 0.001$)] underwent to body composition evaluation (bioimpedance) and cardiopulmonary exercise testing (CPX). After 75 ± 18 days of GBS, patients performed new CPX and bioimpedance.

Results

weight loss was 17.5 ± 4.7 kg as well as lean mass was 5.3 ± 2.1 kg after GBS. Significant reduction was observed only for oxygen uptake efficiency slope (OUES) (preGBS: 1.5 ± 0.1 versus postGBS: 1.3 ± 0.3). There was no difference for the CPX duration between postGBS and noGBS (8.9 ± 1.9 and 7.8 ± 2.1 min, respectively); however, postGBS presented lower oxygen uptake (V_{O_2}), ventilation (V_E), V_E/V_{CO_2} slope, OUES and higher limbs fatigue (LLF) when contrasted with noGBS (V_{O_2} : 19.0 ± 3.0 vs 23.0 ± 4.0 ml/kg/min; V_E : 82.1 ± 18.8 vs 69.6 ± 6.6 L/min; V_E/V_{CO_2} slope: 41.7 ± 5.9 and 27.4 ± 4.4 ; OUES: 1.3 ± 0.3 and 2.1 ± 0.4 ; LLF: 4.5 ± 2.8 and 1.5 ± 1.7 , respectively postGBS and noGBS). Interestingly, there was a significant and positive correlation between weight loss changes and walking distance ($r=0.82$; $p=0.01$).

Conclusion

GBS induces to functional impairment and reduced ventilatory efficiency and respiratory responses. However, greater weight loss changes after GBS positively impact on exercise performance in these patients.

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ANTHROPOMETRIC CHANGE, CARDIOPULMONARY FITNESS, AND WEIGHT LOSS EFFECT OF "SEMI-SUPERVISED EXERCISE PROGRAM" AFTER SLEEVE GASTRECTOMY FOR ASIAN MORBIDLY-OBESE PATIENTS: ONE-YEAR RESULT

Exercise and bariatric surgery

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Introduction

Exercise program and diet education are essential to maintain healthy and sustained weight loss after bariatric surgery. "Semi-supervised Exercise Program" (SEP) is based on outpatient clinic's fitness instruction and demonstration, taking exercise privately, feedback from official perceived exertion scale, and validation of clinical efficacy during follow-up.

Objectives

We review our experience of conducting SEP for Asian morbidly-obese patients after laparoscopic sleeve gastrectomy (LSG).

Methods

A prospective, randomized trial was performed for LSG cases between February 2015 to May 2016. The exercise protocol was started 3 months after LSG. Both groups were prescribed with the same exercise program except exercise diary keeping and validating with perceived exertion scale sooner after exercise for the SEP group. Body weight, body composition analysis, and 6-minute walk test (6MWT) were checked periodically.

Results

Only 22 patients were eligible throughout the study (11 patients in each group). The 1-year excess weight loss was $78.0 \pm 13.1\%$ and $73.6 \pm 17.6\%$, separately. At 1-year follow-up, the SEP group only demonstrated a significant improvement in 6MWT (641.2 ± 50.5 m vs. 571.4 ± 93.7 m, $p < 0.05$). Both groups did not show significant difference in total body fat ($26.4 \pm 5.8\%$ vs. $29.8 \pm 4.1\%$, $p = 0.116$), visceral fat (2.5 ± 1.0 kg vs. 3.0 ± 1.0 kg, $p = 0.401$), and subcutaneous fat (17.2 ± 4.9 kg vs. 18.7 ± 3.5 kg, $p = 0.519$).

Conclusion

Maintaining regular exercise is not easy after bariatric surgery and SEP group is superior in physical fitness than the control group at 1-year follow-up, based on our experience.

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CAN A PRE-OPERATIVE EXERCISE PROGRAM HELP HIGH RISK/POOR MOBILITY PATIENTS ACHIEVE REQUESTED WEIGHT LOSS TARGETS BEFORE UNDERGOING BARIATRIC SURGERY?

Exercise and bariatric surgery

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Background

Bariatric surgery is the most effective treatment for severe complex obesity.

Introduction

Our department recommends all patients to aim for a pre-operative weight loss of 5-10% from bariatric clinic assessment to date of operation as part of our protocol for patient optimisation.

Objectives

Would a pre-operative exercise programme help patients with poor mobility achieve the requested weight loss?

Methods

This prospective single-centre cohort study followed pre-operative adult bariatric patients selected at MDT as high risk and/or poor mobility through a pre-operative 12-week exercise program.

Results

Of 74 bariatric patients referred by MDT for the pre-operative exercise programme, 58 completed the course (21males, average age 47yrs, average BMI 50.14kg/m²) and 28%(16/78) did not engage with the service (5males, average age 47yrs, average BMI 49.5kg/m²).

In the exercise group, 66% lost weight by the end of the program and 13% lost their target weight of 5-10%. The 6-minute walk test was improved in 86%. Most patients progressed to surgery with no intra-operative or early post-operative complications.

In the group that did not attend the programme, only 3 patients progressed to surgery and 13 have been delayed or discharged.

Conclusion

Bariatric patients with poor mobility are at high risk of peri-operative complications. This study showed that a pre-operative exercise program helps patients with poor mobility to achieve weight loss, improve physical fitness, and progress to successful surgery. Those who did not engage with the service did not demonstrate appropriate lifestyle changes in order to progress to surgery.

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PHYSICAL ACTIVITY IMPROVEMENT AFTER SURGERY IN MORBID OBESE PATIENTS. MEASUREMENT WITH OBJECTIVE METHODS.

Exercise and bariatric surgery

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Background

Physical Activity (PA) it is so important to improve the result after bariatric surgery.

Introduction

The multimodal management in obese patients (nutrition, exercise, psychology, surgery) is the base for a good result in this patients.

Objectives

To measure the Physical Activity with objective methods, before and after the surgical intervention in Morbid Obese patients. Analyze whether physical activity has an influence on weight loss, improvement of Comorbidities and inflammatory parameters.

Methods

We include seven patients with BMI between 40 and 50, who undergo Laparoscopic Vertical Gastrectomy or By-pass. Seven days before surgery, they will be wearing an Accelerometer (Actigraph TM GT3X + accelerometer - Pensacola, FL-), which will measure his physical activity (MVPA, moderate to vigorous physical activity). After the surgery, at discharge, they carry the Accelerometer again for a week. Subsequently, and adjusted according to height and weight (this we vary every 15 days), will make a daily record thanks to a Personal Pedometer of the steps, the Kilometers traveled and the Kcalorías burned. After sixthy days they carry again the accelerometer for a week.

Results

The patients, even with elevated sedentary values (411.1 min /Day), increase after bariatric intervention (643.6 min / day), and a significant decrease in both light activity (592.4 vs 431.6 min / day) and moderate vigorous physical activity (5.7 vs 77.5 min / day). They improve sixthy days after the surgery with PA daily.

Conclusion

To measure FA, we prefer a reliable method such as Accelerometer; versus the subjectivity of the questionnaires on physical activity.

METABOLIC AND ANTHROPOMETRIC PROFILE OF BARIATRIC SURGERY CANDIDATES**Exercise and bariatric surgery****M.M. De Oliveira ¹, W. Komatsu ¹, A.B. Guiesser ¹, T.V. Monclaro ², F.C. Silveira ¹, M. Arruda ², J.A. Sallet ², P. Sallet ¹**¹Obesimed - Sao Paulo (Brazil), ²IM Sallet - Sao Paulo (Brazil)**Introduction**

The analysis of body composition is a major tool used in the follow up of patients aiming to lose weight. This analysis is particularly relevant for measuring anthropometric and metabolic variables of patients following bariatric procedures, as this is a proven way of evaluating the success of the operation.

Objectives

To describe the anthropometric and metabolic profile of candidates for bariatric surgery.

Methods

This transversal, descriptive, quantitative study used a sample of 399 patients that fit the inclusion criteria for bariatric surgery proposed by the Brazilian Society of Bariatric Surgery. The data was obtained by submitting the subjects to a bioimpedance test as well as traditional anthropometric body measurements.

Results

The subjects had an average age of 38.1 ± 9.7 , a body mass index (BMI) of 38.7 ± 6.4 and a mean body weight of 106.5 ± 21.1 kg. As far as body composition, the average percentage of adipose tissue was $45.3 \pm 8.3\%$ and the basal metabolic rate (BMR) was approximately 1610 ± 236.6 kcal/day. Furthermore, male presented with a higher overall body weight, lean mass and BMR when compared to their female counterparts. Females had a higher percentage of adipose tissue. There were no significant differences between BMI and waist hip ratio amongst men and women.

Conclusion

The present study showcased that age does not promote a statistically significant reduction in BMR as well as in lean body weight in obese Male present with higher body weight, lean mass and BMR when compared to females of the same age group.

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COMPARATIVE ANALYSIS OF RESPIRATORY MUSCLE STRENGTH BEFORE AND AFTER BARIATRIC SURGERY USING FIVE PREDICTIVE EQUATIONS

Exercise and bariatric surgery

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Introduction

Obesity is the most common chronic metabolic disease worldwide, with detrimental effects on respiratory function. Less is known about the recommended reference values for respiratory muscle strength in the morbidly obese population.

Objectives

This study aimed to evaluate respiratory muscle strength in the morbidly obese population, before and after bariatric surgery, and to compare these estimates with the predictive values using different mathematical equations available

Methods

A multidisciplinary team screened patients referred to a bariatric centre preoperatively. Their Maximum Inspiratory Pressure (MIP) was measured at screening and 3, 6 and 9 months postoperative. Predictive values were calculated using five different mathematical equations. Visual inspection of Bland-Altman plots was performed to determine the agreement between the equations studied.

Results

In total 122 patients were included in this study, among them were 104 females and 18 men, with a mean age was 43.02 ± 11.11 years and mean BMI was 43.10 ± 5.25 kg/m². There were no significant differences between the predicted MIP (according to Neder, Harik-Khan, Enright, Costa and Wilson equations) and the actual obtained MIP preoperatively ($p > 0.05$). Also there were no significant between the predictive values and the postoperative MIP values. ($P > 0.05$) Bland Altman analysis showed that the Enright equation was best suitable for predicting the MIP.

Conclusion

Of the five mathematical equations studied, that of Enright and colleagues was found best suitable for predicting the MIP in the obese population studied.

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THE ROLE OF THE PERCENTAGE OF LEAN MASS IN INCREASING BASAL METABOLIC RATE BEFORE BARIATRIC SURGERY

Exercise and bariatric surgery

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Introduction

Obese patients battle with a myriad of anatomic and physiologic complications that are mainly due to a high percentage of adipose tissue and low percentage of lean mass. However, literature is still poor in analyzing the correlation of body composition and basal metabolic rate (BMR).

Objectives

To establish the correlation between the percentage of body adipose tissue and the BMR in obese.

Methods

This transversal, descriptive, quantitative study comprised a sample of 400 patients that fit the inclusion criteria of the Brazilian Society of Bariatric Surgery. The anthropometric and body composition data was obtained through the use of bioimpedance tests and through the search of medical files.

Results

The data shows direct correlation between the percentage of body fat and the body mass index ($R=0.786$, $p<0,005$), as well as the waist to hip ratio ($R=0.712$, $p<0,005$) and the percentage of adipose tissue ($R=0.829$, $p<0,005$). However, this relationship is inversely proportional with the BMR ($R=0.202$, $p<0,005$) and with lean mass ($R=0.185$, $p<0,005$). The correlation between age and lean mass is also inversely proportional ($R=0.185$, $p<0,005$). Lean mass was strongly correlated with BMR ($R=0.999$, $p<0,005$).

Conclusion

Data analysis showcased the BMR direct correlation with the percentage of lean mass and its the negative correlation with adipose tissue. That only solidifies the role played by lean mass in increasing BMR. In conclusion, it is imperative that resistance training with the purpose of increasing lean mass is incorporated into the perioperative care of bariatric surgery candidates with the intention of promoting better outcomes.



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COMPARATIVE ANALYSIS OF RESPIRATORY MUSCLE STRENGTH BEFORE AND AFTER BARIATRIC SURGERY USING FIVE PREDICTIVE EQUATIONS

Exercise and bariatric surgery

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Introduction

Bariatric surgery has a considerable effect on weight loss. A positive relation of exercise and weight loss has been described before.

Objectives

To systematically review the mode of exercise and its timing pre- or postoperative or a combination in the bariatric surgical population.

Methods

A multi database search was conducted. Identified articles were reviewed on description of exercise, timing around a bariatric intervention and outcome. Methodological quality of the included studies was rated using the Physiotherapy Evidence Database scale. A Cohen's kappa score assessed the level of agreement. Outcome measurements were improvement of anthropometric and physical fitness variables, operation related complications, weight regain and quality of life.

Results

A total of eight prospective studies were included. Four focussed on training before and four on training after a bariatric procedure. Details of exercises varied from 45 minutes treadmill up to full descriptive programs. Supervision was frequently included. Significant improvement was encountered for biometric results physical fitness variables.

Conclusion

In the majority of reports on exercising in a (future) bariatric population, a positive effect on anthropometrics, cardiovascular risk factors and physical fitness was described. However, the results were not unanimous, with a wide range of exercise programs and peri-operative timing and therefore hampering adequate practical guidance.

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IMPACT OF BARIATRIC SURGERY ON SEXUAL WELL BEING OF MORBID OBESE PATIENTS

Fertility, pregnancy and bariatric surgery

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Background

Improvement or normalization of the sex hormones has been known to occur post bariatric surgery, but these changes in hormones whether associated with improved sexual health and overall physical and emotional well being is largely not known. Mere improvement of hormonal levels actually lead to improved sexual health is being debated.

Introduction

Obesity is one of the most common cause of infertility and impotence in males. Obesity causes hormonal changes that reduces fertility and makes men less interested in sex. This study was designed to study effect of Bariatric surgery on S. testosterone level and SHIM score .

Objectives

To study the impact of bariatric surgery (LSG or LRYGB) on morbid obese patient's sexual health and to determine whether just only hormonal improvement or overall improvement in sexual health occurs post bariatric surgery.

Methods

We prospectively studied 32 morbidly obese patients. Mean age of the patients was 37.5 with a mean BMI of 42.7. We studied their hormonal levels and sexual well being score i.e SHIM score questionnaire (Sexual health inventory for men) preoperatively and the hormonal levels and SHIM score at 6 month and at 1 year post bariatric surgery follow up.

Results

Mean S. testosterone level pre-op was 1.6 ± 0.4 (ng/mL) and post op was 3.5 ± 0.9 (ng/mL)
Pre op SHIM score was 9 ± 3 and post op was 16 ± 4 .

Conclusion

Our results suggest that bariatric surgery in morbid obese patient not only led to improvement in sex hormones but also to the improved SHIM score and hence improvement in sexual life of the patient.

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TIMING OF PREGNANCY AFTER BARIATRIC SURGERY

Fertility, pregnancy and bariatric surgery

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Background

Obesity is one of the leading causes of mortality, morbidity, disability, healthcare utilization and healthcare costs. In the last 25 years, bariatric surgery(BS) is shown as an option for the treatment of morbid obesity.

Introduction

The 2/3 of morbid obese women in reproductive age have undergone bariatric surgery for obesity. After theBS, the perfect timing of pregnancy has not been pointed.

Objectives

In this review we would like to evaluate the risk of maternal and neonatal outcomes focusing on the timing of pregnancy after BS.

Methods

PubMed®/MEDLINE®resources search was undertaken using terms "obesity, bariatric, pregnancy, timing" between 2000 and 2017 in English language. Totally 11 articles and 1 congress abstract were included due to the criteria.

Results

The total number of the patients who has given birth after BS in study groups was986. The studies were evaluated the outcomes in terms of miscarriages, birth weight, small for gestational age, large for gestational age and intensive care need. The outcomes after theBS were generally compared between the groups as the first 12months-pregnancies and after the 12months-pregnancies. There was no significant difference between the parameters between the groups. However some studies imply that weight stabilization and support for nutritional deficiencies may be beneficial for pregnancy outcome.

Conclusion

If possible ensuring about weight stabilization with regulations of nutritional deficiency and waiting for at least one year after BS would be a better time for conception.The verdict should be given individually for every couple evaluating the fertility situation.We need to have more prospective randomized trials about the issue.

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MATERNAL-PERINATAL RESULTS IN POST BARIATRIC SURGERY PREGNANT WOMEN

Fertility, pregnancy and bariatric surgery

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Introduction

Obesity is a frequent disease in women at child-bearing age. Obesity in pregnancy carries a higher maternal-perinatal risks which may decrease after weight loss, particularly after bariatric surgery (BS).

Objectives

Determine the maternal-perinatal results in a cohort of post BS pregnant women.

Methods

A retrospective cohort study of single gestation pregnant women, during 2006-2015, previously submitted to BS at our institution. Demographic, preoperative, obstetric, and perinatal data were retrieved and descriptive statistics were performed (SPSS 22.0)

Results

117 post BS pregnant women were identified. The median maternal age (MMA) was 32(18-42) years and 59,8%(70) were nulliparous. The time between BS and gestation was 33(1-131) months. Pre BS BMI was 38,7(30,1-61,6) kg/m² and during first obstetric follow-up 28,3(19,7-41,9) kg/m². Gestational diabetes(GDM) occurred in 1,8%(2) and gestational hypertension(PIH) in 9,9%(11), being GDM lower than national records. Caesarean sections were performed on 53,8%(63) women. 117 births were recorded with a median gestational age of 39(23-41) weeks. Premature birth was registered in 7,8%(9). Newborn birth weight was 3210(575-4360) grams. Neonatal death occurred in 1,7%(2) of newborns. Pregnant women were stratified based on MMA and newborn anthropometry was compared against the national birth registration. Regardless of maternal age, bariatric patients' newborns presented low birth weight(≤ 32 years: 9,5% vs 4,8%; >32 years: 7,4% vs 5,9%) and higher percentage of prematurity(≤ 32 years: 7,9% vs 6,2%; >32 years: 9,3% vs 8%) than general population.

Conclusion

Bariatric surgery may diminish maternal-perinatal risks, although it must be counterbalanced against prematurity and low birth weight in new-borns.

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GESTATIONAL DIABETES AND THE IMPACT OF BARIATRIC SURGERY: A NEW PERSPECTIVE

Fertility, pregnancy and bariatric surgery

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Background

The burden of gestational diabetes mellitus (GDM) is increasing worldwide however clinical evidence for the utility of bariatric surgery in ameliorating GDM is still in its infancy.

Introduction

The prevalence of both obesity and type 2 diabetes mellitus has increased globally. Pregnancy-induced insulin resistance is linked with diabetes after pregnancy. The effect of bariatric surgery upon both GDM incidence and foetal outcome is poorly described.

Objectives

To determine the typical maternal and neonatal outcome profiles after bariatric surgery focused upon GDM and its sequelae.

Methods

A systematic search of the literature (PubMed, Medline OVID, Cochrane Collaboration and Google Scholar) was conducted. Studies were included if they pertained to bariatric surgery and pregnant patients. The primary outcome was GDM with secondary outcomes of BMI, caesarean section rates, prematurity and birthweight.

Results

Few studies met inclusion criteria. All were case-control or cohort trials. The small numbers of patients, heterogeneity of operations and diversity of outcome measures precluded meta-analysis. There is a significant reduction in GDM prevalence in obese women following bariatric surgery. The time between surgery and conception does not seem to affect the rate of GDM. Bariatric surgery decreases the risk of macrosomia in the context of GDM.

Conclusion

Special consideration should be given to counselling for women of reproductive age with regards to bariatric surgery and pregnancy outcomes. GDM can adversely impact both maternal and foetal outcomes for which the risk may be decreased by bariatric surgery. Further studies into specific subgroups of surgery and pregnancy outcomes is required.

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CHARACTERISTICS OF WOMEN OF CHILDBEARING AGE SEEKING BARIATRIC OPERATION

Fertility, pregnancy and bariatric surgery

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Background

Improving fertility in female bariatric patients .

Introduction

Characteristics of women of childbearing age seeking for bariatric operation were evaluated.

Objectives

Retrospective analysis

Methods

249 patients completed an introductory questionnaire, 28% (69) aged 18 - 42 years. Descriptive analysis was used: knowledge about bariatric procedures, complications, short/long term results and general expectations (scale from 1 -5) combined to Global PA Questionnaire.

Results

69 females, median age 35 years, BMI of 43.3 kg/m² were analyzed. 78% have tried to lose weight on medical supervision before, at least once and more than 95% have tried to lose weight on their own. 18.8% didn't meet WHO recommended level on physical activity and 33% were physically active less than 300 minutes per week. 8.7% had type 2 diabetes. 42% hirsutism, 10.1% acne, 19.4 % conceptional insufficiency, 50.7% had normal, 35.8 % irregular, 14.9% painful and 6.0% long lasting menstrual periods. 6,0% had no menstrual periods at all. 56.5% had never heard about polycystic ovary syndrome (PCOS), 23.2% had PCOS diagnosis confirmed in the past (25% on medications for PCOS). Rated knowledge about bariatric surgery was average grade 2.6, complications of surgery grade 2.3 (36% rated about complications of surgery grade 1), limited expectations to short and long term results besides weight loss (2,2) and poor knowledge about dietary counseling and PA in same cohort of patients (2.0).

Conclusion

Low level knowledge about PCOS, surgery procedures, complications and expectations besides weight loss was observed .Improvement of PA, dietary tailoring and positive behavioral were improved by statistical importance($p < 0.05$).



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MENSTRUAL CYCLE PATTERNS AFTER GASTRIC BYPASS SURGERY

Fertility, pregnancy and bariatric surgery

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Background

Obese women have problems with anovulation and irregular or absent menstrual bleeding. Most of these women also have polycystic ovary syndrome (PCOS) and bariatric surgery helps them not only losing weight but also with return of normal menses.

Introduction

Obese women have problems with infertility and they decide for bariatric operations.

Objectives

Retrospectively we looked for our patients with menstrual problems.

Methods

From January 2012 to December 2014 we have operated 380 bariatric patients, 324 where women out of that 34 had irregular menstrual patterns. PCOS was diagnosed in 22, that is 6,8% of all operated women patients and 12 (3,7%) had absent or irregular menstrual cycles. Eight of this patients were lost in follow up. Of 26 patients which we followed for two years or more, PCOS had 15 and 11 had absent menstrual cycles .

Results

In all of this 26 patients we performed gastric bypass. Roux en Y gastric bypass (GBP) was performed in 10 and omega GBP was performed in 16 patients. Body mass index (BMI) before operation was 43,1 and two years after operation was 26,9. Of 15 patients with PCOS 12 had regular menstrual cycles after operation, 3 did not find any difference or still had irregular menses. Of 11 patients with absent or irregular menstrual cycles, 9 had regular cycles and two did not find any difference.

Conclusion

The menstrual cycle disorders may completely resolve after bariatric surgery, both in women with PCOS and women with anamnestic irregular or absent menstrual cycles.

MENSTRUAL PATTERNS AND CONTRACEPTIVE PRACTICES OF WOMEN AGED 18-50 AWAITING BARIATRIC SURGERY

Fertility, pregnancy and bariatric surgery

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Background

Over 70% of patients seeking bariatric surgery are women in their reproductive years.

Introduction

Little research has examined female patients' pre-surgical menstrual patterns and contraceptive practices, making it difficult to identify and meet their reproductive health needs pre- and post-surgery.

Objectives

The aim of the study was to gather information on menstrual patterns and contraceptive practices in this cohort to inform future practice and research.

Methods

Female patients aged 18-50 awaiting surgery at an NHS hospital in England were approached by letter to complete an anonymous on-line survey about their menstrual patterns and contraceptive practices. Recruitment took place between July 2015 - February 2017.

Results

From theatre waiting lists, 214 eligible patients were identified. A total of 42 completed the on-line survey, (response rate 20%). The majority of participants fell into the 36-44 year age range (n=16). Menstrual cycles were described as regular by half the participants, nearly half experienced heavy bleeding (n=19). Contraception was used by 55% (n=23), 66% (n=23) were not aware of unsuitable methods, 24% (n=10) stated their weight affected contraceptive choices.

Conclusion

Data on menstruation provides insight into this area of reproductive health which is not routinely discussed in bariatric practice. Although intrauterine devices were most common, there were methods used, such as oral hormonal contraceptives that are not appropriate. Further research is needed before and after bariatric surgery to understand the impact of bariatric surgery on menstrual patterns and contraceptive practices prior to bariatric surgery, so suitable methods are offered.



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BARIATRIC SURGERY IMPROVES FERTILITY IN PRE-PREGNANT WOMEN.

Fertility, pregnancy and bariatric surgery

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Background

there is a common fear and circumspection among the population as well as doctor community whether any bariatric surgery should be offered to pre pregnant obese women. there is a concern whether the growing foetus would get adequate nutrition following different bariatric procedures.

Introduction

with the growing obesity and diabetes epidemic in Asian countries including India, young obese women waiting to get pregnant form a substantial proportion. it is common to see them with hormonal imbalances leading to PCOD and primary infertility. They end up with their Gynaecologists unable to concieve even after many years of marraige.

Objectives

objective is to see whether weight reduction surgery would help these obese women concieve after various procedures.

Methods

in the last 7 years, we have operated on 42 women with primary infertility. we have advised all of them to use some form of contraception for the first one and half year after surgery. their mean BMI is 44.5 , 13 of them are diabetic and 7 of them are Hypertensive. procedures performed were Sleeve Gastrectomy in 37 and OAGB in 5 of them.

Results

27 of these women have concieved and one of them have ended up in abortion in the first trimester. Remaining women have delivered healthy babies with a mean weight of 2.76 kgs which is slightly lower than the average local weight. There were no congenital anomalies nor any defeciencies in these babies.

Conclusion

Bariatric surgery gives an excellent weight loss and resolution of PCOD which in turn improves fertility in pre-pregnant obese women.

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INFERTILITY : THE PIERCING THORN OF OBESITY – EARLY EXPERIENCE OF THE ROLE OF BARIATRIC SURGERY FROM OMAN

Fertility, pregnancy and bariatric surgery

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Background

Oman has a population of 3.5 million . The country ranks high on the order of Global and regional Obesity. This is especially in women where 75% are overweight and 38% are obese. Metabolic syndrome, is well recognised in 25% of the population.

Introduction

Reproductive health and fertility problems stand out as additional challenges that face women inflicted with this disease. The effect of Bariatric surgery remains a controversial field .

Objectives

To shed the light on our early experience with Bariatric surgery at the biggest centre in Oman, and its role in secondary infertility in these Obese patients.

Methods

Retrospective analysis from a prospective data base of all female patients who had Bariatric surgery between Jan 2012 and Dec 2016.

Results

Of 223 patients operated with Sleeve Gastrectomy, there were 166(74%) females. Of these 35 (21%) had reproductive problems . 22(63%) had infertility of whom 15 (68%) subsequently became pregnant. The mean weight loss at which pregnancy was achieved was 29.9kg ($p<0.05$) at a mean time after surgery of 9.9 mths ($p<0.05$) . Additionally, 19(54%) had a history of Polycystic ovarian disease-Of these 14(74%) had a return of cycle regularity.

Conclusion

This is the first study on Bariatric surgery's effect on Fertility related disorders in Oman.The increased prevalence of obesity in women in Oman creates a major challenge for population planning due to decreased pregnancy. These early results are comparable with other international studies that support the role of surgery in offering a solution to these patients while in their reproductive life.

P.207**EVALUATION OF THE GASTROESOPHAGEAL MUCOSA WITH ENDOSCOPIC (EGD) COMPUTED VIRTUAL CHROMOENDOSCOPY TECHNOLOGIES (CVCT) IN PATIENTS UNDERGOING MINI GASTRIC BYPASS.**

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Although several authors have reported excellent results with Laparoscopic Mini Gastric Bypass (LMGB), revisions of the literature criticize the possible histological damage due to potential bile reflux in the stomach or esophagus caused by this technique.

Objectives

Our study aims to assess the condition of the gastric mucosa and esophagus in patients operated with LMGB technique through the use of Endoscopic (EGD) Computed Virtual Chromoendoscopy Technologies (CVCT); this method allows a more detailed view of the vascular network and of the gastrointestinal mucosa structure.

Methods

In this prospective study we enrolled 80 obese adults operated with LMGB technique in the Department of Advanced Biomedical Sciences of the University Federico II of Naples. All subjects underwent EGD-CVCT for evaluation of the gastroesophageal mucosa preoperatively; follow-up endoscopy was scheduled at 12, 36 and 60 months after surgery. Today, fortytwo patients reached 1 year of follow-up, 21 patients reached 36 months of follow-up and 17 patients have a follow-up of 60 months.

Results

The analysis of chromoendoscopy images showed gastric mucosa free from esophagitis in all patients; in subjects with a 60-months follow-up, we found a mild chronic gastritis in 14 patients and a moderate chronic gastritis in 3 patients. No dysplasia or intestinal metaplasia was detected. All data have been confirmed by histology.

Conclusion

Our study documents that the LMGB do not cause worrying changes of the gastroesophageal mucosa at 60-months follow-up. Further studies with a larger sample and a longer follow-up are required to validate the observed results.



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LAPAROSCOPIC REUX-EN-Y GASTRIC BYPASS IN A PATIENT FOUND TO HAVE MIDGUT NON-ROTATION

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Laparoscopic Roux-en-Y gastric bypass (RYGB) is one of the most common procedures for morbid obesity. Congenital anomalies of the midgut are rare and often asymptomatic and therefore if present in a patient requiring an elective operation such as RYGB, these may only be found during their planned operation.

Introduction

Midgut non-rotation has a frequency of 1 in 6000. Due to the anatomical changes, an alternative operative approach might be required when performing RYGB in morbidly obese patients with midgut non-rotation.

Objectives

We demonstrate the feasibility of RYGB in a patient with midgut non-rotation.

Methods

We present the case of a 45 year old male patient with a BMI of 55 who was scheduled for RYGB. During the operation, he was found to have midgut non-rotation.

Results

Initial inspection of the abdominal cavity revealed the caecum was located in the midpelvis. The third part of the duodenum did not cross the midline. After inspection of the whole length of the small bowel, a RYGB was performed. The patient had an uncomplicated postoperative recovery. A gastrograffin swallow showed normal passage of contrast through both anastomoses.

Conclusion

Patient with non-rotation of the midgut can undergo laparoscopic RYGB successfully. This case highlights the importance of full inspection of the bowel prior to any division.

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PREDICTING WEIGHT LOSS FOR LAPAROSCOPIC GASTRIC BYPASS PATIENTS BEFORE GOING UNDER THE KNIFE

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Laparoscopic Gastric Bypass (LGBP) is one of the most effective bariatric surgical procedure when aiming for long-term weight loss. However, identifying which patients will achieve optimal outcomes remains challenging.

Objectives

To determine the factors that can guide patients and surgeons in achieving weight loss (% EWL).

Methods

Retrospective cohort study with 1333 LGBP between May 2007 and August 2016. Studying the effect of gender, age, BMI, comorbidities, gastric pouch size (GPS) and % preoperative weight loss on %EWL up till 5 years. Acceptable success : %EWL50-69%, very good success : %EWL70-90% , excellent success : %EWL > 90% .

Results

In the univariate analysis, after 6 months, BMI and GPS had a negative correlation ($p < 0.001$, $p=0.011$) and % preoperative weight loss and dyslipidemia had a positive correlation ($p < 0.001$, $p=0.013$) to %EWL. However, in the 1st, 2nd and 3rd years, BMI and age had a negative correlation ($p < 0.001$) while diabetes mellitus or hypertension had a positive correlation ($p=0.048$, $p=0.015$). In the 4th year, only BMI was significant ($p=0.05$), while in the 5th year hypertension and dyslipidemia were significant ($p=0.009$, $p=0.05$). In the multivariate analysis, after 6 months only GPS was significant ($p=0.001$). At one year : BMI and % preoperative weight loss were significant ($p=0.000$, $p=0.002$). In the 2nd year only BMI was significant ($p=0.000$).

Conclusion

Younger age, lower initial BMI and higher % preoperative weight loss gives patients a better chance of succeeding, while small gastric pouches are of a great importance but only in the first 6 months following surgery.

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COMPARISON BETWEEN VERTICAL SLEEVE GASTRECTOMY (VSG) AND MODIFIED DUODENAL SWITCH (MDS) – OUTCOMES AT 3 YEARS AND INADEQUATE WEIGHT LOSS.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

The superiority of MDS for sustained weight-loss with low associated morbidity is not well characterized. VSG studies showed certain degree of inadequate weight loss at long term in which an ideal conversion procedure has yet to be discovered.

Objectives

To compare the outcomes at 3 years between VSG and MDS.

Methods

This retrospective chart review from January 2013- March 2014 identified 141 patients who underwent vertical sleeve gastrectomy (VSG) and 84 who underwent modified duodenal switch (MDS). Gender, age, weight, and BMI were collected and compared using distributive analysis. Total body weight loss, excess body weight loss % and BMI reduction at 3 years were calculated. Inadequate weight loss is defined as excess body weight loss of < 50%. Analyses for continuous variables were calculated using independent T-Test, mean, median; standard deviation and variance were compared between both groups using SPSS V.22 software.

Results

EBWL% in MDS group at 3 years was significantly higher ($p=0.00$) than VSG group, with a mean 83.3%(SD=27) and 58%(SD=19) respectively. 12/42(29%) of VSG group experienced inadequate weight loss while 6/43(14%) of MDS group experienced inadequate weight loss at 3 years. Only 12%(n=5/42) of VSG group had excess weight loss >80% while 58%(n=25/43) of MDS group had excess weight loss >80% at 3 years. 17/42 of VSG group required conversion to MDS after 3 years.

EBWL%	VSG	MDS
<50%	12/42(29%)	6/43(14%)
50-80%	25/42(60%)	12/43(28%)
>80%	5/42(12%)	25/43((58%)

Conclusion

Increased long term excess weight loss identifies MDS as a superior option to treat morbidly obese.

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RE-INTERVENTION FOLLOWING ONE ANASTOMOSIS GASTRIC BYPASS (OAGB) – WHEN AND WHY DOES IT HAPPEN?

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

OAGB is an increasingly common procedure. Recent data has shown that benefits and peri-operative complication rates are comparable to Roux-en-y gastric bypass (RYGB), though there is still limited data on the longer term outcomes of OAGB.

Objectives

Assess the frequency and reasons of major radiological, endoscopic, and surgical interventions after OAGB in our unit.

Methods

All patients who underwent OAGB were identified retrospectively from a prospective database. Post-operative endoscopy, CT, operative reports and clinic letters were reviewed to assess for any re-intervention.

Results

266 patients were included. Follow-up ranged from 3-47 months (median 22). 15% of patients underwent post-operative OGD; the most common indications being abdominal pain (28%) and nausea/vomiting (22%). 12% patients underwent post-operative CT: four for reasons unrelated to OAGB; three within a month post-operatively. Abdominal pain was the most common indication (58%). 9% of patients underwent a second operation (12/5% related to OAGB); one in the early post-operative period (laparotomy for obstruction). Six were conversions to RYGB; median 19 months post-OAGB (one for ulcer perforation; five for reflux/marginal ulceration). Three were diagnostic laparoscopies, one was a hiatus hernia repair and division of gastro-gastric fistula, and one was a laparoscopy for perforation (unknown aetiology).

Conclusion

The re-intervention rate related to OAGB over intermediate follow-up is acceptable (OGD 15%; CT 11%; re-operation 5%) and comparable to other bariatric procedures. This study supports the continued use of OAGB for the surgical treatment of obesity. The data also provides useful reference for other departments using OAGB, and for patient counselling regarding expected outcomes of surgery.

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SPLEEN AND TOTAL SMALL BOWEL NECROSIS AFTER LAPAROSCOPIC GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Spleen infarction and small bowel ischemia is uncommon surgical complication, with difficult diagnosis and potentially severe consequences due to higher risk of mortality. Portal Vein Thrombosis (PVT) refers to an obstruction in the trunk of the portal vein. It is a rare but severe complication after laparoscopic bariatric surgery, with potentially catastrophic consequences.

Objectives

The purpose of this poster is was to present a patient who developed post operation spleen and small bowel necrosis after Laparoscopic Gastric Bypass (LRYGB).

Methods

A 44 years old woman underwent an uneventful laparoscopic gastric bypass for morbid obesity, and present on post operation day 3 with diffuse abdominal pain, nausea, hypotension and leukocytosis. Computed tomography revealed portal vein , splenic and mesenteric vein thrombosis

Results

In reoperation laparoscopy, there was total intestinal necrosis from Treitz ligament to splenic flexure of colon and spleen necrosis. Splenectomy and intestinal resection was done. Unfortunately, the patient was expired four days after reoperation.

Conclusion

Portal vein thrombosis is a rare complication after Laparoscopic Bariatric Surgery, however, laparoscopic surgeons should be aware of the risk of PVT. It should be thought in cases with an atypical outcome after surgery. A high index of suspicion is necessary to diagnose this potentially and lethal complication

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GASTRIC BYPASS AS A THIRD BARIATRIC PROCEDURE - IS IT WORTH IT?

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

It is not uncommon to encounter patients seeking a third, fourth or even fifth bariatric procedure. With higher expected complication rates and questionable patient benefit, the indication for multiple revisions is still in doubt.

Objectives

To evaluate the perioperative and post-operative outcomes of patients undergoing gastric bypass after 2 previous bariatric surgeries or more.

Methods

We identified all patients that underwent gastric bypass following at least 2 previous bariatric surgeries. We looked at, patient demographics, previous bariatric surgeries, pre-operative body mass index (BMI) and obesity related co-morbidities, perioperative complications, length of stay (LOS), re-admissions and re-operations, percentage of excess weight loss and resolution or improvement in comorbidities.

Results

Forty two patients met the inclusion criteria, the majority females (31, 73.8%). Average age was 45.6 years (range 27-62), average weight and BMI was 116 kg (range 75-175 kg) and 41.1 kg/m² (range 25.6-58.7 kg/m²), respectively. Thirty two patients had 2 previous bariatric surgeries (73.8%), 9 patients had 3 former bariatric surgeries (21.4%), and for one patient this was the fifth bariatric procedure (2.4%). Median LOS was 7.5 days (range 2-56 days). Nine patients (21.4%) needed re-admission and 7 (16.7%) needed re-operation. At a median follow up of 48 months (range 7-99 months), the average BMI was 33.9 kg/m² (range 23.7-55.1 kg/m²) reflecting an excess BMI loss of 45%.

Conclusion

Gastric bypass as a third or more bariatric procedure is effective yet associated with high complications rates, re-admissions and re-operations.

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WEIGHT LOSS AS CLINICAL MEASURE FOR PROBABILITY OF INTERNAL HERNIATION AFTER LAPAROSCOPIC GASTRIC BYPASS SURGERY

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Internal herniation(IH) is one of the late complications after gastric bypass surgery. Its diagnosis is challenging due to a wide variety of clinical presentation.

Objectives

To determine if weight loss can be used as measure to determine probability of IH.

Methods

Patients were retrospective included after laparoscopic gastric bypass surgery between January 1, 2011 and December 31, 2014 and if follow-up weights were available. Clinical records have been screened for suspicion on IH, resulting in a median time until start of complaints of 415 days(range 0-1689d). Therefore weight at time of complaints and follow-up weights between 350 and 450 days after surgery were used. Univariate and multivariate logistic regression were used to determine association and odds ratio's(OR). Cox-regression was used to determine hazard ratio(HR).

Results

A total of 1059 patients were included of which 17.8%(188) had complaints. Incidence of IH was 2.9%(31/1059). Sex, age, starting weight and starting BMI were not associated with IH. Median weight loss for patients with and without complaints was 34.9 vs. 38.1kg(p=0.010). Median weight loss for patient with complaints with and without IH was 42.1 vs.32.3kg(p=0.005). The OR per 5kg weight loss for complaints was 0.91(95%-CI;0.85-0.97), for IH this was 1.17(95%-CI;1.04-1.32). HR per 5 kg weight loss for complaints was 0.90(95%-CI;0.85-0.96).

Conclusion

Weight loss is an independent risk factor for IH. Weight loss is more important than having complaints to determine the probability of IH.

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OUTCOMES OF OMEGA LOOP GASTRIC BYPASS, 6-YEARS EXPERIENCE OF 1520 CASES

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Omega loop gastric bypass (OLGB) has been viewed with skepticism after the failure of the old Mason loop. During the past 15 years, a growing number of authors worldwide approved that OLGB is a safe and effective procedure, which appears clearly from the operative outcome and long-term follow-up of consecutive cohort studies of patients who underwent OLGB.

Objectives

The aim of this study is to evaluate the outcomes of OLGB at the bariatric center of our university hospital between 2009 and 2015.

Methods

The data of 1520 patients who underwent OLGB from November 2009 to December 2015 at our center were reviewed. Mean age was 37.15 years, mean preoperative BMI was 46.8 ± 6.6 kg/m², mean preoperative weight was 127.4 ± 25.3 kg and 62.7% were women. Diabetes mellitus (DM) affected 683 (44.9%) of the 1520 patients, whereas 773 of the 1520 patients (50.9%) presented with hypertension. The mean operative time was 35 min.

Results

The 1-year postoperative BMI mean decreased to 29.6 ± 3.1 kg/m², and at the 3-year follow-up, it was 27.5 ± 3.4 kg/m². The mean of weight decreased to 81.3 ± 16.7 kg and to 78.9 ± 16.9 kg at the 1-year and the 3-year follow-up, respectively. Mortality rate was 0.1%. Overall complications were 9.3%; 0.8% required reoperations. Early complications were encountered in 50 patients (3.3%), and the late complications rate was (6.1%).

Conclusion

In this study, greater excess weight loss was observed with OLGB which appeared to be a short, simple, low risk, effective, and durable bariatric procedure.

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THE "HUG" TECHNIQUE- ROUX-EN-Y GASTRIC BYPASS WITH PRESERVATION OF 180° POSTERIOR FUNDOPLICATION FOR PREVIOUS NISSEN FUNDOPLICATION: A SIMPLE SOLUTION FOR A COMPLEX PROBLEM

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Laparoscopic conversion of Nissen Fundoplication to Roux-en-Y Gastric Bypass is a complex procedure related to increased operative times, morbidity and length of hospital stay (LOS).

Introduction

In this study, a new simplified technique avoiding the total dismantling of the previous Nissen repair to construct the gastric pouch, the so called "Hug" Technique, is presented for conversion of Nissen Fundoplication to RYGB.

Objectives

To evaluate the safety of the HUG Technique for patients with a previous Nissen Fundoplication in the greater series in the literature.

Methods

The major innovation of this approach is the fact that the posterior part of the fundoplication wrap is left in place without further dissection or manipulation. The anterior part is stapled and remains attached to the excluded stomach. Prospective data on intraoperative and postoperative morbidity, reflux symptomatology and bariatric outcomes were prospectively collected.

Results

A total of 44 consecutive patients with a mean Body Mass Index (BMI) of 43.7 kg/m² (SD = 4.0, range = 35.6 – 52.0) underwent the "Hug" procedure between 2004 and 2015. Mean operative time was 72min (58-105min). Morbidity was low (4.5%), with no mortality. Reflux symptomatic dropped significantly without PPI medication, and mild asymptomatic endoscopic reflux was found in 12 % of the patients.

Conclusion

In contrast to current techniques for bariatric surgery for patients having previously a Nissen fundoplication, the "Hug" procedure for RYGB is safe and simple to perform. The technique avoids the deconstruction of the previous repair and still maintaining an anti-reflux anatomy.

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THE FUNCTION OF GASTROESOPHAGEAL JUNCTION IN PATIENTS UNDERGOING BARIATRIC SURGERY. COMPARATIVE STUDY BETWEEN LAPAROSCOPIC SLEEVE GASTRECTOMY AND MINI GASTRIC BYPASS.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

In 1997 Rutledge brought the Mini-Laparoscopic Gastric Bypass (LMGB) as an alternative to the traditional Roux-en-y bypass. One of the criticisms of the LMGB is the potential presence of a constant bile reflux.

Objectives

The aim of this study is to carry out a post-operative evaluation on the presence of bile reflux in patients operated by LMGB and Laparoscopic Sleeve Gastrectomy (LSG) through the use of pH-impedance-monitoring and gastro-esophageal manometry in 24 hours (MII-pH).

Methods

We enrolled 10 obese adults operated by LMGB in the Department of Biomedical Sciences Advanced of University Federico II of Naples. The control group was composed of 16 obese patients undergoing LSG technique.

All subjects underwent pH-impedance-monitoring with associated manometry, both at pre-operative baseline and after an average follow-up of 11.87 ± 1.14 months.

Data recorded before and after surgery were gastric pH, total acid exposure, the total distal reflux numbers, distal reflux acid and non-acid, the total number of proximal reflux, proximal acid reflux and not acidic.

Results

We found a statistically significant increase of the gastric pH in patients undergoing LSG ($p = 0.03$); furthermore, comparing the data of the two techniques at follow-up, a greater number of total reflux ($p = 0.005$), proximal reflux ($p = 0.017$) and reflux proximal acids ($p = 0.039$) in the control group were detected.

Conclusion

Our study shows that, compared to LSG, the LMGB technique does not entail a reduction of the gastroesophageal junction functionality. Further studies are needed to validate the observed results.

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ENDOSCOPIC AND HISTOLOGICAL FINDINGS IN SELECTED OBESE PATIENTS UNDERGOING LAPAROSCOPIC RESECTIVE GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

The identification of premalignant gastric cancer (GC) lesions on the excluded stomach during preoperative upper endoscopy study of patients undergoing roux-en-y gastric bypass (RYGBP) and/or family history of GC in a first degree relative identify a group of patients in which is possible to propose a laparoscopic resective (LR-RGBP).

Objectives

We sought to describe the indications and histological results of LR-RYGBP in morbidly obese patients.

Methods

All patients who consecutively underwent LR-RYGB from 2004-2016 were identified. Patients demographic and histological findings from endoscopic biopsy (EB) and resected distal stomach was reviewed by a single pathologist.

Results

Fifty patients underwent LR-RYGBP. Thirty-seven (74%) patients were female, age and BMI was $46,2 \pm 9,3$ years and $38,3 \pm 3,9$ kg/m², respectively. The most frequent indications for LR-RYGB were: 55%(n=27) intestinal metaplasia (IM); 30%(n=15) first degree relative history of GC; 10,2%(n=5) non-adenocarcinoma neoplasms (GIST,NET); 4,1% (n=2) low grade focal dysplasia; 10,2%(n=5) others. Histological analysis of resected stomach revealed: 46%(n=23) chronic atrophic gastritis, 38%(n=19) IM: 4%(n=2) heterotopic pancreas; and 2%(n=1) neuroendocrine tumor. No displacia was found on the resected stomach.

Conclusion

The results of this work indicate that single endoscopic biopsy sampling during preoperative evaluation appears to be insufficient to accurately detect premalignant gastric cancer lesions that may require a resective gastric bypass. Thus, a more precise method of preoperative histological evaluation is needed to improve patients selection for RL-RYGB.

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RESULTS OF SYSTEMATICALLY REVIEWING CT-SCANS IN PATIENTS WITH SUSPECTED INTERNAL HERNIATION AFTER LAPAROSCOPIC GASTRIC BYPASS SURGERY

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Abdominal CT-scans play an important role in diagnosing internal herniation(IH) after gastric bypass surgery. Multiple signs are described to determine presence of IH on CT-scans.

Objectives

The purpose of this study was to evaluate if systematically reviewing CT-scans, using ten different CT signs, results in a better diagnostic value.

Methods

Patients were retrospectively included if they had undergone laparoscopic gastric bypass surgery between January 1, 2011 and December 31, 2014, and if additional radiological examination was performed for suspected IH between January 1, 2011 and December 31, 2016. All CT-scans were reassessed by an abdominal radiologist, a radiology resident and intern. Assessment was done using ten signs from previous literature. Overall suspicion of IH was graded using a 5-point Likert-scale, 5 being definite IH. Re-operation was used as gold standard. Inter-observer agreement was calculate using Fleiss's Kappa.

Results

We reassessed 245 CT-scans, with 68 subsequent re-operations. During 34(50%) re-operations an IH was diagnosed. Considering scores of 3-5 positive at Likert-scale, diagnosing IH by CT-scan had a sensitivity and specificity of 79.4%(95%-CI;65.8-93.0%) and 85.3%(95%-CI;73.4-97.2%) respectively for the radiologist, 76.4%(95%-CI;62.2-90.7%) and 79.4%(95%-CI;65.8-93.0%) respectively for the resident, and 82.4%(95%-CI;69.5-95.2%) and 79.4%(95%-CI;65.8-93.0%) respectively for the intern. The sensitivity for the original CT-reports was 82.4%(95%-CI;69.5-95.2%) and the specificity was 50%(95%-CI;33.2-66.8%). Swirl sign, venous congestion and mesenteric edema were the most sensitive signs. Inter-observer agreement was good.

Conclusion

Systematically reviewing CT-scans for suspected IH results in a better specificity. In clinical practice a checklist of all ten signs and co-reviewing by an experienced radiologist can help to prevent unnecessary surgery.

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STAGED LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS – A WORTHWHILE APPROACH FOR HIGH-RISK SUPER-OBESE PATIENTS?

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Staged bariatric procedures are recommended for high-risk obese patients to minimize perioperative risks.

Objectives

The aim of this study is to investigate the safety and efficacy of a staged-RYGB for super-obese patients.

Methods

All patients who underwent a staged-RYGB between September 2005-January 2016 were identified and their data analyzed. Selection criteria for a staged approach were super-obesity (BMI>50) or an Obesity Surgery Mortality Risk Score (OSMRS) ≥ 4 . A 1st-stage Sleeve Gastrectomy (SG) was followed by RYGB ≥ 12 months later.

Results

During the study period 119 patients underwent a staged-RYGB. Median (range) time between SG and RYGB was 16(7–49) months. Mean age and BMI preoperatively were 50.0 ± 9.9 years and 62.1 ± 9.3 kg/m² respectively. At the time of SG, 55% of patients had OSMRS 4 or 5. By the time of RYGB, this decreased significantly to 26% ($p < 0.01$). Mean EWL achieved by SG (at the time of the 2nd-stage RYGB) was $43.2 \pm 11.8\%$. At 6, 12, and 24 months following 2nd-stage RYGB the overall mean %EWL was $57.9 \pm 12.6\%$, $60.0 \pm 12.4\%$, and $56.3 \pm 17.1\%$, respectively. After 2nd-stage RYGB, there was notable further improvement in comorbidities. Diabetes resolution occurred in 36% following SG and 12-months post-RYGB a further 17 patients (36%) achieved T2DM resolution or improvement. Similarly, 16.9% experienced resolution of hypertension after SG but a further 41 patients (46.1%) had remission or improvement of hypertension 12-months post-RYGB. Overall mortality rate(90-day) was 0% and reoperation rate was 6%.

Conclusion

A staged approach to gastric bypass is safe and effective in high-risk super-obese patients and remains an important strategy for managing such patients.

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HAEMATOLOGICAL INDICES AND HAEMATINIC LEVELS AFTER ONE ANASTOMOSIS (MINI) GASTRIC BYPASS: A MATCHED COMPARISON WITH ROUX-EN-Y GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

There are concerns that anaemia might be more common following One-anastomosis/Mini gastric bypass (OAGB/MGB) compared to Roux-en-Y gastric bypass (RYGB).

Objectives

To compare the incidence of anaemia and haematinic profile in a matched cohort of patients who underwent OAGB/MGB and RYGB.

Methods

Two hundred patients who underwent OAGB/MGB were matched to patients who underwent RYGB for age, sex, body mass index (BMI), and time of surgery. We compared Haemoglobin, Mean corpuscular volume (MCV), Iron, Ferritin, Vitamin B12, and Folic acid levels pre-operatively and at six monthly intervals after surgery.

Results

Number of patients with anaemia was similar – OAGB/MGB (5.5%) versus RYGB (6%) at baseline ($p = 0.82$), and 16.6% versus 12.7% at 24 months after surgery ($p = 0.55$). However, the increase in number of patients with anaemia was significant in OAGB/MGB group ($p=0.006$), but not in RYGB group ($p=0.09$). In both groups, MCV increased after surgery, although within physiological range. There were no significant changes in levels of Iron, ferritin or folic acid. There was a significant increase in post-operative Vitamin B12 levels. Patients lost to follow up were 38% and 33% at one year, and 70% and 72% at two years in the OAGB/MGB and RYGB groups respectively.

Conclusion

We report a slightly higher risk of anaemia following OAGB/MGB compared to RYGB. Both procedures lead to an increase in incidence of anaemia with no significant difference in Haemoglobin, MCV and haematinic levels between the groups upto two years after surgery.

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LAPAROSCOPIC RESECTIVE GASTRIC BYPASS: A SAFE ALTERNATIVE FOR SELECTED MORBIDLY OBESE PATIENTS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

The identification of premalignant gastric cancer(GC) lesions on the excluded stomach during preoperative evaluation and/or family history of gastric cancer in a first degree relative identifies a group of patients in which is possible to propose a laparoscopic resective roux-en-y gastric bypass(LR-RGBP).

Objectives

Evaluate the postoperative outcomes of LR-RYGBP.

Methods

Non-concurrent cohort study of obese patients who consecutively underwent LR-LGBP between 2004-2016 . A control cohort of patients subjected to a standard L-RYGB during the same period of time were randomly selected. Patients demographics and postoperative surgical outcomes were registered.

Results

A total of 3599 L-RYGB were performed of which 50(1,3%) were LR-RYGB. 74%(37) were women.The control cohort group was composed by 100 patients subjected to L-RYGB. The median age and BMI was 48(17-62) years and 38,3(26,2-52,5)kg/m² for LR-RYGB operated patients and 35(16-42) years and 37,8(28,5-51,4)kg/m² for L-RYGB patients, respectively. There were no differences in gender and degree of obesity between groups ($p>0.05$). However, LR-RYGB patients were older($p<0,01$). The average operating time was 147 (65-280)minutes for LR-RYGB and 110(35-210)minutes for L-RYGB($p<0,001$). The median hospital stay was 3(2-8) days in LR-RYGB versus 3(2-5)days in L-RYGB($p=0,001$). There were no differences in early postoperative complications Clavien-Dindo \geq III($p=0,719$), reoperations($p=1,00$), nor in BMI after 12 months of surgery($p=0,861$). There was no conversion or mortality in the cohort.

Conclusion

The addition of gastric resection of distal stomach during laparoscopic gastric bypass in morbidly obese patients with higher risk of GC does not increase the risk of complications. These results suggest that LR-RYGB represent a safe alternative for this group of patients.

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WHICH TECHNIQUE SHOULD BE EMPLOYED TO CLOSE MESENTERIC DEFECTS DURING ROUX-EN-Y GASTRIC BYPASS?

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Internal hernias (IH) are the main cause of late, and potentially catastrophic, post-operative complications of laparoscopic gastric bypass (RYGB). The incidence of IH is 0.2 – 16% depending on IH definition, follow-up length and mesenteric window closure protocols.

Introduction

Whilst there is now level 1 evidence that mesenteric windows should be closed during RYGB to avoid late small bowel obstruction from IH, there is no universally accepted method.

Objectives

To assess the literature for the optimal method (effective, safe, fast and cheap).

Methods

Pubmed and embase were searched using appropriate terms for papers that specifically focussed on the techniques of closure.

Results

18 papers were relevant. Whilst suturing is blighted by mesenteric haematoma and early obstruction from kinking, it remains the most used method. Observational studies are either poor quality or conflicting as regards continuous suturing (with or without barbed suture) versus interrupted suturing, absorbable versus non-absorbable suture, number of layers, whether to suture one or both sides of the windows, or whether "mesenteric irritation" helps. Two mesenteric stapling devices are described in 4 papers: Ethicon EMS (no longer produced), and Covidien Autosuture Endo Universal. Stapling seems as effective, and is significantly faster than suturing: 109s (versus 804s for suturing) in the largest relevant papers. Two publications describe mesenteric window closure with fibrin glue, but porcine survival data suggests it is not as strong and shrinks the tissue more than suture/staple closure.

Conclusion

The quality of evidence on technique of closure is poor. Future RCTs need to compare efficacies, combined with cost and time comparisons.



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LAPAROSCOPIC GASTRIC BY-PASS FOR OBESITY CONCOMITANT WITH CVASITOTAL GASTRECTOMY FOR INTESTINAL METAPLASIA OF THE GASTRIC ANTRUM.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Due to massive duodeno-gastric reflux intestinal metaplasia of the gastric mucosa appeared.

Objectives

The concomitant intervention is justified and feasible as long as it is performed safe and it doesn't prolong too much the total operation time jeopardizing the postoperative outcome.

Methods

56 years old female with morbid obesity (BMI = 50 kg/m²) appeared to have intestinal metaplasia (anatomopathological proven) due to a massive duodeno-gastric biliary reflux.

The proposed laparoscopic gastric sleeve intervention has been switched to laparoscopic gastric by-pass with resection of the gastric remnant due to impossibility to assess the stomach through endoscopic approach and also due to the continuous exposure to the modified gastric mucosa to the aggression of the bile reflux.

Results

The laparoscopic intervention took out 2,5 hours with no postoperative complications.

Conclusion

On selected cases with proved biliary reflux from the duodenum to stomach and in the presence of modified gastric mucosa – intestinal metaplasia as a pre-malignant lesion, the association between the metabolic surgery and resection of the remnant stomach is feasible and justified.

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VIDEOPRESENTATION: LAPAROSCOPIC ONE ANASTOMOSIS GASTRIC BYPASS AFTER FAILED SLEEVE GASTRECTOMY.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Weight regain or unsuccessful weight loss following sleeve gastrectomy occurs in 15- 30% of patients. Re-sleeve is an option in patients where gastric remnant size permits, however there is a proportion of patients with small gastric remnant to whom re-sleeve is not applicable. In these patients one anastomosis gastric bypass may be a rational choice.

Objectives

To present a case of a female morbidly obese patient who underwent one anastomosis gastric bypass after a failed sleeve gastrectomy. Technical aspects and postoperative results are being addressed.

Methods

A 38 years old female patient underwent laparoscopic one anastomosis gastric bypass for treatment of morbid obesity. Patient had a preoperative BMI of 44 kg/m². In 2005 patient had a laparoscopic adjustable gastric band which has been removed 4 years later due to functional problems (dysphagia, vomit). In 2013 patient underwent laparoscopic sleeve gastrectomy for treatment of morbid obesity, which failed to provide the expected results on weight loss, however without functional problems (e.g. GERD, dysphagia, vomit).

Results

The operation was feasible and safe, as patient started on liquid diet on the first postoperative day and was discharged on second postoperative day. Three months later patients BMI is 36 kg/m².

Conclusion

One anastomosis gastric bypass is a reasonable choice for morbidly obese patients after failed sleeve gastrectomy being both safe and efficient.

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RNY GASTRIC BYPASS: WHAT HAPPENS TO OUR PATIENTS BEYOND 5 YEARS? LONG TERM FOLLOW-UP (7 -13 YEARS) RESULTS FROM A COHORT IN AN ISOLATED SETTING (GUERNSEY –UK)

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

There is paucity in the literature regarding the long-term outcomes of laparoscopic RNY gastric bypass.

We report on a follow-up ranging from 7 to 13 years in a small island with a population of 65000 inhabitants

Objectives

To evaluate RNYGBP with regard to complications, weight loss, medical benefits and quality of life.

Methods

One hundred and forty patients (n = 140) underwent surgery between 2003 and 2009. Data was collected through chart review, outpatient visits and patient interviews. Long term data was available for 106 patients.

Results

The mean BMI at surgery was 44.8 ± 6.1 . Early complications occurred in 19/140 patients (13.5%) including 2 anastomotic leaks requiring re-operation (1.43%).

Late complications occurred in 30 patients (21.4%) including 18 reoperations. Seven of these were for small bowel obstruction caused by an internal hernia (5%).

The mean %EWL remained stable around 62% from year 7 to 11. It then dropped to 45% by year 13.

Out of 20 patients with T2DM 12 were still in remission at late follow-up (remission 60%). Out of 39 hypertensive patients 21 were off medication at follow-up (remission 53.8%).

Fifty patients completed a BAROS questionnaire: 80% rated their outcome as good to excellent.

Conclusion

RNY gastric bypass results in significant sustained weight loss (%EWL>60) between year 7 and 11 followed by weight regain from year 12. A lasting beneficial effect on T2DM and hypertension is seen in a large proportion of patients. Late complications are not uncommon and up to 12 % of patients require surgery at some stage.



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NOVEL TECHNIQUE OF DISTAL LRYGBP FOR INSUFFICIENT WEIGHT LOSS AFTER PRIMARY PROCEDURE AND IN SUPEROBESE PATIENTS: PERSONAL EXPERIENCE AND PRIMARY RESULTS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

In the literature, there is no general consensus about the optimal proportion of the limb lengths in the distal LRYGBP and it is usually a matter of individual practice.

Objectives

In the present study, we describe the primary results of our modified technique either as a primary or a revisional procedure.

Methods

From 2013 to 2015, we performed a DLRYGBP in 30 patients. The length of the common channel was 100 cm in each case whereas the lengths of the alimentary and the biliopancreatic limbs were respectively 2/3 and 1/3 of the remaining bowel. We created three subgroups: 'primary' group of super-obese patients without previous bariatric surgery, 'revisional' group with insufficient weight loss after previous restrictive procedure and 'distalisation' group with insufficient weight loss after previous LRYGBP.

Results

In the 'primary' group (10 patients) the mean EWL % at 12 months was 75%. In the 'revisional' group (9 patients), the mean EWL% at 12 months was 73.6%. In the 'distalisation' group (11 patients), the mean EWL% at 12 months was 51.9%. In all cases, our modified technique is considered successful, according to Reinhold criteria. We had neither severe morbidity nor mortality rate, except of mild adverse events treated promptly with conservative means. Unfortunately, one patient ('distalization' group) presented severe nutritional sequelae which needed a surgical lengthening of the common limb.

Conclusion

DLRYGB, as a primary or a revisional procedure, seems to be efficient. However larger series and longer follow-up are needed.

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OUTCOME OF SLEEVE GASTRECTOMY VERSUS ONE ANASTOMOSIS GASTRIC BYPASS IN SUPER OBESE SUBSET OF INDIAN POPULATION- SHORT TERM RESULTS.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Management of super obese (BMI \geq 50) is a challenge that every bariatric surgeon encounters in his practice and deems to manage with a procedure that carries minimum risk and maximum benefits. Laparoscopic sleeve gastrectomy (LSG) has gained acceptance worldwide while one anastomosis gastric bypass (OAGB) has been gaining popularity in recent times.

Objectives

Compare LSG and OAGB in terms of excess weight loss percentage (EWL%) and comorbidity resolution on short term basis.

Methods

Retrospective analysis of prospectively collected data of 59 superobese patients who underwent bariatric procedure in our department from June 2012 to May 2014 was done. 32 patients underwent standard LSG and 27 underwent OAGB with biliopancreatic limb of 200 cms and completed 2 years of follow up.

Results

The mean preoperative BMI for LSG was 54 ± 1.2 Kg/m² and OAGB was 56 ± 2.2 Kg/m². Mean EWL% for LSG was 54% compared to 52.3% for OAGB at 1 year and 56% compared to 60% at 2 years. Comorbidity resolution was comparable in both groups. Mean operative time for LSG was 55 ± 3 minutes compared to 88 ± 2 minutes for OAGB group. Hospital stay was comparable in both groups, 2.3 days (LSG) versus 2.5 days (OAGB). Both groups had good gastrointestinal quality of life, while GERD was noted in 2 patients of LSG group (6.25%) and increased frequency of loose foul smelling stools was noted in 8 patients of OAGB group (29.6%). No mortality was noted.

Conclusion

LSG and OAGB are comparable in terms of EWL% and comorbidity resolution in superobese patients in short term.

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GASTRIC BYPASS AND SLEEVE GASTRECTOMY HAVE COMPARABLE OUTCOMES IN TERMS OF %EWL IN OBESE (BMI \geq 50) PATIENTS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

The relationship between pre-operative BMI and percentage excess weight loss (%EWL) following bariatric surgery is controversial. In this context, few studies exist comparing roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG).

Objectives

The aim of this study is to determine the relationship between pre-op BMI and %EWL in patients undergoing RYGB and SG.

Methods

Successful outcome (%EWL $>50\%$ at 2 year follow-up) in two cohorts of patients (pre-operative BMI <50 and BMI ≥ 50) undergoing RYGB and SG over a 3 year period were analysed. Statistical analysis was performed using SPSS 24.0.

Results

95 patients underwent RYGB (median age: 52; mean pre-operative BMI 48.9 (sd \pm 6.9). At median follow-up of 23 months, mean post-operative BMI was 32.9 (sd \pm 5.7), with mean %EWL of 70.0% (29.0-127.0%). CHI-squared test between BMI \geq or < 50 vs %EWL \geq or $<$ than 50% found no significant association ($\chi^2= 0.947$, $p=0.330$). Correlation analysis of numerical data showed negative association between pre-operative BMI and %EWL (Spearman's, $p=0.009$). 18 patients underwent SG (median age: 52; mean pre-operative BMI 49.7 (sd \pm 9.6). At median follow-up of 29 months, mean post-operative BMI was 35.4 (sd \pm 10.4), with mean %EWL of 67.0% (19.0-129.0%). Test of association between BMI \geq or < 50 vs %EWL \geq or $<$ than 50% was not significant (Fishers Exact, $p=1.000$). Correlation studies of numerical data indicate negative association between pre-operative weight and %EWL (Spearman's, $p=0.024$).

Conclusion

Although there is a trend towards poorer weight loss with higher pre-operative BMI, both RYGB and SG can achieve good weight loss outcomes in super-obese patients.

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COMPARING METABOLIC OUTCOMES BETWEEN PARTIAL AND TOTAL GASTRECTOMY ON DIABETIC CANCER PATIENTS: A RETROSPECTIVE COHORT FROM SINGLE CENTER EXPERIENCE

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

We used diabetic gastric cancer patients who received conventional gastric cancer operation with curative intent to provide an ethical simulation model for investigation of effects of metabolic surgery in sub-classified obesity (BMI < 27.5 kg/m² in Asian population). In addition, the impact of the extent of gastric resection on diabetes remains to be determined.

Objectives

We hypothesize that total gastrectomy for gastric cancer, compared to partial gastrectomy, will lead to more weight loss, improved diabetic control, and hence better metabolic outcomes in sub-classified obese gastric cancer patients with Type 2 Diabetes Mellitus.

Methods

Data from 33 diabetic gastric cancer patients from 2009 to 2015 who underwent either total or partial gastrectomy for gastric cancer in our center were retrospectively collected and matched by confounding demographic data. Primary outcome was reduction in BMI and HbA1c, change in diabetic medications dosage, diabetic complication rates. Secondary outcome was comparison of postoperative morbidity.

Results

A median drop of 3kg/m² BMI was similar between partial and total gastrectomy, p=0.591. Both led to significant improvement in HbA1c levels (median 0.75% in partial and 1.30% in total gastrectomy), but no statistical difference was detected when they are compared. Longer postoperative length of stay was observed in total gastrectomy group (median 15 days) compared with partial gastrectomy group (median 10 days), p=0.049.

Conclusion

The impact of conventional gastric cancer operation in terms of extent of gastric resection on diabetes was evaluated by this study. Both partial and total gastrectomy give similarly promising metabolic outcomes in terms of BMI reduction and glycemic control.

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ROUX-EN-Y GASTRIC BYPASS IN THE SETTING OF PRIOR CHOLEDOCHOJEJUNOSTOMY

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

In 2015 the American Society for Metabolic and Bariatric Surgery estimated that 196,000 bariatric procedures were performed, 23 percent of which were roux-en-y gastric bypass (RYGB). Thus far there have been no reported cases in the literature of RYGB in patients with a history of prior choledochojejunostomy.

Objectives

To show the feasibility of RYGB in the setting of prior choledochojejunostomy.

Methods

A 30 year old female patient underwent video recording of laparoscopic RYGB with history of prior choledochojejunostomy due to common bile duct injury during cholecystectomy.

Results

The patient successfully underwent RYGB by measuring 30 cm from the ligament of Treitz to where the prior jejunojunctionostomy was found. Then another 30 cm was measured distal to this anastomosis to create an effective 60 cm biliopancreatic limb. The remainder of the procedure was carried out in the standard fashion. The patient had an uncomplicated hospital course and was discharged home on postoperative day two. The patient struggled with nausea and poor oral intake for several months but at her most recent visit, 6 months postoperative, she had improved oral intake and had lost a significant amount of weight (152 kg to 115 kg) with over a 10 point reduction in her body mass index (46.7 kg/m² to 35.5 kg/m²).

Conclusion

RYGB is a safe and effective bariatric procedure for a patient with a prior history of choledochojejunostomy.

□ **P.232**

PRELIMINARY RESULTS OF THE DUTCH COMMON CHANNEL TRIAL (DUCATI): 30 DAY MORBIDITY AND TECHNICAL DIFFICULTIES.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

The aim of the DUCATI study is to investigate the effect of the length of the common channel in gastric bypass surgery for obesity. In this multicenter randomized controlled trial a distal gastric bypass is compared to the standard gastric bypass.

Objectives

As all 444 patients have been included and received surgery, 30 day morbidity and technical difficulties of the procedure are investigated.

Methods

A total of 444 patients have been randomized to receive either a distal gastric bypass with a fixed common channel length of 100cm, or to a standard gastric bypass with a variable common channel length. All available data for technical difficulties of procedures and 30 day morbidity was analyzed.

Results

Conversion to either sleeve gastrectomy, standard gastric bypass or mini gastric bypass was performed in 11 patients (5%) vs 26 patients (12%) ($p=0.007$) in the standard gastric bypass group and distal gastric bypass group respectively.

Thirty day morbidity was 4% vs 8% ($p=0.078$) in the standard gastric bypass group and distal gastric bypass group respectively. Major complications was 1% vs 6% ($p=0.106$) in the standard gastric bypass group and distal gastric bypass group respectively.

Conclusion

Although patients in the distal gastric bypass group needed significantly more conversions to other procedures due to technical difficulties compared to standard gastric bypass this is not reflected in early complication rate.

As one year follow-up is not yet complete, results for primary and secondary outcome measures have to be awaited to evaluate whether the distal gastric bypass is superior to the standard gastric bypass.

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THE ROLE OF GASTROJEJUNOSTOMY SIZE ON GASTRIC BYPASS WEIGHT LOSS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

The laparoscopic Roux-en-Y Gastric Bypass (RYGB) has been considered a gold-standard procedure in the surgical treatment of morbid obesity.

Introduction

The linear stapled gastrojejunostomy (GJ) technique has proved to be safe and effective in long-term series of patients, but its optimal size referred to achieve best post-operative weight loss remains poorly understood.

Objectives

Evaluate the role of the linear -stapled GJ size in the mid-term post-RYGB weight loss and occurrence of complications.

Methods

From January to April 2014, 128 consecutive patients underwent to RYGB with linear stapled GJ and followed by to 2 years were included. The RYGB were carried out with the same technical steps, except by the length of the GJ. In GJ -15mm group (n=64), the GJ was constructed with white 45 mm cartridge in an extension of only 15 mm whereas in GJ -45mm group (n=64) the GJ was achieved using full extension of the cartridge. The weight loss reduction allowing evaluating the BMI was recorded at 1, 3, 6, 12, 18, and 24 months after procedure.

Results

The analysis on raw BMI data showed that both groups had significant reduction of BMI over time ($p \leq 0.05$), however %BMI reduction was greater in GJ -15mm group from 18 months onwards ($p \leq 0.05$). Concerning the occurrence of complication was noticed just 1 case (1,56%) of GJ stenosis in the GJ-15mm.

Conclusion

The global analysis of BMI reduction indicated that the narrower GJ represented a favoring factor reducing significantly more the BMI.

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INTERNAL HERNIA AFTER MINIGASTRIC BYPASS-A RARE ENTITY

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

laparoscopic mini gastric bypass (MGBP) for morbid obesity has become very popular worldwide. Its restrictive and malabsorptive procedure. Internal hernia (IH) is known & serious emergency after Roux-en-Y gastric bypass (RNYGP) but not well known entity in MGBP. Here we present 2 cases of internal hernia after MGBP in our long series of MGBP.

Introduction

1-First case is 42 years old female patient presented with internal herniation 2 years after Mini gastric bypass after excessive weight loss. Internal hernia reduced and mesenteric defect closed laparoscopically .

2-Second case is 37 years old male patient presented with internal hernia 1 year after MGBP, with excessive weight loss. Internal hernia reduced and mesenteric defect closed .

Objectives

An important question arising from our report is whether a mesenteric defect after MGB should be systematically closed or not. Although our two observations are not enough to recommend the systematic closure of a mesenteric defect after MGB.

Methods

First time, we see the clear correlation between MGBP and IH, suggesting that vague, non-explained abdominal pain in patients with MGBP should raise a suspicion of IH and after initial resuscitation , patients should go for CT scan abdomen.

Results

After internal hernia reduced and mesenteric defect closed first patient had perforation which repaired and later patient recovered well and discharged. Second patient, s recovery was smooth and uneventful.

Conclusion

First time, we see the clear correlation between MGBP and IH, suggesting that vague, non-explained abdominal pain in patients with MGBP should raise a suspicion of IH. Urgent work up and operative management should be done.



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GASTRIC CARCINOID AFTER LAPAROSCOPIC GASTRIC BANDING. TREATMENT IN A PATIENT WHOSE WEIGHT REGAINED

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Carcinoid is a rare gastrointestinal tumor but it is the most common neuroendocrine tumor of the stomach. Recent findings have shown an elevated incidence in obese population.

Objectives

Case Report

Methods

A 70-year-old man consulted for epigastric pain and dyspepsia symptoms. He has a history of bariatric surgery (gastric banding) 12 years before, hypertension, hyperlipemia, diabetes mellitus type 1, heart failure, and obesity with a body mass index (BMI) of 53.9 kg/m² at the time of admission. Upper endoscopic was performed which showed multiple small polyps located in lower stomach, corpus and fundus (only great curvature). Biopsy revealed carcinoid tumor and subsequent endoscopic ultrasound evaluation showed it to be limited to the submucosal layer. The patient underwent laparoscopic Roux-y- gastric bypass with gastric remnant resection.

Results

The postoperative course was uneventful. The histopathological evaluation confirmed the diagnosis of neuroendocrine carcinoma of the stomach, well differentiated with submucosal invasion depth and negative margin of resection. Seven months later her BMI is 39,8 kg/m².

Conclusion

Gastric carcinoid is a rare tumor with higher incidence among obese patients. However this tumor after gastric banding has not been reported. Laparoscopic Roux-y-gastric bypass with gastric remnant resection could be an option for patients with morbid obesity associated a gastric carcinoid.

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ANASTOMOTIC ULCERATION POST ROUX-EN-Y GASTRIC BYPASS – INCIDENCE AND COMPARISON OF ANTE-COLIC AND RETRO-COLIC ROUX LIMB ORIENTATION.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

The rate of anastomotic ulceration post roux-en-y gastric bypass has been reported between 1 and 16%. The underlying aetiology is unclear. Retro-colic orientation is the shortest route for reconstruction with minimal tension. Ante-colic roux limb orientation has been suggested as a risk factor for anastomotic ulceration. In this study we compare the rates of anastomotic ulceration in 276 consecutive patients undergoing roux-en-y gastric bypass between April 2010 and August 2016.

Objectives

The aim of this study was to identify if limb orientation changes resulted in an increase in the rate of anastomotic ulceration.

Methods

A retrospective review of 276 consecutive roux-en-y gastric bypass operations between April 2010 and August 2016 was undertaken. Rates of post-operative endoscopy for any reason, endoscopy findings and rates of anastomotic ulceration were recorded on a database. Retro-colic orientation was performed for the first 105 cases, with subsequent change to ante-colic. All operations were performed with a stapled anastomosis with 2-0 monocryl closure of the enterotomy.

Results

Post-operative endoscopy was performed on 13/105(12.4%) of patients with retro-colic orientation compared to 20/171 (11.7%) of patients with ante-colic orientation. Anastomotic ulcers were identified in 5/276 (1.8%). 3/171 (1.75%) patients in the ante-colic group developed symptomatic ulceration compared to 2/105(1.9%) in the retro-colic. There was no significant difference between the groups.

Table 1: Comparison of ante-colic and retro-colic anastomosis

Ante-colic	N	Total	%	Retro-colic	n	total	%	p value
	20	171	11.7	OGD	13	105	12.4	0.71
OGD								
Anastomotic ulcer	3	171	1.75	Anastomotic ulcer	2	105	1.78	1

Conclusion

Ante-colic placement did not result in a higher rate of anastomotic ulceration compared to retro-colic orientation. Post operative endoscopy rates were not different between the groups.

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LSG VS OAGB-1 YEAR FOLLOW-UP DATA-A RANDOMIZED CONTROL TRIAL

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Severe Obesity is one of the major health problem of the world and is associated with several diseases and comorbidities like T2DM and Hypertension.

Introduction

Bariatric surgery is performed more and more frequently as the treatment of choice for weight loss and correction of severe comorbidities.

Objectives

Laparoscopic sleeve gastrectomy(LSG) has become one of the most popular bariatric procedure. One anastomosis gastric bypass (OAGB) is rapidly emerging as a safe and effective bariatric and metabolic procedure. The aim of this study is to compare the 1 year follow-up results of LSG and OAGB in terms of excess weight loss, resolution of comorbidities and complications.

Methods

A prospective randomized study of results between 100 LSG and 90 OAGB patients was done from 2012 to 2015. The results were compared regarding percentage of excess weight loss, resolution of major comorbidities and complications.

Results

The mean BMI for the LSG group and the OAGB was 44.9 and 45.1 kg/m², respectively. Percentage of excess weight loss (%EWL) for LSG was 60.2% and that of OAGB was 64.3% at 1 year. Diabetes remission was 72% in LSG patients and 82.3% in OAGB patients. Remission of hypertension was 65.13% in LSG patients and 66.12% in OAGB patients.

Conclusion

In our study , there was no significant difference between LSG and OAGB in outcome at 1 year follow-up in remission of hypertension. OAGB had slightly better outcome in % of excess weight loss and T2 DM remission. Further long term follow-up is needed to compare the results of both the procedures.



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CYANOACRYLATE TO CLOSE MESENTERIC DEFECTS AFTER LRYGB

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Internal hernias after laparoscopic Roux-en-Y gastric by pass (LRYGB) are still a major concern in the long run.

Objectives

The aim of this video was to challenge cyanoacrylate glue to close mesenteric defects after LRYGB.

Methods

A standard LRYGB, double loop technique, is usually performed at our center.

In this video we closed the Petersen's space and mesenteric defect spraying cyanoacrylate glue.

Results

The application of glue proved to be effective intra-operatively.

Post-op course was uneventful.

Conclusion

Cyanoacrylate glue could be a stitchless alternative to close mesenteric defects after LRYGB.



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TECHNICAL CONSIDERATIONS IN PERFORMING THE MINI-GASTRIC BYPASS IN CASE OF MALROTATION.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

We present a case of a 58 year old lady with a BMI of 45 planned for a bariatric intervention, with a known intestinal malrotation. In the past, she underwent an appendectomy and multiple gynecological procedures.

Objectives

Preoperatively the broad spectrum of surgical possibilities were discussed. We usually prefer the fully-stapled Roux-en-Y gastric bypass (FS-RYGB) as ideal bariatric procedure. Because of the malrotation (the way of performing the gastroenterostomy (GE)), the operative history (adhesions), the older age, and the high BMI, the mini-gastric bypass or single anastomosis-gastric bypass could be considered as a better surgical strategy.

Methods

Peroperatively, locating the Treitz ligament was not feasible due to multiple abdominal adhesions. Subsequently, 4 meters of small bowel were counted backwards from the ileocaecal junction, which was located in the left lower quadrant. A manually made single anastomosis-gastric bypass was performed with 3 meters of common limb (located at the left side of the GE) and minimally 1 meter of biliopancreatic limb (BP) (located at the right side of the GE). Three anti-biliary reflux stitches were placed at the right side of the GE, between the BP limb and the gastric pouch.

Results

The patient was discharged on POD 3. One month after discharge, the patient is in good condition and a weight loss of 10% is noted.

Conclusion

Mini-gastric bypass is a feasible and safe alternative for morbidly obese patients with intestinal malrotation or multiple intestinal adhesions, with attention for specific technical details during the procedure.

□
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LAPAROSCOPIC OMEGA LOOP GASTRIC BYPASS: A LARGEST SINGLE-CENTRE AUSTRALIAN SERIES WITH SHORT-TERM OUTCOMES

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Excellent short- and long-term results of laparoscopic omega loop gastric bypass (OLGB), has been reported by various authors around the world. But according to Australian Bariatric Surgery Registry, OLGB still constitutes only small number (about 4%) of all bariatric procedures in Australia. We present the early result of this emerging option in the Australian setting.

Objectives

The objective was to demonstrate efficacy and safety of OLGB from a single centre in regional Australia.

Methods

Prospective data for first 111 consecutive patients were collected, in 1 year starting from December 2014, who underwent OLGB.

After completion of 1-year follow-up, results were analysed in terms of efficacy and safety.

Results

98 women (88.3%) and 13 men (11.7%), underwent OLGB in a year. The mean age was 41.68 years and mean BMI was 40.7 ± 5.13 kg/m². Cumulative follow-up was 94.6% at 1 year. Of all, 25(23%) patients had prior bariatric procedure.

%Excess Weight Loss was 82 to 92 % at 1 year.

There were no deaths. Overall major morbidity was about 4%. 1 had major intra-operative bleed and 2 unplanned return to theatre for staple-line bleed. One had anastomotic stenosis requiring endoscopic dilatations. 4 marginal ulcers were treated medically. There was no leak, severe bile reflux, Petersen's space hernia, afferent-loop obstruction, or thromboembolism.

30-day re-admission rate was low at 5.4%.

Conclusion

This study validates OLGB is safe and effective, in regional Australian setting. It supports and justifies emerging use of OLGB as a simple, safe, and effective alternative for morbidly obese patients.

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VALIDATION OF THE DIAREM AND ABCD SCORE SYSTEMS AS DIABETES REMISSION PREDICTORS IN MORBIDLY OBESE KOREAN PATIENTS UNDERGOING ROUX-EN-Y GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Morbidly obese patients with type 2 diabetes have shown significant improvement in glycemic control after Roux-en-Y gastric bypass (RYGB).

Introduction

The DiaRem score and the ABCD score systems have been proposed as prediction models for diabetes remission after bariatric surgery.

Objectives

This study aimed to validate the applicability of these 2 systems in morbidly obese Korean patients undergoing RYGB.

Methods

102 RYGB patients between January 2011 & February 2014 were enrolled. Partial & complete remission of diabetes was defined as HbA1c level < 6.5% and < 6.0%, respectively, without the use of anti-diabetic medication. The rate of diabetes remission was evaluated using both scoring systems.

Results

47 patients (46.1%) achieved CR & additional 16 (15.7%) achieved PR over the mean follow-up of 12.3 ± 8.0 months. According to the DiaRem scoring system, the probability of CR ranged from 13.6% to 85.7% across the score groups demonstrating the overall trend of a higher probability of diabetes remission in the lower score group. However, there was a considerable deviation from the prediction model in score group of 8-12. Meanwhile, the rate of diabetes remission was higher in the higher ABCD score group, which ranged from 0% for those with score 2 up to 100% for those with score 10.

Conclusion

Although both scoring systems were useful to predict diabetes remission, the ABCD score appeared to be more reliable than the DiaRem score in our study cohort.

□
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SAFETY AND EFFICACY OF DIFFERENT LENGTHS OF BILIOPANCREATIC LIMB OF MBG FOR OBESE PATIENTS"

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

The obese patient Who seek for bariatric surgery may vary from BMI 30 to 80, it is very unreasonable to fix the bypass limb for all the patients. Therefore, most of surgeons proposed to adjust the bypass limbs according to the BMI of the patients.

Introduction

Many authors found that a routine 200-cm bypass limb may increase weight loss, but will also increase the incidence of late nutritional deficiencies.

Objectives

The aim of this study was to investigate and compare Safety and efficacy of different lengths of Biliopancreatic limb in patients receiving laparoscopic mini gastric bypass surgery this retrospective study.

Methods

. From March 2011 to October 2016, 874 patients with obesity underwent MGB . BMI 43.4 ± 7.8 kg/m² . Age 41.5 ± 7.9 .7. The length of biliopancreatic limb is 150 cm in 72 patients, 17 cm 5 in 241 patients, 200 cm in 265 patients and 250 cm in 296 patients.

Results

. % EBWL are 65 %, 74 %, 75 % and 77 % in 150 cm, 175 cm, 200 cm and 250 cm billiopancreatic limb patients respectively. Diabetes remission are 88 %, 90 %, 93 % and 91 % in 150 cm, 175 cm, 200 cm and 250 cm billiopancreatic limb patients respectively.

Conclusion

We found that a 175-cm biliopancreatic limb has good weight loss and high resolution of Diabetes and will not increase the incidence of late nutritional deficiencies. obese patients receiving mini gastric bypass surgery may no need to tailor the bypass limb according to BMI

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FACTORS ASSOCIATED WITH INCREASED RISK OF 30-DAY COMPLICATIONS IN ROUX-EN-Y GASTRIC BYPASS PATIENTS: A PREDICTION SCORE

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

While mortality risk assessment scores in patients undergoing roux en-Y gastric bypass (RYGB) have been validated, the identification of patients with a high-risk of post-operative morbidity continues to be a challenge.

Objectives

Identify factors associated with 30-day complications and develop a prediction score.

Methods

A retrospective review of all primary and revisional RYGB surgeries performed (2012-2016). Preoperative medical conditions, surgical characteristics and perioperative morbidity were analyzed.

Results

For the 317 procedures, there were 41 (12.9%) with 30-day complications. Preoperative medical conditions that were independently associated with increased risk of morbidity included diabetes (21% in non-insulin diabetes and 23% in insulin diabetes, $p=0.0035$) and other serious conditions (including history of pulmonary embolism (PE), percutaneous cardiac intervention (PCI), cardiac surgery, deep vein thrombosis (DVT), venous stasis, current steroid/immunosuppressant use, or therapeutic anticoagulation use) (35% versus 10% without one of these conditions, $p<0.0001$). Additionally, in patients without these conditions, concurrent band removal was independently associated with increased risk of 30-day complications (13.4% versus 2.6% in those without, $p=0.0047$). These results were used to develop a simple pre-operative risk score that correlated with 30-day morbidity ($p<0.0001$).

30-day complication rate by 30-day risk score

Score	Number of Risk Factors	% 30-day Complications
0	Least risk: no risk factors and no band removal	2.6%
1	No risk factors with band removal	13.4%
2	1 risk factor	18.6%
3	2 risk factors	40.0%
4	3 risk factors	66.7%

Conclusion

Diabetes, PE, PCI, previous cardiac surgery, DVT, venous stasis, steroid/immunosuppressant use, therapeutic anticoagulation use, and concurrent band removal are risk factors for 30-day complications from RYGB. The RYGB morbidity prediction score can predict patients who are at higher risk for 30-day complications.

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BYPASS OR NOT TO BYPASS? A COMPARISON OF THE PROCEDURES FOR SUPER MORBIDLY OBESE PATIENTS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

We have experienced numerous cases of super morbid obesity (SMO), defined by a BMI of ≥ 50 kg/m², in which laparoscopic sleeve gastrectomy (LSG) was not able to achieve a sufficient weight loss effect. However, the most appropriate procedure for the treatment of SMO has not yet been established.

Objectives

The subjects included 248 successive patients who underwent surgery at our hospital from June 2006 to December 2012.

Methods

We divided the subjects into an SMO group (BMI, 50 to < 70 kg/m²) and a morbid obesity (MO) group (BMI, 35 to < 50 kg/m²). The subjects underwent LSG, LSG with duodenojejunal bypass (LSG/DJB), or laparoscopic Roux-en-Y gastric bypass (LRYGB). The weight loss effects, safety of surgery, and metabolic profile changes were compared.

Results

Sixty-two subjects were classified into the SMO group (25%). The percent excess weight loss (%EWL) after LSG among the patients in the SMO group was not significantly different from that of patients who underwent other procedures. LSG was associated with a significantly lower success rate in terms of weight loss (%EWL $\geq 50\%$), in comparison to the weight loss at one year after LRYGB, and at two years after LSG/DJB and LRYGB. Among the patients in the MO group, the %EWL and the rate of successful weight loss did not differ to a statistically significant extent.

Conclusion

This study demonstrated that in patients with SMO, LSG/DJB, LRYGB can achieve superior weight loss effects in comparison to LSG.

□
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ONE-ANASTOMOSIS GASTRIC BYPASS PROCEDURE IS PREFERABLE OVER ROUX-EN-Y GASTRIC BYPASS PROCEDURE IN PATIENTS WITH "EXTREME OBESITY"

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Roux-en-Y gastric bypass (GB) procedure is widely regarded by surgeons as the "gold" standard for treatment of morbid obesity. However, patients with super and supersuper obesity also known as 'extreme obesity' require a shorter and simpler gastric bypass technique. One-anastomosis gastric bypass (OAGB), a technically easier option preferable for patients with extreme obesity, is becoming increasingly prevalent.

Objectives

comparing one-anastomosis and Roux-en-Y gastric bypass techniques in patients with "extreme obesity".

Methods

In 2013-2016, we performed 64 laparoscopic gastric bypass procedures for patients with extreme obesity. With informed consent for the research obtained, patients were divided into GB (n=31) and OAGB (n=33) groups. Inclusion criteria: patients suffering from obesity over 5 years; age 16-68 years; body mass index (BMI) > 45 kg/m² for Asians and > 50kg/m² for European nationality. Exclusion criteria: prior gastric surgeries, post-operative ventral hernias.

Results

The median follow-up period was 2 years. The mean operating time in the GB group vs. OAGB group (205+48 vs. 148+54 minutes, P < 0.05). The median length of hospital stay was 5±2 days in the OAGB group (vs. 7±3 days in the GB group, p < 0.05). No lethal outcomes. In 6 months, the average excess weight loss in the GB and OAGB groups was 45.8% and 56.4% (p>0.05) respectively; in 12 months, it was 69.7% (GB) and 78.3% (OAGB) (p>0.05) respectively; in 24 months, it was 77.5% (GB) and 80.2% (OAGB) (p < 0.05) respectively.

Conclusion

One-anastomosis gastric bypass procedure is a simpler and shorter alternative to Roux-en-Y gastric bypass procedure in patients with "extreme obesity".



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ROUX-EN-Y GASTRIC BYPASS IN A PATIENT WITH A LARGE LIVER CYST

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

The presence of a large liver cyst at the left hepatic lobe can obscure the view to the stomach during bariatric surgery.

Objectives

To demonstrate how a large left liver cyst is handled during laparoscopic Roux-en-Y gastric bypass.

Methods

A 54-year-old lady with 10-year history of poorly controlled type 2 diabetes mellitus, hypertension, dyslipidemia, obstructive sleep apnea and knee osteoarthritis was referred to our unit for the management of morbid obesity. Her body weight was 102.6kg and her body-mass-index was 40.7 kg/m². During preoperative assessment, she was incidentally found to have a large asymptomatic liver cyst on ultrasound. Subsequent computed tomography scan confirmed a 15cm left liver cyst covering the whole left supracolic compartment. We treated her by laparoscopic marsupialization of the left liver cyst and Roux-en-Y gastric bypass in a single operation.

Results

This video shows how the procedure of laparoscopic marsupialization of left liver cyst and Roux-en-Y gastric bypass was done. The liver cyst was first punctured with hook electrocautery. Immediate suction decompression of the cyst content was performed. This was followed by deroofting of the cyst wall using bipolar energy device. After marsupialization, the left hepatic lobe could easily be retracted to facilitate the subsequent operative steps of Roux-en-Y gastric bypass.

Conclusion

Concurrent laparoscopic liver cyst marsupialization is a safe and easy procedure during laparoscopic bariatric surgery.

□
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LAPAROSCOPIC TRANS-GASTRIC GASTROSCOPY FOR GASTRIC REMNANT BLEEDING AFTER RY GASTRIC BYPASS, CASE REPORT.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Roux en Y gastric bypass is the gold standard surgery for morbid obesity. Gastric remnant bleeding is one of the challenging complication of RYGB due to its subtle presentation and difficult access.

Introduction

We present a case of 66 year old male who had laparoscopic Roux en Y Gastric bypass for morbid obesity 6 years ago who presented to the ER with melena. Patient has no co-morbidities but was recently taking NSAID for osteoarthritis. CT abdomen identified the gastric remnant to be full of blood. Hb dropped down to 7gm. After full resuscitation and PPI infusion CT angio was done which failed to identify source of bleeding so laparoscopic transgastric endoscopy was planned.

Objectives

To present the technique of laparoscopic transgastric endoscopic evaluation of gastric remnant .

Methods

Traditional 4 ports were used with 15 mm port inserted in the left subcostal region. Diagnostic laparoscopy reveals the gastric remnant to be distended. Gastrostomy and stomach irrigation were done with burse string suture anchoring the stomach to the anterior abdominal wall. Gastroscope was introduced via the 15 mm port and proper evaluation of the remnant was done while Intubation to the duodenum failed. Closure of gastrostomy in 2 layers.

Results

Multiple gastric ulcers with overlying blood clots were found in the gastric remnant but no active bleeding. Multiple biopsies showed superficial ulceration with no evidence of malignancy but positive H.Pylori. Patient was discharged home in day six on high dose of PPI and eradication therapy for H.Pylori.

Conclusion

Laparoscopic transgastric gastroscopy provides an easy access and diagnostic tool in cases of bleeding from gastric remnant after RYGB.

□
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MINI GASTRIC BYPASS IS A SAFE AND RELIABLE PROCEDURE FOR TYPE 2 DIABETES REMISSION / CONTROL IN PATIENTS WITH BMI 31-40.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

The efficacy, safety and reliability of Mini Gastric Bypass procedure has been proven since it was first demonstrated by Dr. Robert Rutledge in USA 16 years ago.

Introduction

The MGB has slowly gained proponents throughout the world, particularly increasing in the past 5 years.

Objectives

The aim of our study was to find out the efficacy of Mini Gastric Bypass in remission or control of Type 2 Diabetes in patients with BMI 31-40.

Methods

A total of 46 patients were included in the study between September 2012 and September 2014 and followed up for a minimum of 2 year. There were 28 males and 18 females in the study aged between 30 and 60 yrs. The mean age was 43 and the patients between BMI of 31-40 were included in the study. The mean HbA1C was 9.4%(6.0 – 14.7)

Results

Out of these 46 patients who underwent MGB with type 2 Diabetes 27 patients had complete remission, 18 patients had a reduction in their requirement following the procedure.

Conclusion

Hence it can be concluded that Mini Gastric Bypass is a safe , reliable procedure for Type 2 Diabetes Remission / Control In Patients With BMI 31-40.

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INTERNAL HERNIA AND REOPERATION RATES POST ROUX-EN-Y GASTRIC BYPASS – INCIDENCE AND COMPARISON OF ANTE-COLIC AND RETRO-COLIC ROUX LIMB ORIENTATION.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Roux-en-Y gastric bypass is a successful operative treatment for morbid obesity. A recent RCT has shown that Ante-colic roux limb orientation reduces the risk of internal herniation. The authors initial practice was for retro-colic roux limb, however this changed to ante-colic. Mesenteric defects except Petersen's space were always closed.

Objectives

To assess the effect that this change from retro to ante-colic had on internal hernia and re-operation rates.

Methods

A retrospective review of a prospective collected database 276 consecutive patients having undergone Roux-en-y gastric bypass operations performed by a single surgeon over the period from April 2010 to August 2016 was undertaken. Re-operations and internal hernia identification at subsequent diagnostic laparoscopy were identified from patient record searching. The ante-colic and retro-colic group were then compared. No attempt was made to close Petersen's defect in any patients

Results

All 276 cases were analyzed. There were no anastomotic leaks in either group. Re-operation rates for abdominal pain were 10.4% in the retro-colic group compared to 4.6% in the ante-colic group ($p=0.05$). Table 1 shows the operative findings at reoperation for abdominal pain in both groups

Internal hernias were positively diagnosed at operation in 5/105(4.8%) patients in the retro-colic group (mixed meso-colonic/mesenteric defects) compared to 2/171(1.2%) in the ante-colic group.

However this difference did not reach statistical significance $p=0.1$

	Ante-colic(n=171)	Retro-colic(n=105)
Internal hernia	2	5
Re-fashioning of pouch	1	0
Adhesiolysis	3	1
Total	6	6

Conclusion

Ante-colic orientation produces lower rates of internal herniation. However statistical significance was not reached likely due the power of the study. Re-operation rates for pain were higher in the retro-colic group

□
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GASTRIC BYPASS: TECHNICAL ASPECTS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Multiple bariatric procedures have been developed and adopted over the last decades.

The laparoscopic approach brought a huge evolution in bariatric surgery, and greatly helped with its globalization.

The laparoscopic Roux-en-Y gastric bypass is a safe and simple procedure with an easily reproducible technique.

Introduction

We present the case of a 39 year-old female patient with morbid obesity. At 155 cm (5 ft 1 inches) and 97 kg, she presented with a Body Mass Index (BMI) of 40,4 Kg/m² (Class III obesity) and had no other relevant past medical history.

The preoperative studies included an upper endoscopy, pulmonary function tests, an abdominal ultrasound and blood tests. The upper endoscopy showed peptic esophagitis.

There were no surgical contraindications.

Objectives

To show the systematization of our technique and its safety.

Methods

In this video, we present a laparoscopic Roux-en-Y gastric bypass.

Intraoperative methylene blue test was performed and it was negative for anastomotic leaks.

The procedure lasted approximately 46 minutes.

Results

We show a straightforward approach to this bariatric procedure.

The postoperative course was uneventful and the patient was discharged on the 2th postoperative day.

Conclusion

The Laparoscopic Roux-en-Y gastric bypass is a reproducible, safe and relatively uncomplicated procedure due to the technical skills developed by a dedicated team.

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THIRTY-DAY OUTCOMES FOR LRYGB IN SINGLE SURGEON PRACTICE: IS THERE STILL A LEARNING CURVE AFTER BARIATRIC FELLOWSHIP?

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

LRYGB, although safe and effective, is technically demanding and has an associated learning curve. We have published previously that a bariatric fellowship may reduce the individual surgeon learning curve of primary LRYGB and improve patient outcomes after one-year of independent practice.

Objectives

The aim of the study was to compare the previously published 30-day outcomes for LRYGB of a post-fellowship single surgeon in the first year of independent practice with the subsequent six years of practice.

Methods

A prospective database from March 2010 until February 2017 of all patients under a single surgeon undergoing primary LRYGB was analyzed. 30-day outcome data was reviewed and compared between the first year of independent practice (<1yr group) and subsequent six years (>1yr group).

Results

279 eligible cases were studied over a 7-year period. There were 74pts(26.5%) in the first year of practice and 205pts(73.5%) subsequently.

The >1yr practice group had a significantly higher pre-operative risk scores (ASA and OSMRS). There were no other significant demographic differences between the groups.

There was no significant difference between the groups in terms of LOS, all complications, re-admissions or re-operations. There were no conversions to open or in-patient mortality in either group.

	<1yr(n=74)	>1yr(n=205)	p
<i>Demographics</i>			
Age(Mean/SD)	45.1(9.00)	44.4(10.5)	0.611
Gender(M:F)	13:61	49:156	0.269
BMI(kg/m ²)(Mean/SD)	47.7(4.76)	48.0(5.97)	0.698
ASA(Median/IQR)	2(2-3)	3(2-3)	0.000
OSMRS(Median/IQR)	A(A-B)	B(A-B)	0.041
<i>Outcomes</i>			
LOS(d)(Mean/SD)	2.34(0.832)	2.44(0.898)	0.376

All complications(%)	4.05%	5.85%	0.556
Readmissions(%)	0	2.44%	0.539
Reoperations(%)	2.70%	1.95%	0.657
Mortality	0	0	-

Conclusion

There was no significant difference between 30-day outcomes in the first or subsequent years of practice. The higher risk scoring of later group did not equate to an increase in complications. A bariatric fellowship reduces the learning curve for LRYGB allowing for excellent outcomes in the first or subsequent years of independent practice.

□
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GASTRIC BY-PASS AS A SINGLE TECHNIQUE FOR G.E.R.D IN OBESE PATIENTS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

There are many patients with BMI greater than 35 and GERD. These patients come to the surgeon's office and in many occasions they offer a laparoscopic Nissen funduplication.

Due to obesity the surgical technique is difficult and the risk of postoperative complications is high as well as relapse of reflux in the future.

The possibility of weight gain is also high.

Gastric bypass is the solution to these types of patients.

Introduction

We present the case of a 39-year-old patient with BMI of 36.4 and GERD.

Gastroscopy: Hiatal hernia. Distal grade A esophagitis. Chronic gastritis. HP (-)

DeMeester: 36.7

Esophageal manometry: EEI hypotonia.

Diabetes mellitus type II and SAHS.

Objectives

We present a video with the surgical technique.

Methods

Detail of technical aspects and steps.

Hiatus dissection, confection of the gastric reservoir, food loop measurement and gastro-yeyunal anastomosis.

Results

Gastric By-pass technique.

Conclusion

Gastric Bypass is the ideal technique for treating GERD in obese patients.

□
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OUTCOMES OF BARIATRIC SURGERY IN IMMUNOCOMPROMISED PATIENTS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Recent Research evidences from across world indicate usefulness of bariatric surgery in improving immunological co-morbidities in patients with morbid obesity.

Objectives

Aim of study was to evaluate outcome from bariatric surgery in patients presenting with diabetes mellitus and/or morbid obesity with immunological comorbidities.

Methods

Study included patients with morbid obesity with immunological comorbidities, and additional comorbidity of type 2 diabetes in about one third of cases, who had undergone laparoscopic gastric bypass surgery during 2014-16 at Columbia Asia hospital, Ahmedabad. Preoperative data on patient demographics, BMI, immunological conditions and use of medications were recorded. Patients were followed for assessing outcome in terms of BMI and dependency on medications to evaluate effectiveness of procedures.

Results

Study included 23 patients (52% female and 48% male) who underwent bariatric surgery. Mean age of study group was 50.30 ± 10 years (range 32-72 years).

34.78% patients were diabetic and 65.22% presented with immunological co-morbidities such as psoriasis (n=4), HIV (n=1), Hepatitis B (n=3) and other immunological conditions (n=15). Mean BMI was 43.36 ± 8.06 kg/m² (range 30.32-56.0 kg/m²). Surgery included RYGB (52.17%), SGB (43.47%) and MGB (4.35%).

2 yrs to 3 months follow up of the patients indicated that 57.71% were without dependency on medications, 1 patient (M/ 32) underwent reversal of surgery.

Recent follow up of these patients in March 2017 showed that mean BMI of the study group decreased significantly to 30.47 ± 6.65 kg/m² (range 19.48-45.29 kg/m²) and 28.57% patients were with normal BMI ≤ 25 kg/m² and all patients were without any dependency on immunosuppressive medications except the Patient reported HIV positive.

Conclusion

Bariatric surgery can be effectively performed in patients with morbid obesity and diabetes having other immunological co-morbidities. Immunological conditions improve drastically following surgery without dependency on medications along with significant BMI improvements.

□
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COMPARING THE QUALITY OF LIFE AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS AND MINI GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

M. Ismail

Moulana Hospital - Perinthalmanna (India)

Background

The prevalence of obesity is rising exponentially. The increased incidence of obesity has been followed by increasing number of bariatric operations.

Introduction

In selection of the bariatric procedure, the post operative quality of life is an important factor. A patient friendly procedure with good result may be an ideal procedure.

Objectives

The aim was to compare the quality of life after LRYGB and LMGB in morbidly obese patients.

Methods

From January 2012 to March 2016, we enrolled 100 patients who underwent LRYGB and LMGB. The mean age and body mass index (BMI) was 39 ± 4.8 years and 43.5 ± 6.5 (kg/m²), respectively. Quality of life was measured by the gastrointestinal quality of life index (GIQLI), a 36 item questionnaire before and at 1-year after LRYGB and LMGB and was compared.

Results

The two groups were comparable in age, gender, and BMI. One year after bariatric surgery, the mean general score of GIQLI improved significantly ($P = 0.001$). All patients had improvement in the four domains of the questionnaire (social function, physical status, and emotional status). Despite a significant difference between two groups in postoperative physical and emotional domains of GIQLI scores ($P \leq 0.05$), the postoperative gastrointestinal quality of life was comparable in both the groups.

Conclusion

Both LRYGB and LMGB are effective treatments for morbid obesity. LMGB was shown to be a simpler and safer procedure than LRYGB with similar efficacy at the 1-year follow-up. LMGB is thus an acceptable alternative treatment to standard LRYGB for morbidly obese patients.

□
P.256

ACUTE BLEEDING AFTER ROUX-EN-Y GASTRIC BYPASS: WHAT HAVE WE LEARNED

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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CHEDV - Porto (Portugal)

Introduction

Bleeding after bariatric surgery is a potential life-threatening complication, with a reported incidence of 1-4% after gastric bypass (RYGBP). With the global increase in bariatric procedures, it is imperative to be aware of the nature and management of this morbidity.

Objectives

The purpose of this study was to determine the incidence of acute bleeding after Roux-en-Y gastric bypass (RYGBP) in our series and to evaluate various treatment options.

Methods

The records of 1610 patients who had undergone laparoscopic RYGBP over 7 years period, were retrospectively reviewed. The charts of patients who had developed acute intraluminal or intraabdominal bleed were chosen for further analysis.

Results

33 patients (2%) developed acute postoperative hemorrhage. The bleeding was intraluminal in 14 cases (42,4%). 10 patients (30,3%) were unstable and required reoperation and 17 (51,5%) required blood transfusions. All others were successfully treated with observation. There was no mortality.

Conclusion

The diagnosis and treatment of acute bleeding after laparoscopic RYGBP represents a real challenge, mainly due to the anatomy modifications. However, most cases respond to conservative therapy. Failure of conservative management or hemodynamic instability may require operative intervention.

□
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SINGLE PORT OMEGA LOOP - PRACTICAL ASPECTS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

E. Al Alawi

Algarhoud Private Hospital - Dubai (United arab emirates)

Background

There is increasing demand for scarless surgery especially in the lower BMI bariatric patients. The main reasons given by the patients are privacy, better cosmetic outcome and psychological acceptance.

Introduction

Single incision laparoscopic surgery (SILS) has been performed for bariatric procedures and there are several reports in the literature about the safety and efficacy of SILS sleeve gastrectomy. However, there is no publication so far regarding SILS omega loop. In this small series of 25 cases, we have studied the safety and efficacy of the procedure as well as recommendations of practical steps and tips in performing the procedure safely and in timely fashion.

Objectives

To assess the safety and efficacy of the procedure as well as recommending practical surgical steps to perform the procedure safely.

Methods

25 cases of SILS omega loop were compared to 132 cases of multiple trocars procedure in our bariatric unit during 24 months from January 2015 to December 2016. The patients were matched demographically. The studied parameters were; operative time, perioperative complications, post operative pain, length of hospital stay and patient satisfaction rate.

Results

Operative time average was 76 minutes for the multiple trocars group and 123 minutes for the SILS group. Perioperative complications and post operative pain scores and length of hospital stay were similar in the two groups. Patient satisfaction was higher in the SILS group.

Conclusion

Single port omega loop surgery can be done safely in selected patients in the hands of experienced laparoscopic surgeons with the availability of rotating surgical instruments.

□
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LAPAROSCOPIC HAND-SEWN ONE-ANASTOMOSIS GASTRIC BYPASS: SHORT-TERM OUTCOMES

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

One-Anastomosis Gastric Bypass (OAG) is a restrictive/malabsorptive bariatric surgery. Some reports have demonstrated that the use of laparoscopic hand-sewn anastomosis (HSA) means in lower incidence of leaks

Introduction

Some authors have reported an increase in the operating time with hand-sewn anastomosis but lower rate of leaks

Objectives

To show our initial experience in 76 cases of OAG with HSA.

Methods

From December 2015 to December 2016, 76 patients with MO were treated surgically with HSA-OAG. Data Include: Preoperative Body Mass Index (BMI), associated preoperative morbidity, surgical time and postoperative complications

Results

Age average was 39.7 years (16-59), BMI average: 47.6 kg/m² (35-73), associated morbidity: Diabetes mellitus 28 (36,8%), Hypertension: 9 (11.8%), Sleep apnea:13 (17.1%). Average operating time was 98 minutes (85-155). OAG was created with 5-6 trocars, creation of the gastric pouch began at 8-10 cm below the GE junction with 32 Fr. calibration bougie and the G-J anastomosis was created hand- sewn with 4 planes of 000 PDS at 180-250 cm from the Treitz fixation. All cases completed laparoscopically. There were 4(3.9%) postoperative complications: 1(1.3%) intra-abdominal bleeding due to hypertension that was treated conservatively. There were no leaks. Obstructive stenosis presented at 3 patients (3.9%) at 2-3 weeks after procedure and required endoscopic dilatation. Mortality rate was 0. Loss percentage of weight excess was: 3 months 37,2%, 6 months 57,1%.

Conclusion

At short- term, laparoscopic HSA in OAG is secure and effective in treating patients with morbid obesity and it represents average operating time compared with other methods

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COMPLICATIONS OF LAPAROSCOPIC MINI GASTRIC BYPASS PROCEDURE : A 3 YEAR EXPERIENCE

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

M. Ismail

Moulana Hospital - Perinthalmanna (India)

Background

One-Anastomosis Gastric Bypass (OAGB) by laparoscopy consists of constructing a divided 25-ml (estimated) gastric pouch between the esophago-gastric junction and the crow's foot level, parallel to the lesser curvature, which is anastomosed latero-laterally to a jejunal loop 200 cm distal to the ligament of Treitz.

Introduction

The single-anastomosis gastric bypass was first described in 2001, and although controversial, this operation is gaining fast in popularity worldwide. Excellent results have been reported with mini-gastric bypass. This study reports the complications following Mini Gastric Bypass over a period of 3 years.

Objectives

To analyse the immediate and late complications after single anastomosis gastric bypass in morbidly obese patients

Methods

Total of 347 patients submitted to Laparoscopic Mini Gastric Bypass between 2012 and 2015 were analyzed. Mean age was 45 years (17-73) and body mass index (BMI) 46 kg/m² (22-69).

Results

Mean operating time (min) was as follows: (a) primary procedure, 90 (45-180); (b) with other operations, 115 (95-230). The following complications were noted in the 347 patients : bleeding from the stapler line -4 (1.15%) anastomotic leak – 1(0.28%) , marginal ulcers – 2(0.58%), bleeding in the remnant stomach – 1 (0.28%), Nesidioblastosis – 2(0.58%).

Conclusion

Laparoscopic OAGB is safe and effective. It reduces difficulty, operating time, and early and late complications of Roux-en-Y gastric bypass. Long-term weight loss, resolution of comorbidities, and degree of satisfaction are similar to results obtained with more aggressive and complex techniques. It is currently a robust and powerful alternative in bariatric surgery.

□
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LAPAROSCOPIC MINI GASTRIC BYPASS: EXPERIENCE OF SINGLE CENTRE OF HIGH VOLUME BARIATRIC SURGERIES

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

There is increasing number of mini gastric bypass MGB (One Anastomosis Gastric Bypass OAGB) procedures are done in the world with more acceptance.

Introduction

The MGB is increasingly practiced internationally and there is gradual shifting to do more of MGB in the bariatric centers specially with high volume centres

Objectives

This Study and evaluate the practice and the outcome of High volume bariatric center in MGB.

Methods

Retrospective review of all the records of for the patients whom had operated by the author as bariatric operations over 20 years in Prince Sultan Medical Military City in Riyadh-Saudi Arabia. The preparations and operative techniques were standardize.

Results

The total number of the bariatric patients were 1728 since May 1997, out of which 283 patients were SAGB since November 2012. The body mass index ranges 34.2-72.5 kg/m² (mean 46.35 kg/m²). The excess body weight loss percentage 38, 71.2, and 92 kg/m² for the 3, 6, and 12 months post operatively respectively. The hospital stay 2-6 days (mean 2.4 days). The operative time ranges 21- 114 min (mean 46.3 min). The major complications include one leak ended with conversion to laparoscopic RYGB, one stenosis, two bleedings treated conservatively, 2 marginal ulcers, and 5 nutritional deficiencies. There was no mortality.

Conclusion

MGB is safe simpler feasible and shorter operative time. There clear shift from RYGB to MGB in our practice with less complications. There is a need to RCT to confirm the upper trend and results.

□
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SINGLE PORT OMEGA LOOP - PRACTICAL ASPECTS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

E. Al Alawi

ALGARHOIUD PRIVATE HOSPITAL - Dubai (United arab emirates)

Background

There is increasing demand for scarless surgery especially in the lower BMI bariatric patients. The main reasons given by the patients are privacy, better cosmetic outcome and psychological acceptance.

Introduction

Single incision laparoscopic surgery (SILS) has been performed for bariatric procedures and there are several reports in the literature about the safety and efficacy of SILS sleeve gastrectomy. However, there is no publication so far regarding SILS omega loop. In this small series of 25 cases, we have studied the safety and efficacy of the procedure as well as recommendations of practical steps and tips in performing the procedure safely and in timely fashion.

Objectives

To assess the safety and efficacy of the procedure as well as recommending practical surgical steps to perform the procedure safely.

Methods

25 cases of SILS omega loop were compared to 132 cases of multiple trocars procedure in our bariatric unit during 24 months from January 2015 to December 2016. The patients were matched demographically. The studied parameters were; operative time, perioperative complications, post operative pain, length of hospital stay and patient satisfaction rate.

Results

Operative time average was 76 minutes for the multiple trocars group and 123 minutes for the SILS group. Perioperative complications and post operative pain scores and length of hospital stay were similar in the two groups. Patient satisfaction was higher in the SILS group.

Conclusion

Single port omega loop surgery can be done safely in selected patients in the hands of experienced laparoscopic surgeons with the availability of rotating surgical instruments.



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RETRO GASTRIC DISSECTION DURING A GASTRIC BYPASS IN THE LEARNING CURVE

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

The visualization of the left diaphragmatic crus is a crucial step during the retro gastric dissection in a gastric bypass. This is not always obvious especially in the beginning of the learning curve.

Objectives

Describing a systematic maneuver that may guide the surgeon during this step of the procedure.

Methods

55 Laparoscopic Roux-Y Gastric Bypass (LRYGBP) procedures were studied. During the creation of the gastric pouch, when proceeding to the vertical dissection to reach the diaphragmatic crus; we can always before performing the second vertical shot, expose the retrogastric space with the aid of a laparoscopic clamp. We identify the gastric fundus and its avascular zone. Parallel to the staple line of the first shot and approximately 2cm medial to the avascular zone, the dissection is performed until the left diaphragmatic crus is visualized.

Results

In 55 LRYGBP, the systematic retro grastic maneuver facilitates the realization and learning during laparoscopic gastric bypass.

Conclusion

Because of the complexity of retro gastric dissection, surgeons in the beginning of the learning curve of gastric bypass tend to create a large gastric pouch. We recommend during the vertical step of retro gastric dissection to identify the gastric fundus and its avascular zone and 2 cm medial to this zone, continue the dissection vertically reaching the left crus of the diaphragm.

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ADEQUATE LOOP LENGTH IN ACHIEVING AN OPTIMUM BARIATRIC RESULT AND RESOLUTION OF COMORBIDITIES IN MINI GASTRIC BYPASS : A 3 YEAR EXPERIENCE

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

The mini-gastric one-anastomosis bypass (MGB) was conceived by Dr. Robert Rutledge in USA 16 years ago, as a safe, rapid and effective bariatric operation.

Introduction

Obesity rates have reached pandemic levels globally . As per the World Health Organization (WHO) World Health Statistics 2012 report, 1 in 6 adults is obese and 1 in 10 is diabetic. The prevalence of morbid obesity is also rising sharply amongst the elderly patients.

Objectives

We report here the results of Mini Gastric Bypass over a 3 year period at our hospital with emphasis on the adequate loop length in achieving an optimum weight loss and resolution of comorbidities following the procedure

Methods

A total of 276 patients were included in the study between Sept. 2012 and Sept. 2015. There were 162 males and 112 females in the study aged between 26 and 60 yrs. The mean age group was 43 and the mean BMI was 42. In this 226 patients had comorbidities. There were 134 patients who underwent MGB with loop length of 200 cm, 108 patients with loop length of 150 cms, 34 patients with loop length of <150 cms and 4 patients with loop length of >200 cms.

Results

Out of these, the patients who underwent MGB with loop length of 200cms achieved the maximum weight loss with almost near resolution of comorbidities at the follow up of 1 yr.

Conclusion

Hence it can be concluded that a loop length of 200cm is most suitable for Mini Gastric Bypass for achieving the most optimal result.

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LAPAROSCOPIC GASTRIC BYPASS WITH REMNANT GASTRECTOMY IN A SUPER-SUPER OBESE PATIENT WITH GASTRIC METAPLASIA: A SURGICAL HAZARD?

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Obesity is an epidemic disease in the world and also is one of the major cause of cancer. Lately the number of bariatric surgery procedures that are effectuated has grown. Laparoscopic gastric bypass with reconstruction sec. Roux is the most performed. The problem is the difficulty to access endoscopically to the remnant stomach, delaying the diagnosis of gastric cancer. For this, all patients that have to do bariatric surgery undergo esophagogastroduodenoscopy to diagnose precancerous lesions.

Objectives

We performed a Roux-en-Y gastric bypass with gastrectomy of the remnant in this patient with high risk of gastric cancer to reset it.

Methods

55 years old male patient, suffering from severe morbidity obesity (weight 193kg, height 1,75m, BMI 63kg/m²). In history: hypertension, type II diabetes, gastro-esophageal reflux disease, hiatus hernia and gastric cancer family history. An endoscopy showed antral gastritis with intestinal metaplasia.

Results

A Roux-en-Y gastric bypass with the remnant gastrectomy was performed. The postoperative course was regular and the patient was discharged on the 8th day. At 6 months, the patient weighed 119kg with a loss of 38% of body weight, diabetes resolution and reduction of reflux symptoms. At 12 and 24 months, he maintained a stable weight. At 5 years he weighs 122kg and he wasn't diabetic and hypertensive.

Conclusion

Although the gastric cancer is rare in patients undergoing bariatric surgery, it is important to perform a preoperative endoscopy to find pre-cancerous lesions. We believe that in cases of family history of gastric cancer or pre-cancerous lesion is necessary prophylactic gastrectomy in gastric remnant.

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LONGER GASTRIC POUCH IN OMEGA LOOP IS ASSOCIATED WITH LESS BILE REFLUX

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

E. Al Alawi

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Background

Omega Loop Gastric Bypass has gained popularity throughout the world. The numbers have increased dramatically in the middle east area in the last 10 years. It has been demonstrated that it is a rapid, safe and effective bariatric operation.

Introduction

Advantages of mega loop bypass include ; shorter operative time, lower risk of anastomotic leakage and internal herniation, shorter learning curve, and the ease of reversibility. Potential complications include; marginal ulcers, chronic alkaline reflux and gastro-jejunoscopy (GJ) stenosis.

We noticed in our department that patients with longer gastric pouch had less bile reflux.

Objectives

Retrospective analysis to assess the effectiveness of a longer gastric pouch well below the crow's foot in omega loop surgery as compared to a shorter pouch above the crow's foot in preventing bile reflux.

Methods

437 patients underwent omega loop bypass between January 2008 to December 2016 were matched demographically. 98 patients had the gastric pouch performed above the crow's foot were compared to 339 patient who has the gastric pouch performed well below the crow's foot. Assessment tool were symptoms of Bile reflux and vomiting bile with a follow-up period of 3-24 months

Results

–Patients with longer gastric pouch below the crow's foot had less bile reflux as compared to above crows foot with statistically significant p- value.

Conclusion

–We strongly recommend longer gastric pouch in omega loop surgery to reduce the incidence of bile reflux.

We also noticed more comfortable eating and more gradual weight loss in patients with longer gastric pouch.

□
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GASTRO-JEJUNOSTOMY ON A BOUGI REDUCES THE INCIDENCE OF STENOSIS IN OMEGA LOOP

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

E. Al Alawi

Algrhoud Private Hospital - Dubai (United arab emirates)

Background

Omega Loop Gastric Bypass has gained popularity throughout the world. The numbers have increased dramatically in the middle east area in the last 10 years. It has been demonstrated that it is a rapid, safe and effective bariatric operation.

Introduction

Advantages of mega loop bypass include ; shorter operative time, lower risk of anastomotic leakage and internal herniation, shorter learning curve, and the ease of reversibility. Potential complications include; marginal ulcers, chronic alkaline reflux and gastro-jejunosomy (GJ) stenosis.

We noticed in our department that suturing the gastro-jejunosomy (GJ) over a bougi has reduced the rate of GJ stenosis and the need for endoscopic balloon dilatation later on.

Objectives

Retrospective analysis to assess the effectiveness of anastomosing the gastrojejunosomy on a calibration tube in reducing GJ stenosis after omega loop surgery.

Methods

A total of 266 patients undergoing Omega Loop Bypass with GJ anastomosis over a 36F bougi were compared with a demographically similar 79 patients with the anastomosis performed without a bougi between January 2008 and March 2017. The follow up period was between 3 - 24 months.

–Assessment tools were vomiting liquids and solids and GJ stenosis confirmed on fluroscopy and endoscopy.

Results

–Patients with GJ anastomosis performed over a calibration tube showed less GJ stenosis than those sutured blindly.

–*P-value was statistically significant between the 2 groups in reduction of the stenosis rate.

Conclusion

–GJ anastomosis over a bougi reduces the risk of GJ stenosis.

□
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MINI GASTRIC BYPASS VERSUS R-EN-Y GASTRIC BYPASS IN MEDDLE AGED SUPER OBESE EGYPTIAN PATIENTS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Obesity is now a pandemic affecting people of all ages. Overweight and obesity affects all age group, are now dramatically on the rise in low and middle-income countries, particularly in urban settings.

Introduction

Reduced Technical Complexity is evident with a shorter learning curve and a shorter operative time. Furthermore, ease of reversal and revision has been described in published reports on this procedure. Demonstrated safety and efficacy.

Objectives

Comparative study between outcomes efficacy and safety of Laparoscopic Mini Gastric Bypass (LMGB) versus Laparoscopic R-En-Y Gastric Bypass (LRGB) for the treatment of middle aged super-obese Egyptian patients

Methods

Two hundred and forty patients divided into two groups, 120 patients underwent LMGB and 120 underwent LRGB, operative and post operative data are collected), informed consent, the study approved from all relevant committee.

Results

LMGB group (50±5 minutes vs. LRYGB 120±15 minutes). 2 cases (1.6%) of leaks required readmission and insertion of endoscopic stent. Compared with LRGB 4 cases (3.3%) of leaks need readmission and insertion of endoscopic stent, one case of hematoma aspirated under CT guidance 6 cases were founded to have stricture treated by endoscopic dilatation after an initial upper gastrointestinal endoscopy and contrast study.

Conclusion

Mini gastric bypass efficacy and safety is evident. It' is a simple procedure; it is less time consuming and is associated with shorter hospital stay. It has more favorable outcome a lower complication rate, no mortalities and is considered a suitable weight loss procedure compared with Roux-En-Y Gastric Bypass.



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PETERSONS SPACE CLOSURE WITH SUTURE AND BIO ABSORBABLE MESH COMPARED TO NON CLOSURE

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Petersons space hernias are an increasing problem in RYGB. The aim of this prospective study is to evaluate whether closure with mesh reinforcement is superior to non closure.

Introduction

Rates of up to 10 % are reported for Internal hernias. Does closure with mesh reinforcement reduce hernia rates? This is a Prospective study looking at proven internal hernias occurring after RYGB and directly comparing hernia rates between 2 matched groups.

Objectives

To examine whether closure of Petersons space with suture and mesh is superior to non closure of Petersons Space in preventing Petersons space hernia's.

Methods

A total of 208 patients undergoing RYGB were observed over a minimum 18 month period. 93 patients did not have Petersons Space closed and 118 patients had closure of the space with a running 3'0 Novafil Vlock and reinforced with a 4 cm piece of Bio A mesh secured with Glubran.

Results

6/93 (6.7%) patients in the non closure group underwent laparoscopy and were found to have bowel incarcerated within Petersons space. Patients with open Petersons space and no bowel within the defect or without evidence of incarceration (Chylous fluid, oedematous bowel) were not included.

Mean time to hernia was 4 months.

0/118 patients who had closure with suture and mesh had a positive laparoscopy. We did lparoscopy 2 patients for abdominal pain and found the space still closed with no evidence of internal hernia. There were no complications.

Conclusion

Closure of Petersons space with suture and mesh shows promise in decreasing Petersons space internal hernias post RYGB.

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LONG TERM RESULTS GASTRIC MINI-BY- PASS FOR MORBID OBESITY

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Gastric mini by-pass (MGB) is a safe and feasible procedure for morbid obesity first introduced by Rutledge in 1997.

Objectives

Aim of this study is to confirm that MRG is a safe and effective alternative to other bariatric surgical operations and if the results in terms of %EWL and BMI are related to the starting BMI.

Methods

Analysis of a continuous series of 92 patients submitted to MRG from 1 Jan. 2011 to 31 Dec. 2011 with 36 months of follow up.

Results

Population: 92 patients, 14 M (11%), 73 F (79%), mean age 43 aa (range 22-68) , mean BMI 42,5 (range 30.8 -53.5), mean weight 113,5 (range 76-155), 56 first procedure (32 with intragastric balloon placement for 6 months, and subsequent removal 3 months before the MGB), 31 redo (26 from adjustable gastric band, 4 from sleeve gastrectomy, 1 from vertical gastropasty). We divided the patients in 3 groups based on the starting BMI to check if there were some difference in %EWL and in BMI at 36 months after the procedure. The results were not statistically significant.

Conclusion

Mini gastric bypass seems a good alternative to RNY, giving the same results with a more simple and reproducible technique. Starting BMI is not predictive for the final %EWL. Further studies need to be performed to understand the long term results following this procedure.

□
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SIDE-TO-SIDE ANASTOMOSIS OF THE LESSER CURVATURE OF STOMACH AND JEJUNUM IN GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Gastrojejunostomy is one of the most important procedures in Laparoscopic Roux-en- Y gastric bypass (LRYGB) because it needs proficient and skilled surgeon to control the size of anastomosis, which is usually associated with the occurrence of complications. However, the surgical mode has not been standardized.

Objectives

To evaluate the feasibility of side-to- side anastomosis of the lesser curvature of stomach and jejunum in LRYGB

Methods

Seventy-seven patients received side-to- side anastomosis of the lesser curvature of stomach and jejunum by utilization of linear stapler in LRYGB from April 2012 to July 2015 were retrospectively analyzed

Results

All patients were successfully completed laparoscopic gastric bypass with the side-to-side anastomosis of the lesser curvature of stomach and jejunum. No patient was switched to laparotomy during operation. No early complications including gastrointestinal anastomotic bleeding, fistula, obstruction, deep vein thrombosis, incision infections, intra-abdominal hernia complications were found. One patient complicated with stricture of gastrojejunal anastomosis (1.3%) and six patients complicated with incomplete intestinal obstruction (7.8%). BMI and HbA1c determined at 3, 6, 12, 24 mo during follow up period were significantly reduced compared with preoperative baselines respectively. The percentage of patients who maintain HbA1c (%) < 6.5% without taking antidiabetic drugs reached to 61.0%, 63.6%, 75.0%, and 63.6% respectively. The outcome parameters of concomitant diseases were significantly improved too

Conclusion

Present surgery is a safety and feasibility procedure. It is effective to lighten the body weight of patients and improve type 2 diabetes and related complications

□
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VISUALIZATION AND PRECISION- THE ROLE FOR ROBOTIC REVISION OF COMPLEX BARIATRIC SURGERY

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

With the increased incidence of bariatric procedures and growing need for surgical revision secondary to recidivism, surgeons face more technically demanding surgical situations. Compared to standard laparoscopic techniques, the robotic video platform provides improved visualization and flexibility to better address the challenges of these difficult bariatric revision procedures. This video depicts the enhanced visualization and maneuverability available to the operating surgeon when utilizing the robotic platform.

Objectives

To detail the importance of the robotic platform in difficult bariatric revision surgery

Methods

A 37 year old male BMI 40 underwent gastric bypass in 2007 with successful weight loss from 167 to 95 kg. Starting in 2012 he experienced weight gain to 131 kg. Evaluation included upper GI series and he was deemed to be an appropriate candidate for revision. His weight at the time of surgery was 130 kg.

Results

This robotic procedure was performed with a six port configuration. The dissection was carried along the liver edge to release gastric adhesions and expose the underlying anatomy. The gastric remnant and Roux limb were divided and a new anastomosis was created to the gastric pouch. Air leak test was negative at the gastrojejunal anastomosis. His six month post-operative weight is 119 kg. He has suffered no complications, no readmissions and no leak.

Conclusion

Bariatric surgery is a safe and effective weight loss option for many patients. With improvements in the robotic platform complicated bariatric surgery complications and mortality with complex bariatric revision procedures will continue to decrease allowing surgeons additional options to aid their patients.

□
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INCOMPLETE REMISSION OF OBESITY AFTER OAGB/MGB AND A PROPOSED STANDARDIZED REPORTING OF GASTRIC BYPASS PROCEDURES

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

OAGB/MGB is the main bypass procedure performed in Egypt and the Middle East. However, OAG/MGB does not have standard reporting.

Introduction

Remission of Obesity is the aim of OAGB/MGB. Weight loss is reported as %EWL, %Total Weight Loss or BMI loss. However, the incidence of unsatisfactory weight loss is not usually reported. Moreover, the correlation between weight loss and patient characteristics, and specifications of OAGB/MGB is not accurately studied.

Objectives

Evaluating OAGB/MGB and proposing standardized reporting of patient and procedure characteristics.

Methods

The last 100 cases of OAGB/MGB were analyzed to evaluate weight loss after one year. We propose a standardized reporting system as a basis of evaluation and comparative analysis of outcome of various gastric bypass procedures.

Results

The average %EWL one year after OAGB/MGB was 78%. Four cases (4%) have not achieved 60% EWL, with %EWL of 39.8%, 42.5%, 47% and 51.8%. Three patients were superobese with BMI > 50, in whom MGB was performed with a long gastric tube and division of omentum to avoid tension on the gastrojejunal anastomosis. Our proposed reporting system entails reporting of patient characteristics, type of bypass, gastric pouch length, bougie size, stoma size and configuration, alimentary limb length, biliopancreatic limb length, division of omentum, internal hernia site closure, anti-obstruction stitch.

Conclusion

OAGB/MGB achieves average % EWL of 78% in 96% of patients after 1 year. EWL% less than 60% is achieved in 4% of patients. Accurate reporting of the specifications of the gastric bypass procedure is essential for outcome evaluation and comparative analysis.



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REVERSAL OF OMEGA LOOP BYPASS - PRACTICAL STEPS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Gastric bypass procedures can potentially lead to complications like anastomotic complications or functional disorders such as bile reflux or malnutrition. The present work describes reversal of omega loop bypass into normal anatomy.

Introduction

The demand for bariatric surgical procedures is increasing with raising obesity rates worldwide. Although most procedures are safe and feasible, however the associated short and long term complications can be disruptive to normal daily lifestyle. The options of reversibility must be possible, safe and feasible too.

Objectives

To provide a step by step practical tips for safe reversal of omega loop bypass surgery.

Methods

We present the video report of a 40-year-old woman who suffered hair loss, dry pale skin and did not like her appearance after weight lose (weight of 56 kg, body mass index of 22.4). She had undergone laparoscopic omega-loop gastric bypass 2 years ago (initial weight of 98 kg and initial body mass index of 40.2).

Results

Presented is a step-by-step laparoscopic reversal of the omega-loop gastric bypass. The procedure began with a careful release of adhesions from the left lobe of the liver, gastric pouch, and omega-loop. Then, the gastro-jejunostomy was transected with Endo GIA stapler. Gastro-gastric anastomosis was created between the gastric pouch and the excluded stomach. Omega-loop jejunum was resected and the anastomosis performed. The operative time was 122 min. Postoperative course was uneventful and the patient discharged after 2 days. Three month later, she has gained 8 kg without needing any nutritional support.

Conclusion

Reversal of omega loop is feasible and safe procedure.



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CLOSURE OF MESENTERIC DEFECTS AFTER ROUX EN Y GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Many articles published in the literature have showed that the incidence of internal hernia in patients without closure of the mesenteric defects and reapportion is high and substantially higher compared to patients with primary closure of mesenteric defects.

Objectives

The aim of this video is to give tips and tricks to facilitate the closure of the defects and to avoid the kinking of the anastomosis.

Methods

Tips and tricks of closure of the defects during RYGB are presented.

Results

Defects are closed with a simple and reproducible technique.

Conclusion

We recommend routine closure of the mesenteric and Petersen s defects in laparoscopic Roux en Y Gastric Bypass. However, surgeons must be aware that closure of the mesenteric defects might be associated with increased risk of early small bowel obstruction caused by kinking of the jejunojejunostomy.

□
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BANDED ROUX-EN-Y GASTRIC BY PASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Roux-en-Y gastric by pass (RYGBP) is a restrictive procedure. One of the reasons why people regain weight after a RYGBP is the dilatation of gastric pouch.

Introduction

The rationale behind the banded-bypass is to minimize this dilatation. Specific devices are marketed currently in Europe.

Objectives

The aim of this video is to demonstrate the placement of the Minimizer Ring® during a RYGBP.

Methods

We present the case of a 40-year-old-woman, with a BMI 41. The patient underwent preoperative screening, including physical examination (comorbidities, use of medication, body mass index (BMI)), nutritional status (laboratory tests), psychological examination, screening for obstructive sleep apnea, preoperative upper endoscopic evaluation, preoperative abdominal tomography and a preoperative upper gastrointestinal study. The patient participated to the choice of the procedure.

Results

The gastrojejunostomy was performed in an antecolic manner using a 30 mm linear stapler. The integrity of the anastomosis was tested with methylene blue before the placement of the ring. The ring was placed 2 cm above the gastrojejunal anastomosis. It is closed according to the manufacturer's instruction and fixed with two sutures. The postoperative course was well. The patient drunk the day of the surgery, eat on the first postoperative day (POD) and was discharged on the second POD. One month after the procedure the patient can eat without dysphagia.

Conclusions

Conclusion

Laparoscopic banded RYGBP is feasible and should be part of surgeon's options to avoid dilatation of gastric pouch. This technique is easier with a specific device.



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QUALITY OF LIFE THREE YEARS AFTER MINI GASTRIC BYPASS SURGERY

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Various bariatric and metabolic procedures have evolved from time to time. There are benefits and complications associated with the procedures.

Introduction

Obesity is a universal disease of epidemic proportions and is increasing in prevalence. Morbid obesity along with obesity related diseases have a negative impact on the quality of life. Mini gastric bypass / one anastomosis gastric bypass(MGB/OAGB), which started two decades back is increasingly becoming a popular, safe bariatric and metabolic procedure.

Objectives

The aim of this study is to compare the quality of life before and three years after mini gastric bypass(MGBOAGB).

Methods

The study is an analysis of a retrospectively collected database of 90 patients. The primary endpoint was to compare the quality of life as measured by the questionnaire sent randomly to the patients three years after mini gastric bypass surgery in a single Centre in Jammu Hospital Jalandhar India. Questionnaire was based on the following main parameters like social acceptance, physique, sexual intimacy, energy levels, self confidence, weaknesses if any, any regrets, will they recommend aspiring obese patients for MGB or any social problems after the surgery.

Results

All the patients were satisfied in various proportions as per the replies sent by them. Although in few patients there were some problems in the first few months of surgery but ultimately they were manageable.

Conclusion

Mini gastric bypass (MGB/OAGB) is a safe option for the weight loss and resolution of comorbidities. It enhances the quality of life in an obese patient after the surgery.

□
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MINI-GASTRIC BYPASS/ONE ANASTOMOSIS GASTRIC BYPASS (MGB/OAGB): OUR RESULTS AFTER 2 YEARS OF FOLLOW UP.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

We started laparoscopic MGB/OAGB for the first time in Córdoba, Argentina in May 2014 for its reported safety, efficacy, and easy reversibility.

Introduction

The MGB/OAGB was described initially by Robert Rutledge in 1997. This technique has proven to be effective like primary surgery as well as in the revision bariatric surgery.

Objectives

Describe our results then 2 years of applying the technique in a high-volume center with experience in other bariatric procedures.

Methods

Since May 2014 until December 2016 were undergoing to laparoscopic MGB/OAGB 141 patients. They were analyzed after 6-12-24 months of Follow Up (FU). Mean age was 51.7 years and body mass index 45.4. We describe mean operating time, hospital stay, %Excess Weight Loss (EWL), resolutions of comorbidities, morbidity and mortality. The data was collect in form prospective.

Results

The average of %EWL was 65%, 82.3% and 90.4% at 6, 12 and 24 months respectively. The resolution of comorbidities was evaluated only in patients with one year of FU. The resolution rate of Type II Diabetes Mellitus (DM2) was 59,6% and 19 patients had improvement of DM2. 68% showed improvement/remission of high pressure. Remission was also demonstrated in most patients with other metabolic conditions like hyperlipidemia. Early complications occurred in 2.82% and late complications occurred in 4%. One patient required conversion to Roux-Y-Gastric By pass by severe GERD.

Conclusion

Laparoscopic MGB/OAGB is a good alternative for the treatment of obesity. We believe that this technique could be a powerful alternative in bariatric surgery with similar results with more aggressive and complex techniques.



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REDUCED TROCARS OMEGA LOOP - SAFETY & FEASIBILITY

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Laparoscopic Omega Loop bypass (LOLB) has proven to be a safe and successful bariatric procedure. Typically, the procedure is performed using five to seven trocars. The urge to minimize surgical trauma and pain has led to the development of reduced trocars procedure, which has been shown to be a safe and less-invasive. We describe the feasibility and safety of 3-trocar approach in performing Laparoscopic Omega Loop Bypass.

Introduction

The goal of reduced trocars laparoscopic surgery is to reduce tissue trauma and enhance faster recovery, however it requires a vast experience in obesity laparoscopic surgery and dealing with large liver and fat.

Objectives

To assess the safety and feasibility of 3-Trocars LOLB procedure.

Methods

367 patients underwent 3 trocars LOLB between February 2011 and February 2017. The same surgeon performed all procedures. The umbilicus was the point of optical port for all patients with a 5mm trocar and the same operative technique and perioperative protocol were used in all patients.

Results

A total of 367 triple-incision LOLB procedures were performed. The procedures were successfully performed in all patients. Mean operating time was 88 minutes. One patient required conversion to laparotomy, two patients leaked and required reoperation, one patient developed a pelvic abscess one week postoperatively and 3 patients dropped hemoglobin and required blood transfusion. There were no mortalities.

Conclusion

Three trocar laparoscopic omega loop bypass is safe, technically feasible and reproducible. Operative time was acceptable and post-operative recovery and complications were comparable to 5-7 trocars technique reported in the literature.

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HYPERINSULINEMIC HYPOGLYCAEMIA WITH NESIDIOBLASTOSIS AFTER LAPAROSCOPIC MINI-GASTRIC BYPASS SURGERY FOR MORBID OBESITY - TWO CASE REPORTS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Severe hypoglycaemia characterised by neuroglycopenic symptoms is a recently described and relatively uncommon complication of gastric bypass surgery. It occurs several years after surgery and may be distinct from the more commonly encountered dumping syndrome that occurs early in the postoperative period and usually improves with time. Nesidioblastosis has been proposed as a possible underlying mechanism for late postoperative hypoglycaemia. Both the patients have been started on medications.

Introduction

Nesidioblastosis is a controversial medical term for hyperinsulinemic hypoglycemia attributed to excessive function of pancreatic beta cells with an abnormal microscopic appearance.

Objectives

We have diagnosed two patients with Nesidioblastosis after successful gastric bypass surgery.

Methods

One patient developed symptoms of postprandial hypoglycaemia 30 months following gastric bypass surgery, the other patient had the symptoms 14 months after surgery. Both patients underwent Ga68-DOTA-PET CT Scan and detected to have diffuse Nesidioblastosis.

Results

Both the patients have responded well to the oral medications and are on regular follow-up. Postprandial hyperinsulinemic hypoglycaemia and nesidioblastosis may occur in patients who have undergone Gastric bypass for morbid obesity. Increased levels of a beta cell trophic polypeptide, such as glucagon-like peptide 1, may contribute to the hypertrophy of pancreatic beta cells in these patients.

Conclusion

Recurrent hypoglycaemia after bariatric surgery has to be evaluated properly to exclude nesidioblastosis. Although it was initially thought to affect only infants and children, numerous cases have been reported in adults of all ages but at a much lower incidence.

□
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SINGLE ANASTOMOSIS GASTRIC BYPASS IN 7 MORBIDLY OBESE MALE PATIENTS ; HOW I DO IT? AND SHORT-TERM OUTCOMES

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Mini-gastric bypass(Single anastomosis gastric bypass;SAGB) was first reported in 1997. Because of the risk of reflux esophagitis and the cancer risk of gastric pouch, it couldn't take center stage.

Introduction

However, experiences of past 20 years suggest potential benefits which shed new light on SAGB.

Objectives

Here, we report our techniques and short term outcomes.

Methods

Short summary for surgical procedures as follows; 1) 5 trocars and 1 liver retractor, 2) start from 4 cm proximal to pylorus, 3) elongated gastric pouch of approximately 120mL in volume, 4) linear stapled gastrojejunostomy, 200cm from the ligament of Treitz, and 5) Petersen defect closure.

Review of a prospectively maintained database was performed. Data collected included demographics, operative time, length of stay, complications, and weight loss.

Results

All procedures were successful by laparoscopy. Average age was 28 years (22-31). Average weight and BMI were 149 (131-166) and 45.5 (43-54), respectively. In one case, nephrectomy was done simultaneously due to early renal cell carcinoma. Average operative time for 6 patients was 141 min (120-160 min) and hospital stay was 1.3 days. There were no intraoperative and postoperative complications. Mean follow up was 130 days (0-219). %EWL at 1 month(N=6), 3 month(N=5), and 6 months(N=4) was 18.0% (10.5-23.1), 38.7% (31.5-49.5), and 55.7% (44.7-64.4).

Conclusion

Laparoscopic SAGB is a technically simple and safe procedure in morbidly obese male patients. Weight loss appears favorable in the short term; however, information regarding long-term weight loss, durability, and safety profile in this population will require a greater number of patients and longer follow up.

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INITIAL EXPERIENCE COMPARING LRYGBP VS LMGBP

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Laparoscopic Roux-en-Y Gastric Bypass (LRYGBP) is the most commonly performed bariatric operation worldwide and thus, by many is considered as the gold standard in bariatric surgery. Laparoscopic Mini-Gastric Bypass (LMGBP) was proposed as a simple and effective treatment with minimal complications, short learning curve and that could be easily reversed or revised if needed.

Objectives

The objective of this work was to compare the safety, effectiveness, complications and 1 year postoperative outcomes between LRYGB and LMGB

Methods

The study was conducted in the Integral Obesity and Metabolic Diseases Surgical Clinic (CLIO) a third level referral hospital from January 2015 to January 2016. All patients were evaluated for surgical treatment of morbid obesity by a multidisciplinary group: surgeons, psychiatrist, internist, dietician, and physiotherapist. Surgical techniques were performed as described by Almino and Rodledge. Information about the surgery and follow up visits on months 1, 3, 6, and 12 was analyzed. Surgical time, early complications, weight lost and resolution of comorbidities were evaluated.

Results

Our preliminary data suggested that LMGB was more efficient in reducing weight and consequently better T2DM control.

Complications vary between both techniques being anastomotic leak for LRYGB and symptomatic reflux requiring surgical conversion on MGBP the most serious.

Conclusion

Early results prove that LRYGB and LMGB are comparable feasible, safe and effective techniques that can be performed in our center with similar results. Further follow up is needed in order to identify clear differences in complications and long term results.

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SIMPLIFIED LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS FOR REDUCING THE LEARNING CURVE

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

LRYGB is currently considered the gold standard treatment for morbid obesity. The learning curve for this procedure is about 20-100 cases, and it is considered an important factor in decreasing complications and mortality.

Objectives

We present my personal experience with simplified LRYGB, and also remarking the importance of this technique for reducing the learning curve.

Methods

French position, the surgeon between the patient's legs. Five trocars are inserted after pneumoperitoneum. Dissection of the esophagogastric angle and lesser curvature is mandatory before the gastric pouch manufacturing. This pouch is done with four blue load staplers. Using a blue load linear stapler inserted only half way into the hole in the pouch is used to perform the gastrojejunal anastomosis and in order to create an anastomosis that is about 3 cm in length. A side-to-side jejunojejunostomy is done with a white load LS. The last step consists in the cut of the jejunum between the two anastomosis. Air test is performed in order to detect leaks.

Results

From January 2017 to February 2017, 32 simplified LRYGB were performed. Gender: 62% female and 38 % males. Average of BMI 42. Mean age was 41 years old. Mean operative time 82 min. No immediate complications were observed.

Conclusion

This simplified gastric bypass is a safe and reproducible technique. This technique in which all the anastomosis are performed in the upper part of the abdomen, allowing the surgeons to be more systematized and avoiding them to make mistakes in the confection of the LRYGB.



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LAPAROSCOPIC REMOVAL OF INTRAGASTRIC BALLOON FROM DISTAL JEJUNUM

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Laparoscopic removal of intragastric balloon from distal jejunum

Methods

The video will show the steps used for the treatment of obstructive intragastric balloon in the distal jejunum diagnosed by CT Scan of the patient presenting to Emergency Department with evidence of obstruction and abdominal pain.

Results

The balloon was removed by enterotomy and suturing it with Endo GIA 60mm with white cartilage Escheron

Conclusion

Patient had smooth post operative course discharged 4 days after surgery

□
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EARLY POST OP OUTCOMES OF LOOP GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Loop Gastric Bypass (also known as mini bypass) is a promising bariatric procedure with multiple apparent benefits. As it is a new procedure, there is limited UK research at present exploring the early post-op outcomes.

Objectives

Retrospectively study early complications at three months follow up.

Methods

Patients who underwent loop gastric bypass from February to November 2016 were identified within our service. Medical notes were reviewed for complications reported at 3 months follow up, nutritional deficiencies and weight loss outcome.

Results

23 patients were identified; 7 male, 16 female with a mean BMI at surgery of 42kg/m². The mean excess body weight loss at 3 months was 34%. No patients required re-admission or re-operation within 30 days of their surgery. However, 5 patients presented at their 3 month review complaining of abdominal pain and dysphagia. All patients were found to have gastric ulcers; 3 with ulcers found at the GJ junction, 1 with multiple gastric ulcers and another with ulcers at the common length.

At three months follow up 15 patients were found to have low zinc, mean 9.4µmol/L (11.5-18), 11 patients were found to have low Vitamin D, mean 31.2nmol/L (50-250), 5 patients were found to have low folate, mean 3.2µg/l(3.9-26.8) and they were supplemented following BOMSS (2014) and ASMBS (2016) guidelines.

Conclusion

Early results with loop bypass in our unit are encouraging with acceptable weight loss but indicate potential risk of developing gastric ulcers. Vigilance should be taking on selecting patient with presence of GORD and/or hiatus hernia.

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ONE ANASTOMOSIS (MINI) GASTRIC BYPASS: 2 YEAR RESULTS WITH 125 PROCEDURES IN A HIGH VOLUME BARIATRIC UNIT

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

The uptake of One Anastomosis (Mini) Gastric (OAGB/MGB) Bypass seems to be increasing worldwide. However, most studies have concentrated on early results and few studies have specifically focused on medium and long term results with this procedure.

Objectives

This study evaluates our 2-year results of (OAGB/MGB) performed during 2013 and 2014.

Methods

Data was analysed retrospectively from a prospective electronic database.

Results

Nine out of 134 patients failed to attend 2-year follow up and were hence excluded. Out of 125 patients, 85(68%) were females. The mean age at surgery was 44.5 (16-69) years. The mean weight and Body Mass Index were 135.8 (86.6-225.0) kg and 47.9(34.3-73.0) kg/m² respectively. The mean excess weight loss at 2 years was 75.8 % (24.1 – 121.3) and the mean total weight loss was 35% (12.4 – 57.1). One patient (0.8%) had early reoperation (within 30 days) for bowel obstruction (division of band). A total of 13 (10.4 %) patients reported Gastroesophageal Reflux symptoms on follow up - 11(8.8%) were treated successfully medically while 2 (1.6 %) needed conversion to Roux-en-Y Gastric Bypass (RYGB). A total of 7 (5.6 %) patients developed marginal ulceration – 5 (4%) were treated successfully medically, 1 (0.8%) was converted to RYGB for perforation, and 1(0.8%) patient was converted to RYGB for stricture following ulceration. Four (3.2%) other patients underwent diagnostic laparoscopies and minor procedures giving a total of 8(6.4%) late reoperations.

Conclusion

This study demonstrates medium term safety and efficacy with OAGB/MGB in the learning curve of a bariatric unit with this procedure.

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EXCESSIVE WEIGHT LOSS FOLLOWING LAPAROSCOPIC GASTRIC MINI BYPASS OR ROUX-EN-Y GASTRIC BYPASS SURGERY

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

More than 90 percent of obesity surgery is done using a laparoscope. This method is superior to open surgery and lead to fewer complications, shorter hospital stay and faster recovery. This study compared course of weight loss following laparoscopic Gastric Mini Bypass or Roux-En-Y Gastric Bypass surgery, after one year of follow up

Introduction

Minigastric bypass is a malabsorptive type of bariatric surgery and with the passage of time is going to be popular, but RNYGBP is a standard bariatric surgery method world wide, in our study we compare the course of weight in these two popular methods

Objectives

Minigastric bypass due to its strong malabsorptive factor is more effective for losing weight

Methods

This randomized clinical trial was conducted among obese patients admitted to Rasoul Akram Hospital Obesity Clinic, Half underwent laparoscopic Roux-En-Y Gastric Bypass and the rest were undergoing laparoscopic Mini Gastric Bypass. The amount of weight loss during the first year after surgery will be discussed.

Results

In this study, 75 obese patients were studied. Most of the participants were female (82.7%). Participants aged between 18 and 59 years old (average = 36.8 ± 9.8 y/o). Before the surgery, there was no significant difference in weight between the two groups. Excessive weight loss after one month, six months nine months and one year between the two groups was significant and was more in Mini Gastric Bypass ($p < 0.05$).

Conclusion

Respecting the benefits of Mini Gastric Bypass compared to the Roux-En-Y Gastric Bypass technique, it is suggested for patients with morbid obesity.

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MANAGEMENT OF BILE DUCT STONES AFTER ROUX-EN-Y GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

The configuration of anatomy in the Roux-en-Y gastric bypass (RYGB) excludes the biliary tree from traditional endoscopic evaluation and treatment. Different options are available including access to the common bile duct (CBD) through an endoscope introduced through the gastric remnant or a direct exploration of the CBD.

Objectives

To present the technical aspects of managing bile duct stones after a Roux-en-Y gastric bypass.

Methods

We report 2 different cases of patients with previous RYGB who presented with CBD stones. The first case is a 60 year old female with a RYGB performed in 2012. She presented with recurrent epigastric pain. The CT scan and magnetic resonance cholangiopancreatography (MRCP) confirmed the presence of gallstones and a dilated CBD to 12 mm with multiple CBD stones. The second case is a 62 year-old patient with a RYGB performed 3 years ago, who developed numerous episodes of cholangitis. An MRCP was performed showing a CBD stone 6 mm in size.

Results

Both cases were dealt with laparoscopically. In the first case, exploration of the CBD with extraction of the stones was performed. In the second case, an ERCP was performed through the gastric remnant, which was accessed laparoscopically. In both cases, a cholecystectomy was performed.

Conclusion

Different options are available for CBD stones after RYGB. The options depend on the surgeon's expertise and training, as well as the presence of CBD dilatation.



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CONTROL OF MESENTRIC BLEED IN A CASE OF RYGB

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Bleeding in a case of Laparoscopic RYGB while dividing the mesentery.

Objectives

To control the bleed laparoscopic without injuring any other organ.

Methods

With a HD Vision and a good workmanship of cameraman, it was able to control the bleed laparoscopically.

Results

The bleeding mesentric vessel was controlled using laparoscopic maryland and sutured using 2/0 Vicryl.

Conclusion

The bleeding was controlled without causing ischaemic injury to the intestines.

□
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MINI GASTRIC BYPASS IS A SAFE AND RELIABLE PROCEDURE FOR TYPE 2 DIABETES REMISSION / CONTROL IN PATIENTS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

The efficacy, safety and reliability of Mini Gastric Bypass procedure has been proven since it was first demonstrated by Dr. Robert Rutledge in USA 16 years ago.

Introduction

The aim of our study was to find out the efficacy of Mini Gastric Bypass in remission or control of Type 2 Diabetes

Objectives

We report here the results of Mini Gastric Bypass over a 2 year period at our hospital with emphasis on its role in the remission or control of Type 2 Diabetes

Methods

A total of 46 patients were included in the study between September 2012 and September 2014 and followed up for a minimum of 2 year. There were 28 males and 18 females in the study aged between 30 and 60 yrs. The mean age was 43 and the patients between BMI of 31-40 were included in the study. The mean HbA1C was 9.4%(6.0 – 14.7)

Results

Out of these 46 patients who underwent MGB with type 2 Diabetes 27 patients had complete remission, 18 patients had a reduction in their requirement following the procedure.

Conclusion

Hence it can be concluded that Mini Gastric Bypass is a safe , reliable procedure for Type 2 Diabetes Remission / Control In Patients

□
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CIRCULAR- AND LINEAR-STAPLED GASTROJEJUNOSTOMY COMPARISON IN LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS – POLISH MULTICENTER STUDY

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

LRYGB seems to be a standardized, well established procedure, but no consensus in selection of method for gastrojejunostomy has been reached yet.

Introduction

This study compares two widely used methods: circular- and linear-stapled gastrojejunostomy in order to optimize perioperative and postoperative outcomes of bariatric treatment.

Objectives

To determine whether is a superiority of circular- or linear-stapled gastrojejunostomy in LRYGB in terms of operative time and postoperative complications.

Methods

This retrospective, case-control study compares operative time, 90-days readmission and 90-days postoperative morbidity rates of LRYGB with circular-stapled (LRYGB-25CS group) versus linear-stapled (LRYGB-LS group) gastrojejunostomy in two academic, referral centers for general surgery. From 2013 to 2016, 255 patients were enrolled in LRYGB-25CS and 202 in LRYGB-LS. Due to heterogeneity, matching was performed. Regardless of technique for gastrojejunostomy, LRYGB and patients' care were standardized.

Results

Total operative time was longer in LRYGB-LS group [140 (100-180) vs. 85 (70-115) min., $P < 0.001$]. Postoperative hemorrhage rate was lesser in LRYGB-LS (2.1% versus 10.3%; $P = 0.021$), as well as wound infection rate (1.0 % vs. 9.3%; $P = 0.011$). The readmission rates were comparable between groups (8.2% versus 6.1%, $P = 0.593$). There was no significant difference in incidence of gastrojejunostomy leakage, stricture, port site hernia or marginal ulcer.

Conclusion

Both circular- and linear-stapled gastrojejunal anastomoses for LRYGB are safe, with low and comparable risk of postoperative complications. After LRYGB with circular-stapled gastrojejunostomy postoperative bleeding and wound infections are slightly more frequent, however the operative time is shorter.

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JEJUNOJEJUNOSTOMY COMPLICATIONS IN RYGB - EXPERIENCE OF 200 CASES IN THE LEARNING CURVE.

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

A single centre single surgeon experience of the learning curve in 120 RYGB procedure over a period of five years. The technique and procedure of jejunojejunostomy(JJ) is as important as other parts of the operation and should be standardised like gastrojejunostomy.

Introduction

Complications associated with Jejunojejunostomy are seldom discussed in Bariatric forums, however in our experience they constitute the majority of major complications requiring re laparoscopy in three of our first 120 cases.

Objectives

To analyse the causes of jejunojejunostomy complications during RYGB and suggest corrective measures for avoiding the same in future, also keeping in mind the ergonomics and safety of the procedure.

Methods

Videos of cases requiring relaparoscopy in early post operative phase were reviewed.

Results

Three out of 120 cases required relaparoscopy in first 72 hours post operatively:

Case 1: excessive narrowing of the common channel of JJ during suturing of enterotomy made for stapler placement.

Case 2: 180 degree rotation of the alimentary limb at the time of JJ causing subacute intestinal obstruction.

Case 3: enterotomy during counting of bowel length for JJ anastomosis.

Conclusion

We recommend a single staple anastomosis with proper orientation so that closure of enterotomy comes on the biliopancreatic or alimentary limb and not on the common channel. The division of jejunum should be the last step in the operation (after JJ and gastrojejunostomy to avoid the above complications as well as other known JJ complications.



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LAPAROSCOPIC MINI GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

M. Hussein

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Background

Single anastomosis bypass is gaining population due to excellent excess weight loss, high rate of cure of diabetes and minor complication with absence of internal hernias.

Introduction

n/a

Objectives

n/a

Methods

The video shows the steps used in this operation.

Results

I represent my experience at the American University of Beirut Medical Center of 52 cases with 80% excess weight loss over 2 years and diabetic cure in 90% of cases with no complication.

Conclusion

n/a



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LAPAROSCOPIC INSERTION OF MINIMIZER FOR THE TREATMENT OF FAILED ROUX EN Y GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Laparoscopic insertion of minimizer for the treatment of failed Roux En Y Gastric Bypass.

Introduction

n/a

Objectives

n/a

Methods

Laparoscopic Gastric Bypass is a Gold Standard Technique for the treatment of Morbid Obesity but associated with 15-20% failure rate.

Results

We report our experience at the American University of Beirut Medical Center of 23 cases of failed Gastric Bypass that was treated successfully with laparoscopic insertion of minimizer on top of gastric bypass with excellent weight loss and decrease in the incidence of dumping.

Conclusion

Laparoscopic insertion of minimizer can be safely used in failed Roux En Y Gastric Bypass failure.

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LAPAROSCOPIC MINI GASTRIC BYPASS WITH HAND-SEWN ANASTOMOSIS: RESULTS AFTER 6 MONTH

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Laparoscopic mini gastric bypass (LMGB) has demonstrated to be a safe procedure to achieve not only significant weight reduction in morbidly obese patients but also shows excellent results in terms of resolution of comorbidities and is therefore more and more accepted among bariatric surgeons. The standard-technique to create the gastrointestinal anastomosis so far is using a linear stapler.

Objectives

The aim of our study is to examine whether a hand-sewn gastrointestinal anastomosis is also a feasible and safe technique in LMGB.

Methods

After creating a gastric pouch as recommended by Dr. Rutledge and others the totally hand-sewn gastrointestinal anastomosis was performed end-to-side using an absorbable running suture, sewing front and back wall each in two rows.

Results

76 patients (female 76,3%; mean age 44,5 years (+/- 12,2)) underwent LMGB with hand-sewn anastomosis. Mean-BMI at baseline was 49,01 (+/- 6,67) and mean bodyweight 141 kg (+/- 24,17). LMGB was the primary procedure in 75 patients and in one patient conversion from sleeve to LMGB. Mean operative time was 85,46 min (+/- 16,24), mean length of stay 3,17 days (+/- 0,55). Intraabdominal bleeding led to one reoperation (1,32%) and readmission rate was 10,5%, mostly due to dysphagia or epigastric pain. In these cases esophagogastrosopy (done in 9,21%) showed marginal ulcer or more likely anastomosisitis in 6,58% and stenosis in 1,32%. Excess weight loss was 29,25% (+/- 8,11) after 6 weeks and 43,46% (+/- 11,58) resp 59,67 (+/- 14,21) after 3 and 6 month. No mortality.

Conclusion

Hand-sewn-LMGB is a feasible and safe procedure, yet with a prolonged learning curve and initially higher readmission-rate.

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SINGLE ANASTOMOSIS GASTRIC BYPASS (SAGB) WITH PARTIAL GASTRIC RESECTION. PRELIMINARY RESULTS OF A NOVEL TECHNIQUE

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Single Anastomosis Gastric Bypass (SAGB), is being performed as a bariatric procedure for almost 20 years. Bleeding from the staple line in the remnant stomach, gastrogastic fistula (GGF) formation and inadequate weight loss are some of it's post-operative complications.

All those complications can be attributed to the presence of the remnant stomach and its Ghrelin production.

To overcome those concerns we developed a modification of the popular way of performing the operation. Instead of leaving the gastric remnant intact, we resect the remnant from the angularis up to the EGJ.

Objectives

To evaluate the safety and short term efficacy of SAGB & Partial Gastrectomy

Methods

Retrospective review of prospectively collected data of all the patients who underwent (SAGB&PG) between 01/16 and 08/16.

Results

During the study period, 22 patients underwent SAGB&PG in our institute. Mean age was 42 years, and mean BMI was 43.5 kg/m². Mean operating time was 106 minutes, and mean hospital LOS was 3.13 days. In the immediate post-operative course there was one event of bleeding, and one event of status asmaticus. No other complications were observed during hospitalization and in the early follow up period. During a mean follow-up period of 45 weeks patients lost an average of 43 kg, and EWL was 68%.

Conclusion

SAGB with resection of the gastric remnant is a safe and simple bariatric procedure. Further studies with longer follow up time need to be conducted, in order to evaluate the added benefit of the gastric resection on weight loss and rate of late complications.

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ENDOSCOPIC SLEEVE GASTROPLASTY: THE LEARNING CURVE

Gastric Plication

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Introduction

Endoscopic sleeve gastropasty (ESG) entails plication of the greater curve using a full thickness endoscopic suturing system. Widespread dissemination as a minimally invasive bariatric therapy has been impeded due to concerns that the learning curve is slow.

Objectives

To define the learning curve for ESG by a single endoscopist experienced in endoscopic suturing, who underwent a one-day ESG training program.

Methods

Consecutive patients who underwent ESG between February 2016 and November 2016 were included. The performing endoscopist, who is proficient in endoscopic suturing (>20 cases) for non-ESG procedures, underwent a one-day ESG training session before offering ESG to patients. The outcome measurements were length of procedure (LOP) and number of plications per procedure. Nonlinear regression was used to determine the learning plateau and calculate the learning rate.

Results

Twenty-one consecutive patients (8 males), with a mean age of 47.7±11.2 years, and a mean BMI of 41.8±8.5 kg/m², underwent ESG. LOP decreased significantly across consecutive procedures, with a learning plateau at 101.5 minutes and a learning rate of 7 cases (p=0.04). The number of plications per procedure also decreased significantly across consecutive procedures, with a plateau at 8 sutures and a learning rate of 9 cases (p<0.001). Further, the procedure time per plication decreased significantly with consecutive procedures, reaching a plateau at 9 procedures (p<0.001).

Conclusion

Endoscopists experienced in endoscopic suturing are expected to achieve a reduction in LOP and number of plications per procedure in successive cases, with progress plateauing at 7 and 9 cases, respectively.

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LAPAROSCOPIC GREATER CURVATURE PPLICATION (LGCP) VS. ENDOSCOPIC SLEEVE GASTROPLASTY (ESG): SIMILAR EFFICACY WITH DIFFERENT PHYSIOLOGY

Gastric Plication

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Introduction

Laparoscopic greater curvature plication (LGCP) and endoscopic sleeve gastroplasty (ESG) are new minimally invasive bariatric procedures that require no resection or bypass of the gastrointestinal tract. Despite a similar anatomic manipulation of the greater curvature of the stomach, differences in approach (laparoscopic vs. endoscopic), resultant pressure gradient, alteration to the enteric nervous system, and the final shape of the fundus might account for important physiologic differences between the two techniques.

Objectives

We aimed to prospectively compare the effects of LGCP and ESG on gastric physiology and weight loss.

Methods

Two centers controlled prospective study in which patients with obesity underwent LGCP (n=10), ESG (n=5), or intensive lifestyle (LS) only intervention (n=14). Gastric emptying using scintigraphy was measured 3 months after each intervention and percent total body weight loss (%TBWL) at 6 months recorded.

Results

Patients were mostly female (28/29), mean baseline BMI was 37.7±3.6 kg/m², and age was 35.4±9.8y. LGCP was associated with significant acceleration in solid gastric emptying compared to ESG, which was associated with significant delay in gastric emptying (p< 0.01). Percent gastric retention at 2 hours three months after LGCP was 12.9±9.3% vs. 57.6±15.4% for ESG (p= 0.001), and 25.7±18% (p= 0.04) for LS control. Both LGCP and ESG resulted in significantly more %TBWL at 6 months compared to LS control, but they did not differ between each other (LGCP 25±4.5% vs. ESG 19.5±8.7% [p= 0.2] vs. LS control 5.3±4% [p<0.01]).

Conclusion

LGCP and ESG are similarly effective minimally invasive bariatric procedures with significantly different physiologic mechanism of action.

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MID-TERM COMPARATIVE STUDY OF LAPAROSCOPIC GREATER CURVATURE PPLICATION AND LAPAROSCOPIC SLEEVE GASTRECTOMY IN OBESE PATIENTS WITH A BMI OF 30-35KG/M2

Gastric Plication

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Introduction

Previous studies have consistently suggested laparoscopic greater curvature plication (LGCP) is inferior to laparoscopic sleeve gastrectomy (LSG) in terms of weight loss and the rate of complications in BMI >40kg/m².

Objectives

The aim of this study was to compare the midterm outcomes of LGCP and LSG in obese patients with a BMI 30 to 35 kg/m².

Methods

This single center, retrospective review of prospectively collected data was conducted on obese patients that underwent LGCP or LSG from March 2013 to February 2016. These two patient groups were compared in terms of demographics, perioperative outcomes, weight loss (%EWL), comorbidity resolution, and immediate and long-term complications.

Results

A total of 149 patients were eligible for the study. Seventy-five patients underwent LGCP (Group A), and 74 LSG (Group B). %Excess weight losses (EWL) in groups A and B were; 51.1 ± 16.9 and 47.8 ± 20.8 at 3 months (p>0.05), 71.1 ± 20.2 and 74.5 ± 21.8 at 6 months (p>0.05), 77.1 ± 18.4 and 87.8 ± 25.1 at 12 months (p=0.004), 70.5 ± 18.5 and 83.4 ± 28.7 at 24 months (p=0.01), and 67.3 ± 15.3 and 78.6 ± 31.7 at 36 months (p=0.05), respectively. Intergroup differences of the resolution rates of metabolic comorbidities in the two groups were not significant.

Conclusion

Although mean weight loss after LGCP was inferior to that after LSG, especially after six months postoperatively, it was acceptable and LGCP had an excellent metabolic comorbidity resolution rate in patients with BMIs ranging from 30 to 35 kg/m².

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SUPERIORITY OF GASTRIC GREATER CURVATURE PLICATION VERSUS SLEEVE GASTRECTOMY ON GROUNDS OF LEAK RATES – MYTH BUSTED?

Gastric Plication

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Introduction

Laparoscopic gastric greater curvature plication (LGCP) constitutes an alternative approach to laparoscopic sleeve gastrectomy (LSG), reserved for patients with lower class obesity indices.

Objectives

LGCP is considered safer than LSG. Nevertheless, the cases presented hereby underline the dreadful impact it may have on patients' physiology.

Methods

Over the period 2009-2017, 532 patients underwent LGCP in our center for mild-to-moderate obesity. Six patients among them (0,95%), three males and 3 females, with a mean baseline BMI of 35.9 Kg/m², presented with signs and symptoms of gastric leak in the immediate and short-term postoperative period.

Results

All complicated cases presented with fever as alarming symptom. One patient presented with left-sided pleural effusion. One patient presented with diffuse intra-abdominal fluid effusion and another patient demonstrated a contained intra-abdominal fluid collection, both of which were treated conservatively. Two patients presented with combined pleural and abdominal fluid collections; among them, one was treated supportively, whereas the rest needed percutaneous drainage under imaging guidance. Follow-up upper GI series in all patients showed patency of the remaining gastric lumen, without evidence of leak or fistula.

Conclusion

Five patients with post-LGCP leak admitted unauthorized precocious peroral feeding. This, in combination with imposed intraoperative deviations in technique (i.e. deeper suture bites), induced a temporary leak of intraluminal contents. In one patient the underlying inflammatory bowel disease was identified as the triggering factor of leak. In total, the leak rate after LGCP is comparable to that of LSG, according to the records of our Institution (1.1% vs. 1.2%, respectively).

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CLINICAL OUTCOMES OF REVISIONAL SURGERY OF LAPAROSCOPIC GASTRIC PLICATION

Gastric Plication

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Introduction

Laparoscopic Gastric Plication is a restrictive bariatric surgery introduced with benefits and complications, which may require revision surgery to be controlled. Different modalities of revision were carried to control the complications

Objectives

To study a group of patient who underwent revision of (LGP) for failure of weight loss or undesired symptoms.

Methods

This is a retrospective study for group of patients who underwent revision of (LGP) in the period between 2010-2016. Patients were followed-up to assess resolution of undesired symptoms and to encounter weight loss. Weight loss evaluated by BMI pre and post revision and EWL%. Undesired symptoms post (LGP) were reported such as heart burn, epigastric pain & discomfort, unpleasant taste and bad breathes.

Results

(N=10) patients underwent revision of (LGP). All were females with mean age at revision = 38 +/- 10.8 years

	LGP	Revision
Initial weight	105.6 +/- 12.3	87.7 +/- 17.64
Initial BMI	40.1	35.5
Max. Weight loss	25 +/- 13.1	30.6 +/- 14.5
EWL%	51.4 +/- 17	79.6 +/- 14
Post-op BMI	31.6 +/- 3.5	25.4 +/- 2.9
Max weight gain	19.75 +/- 5.5	2.6 +/- 3.5
undesired symptoms	44%	-
Follow up (months)	16 +/- 3	14 +/- 2

(N=3) of patients had DM2, which not resolved post (LGP), reported complete resolution of (1) case and partial remission for the other two cases. (N=1) case of gastric leak post revision, which required reoperation and aICU admission, with no mortality encountered

Conclusion

Revisional surgery post (LGP) is safe, feasible and effect in weight reduction, resolved of undesired symptoms and control of obesity co-morbidities.

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LAPAROSCOPIC GASTRIC PLICATION; WHY WE STOPPED DOING IT

Gastric Plication

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Background

Laparoscopic gastric plication (LGP) is one of the restrictive bariatric procedures.

Introduction

It seemed attractive to patients and bariatric surgeons due safety, efficacy and low cost.

Objectives

This study tests the mid-term outcome of LGP in morbidly obese patients.

Methods

LGP was offered to obese patients fulfilling NIH criteria. Superobese patients (BMI > 60 kg/m²) and those who have previous bariatric surgeries were excluded. The technique of LGP was standardized. Perioperative and in-hospital data were recorded. Postoperative follow up visits was scheduled at 1, 3, 6, 12 months then annually. Patients were followed for complications, weight loss and resolution/improvement of comorbidities.

Results

LGP was offered to 88 obese patients between March 2010 and September 2014. The mean age was 24.2 years, mean BMI of 38.7 kg/m² and 69 were females. There were no significant intraoperative complications or conversions. The most frequently reported complication was prolonged early postoperative nausea/vomiting (n = 5/ 88; 5.7 %). Early leak occurred in 3/88 (3.4%) patients with one mortality. The mean postoperative follow-up period was 25 months. %EWL was 27.2 %, 35.0 %, and 41.1 % at 3, 6, and 12 months, respectively. Weight regain had been reported in 10 (11.4%) patients at a mean follow up period of 9.5 months. Resolution/improvement of comorbidities was documented in 13.9% patients.

Conclusion

Inadequate weight loss, prolonged hospital stay, inadequate resolution/improvement of comorbidities plus risk of leak forced us to stop LGP.



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LAPAROSCOPIC MINI BYPASS FOR THE TREATMENT OF FAILED GASTRIC PPLICATION

Gastric Plication

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Background

Laparoscopic Mini Bypass

Methods

Laparoscopic Gastric Plication is one of the new procedures used for the treatment of Morbid Obesity with failure to have excess weight loss more than 50% in 25% of patients.

Results

Laparoscopic mini bypass is a procedure of choice for the treatment of failure with excellent weight loss in more than 10 cases done at the American University of Beirut Medical Center and affiliated hospitals.

Conclusion

The steps used in the procedure without unfolding the plication is shown in this video.



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LAPAROSCOPIC GASTRIC PLICATION FOR THE TREATMENT OF MORBID OBESITY

Gastric Plication

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Background

Gastric Plication

Methods

The treatment of morbid obesity that include Laparoscopic Gastric Band, Roux En Y, Gastric Bypass, Mini Gastric Bypass and Sleeve Gastrectomy

Results

I report the first 300 cases done at the American University of Beirut Medical Center and affiliated hospitals with Laparoscopic Gastric Plication with no complication and EWL of 70% in 1 year.

Conclusion

Thus, procedure is safe on reversible and low complication.



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LAPAROSCOPIC GASTRIC PLICATION AFTER REMOVAL OF FAILED BAND IS A ONE STEP PROCEDURE

Gastric Plication

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Background

Laparoscopic Gastric Plication as one step procedure.

Methods

Laparoscopic gastric band was the first common procedure in Europe for the treatment of Morbid Obesity but the failure of this procedure with its complication can reach up to 40%. Shifting to Laparoscopic Sleeve Gastrectomy as one step procedure associated with increase in the leak rate.

Results

I report my experience failure of 56 band removal and gastric plication as a one step procedure to treat failure of band with no complication and excellent weight loss.

Conclusion

Laparoscopic Gastric Plication is a safe procedure to treat failed gastric band as a one step procedure.

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CONCOMITANT VENTRAL HERNIA REPAIR AND BARIATRIC SURGERY: A RETROSPECTIVE ANALYSIS

Hernia surgery in the bariatric patient

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Background

Ventral hernias (VH) are frequently encountered in morbidly obese patients, potentially causing complications when bariatric surgery (BS) is performed.

Introduction

Concomitant VH repair (VHR) and BS is practiced but controversial, due to wound related complications (seroma, haematoma, wound infection) and hernia recurrence.

Objectives

We aimed to estimate the rate of complications from concomitant BS (Laparoscopic Roux -en-Y Gastric Bypass & Sleeve Gastrectomy) and VHR and to identify patient subgroups at higher risk of complications from synchronous repair.

Methods

A retrospective analysis of successive 106 patients who underwent concomitant BS+VHR at our institute (09/2007 to 09/2015) was performed using data from patients' records. Parameters considered were: type of repair (open, laparoscopic +/-mesh), size and type of hernia (<5 cm, 5-10 cm, >10cm and primary/incisional), patient gender and co-morbidities.

Results

106 patients underwent concomitant BS and VHR. 60 were laparoscopic VHR and 46 open. Hernias recurred in 5(8.3%) laparoscopic and 7(15.2%) open VHR. Wound related complications were commonest in open (15%) vs laparoscopic (11.7%) VHR. The VH patients with recurrence included 8 (75%) with defects >5cm, 10 (83%) were female, and all had BMIs>45. Six patients had wound infection, 4 of which had T2DM. Six patients had haematomas, 5 of which underwent mesh repairs. 4 patients had seroma (BMI>48, defects >5 cm, laparoscopic mesh repair).

Conclusion

Synchronous VHR and BS is safe and feasible with low recurrence rate. Laparoscopic VHR has lower complication rates than open; apart from seroma formation. High BMI and female gender is more prone to recurrence. Diabetic patients have a higher risk of infection.



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IMPACT OF MESENTERIC DEFECT CLOSURE DURING LAPROSCOPIC ROUX-EN-Y GASTRIC BYPASS

Hernia surgery in the bariatric patient

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Introduction

The internal hernia IH is a rare but a potentially fatal complication of Laparoscopic Roux-En-Y Gastric Bypass (LRYGB).

Objectives

The aims of this study are To determine the impact of mesenteric defects closure on the incidence of IH after (LRYGB) and the symptoms, characteristics and Managements of IH

Methods

A retrospective study for a total of 1906 (LRYGB) which has been done Since 1998 till 2013 at CHU Nice

Till 2004, 312 pts were operated without closing of mesenteric defects (A). From 2005 until 2013, 1594 pts were operated with closing mesenteric defects at Petersen's (PD) and at level of jejuno-jejunal anastomosis (JJA), by tight non-absorbable continued sutures (B).

Results

From 1906 pts who underwent LRYGB, 20 pts 1.05% developed a symptomatic IH that required primary surgical intervention, 7 pts 2.24% in (A) versus 13 pts 0.82% (B). This incidence was significantly lower in (B) $P= 0.03$. 14 pts 70% 5 in (A) were admitted in an emergency with an acute abdomen pain. CT scan was performed in 8 pts 40 % and has shown signs of occlusion in all cases. The most common symptoms were abdominal pain and vomiting. The surgery was performed by laparoscopy in 8 pts 40%. In all cases IH was reduced and closed all defects. In only one pt in (A) a small bowel at JJA was resected. There was no mortality

Conclusion

The closure of mesenteric defects by tight non-absorbable continued sutures is recommended because it is associated with a significant reduction in the incidence of IH



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INTERNAL HERNIA IN GASTRIC BY-PASS. HOW DO I AVOID IT?

Hernia surgery in the bariatric patient

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Introduction

Laparoscopic Roux-en-Y gastric bypass (LRYGB) is the most common bariatric procedure worldwide. Along with its importance, there is also the complications related to the procedure – divided in early and late complications. It's of great importance that surgeons become well aware of it and focusing in reducing the morbidity and mortality of this complications (internal hernia; marginal ulcer; stomal stenosis...). This paper will focus in internal hernia related to petersen's space.

Objectives

To illustrate the importance of closing all the defects created in the intermesenteric spaces after mobilizing the Roux limb. In this case, specially the Petersen's space (space between the mesentery and the gastrojejuno anastomosis).

Methods

This is a retrospective review of internal hernia and ways to avoid it. We reviewed records of patients who underwent LRYGB in the past 4 years of our service, and the incidence of internal hernia among them.

Results

A total of 181 patients underwent surgery, and in only one patient did the Petersen space not be closed due to technical difficulty. After 3 years of surgery, this patient experienced abdominal pain, normal imaging tests being submitted to diagnostic videolaparoscopy being diagnosed with Petersen's hernia which was reduced and the space closed.

Conclusion

With the increasing number of LRYGB performed among the world, its important to learn how to avoid and reduce the percentage of complications related to the procedure. In this paper we focused and emphasizing petersen's hernia and the procedures we perform in our service that have shown great value, reducing the number of this complication.



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BARIATRIC SURGERY WITH CONCOMITANT MESH HERNIA REPAIR

Hernia surgery in the bariatric patient

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Introduction

Hernias are not uncommon in the bariatric population. Their management is technically demanding and remains controversial. Hernia complications can be lethal after bariatric surgery (BS). We herein report our experience with concomitant BS and ventral hernia repair (VHR)

Objectives

To evaluate if bariatric surgery is safe with concomitant hernia repair

Methods

We performed a retrospective analysis of a prospectively maintained database queried for combined procedures. Hernias were repaired after complete reduction (when the defect was not empty) using a dual mesh fixed to the abdominal wall with absorbable tackers in 5 cases. Data collected included demographics, anthropometrics, co-morbidities, peri-operative course.

Results

Between January 2014 and December 2016, a total of 5 patients (3 females) underwent simultaneous BS and VHR

Three patients underwent laparoscopic sleeve gastrectomy and Laparoscopic Roux-en-y gastric bypass (LRYGB), and laparoscopic mini gastric bypass were performed in one patient each.

We did not encounter mesh infection.

Conclusion

Concomitant Bariatric Surgery and Hernia Repair is feasible and safe, obviating the need for two separate procedures while not hampering the outcome of either. Complication rates for the combined surgery do not seem to be adversely affected.



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THE STATE OF ART TECHNIQUE FOR THE TREATMENT OF INTERNAL HERNIA COMPLICATION POST ROUX EN Y BYPASS

Hernia surgery in the bariatric patient

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Background

Treatment of internal hernia complication post Roux En Y Bypass.

Methods

Laparoscopic Roux En Y Bypass is one of the Gold standard technique for the treatment of Morbid Obesity associated with long term complication of intestinal obstruction due to internal hernia at the level of jejunojejunostomy and Peterson defect that if not treated on emergency basis associated with bowel gangrene and even mortality.

Results

The video will show the steps used to reduce incarcerated bowel and repair of the internal hernia successfully without shifting to open surgery.

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SELF-EFFICACY FOR EATING (ESE) AND PHYSICAL ACTIVITY (SEPA) - PREDICTORS FOR WEIGHT LOSS AFTER VERTICAL SLEEVE GASTRECTOMY (VSG FOR SEVERE OBESITY? A PROSPECTIVE COHORT STUDY

Integrated Health/Multidisciplinary care

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Background

Between 30 and 40% of VSG-patients regain excess weight after surgery. Identification of factors that can explain the variability in long-term weight management after bariatric surgery is needed.

Introduction

Social cognitive theory has defined ESE and SEPA as targets for behavioral change in weight-loss interventions. Research on self-efficacy after bariatric surgery are scarce.

Objectives

To explore the association between patient-reported ESE and SEPA, and weight development 16 months after VSG.

Methods

Clinical and patient-reported data from VSG-patients, operated during 2012-2013, were collected prospectively with a mean follow-up of 16 months. We performed separate multiple linear regression analysis with BMI at 16 months after VSG as the dependent variable. Age, gender and preoperative BMI were covariates in all models exploring the predictive value of ESE and SEPA both separately and merged (composite score).

Results

Of the 114 patients included, 91 (80%) were available for follow-up. Preoperative ESE or SEPA did not predict postoperative BMI ($p > 0.18$). Higher change-scores (0-16 months) of both ESE and SEPA predicted statistically significant lower postoperative BMI in separate analyses ($p < 0.05$), but not when entered together in the same model ($p > 0.08$). A higher composite score on ESE and SEPA predicted statistically significant lower postoperative BMI ($p < 0.05$).

Conclusion

A higher postoperative change (0-16 months) in ESE and SEPA composite score, but not preoperative ESE and SEPA, predicted lower postoperative BMI in this cohort. Due to the surgical-induced physiological effects during the weight-stabilizing stage (1-2 years postoperatively), self-efficacy data should be recorded within the critical weight-regain phase (2-5 years) after VSG.

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QUALITY OF LIFE AND BARIATRIC SURGERY: A SYSTEMATIC REVIEW OF SHORT AND LONG TERM RESULTS AND COMPARISON WITH COMMUNITY NORMS

Integrated Health/Multidisciplinary care

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Background

Currently the effects of bariatric surgery are generally expressed in Excess Weight Loss (EWL) or comorbidity reduction.

Objectives

Therefore the aim of this review was to provide insight in the available prospective evidence regarding the short and long-term effects of bariatric surgery on Quality of Life (QoL) and a comparison with community norms.

Methods

A systematic multi-database search was conducted for 'QoL' and 'Bariatric surgery'. Only prospective studies with QoL before and after bariatric surgery were included. The 'Quality Assessment Tool for Before-After Studies with No Control Group' was used to assess the methodological quality.

Results

Thirty-Six studies met the inclusion criteria. Most studies were assessed to be of 'fair' to 'good' methodological quality. Ten different questionnaires were used to measure QoL. Follow-up ranged from 6 months to 10 years, sample sizes from 26 to 1276 and follow-up rates from 45% to 100%. A significant increase in QoL after bariatric surgery was found in all studies ($p \leq 0.05$), however mostly these outcomes stay below community norms. Only outcomes of the IWQOL, SF-36 and OWQOL show QoL outcomes that exceed community norms.

Conclusion

The Quality of Life is increased after bariatric surgery on both the short and long term. However, due to the heterogeneity of the studies and the generality of the questionnaires is it hard to make a distinction between different surgeries and difficult to see a relation with medical profit. Therefore, tailoring QoL measurements to the bariatric population is recommended as the focus of future studies.

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IMPROVED AND MORE EFFECTIVE ALGORITHMS TO SCREEN FOR NUTRIENT DEFICIENCIES AFTER BARIATRIC SURGERY

Integrated Health/Multidisciplinary care

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Background

Most bariatric guidelines recommend frequent lab monitoring of patients to detect nutrient and vitamin deficiencies as early as possible. The aim of this study was to optimize the cost effectiveness of the nutrient panel, by developing an algorithm, which detects nutrient deficiencies at lower costs.

Methods

In this retrospective study, 2055 patients who had undergone Laparoscopic Roux-Y Gastric Bypass (LRYGB) and Laparoscopic Sleeve Gastrectomy (LSG) surgery at Catharina Hospital Eindhoven between January 2009 and December 2013. Perioperative biochemical measurements (7 days before and 127 days after surgery) and measurements >549 days before surgery were excluded. For analysis, the most recent pre- and postoperative measurements were selected for each biochemical parameter separately. Firstly step the amount of moderate and severe deficiencies were calculated. Secondly, we investigated whether each variable (vitamins A, B1, B6, B12, D, folate, ferritin, zinc and magnesium) could predict the presence of deficiency.

Results

In total, 561 (LRYGB) and 831 (LSG) patients had at least pre- and postoperative values of vitamin A, B1, B6, B12, D, folate, ferritin, zinc or magnesium. The algorithm reduces vitamin D, B12, B6, B1 and ferritin examinations by 15%, 11%, 28%, 28% and 38%, respectively, without missing clinically relevant deficiencies. The corresponding potential cost savings was 14%.

Conclusion

This study identified substantial cost savings in laboratory test for both LRYGB and LSG procedures. The potential cost reduction of 14% might even be increased to 42% when less frequent moderate deficiencies are not screened anymore, while >99.0 of moderate deficiencies will be detected.

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ON EPWORTH AND STOP BANG SCORES: WHO REALLY NEEDS SLEEP STUDIES?

Integrated Health/Multidisciplinary care

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Background

Epworth and Stop Bang are two scoring systems to assess the likelihood of obstructive sleep apnoea (OSA) and guide referral for sleep studies.

Introduction

Historically in our unit, scores of 10 or 3 respectively are sleep study referral threshold. Recently, Stop Bang score of ≥ 5 has been introduced.

Objectives

To determine what proportion of obese patients referred for sleep studies using these criteria have objective evidence of OSA. This may validate or reset the referral trigger and improve efficiency.

Methods

Data of 678 patients were collected prospectively from April 2015 to January 2017 at a large Bariatric Centre in England. Patients with Epworth score of ≥ 10 or Stop Bang ≥ 3 were referred. The proportion of patients diagnosed with OSA using both criteria determined.

Results

One third (224/678) did not meet the threshold for referral, a third (30%) had the study and the remaining third (30%) awaits sleep study or results. Of the 207 who had sleep study using the old criteria, two thirds (66%) were diagnosed with OSA with nearly half (48%) classed as severe (requiring CPAP). With the new criteria, 40% had OSA, with 30% requiring CPAP. The positive predictive values of the old and new referring criteria are 52 and 61% respectively.

Conclusion

Obstructive sleep apnoea is common in the obese. At least a third tested positive for OSA, and for up to half of these, the condition is severe enough to require preoperative CPAP therapy. In addition the current referral criteria demonstrate moderate ability to correctly identify candidates who truly have OSA.

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THE INCIDENCE OF PRE-OPERATIVE ASYMPTOMATIC GASTRO-OESOPHAGEAL REFLUX DISEASE (GORD) IN A BARIATRIC SURGICAL POPULATION.

Integrated Health/Multidisciplinary care

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Introduction

Obese patients have an increased risk of developing oesophageal adenocarcinoma. Another risk factor for this is gastro-oesophageal reflux disease (GORD). Current evidence suggests that approximately 9.3% of individuals within the general population have asymptomatic reflux. There is however, little evidence on the incidence of asymptomatic reflux in bariatric patients.

Objectives

Given the clinical implications of obesity and GORD, the purpose of this study was to determine the incidence of asymptomatic reflux within a bariatric population and compare it to the general population.

Methods

A retrospective analysis was undertaken incorporating 387 pre-operative bariatric patients at a single centre between 2014 and 2016. Patients were questioned about symptoms of reflux and underwent routine upper endoscopy as part of their pre-operative workup. The Los Angeles (LA) classification system for reflux oesophagitis was used to grade the severity of oesophageal changes.

Results

Of these 387 patients, 250 (64.6%) denied experiencing any reflux symptoms. 50 out of 250 (20%) had evidence of oesophageal changes on endoscopy. Within them, 21 (42%) had oesophageal changes with no LA classification noted, 26 (52%) had LA grade A changes and 3 (6%) had LA grade B changes. 3 (6%) patients had confirmed Barrett's oesophagus.

Conclusion

20% of patients included in the study had confirmed asymptomatic reflux changes on upper endoscopy, double the percentage within the general population. Additionally, three patients had changes consistent with Barrett's oesophagus despite experiencing any reflux symptoms. This data shows that the incidence of silent reflux is higher within pre-operative bariatric surgery patients when compared with the general public.

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COMPARISON OF THE MOST CURRENT GUIDELINES FOR NUTRITION CARE IN WEIGHT LOSS SURGERY

Integrated Health/Multidisciplinary care

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Background

Three sets of guidelines are currently used in the care of patients who have undergone weight loss surgery (WLS): 2013 AACE/TOS/ASMBS Bariatric Surgery Clinical Practice Guidelines, 2013 A.S.P.E.N. Clinical Guidelines: Nutrition Support of Hospitalized Adult Patients with Obesity and ASMBS Integrated Health Nutritional Guidelines for the Surgical Weight Loss Patient 2016 Update: Micronutrients.

Introduction

Clinicians may be confused by the existence of multiple guidelines for nutrition care in WLS. Currently guidelines differ in terms of setting, scope, target professions and treatment characteristics addressed.

Objectives

Differences between recommendations and guideline scope are discussed and clarified.

Methods

Scopes of separate guidelines are compared using an analytic framework developed for this analysis covering setting, scope, interprofessional involvement, and treatment characteristics. Agree II criteria are used to evaluate the relative quality of the respective guidelines.

Results

Overall, the AACE guidelines were the most comprehensive in terms of setting, scope, interprofessional recommendations and treatment characteristics. The ASPEN guidelines were the most restrictive, focusing on inpatient postoperative guidelines. ASMBS guidelines are slightly less broad than AACE, focusing more in-depth on micronutrient recommendations. ASMBS macronutrient recommendations were reserved for a future guideline. All guidelines were developed based on accepted standards for guideline development, including systematic reviews of the evidence.

Conclusion

Rather than competing guidelines, the three existing guidelines for nutrition care in WLS should be viewed as complementary resources for use in clinical care. Clinicians should evaluate the relative coverage and currency of the respective guidelines to build a targeted nutrition care plans for patients in different phases of the WLS process.

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IMMUNOLOGIC CHANGES AFTER BARIATRIC SURGERY AND IMMUNOLOGIC DISEASES: IS AN EXCESSIVE WEIGHTLOSS A FACTOR

Integrated Health/Multidisciplinary care

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Background

Obesity surgery is a popular option to weightloss, but the immunological effects of this weight loss are not yet fully studied.

Introduction

Weightloss surgery in patients with rheumatoid arthritis improves the symptoms but some patients develop positive markers, thrombotic events or autoimmune diseases like Guillaine Barre and Lupus in previously healthy patients.

Objectives

To describe the development of systemic autoimmune diseases after bariatric procedures

Methods

Obese patients treated by bariatric surgery were evaluated at baseline and at 4 and 8 months in a prospective cohort study. Immunologic profile (complement C3-C4, ANAs, IgG/IgM anti-Cardiolipin antibodies, Anti-CCP, and RF) were evaluated. Peripheral blood distribution of B and T lymphocytes was determined by flow cytometry. Leptin and adiponectin were measured by Elisa technique. All patients did not have history of AIDs.

Results

34 patients. Mean age at baseline was 38.3 years. BMI was 42.8 ± 3.6 . Several immunologic changes were seen between baseline and 8 months: Four patients (11.8%) with baseline negative ANAs had positive results. C3 and C4 decreased in all patients and IgG aCL decreased. IgM aCL and RF did not change during follow-up. Number and percentage of T CD4+ cells increased at 8 months (n=30): 1074 cells/mL vs. 1217.5 cells/mL. At 8 months, T CD8+ percentage decreased and CD4/CD8 T cells ratio significantly increased. B cells number/percentages remained stable and leptin decreased at 8 months in all patients: 45.7 vs. 23.5 and adiponectin increased from 6.6 to 10.

Conclusion

Our results showed immunological changes after bariatric surgery (mainly in C3 and C4 levels, positivity of ANAs and distribution of T cells). Clinical implications of these findings must be analyzed in the follow-up of our cohort.

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THE EFFECT OF SURGICALLY INDUCED WEIGHT LOSS ON PREOPERATIVE HEART RHYTHM DISORDERS

Integrated Health/Multidisciplinary care

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Introduction

Epidemiological research shows that obesity has become a global pandemic. This means that a lot of people are at risk for developing associated comorbidities, including cardiovascular diseases such as heart rhythm disorders.

Objectives

Surgical weight loss may be an novel therapy for obese patients with a heart rhythm disorder that needs further evaluation

Methods

We used a retrospective, observational study design. Efficacy was assessed by extracting weight loss, BMI reduction, excess weight loss and obesity-related symptoms from Electronic Patient Files (EPD). Pre- and post-operative ECG- and Holter recordings were evaluated from each patient.

Results

Most common were conduction disorders, including any kind of bundle branch block. The group of patients with a AV-conduction disorder, bradycardia, a bundle branch block, a pacemaker or a non-specific conduction disorder (N=48), of which 18.8% (N=9) had no or a different type of heart rhythm disorder after surgery and 69% (N=20) remained in the same subgroup of heart rhythm disorders. All patients with AF or an atrial flutter (N=8) before surgery, showed AF on the postoperative ECG recordings (100%) as well. However, in the subgroup of patients with a bundle branch block pre-bariatric surgery a significant decrease in heart rate was seen (63 vs 76, respectively, p-value=0.003).

Conclusion

We cannot conclude that bariatric surgery causes a significant reduction of preoperative heart rhythm or conduction disorders in morbid obese patients. However, an interesting finding is that in the subgroup of patients with a bundle branch block pre-bariatric surgery there was a significant decrease in heart rate post-surgery compared to pre-surgery.

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INCIDENTAL PATHOLOGICAL FINDINGS DURING BARIATRIC SURGERY, A SINGLE-CENTER RETROSPECTIVE STUDY AND LITERATURE REVIEW.

Integrated Health/Multidisciplinary care

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Introduction

Obesity has become a common lifestyle disease and the number of bariatric procedures performed worldwide is increasing every year, therefore the question of cost-effectiveness of routine histopathological examination of tissue specimens should be considered.

Objectives

To evaluate the necessity of histopathological investigation of tissue excised during bariatric surgery and to verify whether the operation should be continued in case of suspicious macroscopic findings.

Methods

A single-center retrospective study. The study group comprised 1252 obese patients qualified for bariatric procedures. In 81 cases suspicious macroscopic pathologies were found during the operation and tissue specimens sent to histopathological examination.

Results

Out of 81 patients from whom histopathological samples were collected, in 32 cases the results were negative vs 49 positive. Pathological tissue was found in 31 LSGs, 11 LRYGBs and in 7 cases diagnostic laparoscopy and surgical biopsy ended the operation. Out of 49 samples collected, 29 came from the stomach, 16 from the liver, 3 contained perigastric tissue and 1 from the small intestine. GISTs were found in 16 cases, other cases being benign tumors of various histological origin.

Conclusion

Tissue excised during bariatric procedures should be routinely histologically examined, especially in case of macroscopic pathological findings. Since most of the neoplasms were found to be benign, there is no need to waive off the bariatric procedure if a pathology was resected.

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BARIATRIC HEALTH INDEX (BHI): QUANTIFICATION AND CLASSIFICATION OF COMORBIDITY IN BARIATRIC PATIENTS BASED ON BLOOD MARKERS

Integrated Health/Multidisciplinary care

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Background

Comorbidities are common in bariatric patients. However, the degree of comorbidities is hard to quantify objectively as they develop gradually and do not independently reflect the continuum of metabolic syndrome.

Introduction

In the Catharina Hospital bariatric patients are monitored with extensive laboratory panels prior and after surgery. Besides detecting nutrient deficiencies, these parameters offer the opportunity to search for objective markers to describe the health of bariatric patients.

Objectives

The bariatric health index (BHI) is developed enabling quantification and classification of comorbidity in bariatric patients.

Methods

Machine learning is applied to comprehensive laboratory data, collected from 2367 patients containing both pre- and post-surgical data (6, 12 and 24 months). Since comorbidities of interest (diabetes, hypertension, and dyslipidemia), were correlated, an ordinal output variable was defined, stating presence as 'none', 'one', or 'multiple' comorbidities. Different ordinal logistic regression models were fit to the data and compared by AUC.

Results

Next to gender and age at surgery, blood marker levels of HbA1c, triglycerides, urea, potassium, and estimated GFR (CKD-EPI) appeared descriptive for the degree of comorbidity. For the classes 'none', 'one', or 'multiple' the best performing BHI model had an AUC (SE) of 0.82 (0.01), 0.66 (0.01), and 0.88 (0.01), respectively.

Conclusion

A model has been developed by mining bariatric laboratory data that enables quantification and classification of presence of comorbidity. The BHI provides the basis for a tool that predicts the evolution of bariatric health state and may be used to personalize the patient's monitoring plan.

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RESTING METABOLIC RATE AND WEIGHT LOSS AFTER BARIATRIC SURGERY

Integrated Health/Multidisciplinary care

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Introduction

There is an increased interest in understanding how variation in Body Composition (BC) and Energy Expenditure (EE) are related to successful weight loss after bariatric surgery, since had been suggested that low resting metabolic rate (RMR) could be associated with poor weight loss

Objectives

Determine the relation between weight loss and the changes in RMR before and after bariatric surgery

Methods

Prospectively study 45 patients submitted to bariatric surgery. RMR was evaluated by indirect calorimetry before and 6 months after surgery. RMR was adjusted per kilogram of body weight (RMR/Kg).

The patients were divided in 4 groups, based on the distinctive patterns of change in the RMR/kg before and after surgery. The RMR/kg could decrease (Group 1), keep stable (Group 2), had a small increase (Group 3) or an important increase (Group 4)

Results

The EWL didn't show a statistically significant relation to pre operative RMR/kg ($p=0.68$).

Table 1 summarizes the changes in RMR and the correlation with Excess Weight Loss (EWL).

Difference in EWL between groups

	RMR range (Cal/kg)	Mean RMR/KG	EWL>50%
All	-4 to 9	3,22	73,3%
Group 1	< -2	-4,0	0
Group 2	-2 to 2	0,9	61%
Group 3	2 to 6	3,8	80%
Group 4	> 6	7,4	100%

Conclusion

The pre-operative RMR/kg is not correlated with EWL and could not be used as a predictor of successful weight loss. Furthermore, the increase in RMR/kg after bariatric surgery is a major factor related to a satisfactory EWL.

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EARLY IMPROVEMENT OF DEPRESSION FOLLOWING BARIATRIC SURGERY

Integrated Health/Multidisciplinary care

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Introduction

The prevalence of psychological disorders in candidates for bariatric surgery is well established. Anxiety and depression are the most commonly observed, however there is little information about their evolution after weight loss.

Objectives

To analyze the early impact of weight loss on the degree of depression in bariatric patients

Methods

Prospective study with patients undergoing bariatric surgery from 2015 to 2017. A comparative analysis of preoperative depression (Beck inventory) was performed and compared at 6 and 12 months. A demographic and weight loss analysis was also performed.

Results

Seventy-three patients were enrolled. Female sex comprised 76.7% of cases, with a mean BMI of 42.8 kg/m². Baseline depression was present in 45.2% of cases, being severe in 2.7%. The follow-up percentage was 84.9% and 63% at 6 and 12 months. The analysis at 6 months showed improvement of the mean score (12.3 baseline, vs. 4.2 points at 6 months, $p = 0.006$), as well as for each item. At 12 months, the mean score was 5 points, with no statistical significance vs. 6 months. The only item with extra improvement after 6 months was self-criticism. At 6 and 12 months there was some degree of depression in 9.6% and 8.6%, respectively, corresponding to a percentage change of -65.8% and -59.3%. Only 1 patient (2.7%) continued with severe depression.

Conclusion

Almost half of the candidates to bariatric surgery present depression, which improves dramatically soon after bariatric surgery, and continues stable during the first year. Self-criticism improved during the first and second semester of follow-up.

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BARIATRIC SURGERY AND INCIDENTAL GASTROINTESTINAL STROMAL TUMORS - A SINGLE-CENTER STUDY.

Integrated Health/Multidisciplinary care

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Introduction

Gastrointestinal stromal tumors, originating from Cajal cells are most commonly located in the stomach, therefore they can be found in the specimens excised during bariatric operations.

Objectives

To analyze the incidence of GISTs in patients undergoing bariatric surgery and to verify whether an operation performed according to bariatric protocol is oncologically radical in case of GIST.

Methods

A single-center retrospective study. The study group comprised 1252 obese patients qualified for bariatric procedures, none of whom had upper gastrointestinal tract neoplasms found during preoperative diagnostic exams. In case of suspicious macroscopic pathologies (n=81) present during the operation, tissue specimens underwent histopathological examination with further investigation performed if GISTs were found, including tumor size and localization, mitotic index and immunohistochemical analysis.

Results

GISTs were found in 16 cases, benign tumors of different various histological origin in 33 cases. All cases of GIST found came from stomach specimens, 7 from gastric corpus vs 9 from fundus. 14 GISTs were found during LSGs vs 2 during LRYGBs. 14 tumors were excised with negative margins of more than 10mm vs 1 of 5mm vs 1 excision line through the tumor. No cases of local metastases to lymphatic nodes were found.

Conclusion

In case of incidental findings of GISTs during bariatric surgery, tumor resection with negative margins of incision may be considered as complete oncological treatment if there was very low or low risk stratification of GIST's recurrence after surgery. All patients after GIST resection should stay under long-term postoperative care.

PREVALENCE OF METABOLIC SYNDROME IN THE OBESE INDIAN**Integrated Health/Multidisciplinary care****C. Remedios, N. Dhulla, H. Bhankharia, A. Govil Bhasker**

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Introduction

Indians are known to suffer from co-morbid conditions at lower BMIs. This has mainly been attributed to their abdominal obesity and higher waist circumferences.

Objectives

The objective of this study was to determine the prevalence of type 2 Diabetes, hypertension and dyslipidemia in an obese Indian population

Methods

This was retrospective analysis on 3175 obese patients who presented at our centre for Bariatric Surgery . Anthropometric measurements, pre-operative blood parameters, medications and duration of co – morbidities were recorded.

Results

The mean age was 41.22 years .The mean BMI was 42.2 kg/m². The female to male ratio was 1.01. 91% of males had a waist circumference equal to or above 85 cms and 88% females had a waist circumference equal to or more than 80 cms.

The prevalence of all 3 components of metabolic syndrome was 7%. 30 % had type 2 diabetes of which 93% of these were on oral hypoglycaemic agents or insulin or both. 38% had a history of hypertension of which 80% were on antihypertensive medications. 19% of these patients had dyslipidemia, of which 57% were on medications.

Conclusion

Central Obesity is one of the major contributing factors for prevalence of major components of the metabolic syndrome. Routine investigative scanning and anthropometric measurements concentrating on central obesity should be undertaken to document presence of type 2 diabetes , hypertension and dyslipidemia in the obese indian population



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AGREEMENT BETWEEN DUAL X-RAY ABSORPTIOMETRY AND OTHER METHODS TO ESTIMATE FAT FREE MASS: A CROSS-SECTIONAL STUDY

Integrated Health/Multidisciplinary care

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Introduction

The assessment of body composition plays an important role in different clinical situations. There are several ways to estimate free fat mass (FFM). Nevertheless, there is no data regarding the most accurate clinical method to determine FFM as compared to the gold standard Dual X-ray Absorptiometry (DXA).

Objectives

Evaluate the concordance between different FFM estimators (Janmahasatian or Humes' formulas and Bioimpedanciometry (BIA)) against DXA in women undergoing benign abdominal surgery.

Methods

Study of method concordance. Women scheduled for benign abdominal surgery were invited to participate in 2015-2016. Body composition was determined before surgery with DXA and BIA (Bodystat 1500). Additionally, FFM was estimated with the Janmahasatian and Hume's formulas. Statistical analysis was performed using Bland-Altman method.

Results

34 women were included. The average age and BMI was $41,1 \pm 11,4$ years and $37,8 \pm 5,1$ kg/m², respectively. 76,5%(26) patients were obese (BMI>30). The model proposed by Janmahasatian overestimates the FFM in 3,3 kg (CI 95% [-11,9 to 5,2] Lin-Q: 0,443), while the Hume formula overestimates it in 8,2 kg (CI 95% [-16,7 to 0,35] Lin-Q: 0,456) when compared with DXA. The BIA device overestimates the FFM in 1,7 kg (CI95% [-16,8 to 13,3] Lin-Q: 0,722).

Conclusion

In our study we found that BIA and DXA showed good agreement. Therefore, BIA which is a simple and non invasive exam, is a reliable method to follow lean mass evolution for example, after bariatric surgery. On the other hand, mathematical formulas showed poor agreement and should be used careful to assess lean mass.

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DIETARY HISTORY IN PATIENTS SEEKING BARIATRIC SURGERY

Integrated Health/Multidisciplinary care

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Introduction

Bariatric surgery is the most effective method for weight loss, however patients still use multiple medical and alternative treatments for weight loss.

Objectives

The aim of this study was to analyze the dietary history characteristics, alternative treatments and use of drugs for weight loss in candidates to bariatric surgery.

Methods

A dietary history survey was conducted with a cohort of patients seeking bariatric surgery at a single Institution. Weight history, types of diets, medications use, and results were analyzed.

Results

307 surveys were applied, with 80% female, and a mean age of 40 yo with 44.8 kg/m² of mean BMI. Childhood obesity was reported in 37.5% of cases, and 41% of patients tried >10 different diets. In 43% of cases medication was used (65.7% were commercial drugs with an average use of 2.4 drugs per patient). Unknown medication were reported in 25% of cases. Medical therapy (known or unknown drugs) was stopped because of side effects in 49.8%. The mean weight loss was 16.8 +/- 13.5 kg with their best diet, lasting 7.9 months ; 74.4% of patients never performed physical activity. Only 32% of patients lost between 10 -15 kg. Among treatments: 42.3% performed regular diets, 18.8% used juices, 33% alternative treatments (acupuncture, magnets, etc) and 22.8% shakes/supplements.

Conclusion

Diets and alternative weight loss methods didn't show an adequate and sustainable weight loss in patients seeking bariatric surgery. Medication use had side effects in almost half of the cases and an important percent of such drugs were unknown; situation that can lead to dangerous effects.

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SELF-REPORTED BODY MASS INDEX IS FAIRLY ACCURATE IN MORBIDLY OBESE PATIENTS

Integrated Health/Multidisciplinary care

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Background

Self reported weight and height are often used in follow-up of bariatric surgical patients.

Introduction

However data on validity of self-reprted body mass index (BMI) in this subset of patients is limited.

Objectives

To assess the vailidity of self-reported BMI among morbidly obese patients presenting for bariatric surgery consultation.

Methods

Patients were prospectively assessed and asked to provide their weight (in kilograms) and height (in cms) before the actual weight and height were measured in the office. Data on gender, age, medical history and prior bariatric surgical history were collected.

Results

A total of 373 patients were assessed over a period of 12 months (feb 2016-feb 2017). The female:male ratio was 54:46 with an avergae age of 38.8 years and an average measured weight 111 kgs and BMI of 39.0 kg/m².

The self-reported BMI was accurate in 71% of patients and within 2% in 93% of patients. Only 1.9% of patients over-estimated their BMI by more than 5% and 5.1% under-estimated their BMI by more than 5%. Age, gender, BMI, exercise level, diabetes status, BAROS score were not predictive of over or under-estimation.

Conclusion

Self-reported weight and height and subsequently BMI was accurate within 2% in most (93%) patients in this consecutive series of morbidly obese patients. Only 5% over or under-reported their BMI by more than 5%. Given the limitations in office follow-up, using self-reported weight and height appears to be valid in follow-up of morbidly obese patients.

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RISK FACTORS FOR DENTAL CARIES AND DENTAL EROSION IN SUBJECTS WHO UNDERWENT BARIATRIC SURGERY

Integrated Health/Multidisciplinary care

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Introduction

There are few studies evaluating oral health in individuals undergoing bariatric surgery, so many questions about this subject remain unanswered.

Objectives

This study aimed to describe risk factors for dental caries and dental erosion in subjects who underwent bariatric surgery.

Methods

Individuals with 6-7 months of post-operative of bariatric surgery were invited to participate in a private center for treatment of obesity in Salvador, Bahia, Brazil. A questionnaire was applied in the form of an interview investigating about clinical and demographics data, dietary habits and oral health behavior. Continuous variables were described by mean and standard deviation and categorical by percentage.

Results

Eighty one patients were evaluated, 65 (80.2%) were female. The average (SD) of age and body mass index were 37.5 (9.2) years and 30.2 (4.6) kg/m² respectively. Fifty-one subjects (63.0%) considered excellent/good their oral health and 48 (59.3%) reported needing dental treatment. Nineteen patients (23.5%) reported that they vomited frequently after bariatric surgery, 51 (63.0%) often consume acid food and 61 (75.3%) acid beverages, which reveal risk of dental erosion. Moreover, 40 (49.4%) reported xerostomia and 69 (85.1%) snack frequency $\geq 2x/day$, which may boost the erosion process. Conversely, 66 (81.5%) of participants reported to consume little or no sucrose and 66 (81.5%) prefer to sweeten beverages and food with sweetener or not sweeten, factors which may decrease the caries risk.

Conclusion

Changes in lifestyle after bariatric surgery may represent risks on oral health and should be investigated by health professionals who take care of these patients.

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RELATIONSHIP BETWEEN PHASE ANGLE AND OBESITY. BODY COMPOSITION IN OBESE PATIENTS

Integrated Health/Multidisciplinary care

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Introduction

Few studies have evaluated the relationship between phase angle (PA) and obesity. Bioelectrical impedance analysis (BIA) is a commonly used method to estimate body composition. PA is the most widely used parameter of BIA for diagnosis of malnutrition and clinical prognosis

Objectives

The aim of our study is to compare the BIA and PA between a group of morbidly obese patients with non-alcoholic fatty liver disease (NALFD) and a group of non-obese patients with NALFD.

Methods

Preoperative clinical and laboratory data were obtained from 100 morbidly obese patients attended in our hospital. A Biliopancreatic diversion was performed in all the patients. Seventy eight non-morbidly obese patients with NALFD were enrolled in the second group. All of them have NALFD, evaluated by liver biopsy.

Results

A total of 178 patients were enrolled in the study (100 obese patients and 78 non obese patients) The average age in the obese group was 43.3±11.4 years old vs 44,7 ± 11,6 years old. BMI (Obese patients: 48.29±7.02Kg/m² vs Non obese patients 30,57±5,18 kg/m²; p<0,001) . Resistance (384,05±70,84 Ohms: 488,75±72 Ohms; (p<0,001), reactance (46,23±13,67 Ohms vs 85,50±14,16 Ohms; p<0,001), PA (6,81±1,44 ° vs 7,66±1,83°; p<0,001), muscle mass (Obese patients 47,72±12,72 Kg vs non obese patients 38,78±9,44 kg; p<0,001).

Conclusion

Comparing our data with those of non-obese patients, we observe that obese patients have lower phase angle than non-obese patients. The use of Bioimpedance on obese patients has led a higher precision in nutritional status.

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THE GERMAN SNOWBALL EFFECT – A GROWING PROBLEM IN BARIATRIC MEDICINE

Integrated Health/Multidisciplinary care

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Background

Surgical treatment of obesity in Germany is a rapidly developing field of expertise that strictly adheres to the National Guidelines.

Introduction

German National Guidelines demand lifelong supervision of bariatric patients which is currently solely performed by bariatric surgeons.

Objectives

To depict the development of outpatient visits in our University Center for Bariatric and Metabolic Surgery in Freiburg

Methods

In a retrospective study, we descriptively analyzed the development of outpatient visits during an 8-year period. Patient numbers were recorded annually, and each presentation was further categorized as first or a follow-up presentation. Total number of performed bariatric operations and the coverage by insurance companies were evaluated as well.

Results

In 2007, there were a total of 318 patient presentations: 156 first and 162 follow-up presentations. The rejection rate concerning coverage of surgical treatment by insurance companies despite expert certification was 16,8% in 2007. 25 bariatric operations were performed in this year. In 2014, there were a total of 1212 patient presentations (+380%), whereof 269 were first presentations (+172%) and 943 (+ 582%) were follow-up presentations. The insurance coverage rejection rate dropped to 1,8% in 2014 while 179 (+716%) bariatric procedures were performed that year.

Conclusion

With the rising acceptance of surgical treatment of obesity in Germany, comparatively few specialized centers currently bear the brunt of managing an exponentially growing number of follow-up patients. Obesity is an epidemic disease. Adequate therapy constitutes a socioeconomic problem and must be solved using an interdisciplinary approach involving bariatric surgeons, special and general practitioners as well as the health care system.

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UNDERSTANDING HOW PATIENTS ADJUST TO SELF-REPORTED SOCIAL COMPLEXITIES AFTER BARIATRIC SURGERY

Integrated Health/Multidisciplinary care

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Background

Bariatric surgery offers rapid and sustained weight loss, improves obesity-related illnesses, which imposes significant changes to a person's appearance and eating habits.

Introduction

The rapid weight loss, changes to physical appearance and altered eating habits may have a significant impact on a person's life, especially everyday social situations, which require a period of adjustment following bariatric procedures. The social aspects of bariatric surgery can assist to understand the non-clinical impact of bariatric surgery on patients' lives.

Objectives

The aim of the study was to explore how people adjust their lives in the first two years following bariatric surgery

Methods

Semi-structured interviews were conducted with participants (11 women, 7 men) who had undergone either gastric bypass or sleeve gastrectomy (17 primary, 1 revisional procedure) at a high volume NHS hospital in the UK within two years of the time of interview. Eighteen participants took part.

Results

Findings showed that participants viewed the social aspects of life after bariatric surgery as embedded in risk. Three different risk attitudes were identified; Risk Acceptors (n=11), Risk Contenders (n=6) and Risk Challengers (n=1). The different attitudes towards social risks in everyday lives and the self-reported meaning of the consequences of their actions appeared to determine how the participants dealt with situations.

Conclusion

The social complexities following bariatric surgery do not appear to be widely understood by others. The three risk attitude profiles provide a framework in which the ways that patients adjust to post-surgical life can be understood. Further research into the social impact of bariatric surgery is recommended.

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EFFECT OF GARLIC POWDER CONSUMPTION ON BODY COMPOSITION IN NON-ALCOHOLIC FATTY LIVER DISEASE PATIENTS

Integrated Health/Multidisciplinary care

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Introduction

Nonalcoholic fatty liver disease (NAFLD) is the most common chronic liver disease becoming a public health problem in recent decades. Obesity plays a key role in pathogenesis of NAFLD. Thus weight loss, especially body fat mass, is one component of therapeutic strategies in NAFLD. Results from experimental studies have shown that garlic reduces body weight and body fat mass. However, the anti-obesity effect of garlic in human population is still obscure.

Objectives

To evaluate the effect of garlic on body weight and body fat mass among subjects with NAFLD.

Methods

In this clinical trial, 110 subjects with NAFLD were selected according to inclusion and exclusion criteria. They were stratified according to sex, age and NAFLD grade, then randomly allocated to either the intervention or placebo group. During 4 months, patients in the intervention group received garlic tablets (containing 1.5 mg allicin) twice a day. Dietary intake and physical activity of participants were obtained by a validated questionnaire at baseline and the end of the study. Body composition was measured by bioelectrical impedance analysis (BIA). All analyses were done using SPSS software version 16.

Results

Our findings showed Significant changes aboutin body weight (garlic -2.6% vs. placebo -0.7% P=0.01) and body fat mass (garlic -2.9% vs. placebo -0.4 % P=0.02), but no significant changes between garlic and placebo group were detected in lean body mass and total body water (P > 0.05). No serious side effects associated with the intervention were reported.

Conclusion

Our trial suggests that garlic supplementation can reduce body weight and fat mass among subjects with NAFLD. Garlic may be a promising food for the treatment and prevent obesity.

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WHAT DO UK ALLIED HEALTH PRACTITIONERS THINK OF THE PLACE OF SOCIAL MEDIA AND TECHNOLOGY FOR BARIATRIC PATIENT SUPPORT?

Integrated Health/Multidisciplinary care

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Background

Allied Health Professionals are asked about social media by patients. No guidance exists for AHP involvement in this area.

Introduction

There is an increasing presence of patient-led social media, mobile apps and patient support technology, but little is known about the role and involvement of Allied Health Professionals (AHPs) in the support of bariatric surgery patients in these areas

Objectives

This study sought the views of AHPs working in UK bariatric surgical teams to understand their perceptions of the role of social media, mobile apps and patient-support technology within the context of bariatric surgery patient support.

Methods

A confidential, printed survey was distributed to AHPs attending a national bariatric surgical conference in 2016. An email to AHPs who did not attend the conference was sent requesting voluntary participation in an online version of the survey online within two weeks of the conference.

Results

There were 95 responses, which was a 71% response rate (n= 134). Responses were from nurses (34%, n= 46), dieticians (32%, n=32), psychologists (16%, n=12), 1 nutritionist, 1 physiotherapist, 1 patient advocate and 1 surgeon; 9 respondents did not fill in their position. Respondents reported an overall increase in the use of social media and mobile apps by patients, with AHPs concerned about misinformation and that advice may differ from what is given in clinic. Technologies, e.g. telehealth and videoconferencing, are not widely used to support bariatric patients in the UK

Conclusion

As the use of media and technology by patients increases, further discussions are needed to address the AHP-reported concerns of misinformation.

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INTEGRATING MULTIDISCIPLINARY PATHWAY SAFETY HURDLES INTO THE SAFE ASSESSMENT AND SCREENING OF PRE-OPERATIVE BARIATRIC PATIENTS

Integrated Health/Multidisciplinary care

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Background

We have set up a private UK bariatric service - integrating 5 'pathway safety hurdles' (PSH) that potential patients navigate in order to access our service.

PSH1= Outpatient surgical assessment by consultant bariatric surgeon.

PSH2= Bariatric screening questionnaire.

PSH3= Telephone screening by clinical psychologist.

PSH4= Telephone or outpatient anaesthetic screening of selected patients where concerns.

PSH5= Outpatient dietitian screening.

Introduction

Effective assessment of potential bariatric surgery patients is key to successful outcome.

Objectives

We wanted to build this into our service through a local multidisciplinary and multi-professional team utilising well defined PSH.

Methods

All patients who proceeded to bariatric procedures were included onto a local database and post-operative outcomes recorded.

Results

52 patients passed PSH1. 38 passed all stages and proceeded to a bariatric procedure.

Laparoscopic sleeve gastrectomy. N= 25. Average age 42, age range 27-56, 88%F. Average BMI pre-surgery 41.4, range 35-47.1. Excess weight loss (EWL) 1 month 30.5%, 3 months 46.9%, 6 months 64.5% and 12 months 79.4%.

Gastric balloon. N=8. Average age 42, age range 23-61, 66%F. Average BMI pre-surgery 39, range 28- 46.8. EWL 1 month 21.9%, 3 months 25.6%, 6 months 25.4%.

Laparoscopic gastric band. N= 5 Average age 35, age range 27-47, 100%F. Average BMI pre surgery 34.6, range 30-41.4. EWL 1 month 39.6%, 3 months 44.3%, 6 months 50.8% and 12 months 38%.

Conclusion

We have established effective patient safety hurdles within a transparent bariatric care pathway, enabling multidisciplinary decision-making regarding planned bariatric procedures and successful end outcomes.

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SUCCESSFUL MANAGEMENT WITH GLP-1 ANALOGUES IN REFRACTORY DUMPING SYNDROME AFTER LAPAROSCOPIC GASTRIC BYPASS . INITIAL EXPERIENCE IN OBESITY CLINIC COLOMBIA

Integrated Health/Multidisciplinary care

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FUNDACION VALLE DEL LILI - cali (Colombia)

Background

Dumping syndrome is a complication of gastric bypass, medical management is the first option before considering a surgical review. The multidisciplinary management allows the symptom control.

Introduction

Dumping syndrome occurs in 85% of post-bypass patients. Symptoms can be mild to severe and are triggered by intake of highly refined carbohydrates or high glycemic carbohydrates. The severity of the symptoms can be very disabling for patients with severe hypoglycemia, fainting, abdominal pain and diarrhea.

Objectives

Show the benefits of GLP-1 analogues in patients with refractory dumping

Methods

Female patient 41 y/o, 4 years post LGBYR at another institution, with early-onset dumping, very difficult to manage with hypoglycemia <40 mg / dl, fainting and abdominal pain with diarrhea. Had two episodes of SBO with operative management. Is referred to our service for reversal of the bypass. Glycemic control with > 300 and <40.

Results

she was evaluated by nutrition and endocrinology who prescribed liraglutide one per day, with glycemia normalization 90-60 mg / dl, without gastrointestinal or neurological symptoms. Tolerating the diet and now in conditioning program.

Conclusion

Current treatments for dumping síndrome include low carbohydrate diets, inhibition of glucose intestinal uptake, reduction of insulin secretion with calcium-channel blockers, somatostatin analogues or diazoxide, a KATP channelopener. Even partial pancreatectomy . In type2-diabetes GLP-1 analogues have a well-documented effect of stabilizing glucose levels without causing hypoglycemia. Our preliminary experience showed good results.

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THE IMPACT OF BARIATRIC SURGERY ON QUALITY OF LIFE

Integrated Health/Multidisciplinary care

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Background

Integrated health / Multidisciplinary care

Introduction

Obesity is considered a global epidemic and it is related to several pathologies. The Bariatric Surgery (BS) has been a quick and effective resource to weight loss in obese people, preventing or treating its consequences. However, the results of BS are little known on the perception of the patients.

Objectives

The objective is to evaluate the effect of weight reduction in quality of life of obese people who were submitted to the BS

Methods

A cross-sectional study with partial results was performed with 53 obese patients submitted to gastric bypass in south of Brazil. Demographic and quality of life data (Short-Form Health Survey / SF-36 quiz) were obtained previously and after 60 days of postoperative of BS.

Results

The average age of the patients was 38,4±8,9 years, being 83% of women and 17% men. The worst average results of postoperative were found in the physical limitations domains (32,07), vitality (39,52) and emotional aspects (30,81). Significant improvements were observed in all the domains (P<0,05) after the BS. All the domains showed average results above 66,03, considering that social aspects (92,92) and emotional aspects (85,53) were the most modified. There was a significant reduction on the average of Body mass index (42,56 x 36,17 kg/m²).

Conclusion

The Bariatric Surgery was effective on the improvement of quality of life in obese patients

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BARIATRIC SURGERY COVERAGE IN THE UAE AND SAUDI ARABIA

Integrated Health/Multidisciplinary care

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Introduction

Obesity has a significant burden in the Middle East. Numerous studies have demonstrated long term safety and effectiveness of bariatric surgery. Payer coverage remains a challenge due to potential lack of awareness, stigma and concerns of increased utilization.

Objectives

We study payer coverage policies of prominent health insurance agencies.

Methods

Primary and secondary research was conducted on policies of top public and private payers.

Results

Dubai Health Authority covers surgery for patients with BMI of 40+, BMI 35-40 with one comorbidity and BMI 30-35 with two comorbidities. Health Authority Abu Dhabi covers surgery for those with BMI 50+, BMI 40-50 with failed interventions, BMI 35-40 with failed interventions and two comorbidities, and BMI 30-35 with failed interventions and three comorbidities. Private payers typically exclude 'investigations into, and treatment of obesity' from coverage. In Saudi Arabia, Ministry of Health covers bariatric surgery for BMI 40+, 35-40 with 1 comorbidity and 30-35 with poorly controlled Type 2 Diabetes and cardiovascular risk. However, Council of Cooperative Health Insurance (CCHI) regulations permit exclusion of, "Treatment of acne or any treatment relating to obesity or overweight, excluding covered medicines."

Conclusion

Public and private payer level discrepancies remain in the coverage of bariatric surgery. Surgeons, professional societies, patients and industry need to come together to highlight value of bariatric surgery to payers and thereby enable patient access.

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INITIATING A BARIATRIC AND METABOLIC SURGERY MULTI-DISCIPLINARY PROGRAM IN A GOVERNMENTAL HOSPITAL IN THE MIDDLE EAST, IS IT FEASIBLE?

Integrated Health/Multidisciplinary care

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Background

The prevalence of obesity in the Middle East had increased dramatically in the last two decades. Recent studies had shown that Middle East countries have the highest rate of obesity in the world with an estimated rate of 54% among men and 65% of women are obese or overweight.

Introduction

Bariatric surgery nowadays had been proven to be the most viable solution for obesity and related health problems. The rate of bariatric surgeries in the Middle East had increased in the last few years. Recent surveys had shown that bariatric surgeries performed in these countries are done in private practice outside the setup of a multi-disciplinary bariatric surgery program.

Objectives

The aim of this study is to check the feasibility of initiating a bariatric and metabolic surgery multi-disciplinary program in a governmental hospital in the Middle East to act as a model for other hospitals to improve the service.

Methods

Surgeons who had specialised interest and structured training in bariatric surgery reviewed and followed the international published guidelines including IFSO, ASMBS and BOMSS.

Results

Local hospital protocol for bariatric surgery was drafted. Multi-disciplinary team was identified and several meetings were held. Theatres and wards were reviewed and all required instruments and equipment were provided. Referral and follow up system was established. Bariatric clinics started recruiting patients. Data base of all patients was maintained.

Conclusion

It is feasible to initiate a bariatric and metabolic surgery multi-disciplinary program in a governmental hospital in the Middle East after following the guidelines and recruiting the suitable teams.

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DUODENAL SWITCH IS SUPERIOR TO GASTRIC BYPASS IN PATIENTS WITH SUPER OBESITY WHEN EVALUATED WITH THE BARIATRIC ANALYSIS AND REPORTING OUTCOME SYSTEM (BAROS)

Malabsorptive bariatric operations

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Introduction

It is not clear which bariatric procedure that gives the best outcome for patients with super obesity (Body Mass Index [BMI] > 50 kg/m²).

Objectives

Compare outcomes in patients with super obesity after Roux-en-Y Gastric Bypass (RYGB) and Duodenal Switch (BPD/DS) using The Bariatric Analysis and Reporting Outcome System (BAROS) and a local questionnaire for gastrointestinal symptoms.

Methods

In total 211 patients, 98 RYGB and 113 BPD/DS, were included with a mean follow-up time of 4 years for both groups. Gender distribution, age and comorbidities were similar. Weight loss, changes in comorbidities, quality of life (QoL) and adverse events were registered, as well as gastrointestinal symptoms.

Results

Preoperative BMI was higher in the BPD/DS group (56 vs. 52 kg/m²); despite this the postoperative BMI was lower (31 vs. 36 kg/m², $p < 0.001$). Resolution of diabetes and dyslipidemia was higher after BPD/DS, otherwise both groups had a similar reduction in comorbidities. There was no difference in QoL. Adverse events were less common after RYGB (14% vs. 27%). Overall, the BPD/DS group had a superior BAROS-score ($p < 0.05$). Dumping was more common after RYGB ($p < 0.001$), while reflux, diarrhea, fecal incontinence and problems with malodorous flatus were more common after BPD/DS (all $p < 0.05$). Frequency of nausea/vomiting and abdominal pain were similar.

Conclusion

Patients with super obesity have a better weight reduction and metabolic control with BPD/DS, at the cost of higher incidence of adverse events, compared to patients operated with RYGB.

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REVISIONAL BARIATRIC SURGERY : BILIPANCREATIC DIVERSION IN DIFFICULT CASES

Malabsorptive bariatric operations

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Introduction

Bariatric surgery is able to improve obesity related co-morbidities. Aim of this study was to inquire the effects of BPD procedures on metabolic and cardiovascular parameters, as well as the complications and nutritional deficiencies.

Objectives

To evaluate the results of applying the technique of Scopinaro DBP, after the failure of the application of adjustable gastric band or sleeve gastrectomy.

Methods

Consecutive 100 patients studied between 2009 and 2014 were called back after an average period of 18 months. 31 went through Duodenal Switch and the remaining 69 to Scopinaro´s Method. Cases of failed gastric banding or vertical gastrectomy were considered as a revision procedure. There were analyzed for BMI, blood glucose, cholesterol, and triglycerides, blood pressure, and sleep apnea criteria.

Results

Of the 100 patients, 79 were female and average age was 48,1 years. The mean preoperative weight was 133,8kg and average preoperative BMI was 50,9 kg/m². Diabetes, hypertension and metabolic syndrome disappeared more in surgery than in control patients. No mortality and no intraoperative complications were observed. There were 2 cases of perioperative major complications. There were registered 12 cases of iron deficiency and no cases of serious protein deficiency. In 17 patients, an incisional ventral hernia was observed 8-12 months postoperatively. No cases that underwent revision surgery. Gradual progressive weight loss was obtained. In 90% of the cases, the initial excess weight decreased in about 70% after 18 months.

Conclusion

The data analysis has confirmed the excellent weight loss obtained after BPD. Given these results and the favorable effect on comorbidities and quality of life, BPD is a valid option as surgical treatment of morbid obesity.



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DS / SADI-S IN SUPER-OBESITY: ONE OR TWO-STAGE SURGERY?

Malabsorptive bariatric operations

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Introduction

Super-obesity (Body Mass Index (BMI) ≥ 50 kg/m²) remains a challenge to the bariatric surgeon. Surgical strategies in these patients are not well established. Two stage surgery is frequently adopted to reduce risk.

Objectives

The objective of this study is to compare the short term results and complications of 1- vs. 2-stage laparoscopic surgical approach, in patients with BMI ≥ 50 kg/m².

Methods

Retrospective charts review of the complications and outcomes, between June 2010 and July 2016, for patients with a BMI ≥ 50 kg/m² who underwent directly duodenal switch (DS) / duodenoileal bypass with sleeve (SADI-S) (1-stage) or a sleeve gastrectomy (SG), as the first step of DS or SADI-S (2-stage).

Results

Seventy-five patients were enrolled. The mean BMI was 53,3 kg/m² in the 1-stage group (DS/SADI-S) and 56,8 kg/m² in the 2-stage group (SG). Six patients (16%) in the 1-stage and four patients (11%) in the 2-stage group had complications. Three patients in DS/SADI-S group needed reintervention. No mortality was found. With one year follow-up, percentage of excess of BMI loss (%EBMIL) was 78% and 59% in the 1-stage and 2- stage groups, respectively.

Conclusion

In patients with BMI ≥ 50 kg/m² a 1-stage DS/SADI-S obtains in the short term a better percentage of excess of BMI loss, with no significant differences in terms of complications.

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SADI-P (SINGLE ANASTOMOSIS DUODENO-ILIAL WITH GASTRIC PPLICATION)

Malabsorptive bariatric operations

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Background

Gastric plication is an emergent restrictive gastric surgery. Short and mid-term results on excess weight are comparative to other restrictive surgeries. The complications rate notably bleeding and gastric leak are extremely rare in comparison to other restrictive surgeries. Single anastomosis duodeno-iliac is also a new malabsorptive procedure, highly effective on excess weight and metabolic syndrome. The authors propose a combination of gastric plication with SADI-P to reduce the cost of bariatric surgeries, the rate of complications for a better outcome. They present a step-by-step video demonstration of this new technique.

Introduction

SADI-P is a combination between two procedures . gastric plication to reduce the stomach capacity over a 40 french tube and duodeno-iliac anastomosis at 3 m far from the ileo-cecal junction.

Objectives

Reducing the rate of complications and the cost of bariatric surgery and to give the best result on excess weight loss on long term.

Methods

step 1: complete liberation of the greater curvature of the stomach

step 2: gastric folding inward over a 40 french tube

step 3: folding of the stomach in multiple bites into two rows of running suture from the GE junction to 3cm from the pylorus

step 4: transaction of D1 at 3cm from the pylorus

step 5: termino-lateral ileo-duodenal anastomosis

Results

The procedure is under evaluation. 50 cases were performed in 2016.

Percentage excess weight loss is 80%.

The cost is reduced by 40%.

Conclusion

SADI-P is an effective, safe procedure that can reduce the price of bariatric surgery with excellent result on long term.



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WEIGHT LOSS FAILURE AND WEIGHT REGAIN AFTER ROUX-EN-Y GASTRIC BYPASS: AN INTERNATIONAL QUESTIONNAIRE ON OPINIONS AND EXPERIENCES OF BARIATRIC SURGEONS

Management of weight regain after surgery

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Introduction

The Roux-en-Y gastric bypass (RYGB) has shown the best results in weight loss and reduction of comorbidities. However, 1 in 5 patients who underwent RYGB experience insufficient weight loss (weight loss failure, WLF) or excessive weight regain (WR). In literature there is no clear definition for WLF or WR, nor is there consensus about the best treatment options.

Objectives

Investigate whether there is consensus amongst bariatric surgeons on the definition of WLF and WR in a clinical setting.

Methods

All surgeons specialized in bariatric surgery in the Netherlands and Belgium were invited to participate in a digital survey. The online questionnaire consisted of multiple-choice questions about WLF and WR, considering cut-off points, post-operative terms and treatment options.

Results

At the time of abstract submission 45 surgeons participated. Most surgeons (44,4%) consider WLF or WR at least 18 months after RYGB. WLF was most frequently defined as excess weight loss less than 50% (62,2%) or BMI over 35 (35,6%), with a clear preference for excess weight loss. Total body weight loss was not considered significant (55,6%). The percentage of weight gain compared to the lowest weight is considered the most reliable determining factor in WR (48,9%), with a cut-off point of 20% (34,9%).

Conclusion

There is no consensus about the definition for WLF and WR after RYGB. This is reason to consider the formation of an international panel of experts to compose a clear definition by Delphi method. This definition can be used in further scientific research and clinical setting.

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TAILORED SURGICAL TREATMENT FOR WEIGHT LOSS (WL) FAILURE AFTER ROUX EN Y GASTRIC BYPASS (RYGB). PRELIMINARY RESULTS OF A PILOT STUDY

Management of weight regain after surgery

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Background

Despite the overall effectiveness of RYGB, an estimated 15 to 25% of patients struggle to maintain long-term weight loss

Introduction

No consensus on ideal treatment

Objectives

To determine the safety and effectiveness of RYGB distalization in a group of patients with WL failure (%EWL < 50%)

Methods

3D CT scan and upper GI endoscopy provided data from the anatomical characteristics. The studied patients (n=4) were described to have enough volume to ensure correct oral intake and food pool. Surgical technique consisted of transection of the alimentary limb (AL) close to the jejunum-jejunostomy, and reimplantation of it approximately at 150 cm proximal to the ileocecal valve

Results

The cohort had a mean age of 43.7 ± 5.7 years, and mean BMI of 42.9 ± 7.0 kg/m² at the time of revision (%EWL of 28.4 ± 14.5). All procedures were performed laparoscopically. Mean operative time was 85.0 ± 26.4 min. No intraoperative complications were reported. Patients were discharged from the hospital at 2 days after surgery. With a mean follow-up of 6 months, mean BMI was 37.1 ± 5.1 Kg/m², and mean %EWL and %TWL was: 50.0 ± 14.1 and 26.1 ± 4.4 , respectively. Metabolic data showed normal number of plasma total proteins (64.6 ± 3.0 g/L) as well as albumin (39.3 ± 3.5 g/L). Mean number of bowel movements was 5 per day and only one patient required pancreatic enzymes supplementation

Conclusion

Shortening the common channel up to 150 cm from the ileocecal valve is a safe and effective procedure. Study of anatomical variations is mandatory

□
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CONVERSION OF LAPAROSCOPIC SLEEVE GASTRECTOMY INTO LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS AND MINI GASTRIC BYPASS: RETROSPECTIVE ANALYSIS OF 23 CASES

Management of weight regain after surgery

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Background

Laparoscopic Sleeve Gastrectomy (LSG) has been increasingly used as a primary bariatric procedure over the last decade.

Introduction

However, weight loss failure occurs in a significant number of patients. One option in order to achieve additional weight loss is conversion to laparoscopic Roux-en-Y gastric bypass (LRYGB) or laparoscopic mini gastric bypass (LMGB).

Objectives

The aim of this study was to analyze LRYGB and LMGB as revisional procedures for failed LSG.

Methods

Retrospective analysis was performed on patients undergoing conversion from LSG to LMGB or LRYGB for weight loss failure between 2012 and 2015 at the Limmattal Hospital in Zurich-Schlieren. Patients were reassessed for weight loss and complications at 12 months postoperatively.

Results

Twenty-three patients, 16 women and 7 men with a mean age of 45.4 years (range 25 to 70 years). The mean preoperative body mass index was 42.5 kg/m² (SD ± 7.8 kg/m²). All conversions were performed laparoscopically. The mean additional excess weight loss at 12 months was 22.0% (SD ±17.5%) for the LMGB and 21.8% (SD ±13.1%) for the LRYGB respectively. There was 1 major complication with an overall morbidity rate of 13%. There was no mortality.

Conclusion

Conversion of LSG into LMGB and LRYGB is feasible and safe. Both procedures are effective in the short term with a mean additional EWL of 21.9% at 12 months. Long-term results of LMGB and LRYGB as revisional procedures are awaited to establish its efficacy in the long-term.

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WEIGHT MANAGEMENT AFTER BARIATRIC SURGERY: ASSESSMENT OF THE DIAMETER OF THE GASTROJEJUNAL ANASTOMOSIS, GASTRIC POUCH SIZE AND PREOPERATIVE BMI

Management of weight regain after surgery

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Introduction

The literature shows that 15% of the patients that had submitted to a gastroplasty Roux-en-Y, presented weight regain, returning to obesity range, within five and ten years after bariatric surgery. This gain of weight can be related to factors not well defined yet.

Objectives

The objective of this study is to investigate if there is a relation in preoperative BMI, gastric pouch size and gastrojejunal anastomosis and the weight regain.

Methods

In this study, we considered as a gain of weight an increase of more than 15% in relation to weight loss in a period of 2 to 9 years after gastroplasty. We analyzed 72 patients who underwent surgery between 2007 and 2014. There were 25 patients excluded: pregnancy, cancer, gastric ring and loss of follow-up. The others 47 had done the upper gastrointestinal endoscopy with the measurement of the gastrojejunal anastomosis and the gastric pouch.

Results

The 47 patients included in the study, a 100% of them had surgical success. Of these, 36 patients did not regain weight while the other 11 regained weight. After the analysis of the medians between the groups, it was observed that the preoperative BMI (40.1 and 48, respectively, p-value 0.01) showed statistical relevance to weight regain, what did not occur with the other parameters, like the diameter of the gastrojejunal anastomosis (1.5 and 1.5, p-value 0.55) and the gastric pouch size (6 and 6, p-value 0.54).

Conclusion

Therefore, the preoperative BMI was the only parameter, in this study, that was correlated with weight regain after gastroplasty.

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COMPLEMENT PROTEINS IN LONG-TERM WEIGHT RESPONDERS AND NON-RESPONDERS AFTER GASTRIC BYPASS

Management of weight regain after surgery

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Introduction

Gastric bypass (GBP) surgery leads to long-term weight loss and has been associated with amelioration of the low-grade inflammation associated with morbid obesity as measured by complement proteins. Postoperatively, complement protein levels correlate to insulin levels and BMI. Nevertheless, about 20% of patients do not achieve satisfactory long-term weight results.

Objectives

To study if levels of complement proteins differ between long-term weight responders and non-responders after GBP.

Methods

Female post-GBP subjects were studied, 10 weight responders (BMI 27.3 and excess BMI loss, EBMI, of 87.2% after 12.2 years) and 10 non-responders (BMI 43.7 and EBMI of 18.6% after 13.3 years). Groups were matched for preoperative age, BMI and follow-up years. Using nephelometry, levels of complement proteins C3 and C4, as well as factor B (FB) were quantified during fasting and during an oral glucose tolerance test (OGTT). Also, measures of glucose homeostasis were compared between the groups.

Results

Weight responders showed no differences in fasting C3, C4 or FB compared to non-responders. During an OGTT, weight responders showed lower levels of C4 and FB compared to non-responders. Both groups displayed similar insulin sensitivity and β -cell function.

Conclusion

Early postoperative changes notwithstanding, subpar long-term weight result might be associated with an higher complement activity in response to a glycemic load.

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NIGHT BLINDNESS IN DUODENAL SWITCH SURGERY PATIENTS-AN EFFECTIVE TREATMENT AT LAST!!!

Medical management of bariatric patients

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Background

Duodenal switch surgery (DSS) is one of the most malabsorptive bariatric surgery. It can lead to severe deficiency of fat soluble vitamins including vitamin A leading to night blindness, which also depends on the length of the common channel. Oral vitamin A supplementation has not been associated with improved serum vitamin A levels in a large cohort of DSS patients in our tertiary level bariatric surgery unit.

Introduction

We are sharing our experience of long term medical management of vitamin A deficiency in DSS patients in our unit where DSS is commonly performed.

Objectives

To show that vitamin A 100,000 IU/amp intramuscular injections are an effective mode of treatment of severe symptomatic vitamin A deficiency in DSS patients.

Methods

Three DSS patients symptomatic of vitamin A deficiency (blurry vision and markedly impaired night vision) were treated with oral, intravenous and intramuscular modes of vitamin A supplementation at different time periods.

Results

All three patients could not achieve normal serum levels of vitamin A or symptomatic relief by long term oral supplementation of vitamin A -16000 IU per day or Vitilipid intravenous infusions (Vitamin A 100,000 IU/bag). However intramuscular injections of vitamin A 100,000 IU/day for three days managed to normalize vitamin A level with marked improvement in vision and other ocular symptoms

Conclusion

Vitamin A injections 100,000 IU/day for 3 days is an effective mode of treatment for night blindness in DSS patients. 3 monthly Vitamin A i.m. injection (100,000 IU) in these high risk patients should be considered as maintenance dose with adequate monitoring.

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HEALTHCARE COST COMPARISON BETWEEN MORBIDLY OBESE INDIAN PATIENTS UNDERGOING BARIATRIC SURGERY VERSUS CONVENTIONAL TREATMENT

Medical management of bariatric patients

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Background

Bariatric surgery (BS) is effective treatment for morbid obesity. However, in absence of health economics studies in India, surgeons and patients/payers are uncertain about its long term economic implications.

Introduction

x

Objectives

To evaluate and compare the cumulative healthcare cost incurred by morbidly obese patients opting for BS with those opting for conventional treatment over 10-year period.

Methods

Cost comparison model was developed using a combination of decision tree and Markov model. Laparoscopic Roux-en-Y gastric bypass and Laparoscopic sleeve gastrectomy were the BS arm. Transition probabilities and BS related outcomes data were sourced from published literature. The analysis considered direct medical costs including cost of bariatric surgery and associated complications, drugs, physician visits and hospitalization for co-morbidities and cost of obesity management measures. All costs were discounted at 3%. The results were expressed in terms of difference in total per-patient healthcare costs incurred by patients in two arms.

Results

For a hypothetical population with mean age of 40 years and a mean BMI of 43 kg/m², the total per-patient cost for BS arm was ₹688k compared to ₹1,015k for the conventional arm over a period of 10 years. Per patient co-morbidity management cost, over 10 years, in the BS arm is only ~30% of that in conventional arm. Current analysis estimated that initial investment in BS will be recouped in < 6 years post-surgery.

Conclusion

The current analysis shows that although bariatric surgery requires an initial investment, it will result in lower healthcare expenses compared to conventional treatment, in a five year time period after surgery

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HIGH DOSE VITAMIN E SUPPLEMENTATION INCREASES RISK OF VITAMIN K DEFICIENCY RELATED HAEMORRHAGIC COMPLICATIONS IN BARIATRIC SURGERY PATIENTS

Medical management of bariatric patients

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Background

Fat soluble vitamin deficiencies in patients with severe malabsorptive bariatric surgeries like Duodenal Switch surgery (DSS) can sometimes be challenging to treat, especially with coexisting multiple nutritional deficiencies.

Introduction

We are sharing our experience of complex clinical presentation and management of a DSS patient with symptomatic vitamin K deficiency augmented by vitamin E replacement.

Objectives

To show that vitamin E supplementation in DSS patients with coexisting vitamin K deficiency can lead to haemorrhagic symptoms due to anti-coagulant effect of vitamin E.

Methods

A DSS patient presenting with history of spontaneous subcutaneous hemorrhages was investigated.

Results

Slight prolongation of Prothrombin time (14.8 sec) with vitamin K deficiency (<0.10ug/l) and elevated functional marker, PIVKA-II (>10.00 au/mL, normal-0.00-0.20) was found suggesting low tissue vitamin K stores. Patient was treated with intravenous phytopenadione and was discharged on Vitamin K oral tablets 10mg/day. Repeat assessment in 4 weeks time revealed mild improvement in vitamin K level with persisting symptoms of spontaneous subcutaneous haemorrhages. Detailed history taking revealed patient was on oral vitamin E supplements 1000 U/day (over the counter). Oral vitamin E supplements were stopped and vitamin K level and PIVKA-II normalized in 3 weeks time with cessation of any further haemorrhagic symptoms.

Conclusion

Vitamin E supplementation in vitamin K deficient patients can lead to haemorrhagic toxicity due to anticoagulant effect of vitamin E on vitamin K associated coagulation pathway. Careful monitoring of vitamin K levels along with functional markers (PIVKA-II) in high risk DSS symptomatic patients should also include exclusion of any potential contributors like over-replacement of vitamin E supplementation.

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INFLAMMATORY BOWEL DISEASE IS NOT A CONTRAINDICATION FOR BARIATRIC SURGERY

Medical management of bariatric patients

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Introduction

Inflammatory Bowel Diseases (IBD) are listed as a contraindication to bariatric surgery in various guidelines. Therefore, little is known about safety and efficacy of bariatric surgery in IBD patients.

Objectives

We assessed the safety and efficacy of bariatric surgery and postoperative quality of life (QoL) in IBD patients.

Methods

All IBD patients who underwent bariatric surgery were included. Complications, mortality, reoperations and micronutrient deficiencies were analyzed. Weight loss was assessed 6, 12 and 24 months after surgery. Postoperative QoL was assessed using a disease specific Inflammatory Bowel Disease Questionnaire (IBDQ).

Results

Fifty patients were included in this study. Bariatric procedures included Roux-en-Y Gastric Bypass (RYGB), Sleeve Gastrectomy (SG), Gastric Banding (LAGB) and revisional surgery (REDO). There was no mortality in the entire follow-up period and there were no perioperative complications. Two major complications occurred during follow-up. Mean percentage (\pm SD) of overall excess weight loss (%EWL) and total body weight loss (%TBWL), 12 months after surgery, were $63.0 \pm 26.6\%$ and $26.6 \pm 10.9\%$ respectively. Twenty-four months after surgery, mean overall %EWL and %TBWL were 64.4 ± 30.7 and 27.7 ± 12.9 respectively. Mean Bariatric Analysis and Reporting Outcome System (BAROS) score was 3.30 ± 2.43 . Median total IBDQ score was 167.00 (min. 77; max. 218).

Conclusion

As bariatric procedures appear safe and effective in this IBD population, one could question why bariatric surgery in this population is contraindicated. Nevertheless, close monitoring to assure safety and a favourable course remains essential.

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BARIATRIC SURGERY IN PATIENTS WITH LIVER CIRRHOSIS.: TIPS (TRANSJUGULAR INTRAHEPATIC PORTOSYSTEMIC SHUNT) THE SOLUTION?

Medical management of bariatric patients

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Introduction

Data regarding the management of bariatric patients with cirrhosis are scarce, and there is no strong evidence that supports a specific approach for this group of patients.

Objectives

The aim of this study was to review our experience with cirrhotic patients and portal hypertension undergoing bariatric surgery.

Methods

Two patients, 51 years (BMI=40kg/m²) and 57 years old (BMI=44kg/m²), with a nonalcoholic steatohepatitis (NASH), developed cirrhosis classified respectively Child A5 and A6.

The diagnosis of portal hypertension is suspected in the presence of splenomegaly, thrombocytopenia and oesophageal varices.

After calculating the porto-cave pressure gradients, it is decided to set up a TIPS (transjugular intrahepatic portosystemic shunt) in order to perform a gastric bypass.

Results

The first patient underwent a 500 ml blood loss during the operation. The follow-up is followed by anemia at 92 g / dl, requiring transfusion of 3 globular pellets. The patient leaves on D6 without further complication. The TIPS is removed at D30.

The second patient had a standard intervention, and the postoperative follow-up was simple. On the other hand, it developed a complication at D21. TIPS was occluded, resulting in hepatic encephalopathy. The TIPS was removed urgently, allowing the cure within 3 days.

Conclusion

Bariatric surgery can be performed without prohibitive complication in carefully selected patients with cirrhosis. A study of the literature does not show an obvious solution for the management of portal hypertension. We recommend the TIPS (transjugular intrahepatic portosystemic shunt) for the management of these patients.

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RANDOMISED TRIAL OF LIFESTYLE COUNSELING WITH AND WITHOUT MEAL REPLACEMENT IN THAI PATIENTS WITH OBESITY

Medical management of bariatric patients

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Introduction

There are no data examining the efficacy of lifestyle education intervention (LEI) with meal replacement upon anthropometric and metabolic outcomes in Thai patients with obesity.

Objectives

We aimed to evaluate the compliance and effects of LEI alone or with meal replacements (LEI+MR).

Methods

110 patients with obesity and metabolic syndrome¹ were recruited and randomised (1:1) to a 12-week LEI (five 30-60 minute face-to-face sessions focused upon nutrition, physical activity and review of food diaries) or LEI+MR (2 MR/day, each 218kcal, protein 15.92g). Patients underwent assessments at baseline, 2, 4, 8, 12 weeks and weight was recorded at 26 and 52 weeks.

Results

At baseline the groups were matched for age (42.5±1.1 yrs), sex, co-morbidities, metabolic and anthropometric indices (BMI=34.6±0.6 kg/m²). 45/52 patients (86.5%) randomised to LEI and 48/58 (82.8%) randomised to LEI+MR completed the intervention. At 12 weeks both groups exhibited significant weight-loss and glycaemic improvements but these were greater in the LEI+MR group (Table 1). Significant weight-loss persisted at 3 months post-intervention with no difference between groups. However, by 6 months post-intervention weight was similar to baseline.

Parameters	LEI		LEI+MR	
	Baseline	12-week	Baseline	12-week
Weight, kg	91.4±3.4	89.5±3.4***	87.2±2.9	84.1±2.9*** ##
Fat mass, %	38.6±1.0	37.0±1.0***	38.9±1.0	37.8±0.9***
FPG, mmol/L	5.7±0.1	5.6±0.1	5.9±0.1	5.5±0.1*** #
HbA _{1c} , mmol/mol	40.1±0.7*	41.0 ±0.7	41.2±0.7	40.8 ±0.7#

Table 1: Data are mean±sem, *** p<0.001 within group, # p<0.05 and ## p<0.01 between groups

Conclusion

LEI and LEI+MR were acceptable to Thai patients with obesity and led to significant improvement in weight and glycaemic indices. LEI+MR group exhibited greater benefits at 12 weeks. A longer-term study aimed at maintaining weight-loss is now warranted.

¹ Alberti KG, et al. Diabet Med 2006;23:469-80.

□

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ESTABLISHING A REPRODUCIBLE MURINE ANIMAL MODEL OF SINGLE ANASTOMOSIS DUODENAL-ILÉAL AFTER SLEEVE GASTRECTOMY: FIRST STEP OF A METABOLIC STUDY

New (Non Standard) Surgical Techniques

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Background

The single anastomosis duodenal-ileal with sleeve gastrectomy (SADI-S) seems to offer good results for the treatment of morbid obesity and its metabolic complications.

Introduction

Few data are available in literature about the effectiveness of SADI-S. Comparison between this procedure to a standard bariatric procedure in terms of weight loss and resolution rate of type 2 diabetes was never reported.

Objectives

The aim of this study was to develop a reproducible murine model of SADI-S.

Methods

SADI-S was performed on 31 Winstar male rats with 2 weeks follow-up.

The surgical technique and complications were carefully described.

The mean initial weight was 339 ± 76 g. The mean operative time was 40 ± 15 minutes.

Results

The mean weight at the end of the study period was 257 ± 97 kg.

25 of the 31 rats survived to the end of the study period. One death occurred for an peri-operative cardiac failure, the others animal deceased for the anastomosis leak between 1 to 6 postoperative day.

In the 25 survived animal no anastomotic leaks were identified at necropsy at the end of observation.

Conclusion

The murine model of SADI-S can be consistently reproduced with preliminary good results.

Our pre-clinic study represent a first step of a metabolic homeostasis investigations after SADI-S in order to compare SADI-S postoperative weight loss and diabetic resolutions with others surgical standard technique results.

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EFFICACY OF SINGLE ANASTOMOSIS SLEEVE ILEAL (SASI) BYPASS FOR TYPE-2 DIABETIC OBESE PATIENTS: GASTRIC BIPARTITION, A NOVEL METABOLIC SURGERY PROCEDURE

New (Non Standard) Surgical Techniques

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Introduction

single anastomosis sleeve ileal (SASI) bypass is a Novel Metabolic/Bariatric Surgery operation based on mini gastric bypass operation and Santoro's operation in which a sleeve gastrectomy is followed by a side to side gastro-ileal anastomosis.

Objectives

Objectives: The purpose of this study is to report 2 years follow up of the outcomes of SASI bypass as a therapeutic option for obese T2DM patients.

Methods

Methods: 120 obese patients with type 2 diabetes underwent laparoscopic SASI bypass with one year follow up. Sleeve gastrectomy performed over a 36-Fr bougie, 6 cm from the pylorus, and 250 cm from the ileocecal valve the ileum brought to be anastomosis side to side with the antrum. Data collected included comorbidity resolution, percent excess weight loss (%EWL), and one-year morbidity and mortality.

Results

Results: The mean BMI of 48.7 ± 7.6 kg/m² and mean age 40.5 ± 7.9 years were operated on. % EWL reached 90% at one year and all patients have normal glucose level in the first 3 months after surgery. Hypertension remitted in 86%, hypercholesterolemia in 100% and hypertriglyceridemia in 97% of patients. There were 6 postoperative complications; One pulmonary embolism, one postoperative bleeding, one leak from biliary limb and one complete obstruction at the gastro-ileal anastomosis. Six months postoperative, one patient diagnosed as marginal ulcer, 12 months after surgery, one patient reoperated for fear of more excessive weight loss.

Conclusion

Conclusion: SASI bypass is a promising operation that offers excellent weight loss and metabolic result.

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LAPAROSCOPIC MAGENSTRASSE AND MILL GASTROPLASTY (M&M): MID AND LONG-TERM RESULT.

New (Non Standard) Surgical Techniques

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Introduction

The Magenstrasse and Mill is a gastric restrictive procedure without band or stomach resection. We present 4-years outcomes after M&M, including revision, weight change, obesity-related disease.

Objectives

The aim of this study is to confirm the efficacy, safety and side effects of this bariatric procedure at Mid and Long-term.

Methods

We studied a cohort of 126 patients (56 males, 70 females) who were assessed pre-operatively by a multidisciplinary team. Mean age was 46 years old (range 18-72). Mean pre-operatively BMI was 43 Kg/m² (range 35-57 Kg/m²). There were 33 diabetic patients with 28 on insulin. All the surgical procedures were performed by the same surgeon. The M&MG is a tubular gastroplasty preserving the greater stomach.

Results

After a mean follow-up of 35 months (range 12-48), the mean EBWL was 65% at 1 year 66% at 2 years, 59% at 3 years and 57% at 4 years.

The remission rate for diabetes was 30%. 12 out of 28 insuline-dependent patients could stop their insuline. There were significant reductions in triglyceride (-46,4 mg/dl) at two years. The percentage of hypertension improvement 56% at two years.

Incidence of gastroesophageal reflux was low and similar to preop workup. We did not observe vitamin or mineral deficiency throughout the study.

Conclusion

The M&M is a more physiological anti-obesity restrictive procedure which provided good result in terms of EBWL and comorbidities improvement with a low incidence of gastroesophageal reflux and vitamin deficiencies.

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BADAR'S PROCEDURE- LAPAROSCOPIC STAPLELESS GASTRIC PLICATION BYPASS

New (Non Standard) Surgical Techniques

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Background

To do stapleless GBP to reduce cost

Introduction

Gastric Bypass Surgery since long is used as a standard form of surgery for weight loss and resolution of comorbidities.

also variations of GBP have been tried throughout the world to suit the local conditions. for poor patients I applied gastric plication as restriction and hand-sewn anastomosis to make surgery stapleless and hence cost effective

Objectives

To evaluate- results of this new technique of performing laparoscopic stapleless bariatric /metabolic procedure.

Methods

All patients undergoing new technique since May 2016 were included in this study
Data included in this study are age, sex, BMI, duration of surgery, complications.
Badar's procedure involves gastric division at antrum with plication of proximal stomach (restriction) and hand sewn bypass of proximal stomach to mid small bowel (malabsorption).

Results

The study included 14(46.7%) men and 16(53.3%) women; with average age of 47years (34-68); the average BMI at one month of 30 patients was preop 44.3(36-61), postop 40(31-54);and at 6 months of 6 patients was preop 45.5(36-61), postop 30.4(26.5-51).

The EWL was 11% at one month and 46% at 6 months.

Resolution of comorbidities- DM-70%, HTN-40%, sleep apnoea -100%, dyslipidemia – 100%.

Duration of surgery was average 100min(85-130).

There were no major complications; minor complications <10% like nausea, upper abdominal discomfort, managed conservatively

The cost of procedure is one third that of GBP at our center.

Conclusion

Badar's procedure is a low cost, safe & effective combined restrictive – malabsorptive weight-loss procedure with minimum complications. It merits more attention in developing country like India.

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SIMULTANEOUS DEBULKING OF GREAT OMENTUM AT PATIENTS WITH OBESITY AND METABOLIC DISORDERS.

New (Non Standard) Surgical Techniques

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Background

Metabolic syndrome is the main reason of global epidemics of type 2 diabetes and cardiovascular disease.

Introduction

Great omentum is part of active abdominal fat tissue. Possibly reducing of intraabdominal fat tissue leads to improving of metabolic status of patient.

Objectives

To substantiate the possibility of using simultaneous omentectomy as a cytoreductive stage of treatment of the metabolic syndrome.

Methods

50 patients with metabolic syndrome and obesity were examined. Patients were divided into two groups. First group included 25 people who underwent surgery for abdominal and/or pelvic organs. The second group of people who, after the main similar stage, performed simultaneous standard omentectomy.

Results

Results and discussion. A theoretical pathogenetic substantiation of the effectiveness of simultaneous omentectomy in patients with abdominal surgical interventions was carried out. It was revealed that the level of glucose in the blood does not reflect the violation of carbohydrate metabolism. At physiological values of glucose in 88% of patients, insulin in 60% - the state of insulin resistance was registered in 92%, while the excess of the index was, on average, 69.9%. After performing simultaneous cytoreduction of visceral fat (omentectomy) insulin resistance was already registered in 64%. At the same time, the severity of insulin resistance decreased in them by an average of 44.91%. Studies showed a decrease in the severity of hyperinsulinemia and insulin resistance in the case of the large-glanding de-baling.

Conclusion

Simultaneous metabolic de-balking should become a routine stage of surgical manual.

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PARTIAL JEJUNAL DIVERSION NEW APPROACH IN MANAGEMENT OF GLYCAEMIC CONTROL IN TYPE 2 DIABETICS

New (Non Standard) Surgical Techniques

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Background

Standard metabolic operations are often considered as too dramatic for achieving T2DM control.

Introduction

Less invasive procedures may meet needs of growing T2DM population. In rodent models, partial jejunal diversion (PJD) exhibited positive impacts on glucose homeostasis.

Objectives

To undertake human feasibility study in T2DM patients.

Methods

15 inadequately controlled T2DM subjects (HbA1c 8.0% to 11.0%), body mass index (BMI) 27.0 - 40.0 kg/m², C-peptide \geq 3 ng/ml/ underwent PJD (side-to-side jejunojejunostomy, constructed 100 cm from the ligament of Treitz and 250 cm from the ileocecal junction), and were followed for one year.

Results

Seven females and 8 males were enrolled. They exhibited at baseline mean (SD): T2DM duration 10.9 years (4-26), age 52.7 years (36 - 60), BMI 34.1 kg/m² (27.4 - 39.8), HbA1c 9.4% (7.8 - 10.7), fasting plasma glucose (FPG) 233.2 mg/dL (151.4 - 338.8), 14 of 15 subjects were receiving $1 \leq$ anti-hyperglycemic agent (AHA), 12 were on insulin. Eleven subjects receiving anti-hypertensives and 10 dyslipidemia medications. Twelve months post-surgery mean(SD) reductions: HbA1c -2.3% (1.3) ($p < 0.001$), FPG -92 mg/dL (53) ($p < 0.001$), weight -10.3% (5.8) ($p < 0.001$). 13 subjects still on at least one AHA, 8 still on insulin; 12 and 9 subjects were receiving anti-hypertensive and dyslipidemic medications, respectively. Seven subjects (46.7%) had HbA1c $< 7\%$ at 12 months post-surgery. Three had HbA1c $\leq 6.5\%$ with AHAs and 1 had HbA1c $\leq 6.5\%$ with no AHAs. PJD was well-tolerated without serious complications. CT confirmed anastomosis patency at 12 months in all subjects.

Conclusion

PJD offers promise in T2DM management and warrants further study.

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THE USE OF UNIDIRECTIONAL KNOTLESS BARBED SUTURE FOR ENTEROTOMY CLOSURE IN ROUX-EN-Y GASTRIC BYPASS: A RANDOMIZED COMPARATIVE STUDY

New (Non Standard) Surgical Techniques

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Introduction

Barbed sutures eliminate the need for knot tying and constant tension kept by a third hand.

Objectives

In this study, we assessed feasibility, safety, and time efficiency of laparoscopic running enterotomy closure for linear stapled Roux-en-Y Gastric Bypass (RYGB) using unidirectional barbed sutures (Stratafix™ 2/0- Ethicon).

Methods

200 patients undergoing laparoscopic RYGB were prospectively randomized regarding running enterotomy closure of the linear stapled gastrojejunal (GJA) and jejunojejunal anastomosis (JJA). Two groups were created: V-group (Vicryl® 2/0—Ethicon) and S-group (Stratafix™ 2/0—Ethicon). Time spent on closing the enterotomies was measured from first needle in until knot and cut (V-group) or last stitch and cut (S-group). If needed, a nonabsorbable “correction” (“c”; in order to close a small hiatus at the anastomosis) or hemostatic (“h”) stitch was made (using a single Prolene® 2/0—Ethicon).

Results

Average total procedure time was similar (S-group 1:01:22, V-group 1:00:44, $P = 0.340$). Closure of the enterotomy (GJA) was significantly shorter in the S-group (07:41 min versus 08:13 min in the V-group, $P = 0.005$). Extra stitches (GJA) were performed in 33 patients (16.5%): 3 (h) and 20 (c) in the V-group and 1 (h) and 9 (c) in the S-group. 4 patients in the V-group suffered from postoperative intraluminal bleeding (3 self-limiting, 1 underwent endoscopic clipping). In the S-group, 1 patient suffered from leakage at the vertical staple line of the stomach.

Conclusion

The use of unidirectional barbed sutures for running enterotomy closure after linear stapled RYGB is feasible and safe. Significant time benefit was seen regarding the closure of the GJA.

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SIMULTANEOUS LIVER TRANSPLANTATION AND SLEEVE GASTRECTOMY PROHIBITIVE COMBINATION OR A NECESSITY?

New (Non Standard) Surgical Techniques

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Introduction

Patients undergoing liver transplant might suffer from nonalcoholic fatty liver disease (NAFLD) recurrence, metabolic syndrome and inflammation caused by obesity and eventually cirrhosis in the transplanted liver. These conditions may be prevented if the obesity is treated. Due to several limitations, they were considered inoperable, but are now beginning to enjoy the benefits of bariatric surgery. Therefore, the field of bariatric surgery in peri-transplant patients is a relatively new and evolving one.

Objectives

To present our experience with an additional innovative approach in the care of morbidly obese liver transplant recipients: a sleeve gastrectomy at the time of liver transplantation.

Methods

A retrospective review of patients who could not achieve a pre-transplantation target BMI of less than 35 kg/m², and underwent combined liver transplantation and sleeve gastrectomy.

Results

Three patients (mean age 44; 2 male, 1 female) with a median BMI of 46.6 kg/m² and a median Model for End Stage Liver Disease score (MELD) of 24 were operated. The mean total weight loss was 27.9% at a median follow up of 13 months (range 3-24 months). None of the patients experienced any problems with immunosuppressive medications intake or graft rejection or dysfunction. Two of the patients had a complete remission of hypertension and diabetes. The addition to the total operative time for SG was around 40 minutes. Two mild complications were recorded. All three are currently alive with normal allograft function.

Conclusion

Combined liver transplantation with simultaneous sleeve gastrectomy appears technically feasible and relatively safe in selected patients.

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DIVERTED MINIGASTRIC BYPASS – OUTCOMES AFTER 400 CASES

New (Non Standard) Surgical Techniques

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Background

Evaluation of the outcomes of 425 cases of a new proposed technique presented by our team since 2013.

Introduction

The diverted minigastric bypass (dMGB) is a new surgical option we are using now for 4 years. It consists in a gastric bypass with a long and thin gastric pouch with a non calibrated gastro-ileostomy, a tailored biliopancreatic limb (150-300 cm) and a Roux en Y diversion with a 100 cm alimentary limb.

In all of the cases we check the bowel ensuring a minimal 300 cm length common limb.

Objectives

The goal of the technique is to get simultaneously a light restriction associated with a mild fat mal-absorption and ileal stimulation and, at the same time, a minimal risk of gastro-esophageal reflux disease (GERD).

Our indications are the patients with a previous GERD, a previous gastric banding or a failed sleeve gastrectomy. The rate of revisional cases is 40% in our series.

Methods

Retrospective systematic review of 425 cases of dMGBs registered in our database.

Results

In an evaluation of the first 425 cases performed, with 82% follow-up (minimal 1 year evaluation) we got an 86% excess BMI loss, 10% of major morbidities, no mortality and 6,5% of surgical reinterventions. The type 2 diabetes improvement rate was 96% including 76% remission cases. The GERD rate was 0,02%.

Conclusion

We conclude this may be a safe and effective alternative to other types of bypass surgery in primary and revisional cases.



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FIRST CASE OF LAPAROSCOPIC DIAPORT (CONTINUOUS INTRAPERITONEAL INSULIN INFUSION PUMP) INSERTION IN UK

New (Non Standard) Surgical Techniques

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Background

There is a small cohort of Type 1 diabetes mellitus patients who are unable to achieve good glycemic control despite the use of a conventional continuous subcutaneous insulin infusion pump. There is particular difficulty with hypoglycemic episodes.

Introduction

On the market actually, there is one further treatment option in the form of a continuous intraperitoneal insulin infusion pump [diaport].

Objectives

Insertion of Diaport Device.

Methods

We present the case of a 56-year-old gentleman with lifelong type 1 diabetes. Due to chronic microvascular complications and damage to his microcirculation despite the use of a conventional insulin pump, he has been suffering difficult glycemic control, particularly hypoglycemic episodes.

Results

We present in this video, Europe's first laparoscopically assisted insertion of a continuous intraperitoneal insulin infusion pump. A diagnostic laparoscopy was performed through 5 mm port and the port catheter was accurately placed under direct vision on top of the liver. The external component was inserted using the manufacturer's pre-supplied kit by extending the LUQ port site.

Conclusion

The diaport device is an option in helping diabetic patients achieve much tighter diabetic control and can also be used prior to bariatric surgery. To this date there is only one other patient in the UK with such a pump, she initially had her inserted in Australia several years ago.

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FIXATION OF THE JEJUNUM IS A SAFE, EASY AND EFFICIENT MANEUVER TO AVOID INTERNAL HERNIA IN GASTRIC BYPASS

New (Non Standard) Surgical Techniques

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Introduction

Internal hernia in Petersen's space occurs when the jejunum slides from the left to the right side of Petersen's space. The closure of Petersen's defect can be technically very difficult in some patients and does not prevent hernia in all patients. Fixing the beginning of the jejunum on the left side of the Petersen's space can prevent bowel migration to right side, avoiding formation of internal hernia, even keeping Petersen's space open

Objectives

Evaluating the safety and efficiency of the fixation of the jejunum in the transverse mesocolon to avoid Petersen's hernia

Methods

Between January/2014 and December/2016, 458 patients were submitted to laparoscopic Roux-en-Y gastric bypass in São Domingos Hospital. During the surgery, it was performed a fixation of the initial portion of the jejunum in the transverse mesocolon, on the left side of the Petersen's space, with stitches with nonabsorbable wire. In 2014 and 2015, it was performed with separated stitches, and in 2016, with continuous suture. The Petersen's space was left open in all patients. Internal hernia was investigated with a questionnaire and with tomography if necessary

Results

The mean follow-up was 24 months (5-40 months). During this period, no one patient presented internal hernia. There were 24 patients that presented intestinal obstruction between the stitches, when the maneuver was performed with separated stitches. No one patient presented intestinal obstruction since the maneuver started to be performed with continuous suture

Conclusion

Fixation of the jejunum with continuous suture in transverse mesocolon is a safe and very efficient alternative to avoid Petersen's hernia

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LAPAROSCOPIC SLEEVE GASTRECTOMY WITHOUT STAPLE-LINE REINFORCEMENT IS A SAFE PROCEDURE

New (Non Standard) Surgical Techniques

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Introduction

Laparoscopic Sleeve Gastrectomy (LSG) for weight loss now accounts for 21.9% of NHS bariatric procedures in the UK. Staple-line reinforcement devices have been developed to reduce the incidence of staple-line leak. The added cost of staple-line reinforcement is approximately £100 per staple firing.

Objectives

The aim of this study was to assess the safety of LSG without staple-line reinforcement.

Methods

An analysis of a prospectively collected bariatric database was performed. All LSGs performed at a regional bariatric surgery centre between 1st September 2009 and 31st August 2014 were analysed. An average of six firings of a stapler were required for LSG. Any bleeding points or split serosal edges were buttressed with a continuous 2/0 PDS suture.

Patient records were reviewed to establish the incidence of post-operative complications including staple-line leak. Two year follow-up data was retrieved to establish percentage excess weight loss at 12 and 24 months as well as co-morbidity data.

Results

Of the 125 patients who underwent LSG, two patients (1.6%) suffered a complication requiring a return to theatre: One drain retraction (0.8%) and one staple-line leak (0.8%) following an unintentional firing of a staple over the bougie.

There was a 47.3% average excess weight loss at 12 months and 52.7% at 24 months. There was a 61% reduction in number of patients prescribed anti-hypertensive medicines and 54% reduction in number of patients prescribed anti-diabetic medicines at 24 month review.

Conclusion

LSG without staple-line reinforcement is a safe procedure with an acceptably low rate of complications.

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LAPAROSCOPIC RESECTION OF THE FUNDUS OF THE STOMACH IN COMBINATION WITH THE PLICATION OF HIS BODY

New (Non Standard) Surgical Techniques

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Background

The problem of obesity now comes to the forefront in economically developed countries. Unfortunately, along with the aesthetic defects associated with excess weight, patients also suffer from serious somatic diseases - diabetes, hypertension, hypercholesterolemia. One Of the ways to resolve this issue is to perform a bariatric operation.

Introduction

Currently, the "gold standard" of bariatric surgery is the implementation of sleeve gastric resection . Therefore, gastric plication operation is also aimed at reducing stomach volume. The disadvantages of this operation is the frequent development of emesis in patients, the possibility of relapse due to the "unfolding" of the fundus of the stomach.

Objectives

The subject of the study were 7 patients with obesity (BMI 36-45 kg/m²).

Methods

We have developed a new surgical intervention, which consisted in a combination of gastric plication and resection of its fundus. Thus, the effect of the intervention is achieved by restrictive components of the plication and resection of the stomach.

Results

Operative treatment was performed in 8 patients with obesity. There were no intra- and postoperative complications. There was also a lack of vomiting, which was noted in patients after classic plication. After 12 months after surgery, the loss of overweight in all patients was 40 to 65% . .

Conclusion

The application of gastroplication in combination with resection of the fundus of the stomach allows us to say that this method is fairly simple technically, easily tolerated by the patient, leads to normalization of the body mass and requires less material costs compared with sleeve resection of the stomach



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SMALL BOWEL BYPASS IN THE TREATMENT OF GASTRIC COMPLICATIONS AFTER PRIMARY AND REVISIONS OF DUODENAL SWITCH

New (Non Standard) Surgical Techniques

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Background

Gastric complications after primary sleeve or revisions are rare, but could be difficult to manage and if not managed properly could be devastating.

Introduction

Technique of using a segment of the small bowel created from the proximal jejunum and connecting sleeve with a proximal alimentary loop is preserving the sleeve and can control problems without compromising weight loss after the Duodenal switch.

Objectives

To show that this technique is safe and effective.

Methods

2 patients many years after DS with a functional gastric obstruction secondary to dilated fundus, 2 patients post revision of RYGB to DS secondary to pyloric dysfunction, 4 patients with early leaks one after primary and 3 post revision from RYGB to DS, 2 chronic fistula patients had been managed with this technique. Small bowel bypass was created by using 30 cm segment of proximal jejunum or roux loop, connected to perforated area, dilated fundus or pre pyloric area proximally and to the first portion of the alimentary loop distally.

Results

All the problems had been resolved with this method. One complication secondary to iatrogenic perforation by NGT.

Conclusion

Small bowel bypass is a useful technique to manage different sleeve complications in DS patients. This approach is preserving sleeve and does not compromise weight loss.



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"HAND-OVER-HAND GRASPING TECHNIQUE": A FAST AND SAFE PROCEDURE FOR SPECIMEN EXTRACTION IN LAPAROSCOPIC SLEEVE GASTRECTOMY.

New (Non Standard) Surgical Techniques

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Background

"Hand-over-hand grasping technique": a fast and safe procedure for specimen extraction in laparoscopic sleeve gastrectomy.

Introduction

The surgical technique of Laparoscopic Sleeve gastrectomy is well standardized, but the specimen extraction is still a matter of controversy between surgeons.

Objectives

We present a simple, fast, safe, and reproducible technique of specimen extraction after laparoscopic Sleeve gastrectomy.

Methods

After the sleeve gastrectomy is completed, the specimen is introduced in a retrieval bag. The specimen orientation is very important, so that the antrum is positioned at the bottom of the bag, and the fundus should exceed the closure of the bag by about 2cm. The 2cm of the held fundus is introduced under direct vision in the 12mm trocar. The stomach is held by a Kocher once it's outside the peritoneal cavity. The bag is opened and everted to protect the wound. The pneumoperitoneum is deflated to relax the abdominal wall. The specimen is removed by simple traction hand-over-hand grasping with gauze.

Results

We applied this technique to approximately 220 consecutive patients with an average body mass index of 42.5kg/m². All surgical specimens were extracted through the orifice of 12mm trocar without wound enlargement. The aponeurosis of this orifice is not closed at the end of the operation. At the first postoperative visit (1 month), none of the patients had wound infection. Uncomplicated incisional hernia was detected in only one patient (0.5%).

Conclusion

This video shows a simple, reproducible, and time saving technique for specimen extraction. It avoids the use of 15mm trocar, and no need to close the aponeurotic defect.



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A NOVEL TECHNIQUE FOR LAPAROSCOPIC SADI-S

New (Non Standard) Surgical Techniques

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Introduction

Malabsorptive procedures such as Duodenal Switch (DS) and Biliopancreatic Diversion (BPD) are extremely effective bariatric operations, yet account for <1.5% of all bariatric procedures performed worldwide at present. Reasons for such low volume include perceived technical complexity of these operations and concerns for major postoperative complications. The single anastomosis duodeno-ileal bypass with sleeve gastrectomy (SADI-S) is a modification of the standard DS procedure which can achieve equivalent clinical benefit but with less risk of post-operative nutritional complications.

Objectives

Herein, we describe a novel technique for Laparoscopic SADI-S.

Methods

SADI-S may be considered as a single-stage procedure for morbidly obese individuals for whom a malabsorptive operation is indicated. Our preferred practice is to perform SADI-S as a second-stage procedure following a sleeve gastrectomy in super-super obese individuals. However, increasingly we are resorting to SADI-S as a useful salvage procedure following weight regain after gastric bypass.

Results

We describe a novel technique for performing a laparoscopic duodeno-ileal anastomosis, based on an anterior approach for mobilisation of the duodenum. This enables a longer and more mobile duodenal segment for constructing the duodeno-ileal anastomosis. It also decreases the risk of bleeding from short posterior branches of the gastroduodenal artery and therefore maximises vascularity of the proximal part of the duodeno-ileal anastomosis.

Conclusion

Using this technique, SADI-S is a safe and effective salvage procedure for patients with weight regain after both gastric bypass and sleeve gastrectomy. It is technically less challenging than the standard DS procedure, and is potentially associated with lower risk of perioperative complications.

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CRURORRAPHY USING RESIDUAL SLEEVE WITH CONVERSION INTO GASTRIC BYPASS FOR GERD AND HIATUS HERNIA POST SLEEVE GASTRECTOMY

New (Non Standard) Surgical Techniques

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Introduction

Laparoscopic sleeve gastrectomy (LSG) has gained popularity as standalone procedure in management of obesity and related co-morbidities. Bariatric surgery, when combined with lifestyle is a successful treatment modality in the obese patient. The literature clearly suggests an increased incidence of GERD and hiatus hernia following LSG. Unfortunately limited treatment options are available in these patients. Crurorrhaphy using distal sleeve with conversion in to Roux-en-Y gastric bypass (RYGB) can be tried with an expectation of good results.

Objectives

Our objective is to illustrate a safe and durable surgical option in the treatment of patients with medically refractory GERD and hiatus hernia post sleeve gastrectomy.

Methods

After placing ports, adhesiolysis and standard dissection of the hiatus is performed. A primary crural repair with interrupted non absorbable sutures is performed. Sleeve was transacted to create gastric pouch. The crurorrhaphy using residual sleeve was done as an effort to prevent migration of stomach pouch in the mediastinum. Finally it was converted in to standard Roux En Y gastric bypass.

Results

No peri-procedural complications were encountered. Standard post-antireflux surgery clinical follow-up is to be taken. GERD clinical questionnaire at 1 month after the surgery demonstrated excellent GERD symptom control without any dysphagia

Conclusion

Crurorrhaphy with conversion in to gastric bypass can be a valid treatment option for the post LSG patient with GERD and hiatus hernia in which the gastric fundus is absent thus eliminating standard fundoplication as a reasonable option. This can be a safe and durable treatment option in this uniquely challenging patient.

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STOMACH INTESTINAL AND PYLORUS SPARING (SIPS) PROCEDURE: THE FIRST EXPERIENCE IN EAST ASIA

New (Non Standard) Surgical Techniques

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Introduction

In east Asian, digestive ulcers and gastric cancer are common. Therefore, Roux-en-Y gastric bypass (RYGB) is losing popularity. In addition, clinical data shows the incidences and degree of weight regain and hyperglycemic reoccurrence are higher in sleeve gastrectomy (SG) than RYGB. Stomach intestinal pylorus sparing (SIPS) surgery, which is derived from the standard biliopancreatic diversion with duodenal switch (BPD-DS), starts to draw attention.

Objectives

To validate the feasibility of SIPS procedure in super obese Asian patients.

Methods

A 26-year old female diagnosed super morbid obesity (BMI 69.4 kg/m²) with hypertension, severe sleep apnea, and umbilical hernia, underwent laparoscopic SIPS surgery. Firstly, a SG procedure was performed with calibration by a 40 Fr bougie. Then the bulb part of duodenum was transected at 2-3 cm distal to pylorus. An end-to-side anastomosis was established by proximal duodenal end and ileum at 300 cm proximal to ileocecal valve. The standard postsurgical diet scheme was prescribed.

Results

Neither surgery-related complications nor nutritional deficiency was presented. The patient achieved 36 kg weight loss and normal blood pressure at 3-month after surgery. The weight loss outcome was comparable to BPD-DS, while one anastomosis in SIPS simplifies the procedure but without concerns of internal hernia.

Conclusion

SIPS surgery leads to superior postoperative outcomes with excellent safety profiles in the treatment of super obesity and obesity with long history of diabetes. It has a potential to become the next generation "gold standard" metabolic and bariatric operation in east Asia due to less concerns in marginal ulcers and gastric cancer.



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HOW DO IT: GASTRIC BYPASS – GASTROENTERO ANASTOMOSIS

New (Non Standard) Surgical Techniques

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Introduction

Laparoscopic Roux-en-Y gastric bypass (LRYGB) is one of the most performed bariatric procedure worldwide, however, there are several complications that can occur such as fistulas, bleeding, anastomosis stenosis.

Objectives

Present the safety and effectiveness of the gastroenteroanastomosis technique described.

Methods

Review the operative technique in gastroenteroanastomosis of 181 patients who underwent LRYGB from 2013-2017 in a tertiary hospital. In the surgical technique the surgeon stands on the right side of the patient, attaches the small intestine loop in the stomach, performed opening of the intestine and the stomach with electric scalpel, then, the anastomosis is performed with linear stapler, the size of the anastomosis is Approx. 1.8 cm. After this, we made manually closing the hole where the stitch stapler enters using 3-0 PDS in two planes under a fouchet mold 32, and finally, the methylene blue test is performed routinely.

Results

Among all patients submitted to gastroenteroanastomosis, there was only 1 patient with gastroenteroanastomosis stenosis who did not require endoscopic dilatation and had a spontaneous resolution after 3 months of follow-up.

Conclusion

The exposed gastroenteroanastomosis technique may be useful and safe to perform during the Laparoscopic Roux-en-Y gastric by-pass (LRYGB).

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A REVIEW OF NATIONAL GUIDELINES FOR MICRONUTRIENT SUPPLEMENTATION FOLLOWING BARIATRIC SURGERY

Nutrition after bariatric surgery

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Introduction

Managing nutritional deficiencies after bariatric surgery requires long-term monitoring and supplementation. The British Obesity and Metabolic Surgery Society (BOMSS 2014) published national guidelines to support this. It has been observed that this policy differs to the national guidelines recently updated by the American Society for Metabolic and Bariatric Surgery (ASMBS) in 2016.

Objectives

To compare the current UK guidelines for micronutrient supplementation post-bariatric surgery (BOMSS 2014) with ASMBS guidance (2016).

Methods

A review of the suggested micronutrient supplementation following Roux-en-Y gastric bypass and sleeve gastrectomy was carried out on both guidelines. All recommendations were compared for suggested dose and route of administration.

Results

Both guidelines conclude that an A-Z multi-vitamin and mineral containing thiamine, folate, iron, selenium, zinc and copper should be recommended twice daily. BOMSS recommends 1mg of IM B12 every 3 months, agreeing with ASMBS which also offers suggestion for alternative oral supplementation. A higher dose of additional iron supplements is suggested by BOMSS for both low risk patients (45-60mg v 18mg/day) and menstruating women (100mg v 45-60mg/day). There is also a significant difference between calcium (800-1200mg v 1200-1500mg/day) and vitamin D (800IU v 3000IU/day) recommendations. ASMBS give specific guidance for doses of vitamins A, E & K which are not uniform with BOMSS findings that sufficient amounts are contained within multi-vitamins.

Conclusion

A review of both guidelines should be incorporated into local bariatric practices to optimise nutritional care and best practice in preventing micronutrient deficiencies. Considerations should be made for patient choice, preferred route of administration, cost and availability.

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ARTIFICIAL NUTRITION SUPPORT FOLLOWING BARIATRIC SURGERY: PREVALENCE AND OUTCOMES

Nutrition after bariatric surgery

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Introduction

Artificial nutrition support is sometimes required to treat malnutrition following roux-en-y gastric bypass (RYGB) and sleeve gastrectomy (SG) whilst investigating cause of poor oral intake.

Objectives

Assess the prevalence and outcomes of treatment with artificial nutritional support in patients who have undergone bariatric surgery.

Methods

Patients were identified from dietitian records between 2013 and 2017. Inclusion criteria: patients who had RYGB/SG and required long term (>4 weeks) home enteral feeding. Exclusion criteria: patients who required enteral feeding with acute complications. Data was collected using Microsoft Excel.

Results

9 patients were identified out of ~750 patients (1.2%): All were female, mean age 37 years; mean BMI at surgery 52kg/m²; mean time of presentation with complications was 478 days (range 9 -1370).

Table 1. Symptoms at time of artificial nutrition commencement

Symptom	Prevalence
Nausea	56% n=5
Vomit	89% n=8
Abdominal pain	44% n=4
Excess weight loss	78% n=7
Pregnancy	11% n=1

Routes of artificial nutrition support included nasojejunal, surgical jejunostomy, surgical balloon gastrostomy in redundant stomach and parenteral nutrition. Mean duration of artificial feeding was 243 days (range 9-583 days). Outcomes show that n=6 symptoms resolved. 50% of these patients had RYGB reversal surgery and 50% had improvement in oral intake following surgical, medical & nutrition intervention. Of those who have ongoing symptoms, n=1 no cause of symptoms identified, n=1 declining reversal surgery and n=1 lost to follow up.

Conclusion

Artificial nutrition support to treat malnutrition following bariatric surgery, whilst investigating and treating the underlying cause, is rare.

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MONITORING VITAMIN B12 LEVELS VERSUS ROUTINE 3 MONTHLY ADMINISTRATION FOLLOWING ROUX-EN-Y GASTRIC BYPASS FOR MORBID OBESITY

Nutrition after bariatric surgery

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Introduction

B12 deficiency may occur following Laparoscopic Gastric Bypass (LRYGB), causing haematological and neurological abnormalities.

Guidelines from the British Obesity and Metabolic Surgery Society advise routine vitamin B12 injections every three months. Prior to these recommendations, our unit policy was of monitoring B12 levels, with advice to primary care to treat on an 'as required' basis. B12 blood tests cost £1.48, B12 injections cost £2.41 (1mg in 1ml)

Objectives

To assess the safety of vitamin B12 administration on a pro re nata basis after LRYGB

Methods

Audit of a prospective database of consecutive LRYGB between 2012-2014, with two years follow up. Post-operative Vitamin B12 levels were recorded and highlighted to the GP if levels were below normal limits.

Results

135 patients had LRYGB. 131 had data available for analysis

A median of 5 B12 blood tests were taken from each patient (range 1-13).

33 of 131(25.2%) of patients had a low B12 level (<187ng/L) at any time. Abnormally low levels were documented to be subsequently corrected in 23 of the 33(69.7%)

Conclusion

We note a rate of B12 deficiency following surgery which is consistent with that described in the literature. Our results show that 75% of patients had normal B12 levels postoperatively. Routine B12 injections would have been overtreatment for the majority of patients. Monitoring B12 levels and treating on an 'as required' basis is an effective method of management, avoiding regular injections and reducing the cost of post-operative care.

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DIETITIAN INPUT IMPROVES COMPLIANCE WITH HEALTHY DIET AND OPTIMISES OUTCOME IN BARIATRIC PATIENTS

Nutrition after bariatric surgery

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Introduction

The recommendations as per the UK's national food guide, 'the eat well plate' are:

Fruit/vegetables (F/V): 33%, Carbohydrates 33%, Dairy 15%, Protein 12%, Sugar/Fat 8%.

Objectives

The aim was to assess the diet of patients referred for surgery and the impact of dietitian intervention pre and post surgery.

Methods

Dietary composition from 3 cohorts (at first appointment, at first appointment and pre-operatively, at first appointment, pre-operatively and 6-8 weeks post surgery) was analysed using SPSS 24.0 .

Results

In the first cohort (n= 146; M:F = 41:105; F/V – 15%, Carbohydrates – 25%, Dairy – 10%, protein – 20% and Sugar/Fat – 15%) there was significant difference in composition compared to 'the eat well plate' (Wilcoxon-signed rank $p < 0.0001$).

In the second cohort (n = 60; M:F = 15:45), there was significant change in composition after intensive dietitian input (at presentation vs pre-surgery: F/V-19% vs 33%, Carbohydrates-28% vs 18%, Dairy-11% vs 14%, protein-21% vs 25%, Sugar/Fat-20% vs 10%; Wilcoxon-signed rank, $p < 0.0001$).

In the third cohort (n=26; M:F = 5:21), there was significant increase in F/V (Friedmans $p = 0.03$), dairy ($p = 0.03$) and carbohydrate ($p = 0.005$) consumption with decrease in Sugar/Fat consumption ($p < 0.001$) and little change in protein consumption (at presentation vs pre-surgery vs 6-8 weeks post-op: F/V- 20% vs 30% vs 31%, Carbohydrates-31% vs 19% vs 17%, Dairy- 11% vs 14% vs 20%, protein-21% vs 27% vs 29%, Sugar/ Fat-17% vs 11% vs 3%).

Conclusion

Intervention with intensive dietitian input in the bariatric pathway can lead to substantial change in dietary habits of patients and optimise outcome after surgery.

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DO SPECIALIZED BARIATRIC MULTIVITAMINS LOWER DEFICIENCIES AFTER RYGB?

Nutrition after bariatric surgery

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Introduction

To counter the worldwide obesity epidemic on the long-term, bariatric surgery like Roux-en-Y gastric bypass (RYGB) is currently the only proven option. However one of the side effects of bariatric surgery is the risk for vitamin and mineral deficiencies.

Objectives

To examine the effectiveness of the specialized multivitamin supplement WLS Forte™ (adjusted to the needs of RYGB patients) on deficiencies and mean serum concentrations in a large cohort of RYGB patients.

Methods

A prospective cohort study with a follow-up of up to three years, in which patients had the choice to use WLS Forte™ or not.

Results

1160 patients were included, 883 users and 258 non-users of WLS Forte™. Patient characteristics and weight development were comparable between the groups. Higher mean serum concentrations of ferritin ($124.7 \pm 96.2 \mu\text{g/L}$ versus $106.0 \pm 83.0 \mu\text{g/L}$, $p=0.016$), vitamin B12 ($347.3 \pm 145.1 \text{ pmol/L}$ versus $276.8 \pm 131.4 \text{ pmol/L}$, $p<0.001$), folic acid ($34.9 \pm 9.6 \text{ nmol/L}$ versus $25.4 \pm 10.7 \text{ nmol/L}$, $p<0.001$) and vitamin D ($98.4 \pm 28.7 \text{ nmol/L}$ versus $90.0 \pm 34.5 \text{ nmol/L}$, $p=0.002$) were observed in users compared to non-users. Subsequently, less de novo deficiencies were found for ferritin (1% versus 4%, $p=0.029$), vitamin B12 (9% versus 23%, $p<0.001$) and vitamin D (0% versus 4%, $p<0.001$) in users compared to non-users.

Conclusion

The use of the specialized multivitamin supplement resulted in less deficiencies of vitamin B12, vitamin D, folic acid and ferritin and higher mean serum concentrations. The study showed clearly that RYGB patients benefited from the specialized multivitamin supplement.

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NUTRITIONAL OUTCOMES AFTER MALABSORPTIVE BARIATRIC SURGERIES AT QUATERNARY BARIATRIC SURGERY CENTRE

Nutrition after bariatric surgery

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Background

Bariatric surgery comprises of restrictive and malabsorptive procedures. It has been observed that malabsorptive procedures lead to nutritional deficiencies.

Introduction

We are trying to note the nutritional deficiency outcomes in different types of malabsorptive procedures like Gastric Bypass, Mini Gastric Bypass and Banded procedures

Objectives

To assess the nutritional and clinical outcomes of malabsorptive surgeries performed in a single year at Quaternary Bariatric Surgery Centre.

Methods

180 Mini Gastric Bypass, 223 Gastric Bypass and 209 Banded Gastric Bypass patients were assessed for percentage of protein deficiency and percentage excess weight loss at 6 months, 12 months and 24 months. The surgeries were performed with standardized techniques. The data was analysed to define nutritional outcomes and excess weight loss percentage of malabsorptive procedures. A standardized post bariatric nutrition advice was given to all the patients.

Results

The excess weight loss percentage at 6 months, 12 months and 24 months for Mini Gastric Bypass was found to be 55%, 69% and 77% and for Gastric Bypass 50%, 65% and 72% for Gastric Bypass 54%, 68% and 76% respectively. The protein deficiency percentage at 6 months, 12 months and 24 months for Mini Gastric Bypass was 25.5%, 12.7% and 6.6% for Gastric Bypass at 6 months was 20.17%, at 12 months 11.21% and at 24 months 5.38%. In Banded Gastric Bypass protein deficiency at 6 months 22.9%, at 12 months 12.4% and at 24 months 6.2% were recorded.

Conclusion

All procedures show non-significant difference in terms of Protein Deficiency percentage and Excess weight loss percentage, thus suggesting regular follow up.

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SERUM CALCIUM LEVELS PRE AND 1 YEAR POST MINI GASTRIC BYPASS IN INDIAN OBESE

Nutrition after bariatric surgery

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Introduction

Nutritional deficiencies are common post malabsorptive surgeries like the MGB due to bypassing parts of the small intestine. Post-op supplementation is crucial maintain nutritional status

Objectives

The aim of this study was to evaluate the serum calcium levels pre and 1 year post mini gastric bypass

Methods

A retrospective study of 60 (36 females and 24 males) patients that had undergone MGB with BP limb length of 200 cms between the years 2015 - 2016 were evaluated. Pre and post operative weight and BMI and serum calcium levels were recorded and evaluated. All post MGB patients were supplemented with 1500 mg calcium citrate daily

Results

The mean age of patients was 53 years and mean weight was 118.7 kgs, mean BMI was 46 kg/m². Post op mean weight was 99.9 kgs and mean BMI 33.5 kg/m². The mean serum calcium levels pre & post operatively remained same at 9mg/dl. 3.33 % of this population was deficient in calcium pre-op and 5% deficient 1 year post -op. The % of deficiency was higher in males as opposed to females both pre and post op.

Post -op serum calcium levels were higher in females as compared to males 9.32mg/dl vs 8.31mg/dl. no correlation was found between age and serum calcium levels or BMI and serum calcium levels.

Conclusion

Pre -operative nutritional screening is important to assess baselines levels of all patients undergoing bariatric surgery Surgery specific ,appropriate dosages and timely commencement of supplementation post malabsorptive surgeries are crucial to maintain nutritional status of post operative patients.



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QUALITATIVE ASSESMENT OF FOOD INTAKE PRE & POST LSG

Nutrition after bariatric surgery

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Introduction

The laparoscopic sleeve gastrectomy is the surgery of choice for volume eaters , however whether the food quality impacts weight loss outcomes needs to be evaluated.

Objectives

To qualitatively evaluate dietary intake of patients pre & 1 year post LSG

Methods

A retrospective study was conducted on 40 patients that underwent LSG Weight, height, BMI, excess weight loss % and body fat % were measured pre and post - surgery. 24 hour diet recall pre-op & 1 year post-op was evaluated for total calories, protein, carbohydrate and fat

Results

The mean age was 40.2 years. The mean pre-op and post-op BMI was 47kg /m² & 33.8kg/m² respectively. Pre-op Body Fat % was 51.3 % and post-operative was 40 %. The mean excess weight loss % 1 year post surgery was 55.8%.The mean daily energy intake pre-op was 1884.7 kcals and protein intake was 53.3 (11% of the total energy intake. Post-op total energy intake decreased to 1100.7 kcals and protein intake increased to 65.4 g (23% of the total energy intake). Pre-op mean daily fat intake was 76.5 g and post-op reduced to 30 g. Pre-op males and females consumed the same % of carbohydrates, protein and fat. Post-op intake of protein increased from 11% to 25% in males and females. There was a decrease in % of fat intake from 36% to 24% &26% in males and females respectively

Conclusion

LSG results in overall decreased quantity of food, but also improvement food quality. This could be attributed to pre &post nutritional counselling

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SELF-REPORTING REGULAR MEAL EATING IN A PRE-OPERATIVE QUESTIONNAIRE TO PREDICT WEIGHT LOSS SURGERY CHOICES AND WEIGHT LOSS OUTCOMES

Nutrition after bariatric surgery

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Background

We set up a private UK bariatric service, integrating a multidisciplinary-bariatric screening questionnaire which incorporates self-reporting of eating habits.

Introduction

Patients who presented to us were self-funding self-referral or GP-referrals. All patients completed a pre-operative questionnaire.

Objectives

We feel that pre-operative eating habits are a key factor in outcomes following bariatric surgery.

Methods

Data from the eating behaviour section of the bariatric questionnaire was entered onto a local database and post-operative outcomes recorded.

Results

38 bariatric procedures, 25 laparoscopic sleeve gastrectomies(LSG), 8 endoscopic gastric balloon(EGB) insertions and 5 laparoscopic gastric bands(LGB). Average age40, range23-61, 85%F.

65.8% reported eating until they burst. 84% reported eating when stressed/bored/unhappy. 55% reported long periods without eating. In this group, average pre-operative BMI was 39.9. Average age41. LSG 66.7%, EGB 19% and LGB 14%. Excess weight loss(EWL) 1 month 29.7%, 3 months 46%, 6 months 60.6% and 12 months 77%.

45% self-reported regular meals. Average pre-operative BMI 40.1. Average age42. LSG 62.5%, EGB 25% and LGB 12.5%. EWL 1 month 30.4%, 3 months 35.8%, 6 months 46.3% and 12 months 73.4%.

Conclusion

All patients are advised regular eating patterns prior to bariatric surgery and encouraged to demonstrate change. Patients who self-report long periods without eating showed a trend towards greater EWL up to 6 months post-surgery, but EWL in both groups was equivalent by 12 months. Almost all pre-operatively self-reported emotional eating, the majority over eating until the sensation they were going to burst.

Despite differing pre-operative eating patterns, patients can achieve similar weight loss outcomes when provided multidisciplinary support.

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DESIRE FOR BODY CONTOURING SURGERY LEADS TO LOW QUALITY OF LIFE

Plastic surgery after weight loss

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Introduction

Recently the BODY-Q was developed, a Patient-reported Outcome Measure (PROM) specific for the post-bariatric population. This questionnaire permits systematic assessment of perceptions of weight loss and excess skin in the post-bariatric population. Never before was this questionnaire used to study the effect of desire for body contouring surgery (BCS) on quality of life.

Objectives

To compare BODY-Q scores in post-bariatric patients with and without a desire for BCS.

Methods

The BODY-Q consists of 3 domains and 18 independent scales. Scores range from 0 to 100; a higher score is positive. The questionnaire was administered to patients 2 and 3 years after bariatric surgery, as part of a larger study assessing a new screeningtool for BCS.

Results

A total of 120 patients were included, mean BMI was 31 kg/m² and TWL was 30%. There was a desire for BCS in 96 patients (80%); 24 patients (20%) had no desire. There were no significant differences in gender, follow-up time, current BMI and weight loss between the groups. Patients with a desire scored lower on all BODY-Q scales. There was a significant difference on body image ($p < 0.001$), overhanging skin ($p < 0.001$), social wellbeing ($p = 0.010$) and sexual wellbeing ($p = 0.003$).

Conclusion

Patients who desire BCS have a lower HRQOL than patients who do not. Low wellbeing and negative body image have been linked to weight regain in the obese and might also explain weight regain in patient who do not undergo BCS.

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NEW SCREENINGTOOL POSTBARIATRIC BODY CONTOURING SURGERY

Plastic surgery after weight loss

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Introduction

Body contouring surgery (BCS) improves quality of life and weight maintenance. However insurance coverage of BCS continues to be a worldwide issue. Consequently patients with significant overhanging skin cannot be treated appropriately. To ensure proper treatment and integration in the bariatric care, an objective tool for indication of BCS is necessary.

Objectives

Goal is to assess a new screeningtool for postbariatric patients presenting for BCS.

Methods

The Dutch Society of Plastic Surgeons has developed a new screeningtool for postbariatric patients. This questionnaire can be filled in by bariatric team and consist of questions regarding weight loss and consequences of excess skin. A score above 8 is an indication for BCS. The tool was tested in a post-bariatric population at 2 and 3 year follow-up.

Results

A total of 120 patients were included, mean BMI was 31 kg/m². In 24 patients (20%) there was no desire for BCS; mean score was 2.1 (\pm 3.8). In 80% (n=96) there was a desire for BCS, these patients had a mean score of 4.2 (\pm 3.9) (p = 0.021). In this group 21% (n=20) had a score \geq 8. These patients had lower BMI (28 vs 31 kg/m²), higher TWL (34% vs 28%) and more medical complaints of excesses skin.

Conclusion

This new screeningtool for postbariatric BCS shows significant differences in scoring between patients who desire BCS and patients who do not. Patients with sufficient scoring have better weight loss and more medical complaints. The next step is addition of measurements of excess skin to the questionnaire.



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BODYCONTOURING SURGERY AFTER MASSIVE WEIGHT LOSS : READY-TO-WEAR OR MADE-TO-MEASURE?

Plastic surgery after weight loss

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Introduction

The increase of post-bariatric patients in the last years raises several questions when considering bodycontouring surgery.

Objectives

Are there many techniques or is one applicable to all? How do they differ from one another? Are there any constants? How should they be classified? Are all patients comparable?

Methods

We carried out a retrospective analysis of the evolution of our own bodycontouring techniques and their progression in time as we gained in experience. We studied the body in different positions, in a static and dynamic fashion, to develop our knowledge of the existing variables and better define the goals we wish to achieve.

Results

Constants were observed, such as the need to always distinguish skin (correct traction direction, length or width reduction) from fatty tissue. This requires understanding and respecting the basic principles as well as recognizing the precise problem we wish to correct.

However, there is also a great variability in individuals depending on age, gender, overall health condition, current weight, direction of skin excess (vertical versus horizontal) and body harmony as a whole.

Conclusion

For each individual patient there is a basis of ready-to-wear with a component of made-to-measure. One should possess the fundamentals of bodycontouring techniques and adapt them on a case-by-case basis. It therefore seems interesting and useful to determine groups that exhibit common characteristics to better understand each situation.



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POSTBARIATRIC BODY CONTOURING PSYCHOLOGY

Plastic surgery after weight loss

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Background

Most patients consider excess skin as a negative consequence of bariatric surgery. However a minority of patients undergoes postbariatric body contouring surgery, due to insurance policies and financial problems.

Introduction

Untreated excess skin following bariatric surgery results in ongoing functional, psychological, relational, and social problems. However, postbariatric body contouring surgery on itself is not an adequate resolution for these problems. Even successful body contouring surgery may lead to dissatisfaction with the results of surgery. For instance, despite a better contour, some patients' preoperative (low) self-esteem and (negative) body image may be unchanged postoperatively.

Objectives

To get a first inventarisation of the psychological aspects of body contouring surgery in a sample of postbariatric patients and to plan adequate psychological screening-, monitoring-, and treatment interventions for patients opting for postbariatric body contouring surgery.

Methods

Interviewing patients preoperatively and postoperatively as well as developing and testing psychological screening and monitoring procedures.

Results

Postbariatric patients may be highly motivated for body contouring surgery. However, since their expectations are high, they may be dissatisfied with the results, especially in patients with low self-esteem and suffering from a body dysmorphic disorder.

Conclusion

Patients who opt for postbariatric body contouring surgery should be psychologically screened for characteristics potentially threatening postoperative success. Patients who underwent postbariatric body contouring surgery should be monitored for the same reason. Identified characteristics should be treated to enhance postoperative success, proper adjustment to their 'new body' and better quality of life.



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SIMULTANEOUS BARIATRIC SURGERY AND PANNICULECTOMY: A VIABLE OPTION?

Plastic surgery after weight loss

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Introduction

A large hanging panniculus can cause problems such as intertrigo, chronic infection and immobility. Many patients undergoing bariatric surgery can benefit from panniculectomy either done simultaneously with bariatric surgery or at a later point after weight loss.

Objectives

The authors evaluated whether these two procedures could be performed simultaneously.

Methods

Retrospective analysis of patients undergoing simultaneous bariatric surgery and panniculectomy operations at a central London teaching hospital was performed. The functional outcome, percentage weight loss and complication rate was analysed.

Results

5 patients underwent concomitant surgery over the time period (April 2013 – April 2016). In all cases the bariatric surgery was performed by the same surgeon and a specialist plastic surgery consultant performed panniculectomy. The prebariatric surgery weight ranged from 145 – 215 kg (mean: 172.1kg) with a mean body mass index (BMI) of 61.02. After bariatric surgery the mean percentage excess weight loss was 43% after 6 months. All patients had multiple co-morbidities. The weight of the panniculectomy specimen ranged from 5 – 27kg.

Conclusion

Simultaneous bariatric surgery and panniculectomy is a viable option for select patients with severe problems arising from a large hanging panniculus. However, caution should be advised as complication rates may be higher.



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SAFETY CONSIDERATIONS BEFORE , DURING AND AFTER POST BARIATRIC SURGERY .

Plastic surgery after weight loss

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Introduction

We face increasing demand from massive weight loss patients for correction by plastic surgery. But they are specific category of patients and have a higher risk of complications .

Objectives

This presentation aims to help the surgeon to have all the essential information to prevent bad outcomes in body contouring surgery.

Methods

To avoid complications , safety considerations must be applied.

First of all , patient selection is of paramount importance. A complete weight loss and medical history , including smoking, a nutritional assessment , a psychosocial screening , and a complete physical examination should be performed for every patient before deciding on the surgery . Medical comorbidities must be controlled or treated .

Complete physical examination is essential, to understand how to surgically correct it. BMI must be stable, and close to the ideal body weight .

During the intraoperative time , precautions must be taken concerning hypothermia , patient positioning , patient support and blood loss.

After the surgery , safety concerns include prevention of DVT , pain management , laboratory tests, and patient's dressings .

Results

Bariatric surgery results in good weight loss but it is important to recognise that these MWL patients present several challenges to the plastic surgeon, like nutritional deficiencies , residual medical comorbidities , complex skin excesses , and psychosocial issues .

Conclusion

These are some preoperative , intraoperative and postoperative considerations that are important to keep in mind before proceeding with body contouring techniques, to minimise complications and ensure satisfactory results for both patient and surgeon.

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THE INFLUENCE OF DIFFERENT VITAMIN D SUPPLEMENTATION REGIMES ON VITAMIN D, CALCIUM AND PARATHYROID HORMONE AFTER BARIATRIC SURGERY

Post-operative care

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Introduction

Vitamin D plays a key role in calcium balance and formation of bone structure. Low vitamin D are associated with decrease in calcium absorption but are not always accompanied by reduction in serum calcium. However, it is unclear what the most optimal calcium and vitamin D supplementation regime is and its effects on nutrient deficiencies after bariatric surgery.

Objectives

Examine the most optimal vitamin D supplementation regime to prevent a vitamin D deficiency in bariatric patients.

Methods

In this retrospective matched study, we included 100 patients who have had bariatric surgery between October 2015 and December 2015 and were divided into 2 groups. Group A (n=50) used a supplementation regime of 1000 mg calcium and 800IU vitamin D and besides that, group B (n=50) used 50000IU additional cholecalciferol/monthly. Blood analysis were done at baseline and 6 months postoperatively.

Results

A significant difference in delta vitamin D was seen between group A and B ($p < 0.01$), in favour of group B. In group A, 47 patients have had a VD deficiency at baseline and 35 in the follow-up. In group B, 44 patients have had a VD deficiency at baseline and 10 in the follow-up. No significant difference was seen in calcium levels between both groups. A significant decrease in parathyroid hormone was seen in group A ($p < 0.032$) and group B ($p = 0.000$). Delta parathyroid hormone showed no significant differences between groups.

Conclusion

A standard daily vitamin D supplementation regime (800 IU) with 50000IU additional cholecalciferol/monthly results in higher vitamin D levels and less vitamin D deficiencies.

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SAFETY AND EFFICACY OF A STANDARDIZED PERI- AND POSTOPERATIVE TREATMENT PROTOCOL IN INSULIN DEPENDENT TYPE 2 DIABETES (T2DMI) PATIENTS UNDERGOING ROUX-EN-Y GASTRIC BYPASS (RYGB) SURGERY

Post-operative care

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Introduction

In the immediate postoperative period of RYGB surgery, insulin requirements decrease rapidly. Therefore, T2DMi patients have an increased risk of hypoglycemia.

Objectives

Evaluate the safety and efficacy of a standardized insulin reduction protocol in T2DMi patients, aiming to maintain blood glucose levels between 5 and 15 mmol/l.

Methods

At the day of surgery, insulin was discontinued in patients with a preoperative insulin dose <50 IU/day. Those with a preoperative dose >50 IU/day had a 75% reduction. Patients were discharged the second day after surgery, and then monitored by phone for three months.

Results

155 T2DMi patients were included. Preoperative insulin dose was 130±80 IU/day. On the day of surgery, at discharge and after three months, insulin had been discontinued in respectively 13%, 22% and 80% of the patients. In patients on insulin, the dose had been decreased to 34±16, 26±19 and 32±22 IU/day, respectively. On the day of surgery, the second day after surgery and the first week after discharge 1%, 5% and 9% of all blood glucose measurements were <5 mmol/l, and 11%, 2% and 1% were >15 mmol, respectively. Three patients had hypoglycemic events (blood glucose <3.5 mmol/l) during the in-hospital period and ten during the follow-up at home. The lowest glucose level during follow-up was 2.3 mmol/l. None of the patients needed help for hypoglycemia treatment.

Conclusion

An immediate 75% reduction of insulin dose with rapid response monitoring is safe and effective in the large majority of patients to prevent hypo- and hyperglycemia during the peri- and postoperative period of RYGB.

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NEUROPATHY BY FOLIC ACID SUPPLEMENTATION IN A PATIENT WITH ANEMIA AND AN UNTREATED COBALAMIN DEFICIENCY: A CASE REPORT.

Post-operative care

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Introduction

43-year old woman underwent a laparoscopic Roux-en-Y gastric bypass for morbid obesity. At the regular check-up 2 years postoperative she had no complaints and she got vitamin D, iron and folic acid supplementation at the following laboratory results: hemoglobin 7.1 mmol/L (7.5-10.0 mmol/L), vitamin D 34 nmol/L (>75 nmol/L), iron 4.0 μmol/L (10-25 μmol/L), ferritin 6.0 μg/L (13-200 μg/L), cobalamin 170 pmol/L (>140 pmol/L), folate 3.8 nmol/L (>10 nmol/L). She returned 13 days after starting supplementation because she developed a lot of complaints: tinnitus, palpitations, reduced visibility, tingling in fingers and toes, concentration problems, confusion, irritability, mood swings, behavioral changes, weakness, ataxia, aphasia and glossitis.

Objectives

To studying a complex phenomenon after bariatric surgery

Methods

A diagnosis was made of neuropathy following folic-acid treatment in a patient with anemia and an untreated cobalamin deficiency. She received the following therapy: folic-acid treatment immediately stopped and treatment with 2 intramuscular hydroxocobalamin injections per week was started.

Results

One month after start therapy she feels much better. Tingling in fingers and toes, glossitis, palpitations, ataxia, dizziness, weakness, confusion and behavioral changes cured. Reduced visibility improved and is still present in slight degree. Laboratory results are normalized.

Conclusion

In this case, a normal serum cobalamin was seen. No additional parameters (methylmalonic acid or homocysteine) were measured. However, due to the high failure rate of serum cobalamin, additional parameters are necessary in order to detect a functional cobalamin deficiency at tissue levels. A cobalamin deficiency must be excluded or treatment should be started prior to the folic-acid treatment.

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LAPAROSCOPIC SLEEVE GASTRECTOMY HAS HIGHER CHANCE OF POSTOPERATIVE NAUSEA AND VOMITING COMPARED WITH LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: TREATMENT AND NURSING CARE STRATEGIES

Post-operative care

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Introduction

Postoperative nausea and vomiting (PONV) is common after bariatric surgery.

Objectives

To analyze the related factors, severity and response measures for PONV.

Methods

Patients underwent LSG and LRYGB by a single surgeon under the same anesthesia protocols between January and December 2016 were analyzed retrospectively. Nausea and vomiting score, pain score, antiemetic and analgesic usage of the patients with PONV in 72 hours postoperatively were recorded and evaluated. The relative factors for the PONV were also analyzed.

Results

65 out of 116 patients (17 males, 26.2%; 48 females, 73.8%) complained of PONV, with average age 28.8 ± 9.5 , average weight 105.0 ± 22.1 kg and average BMI of 38.8 ± 7.7 kg/m². All procedures (55 LSG, 84.6%; 10 LRYGB, 15.4%) were performed laparoscopically with average surgical duration 108.0 ± 28.3 minutes. Mean pain score in numeric rating scale (NRS) was 3.75 ± 1.5 . Occurrence of PONV was in a linear negative correlation ($P < 0.05$) with patients' age, weight, types of surgery, surgical duration; and was in a linear positive correlation ($P < 0.05$) with pain score. Occurrence of PONV in LSG was twice as in LRYGB (66.3% vs 30.3%, $P < 0.01$). It was more often having vomiting in 0~6 hours postoperatively, compared with 6~24 hours and 24~72 hours (37.1%, 27.6%, 19.8%, respectively), antiemetic (52.1%) and analgesic usage (49.2%) were also relatively higher.

Conclusion

Patients with younger age, lower weight, shorter surgical duration, and patients underwent LSG should be observed and monitored more closely, especially 0~6 hours after surgery. Early usages of antiemetic and analgesic drugs, intervention of nursing care are efficient to prevent and treat for the PONV.

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THYROID HORMONE WITHDRAWAL AFTER GASTRIC BYPASS IN PATIENTS WITH A PREOPERATIVE DIAGNOSIS OF ANTIBODY-NEGATIVE SUBCLINICAL HYPOTHYROIDISM

Post-operative care

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Introduction

Weight loss induced by Roux-en-Y gastric bypass (RYGB) is associated with normalization of serum TSH levels in about 90% of morbidly obese patients with untreated subclinical hypothyroidism (SH) diagnosed preoperatively. Postoperative withdrawal of thyroxine in patients with a previous diagnosis of antibody-negative primary hypothyroidism might be possible after successful weight loss.

Objectives

To evaluate the response to gradual withdrawal of thyroxine treatment at least one year after bariatric surgery in patients with antibody negative hypothyroidism.

Methods

Patients with antibody negative primary hypothyroidism, TSH < 4 mU/L during thyroid replacement therapy at screening, and at least 1 year after bariatric surgery were included. Serum FT4, FT3 and TSH were measured every 4 weeks during gradual withdrawal of thyroxine in steps of 25ug/2 weeks. Failure of withdrawal was defined as persisting serum TSH > 4.0 mU/L.

Results

So far, 35 patients on thyroxine have been screened, 38 ± 16 months (mean ± SD) after surgery. Twenty-two patients (63%) were not eligible: 15 patients (43%) had antibody-positive hypothyroidism, and 7 (20%) had TSH levels > 4.0 mU/L despite thyroid hormone treatment. Thirteen patients (37%) were included for Thyroxine withdrawal. Gradual withdrawal was successful in 6 out of 13 patients (46%). Withdrawal failed in 7 patients (54%): in 6 patients because of recurrent biochemical hypothyroidism and in 1 patient because of psychological reasons.

Conclusion

Withdrawal of Thyroxine replacement therapy was successful in nearly fifty percent of patients with a preoperative diagnosis of antibody-negative hypothyroidism.

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CHANGES IN GASTROINTESTINAL FUNCTION AND PATIENT-SCORED SYMPTOMS AFTER BARIATRIC SURGERY.

Post-operative care

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Background

Bariatric procedures are increasingly being used, but data on bowel habits are scarce.

Introduction

Objectives

We have measured changes in gastrointestinal function and patient-scored symptoms after bariatric surgery.

Methods

We recruited 277 adult patients (67.9% female, 42.5 (SD 10.9) years, BMI 44.8 (SD 7.5)) listed for Roux-en-Y Gastric bypass (RYGBP) and Duodenal switch (DS). Patients answered a validated local questionnaire concerning bowel function and the Fecal incontinence Quality of Life Scale before and after their operation (n=208, response rate 74%).

Results

Compared to preoperative values, RYGBP patients had fewer bowel motions per week (8 vs. 10), more usage of laxatives and more abdominal pain after the operation, 32% vs.17%, ($p<0.01$ for all). In contrast, DS patients had higher frequency of bowel motions per week (21 vs. 13), more loose stools, bloating, flatus, incontinence to gas, and urgency, and needed longer time to empty the bowel ($p<0.01$ for all).

More patients in the DS group considered their bowel habits bothersome to their well-being and sexual life compared to RYGBP ($p<0.05$ for both). However, DS patients described themselves healthier than before the operation, in spite of the fact that they were more afraid of going on outside activities like visiting friends and staying over the night ($p<0.05$ for all).

Conclusion

Albeit having more bowel problems than RYGBP, DS patients scored their general health higher postoperatively than before the operation.

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FOLLOW UP AFTER BARIATRIC SURGERY. DOES IT REALLY MATTER?

Post-operative care

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Introduction

Bariatric surgery is an effective tool to achieve a long term sustained weight loss, remission of comorbidities and improved quality of life. Adherence to a postoperative follow up program is necessary to maximize benefits of surgery.

Objectives

To identify the effect of adherence to a routine postoperative follow-up program on weight loss after bariatric surgery.

Methods

86 Patients who underwent a bariatric procedure in our center were tracked through phone calls. According to their compliance to follow up visits, patients were classified into 2 groups; **Drop out group** (patients who didn't attend the follow up appointments for more than 12 months, n=45) and **Regular follow up group** (patients attached to their scheduled postoperative appointments, n=41). Both groups were compared in terms of weight loss at 4 fixed time points: Time of operation (T0), next to last (T1) and last follow up appointments (T2) and time of interview (T3).

Results

%EWL and %TWL decreased in the time interval between T0-T2 without a significant difference between both groups.

On the contrary, during time interval between T2 and T3, %EWL continued to decrease among the regular follow up patients versus a rise within the drop outs patients (62.7±24.1 vs. 49.9±22.9 %; p=0.014)

Conclusion

Adherence to follow up program is crucial to improve and sustain weight loss after bariatric surgery. Every effort should be done to contact patients who are lost to follow up before they start to regain weight. Financing of the aftercare is absolutely necessary to optimize post bariatric weight loss.

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PREDICTORS FOR ADHERENCE TO MULTIDISCIPLINARY FOLLOW UP CARE AFTER SLEEVE GASTRECTOMY

Post-operative care

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Introduction

Up to 63% of patients do not attend the recommended follow up visits after bariatric surgery.

Objectives

To assess the predictors for postoperative adherence to follow up, to evaluate the possible correlation between adherence to follow up and postoperative weight loss and to examine the differences between those patients who adhere to follow up and those who do not.

Methods

A retrospective postoperative analysis was performed with a mean time follow up of 3 years. Data was extracted from the medical records. At the end of the follow up period telephonic questionnaires were performed. A logistic regression model was used to assess predictors for adherence.

Results

178 patients were included in the study, 46.6% were "adherent" to postoperative visits. The "adherent group" included more Hebrew speakers and higher proportion of patients who take vitamin D supplement, as instructed. The non- adherent patients had higher rate of re-admissions and higher consumption of sweet beverages. Positive predictors for postoperative adherence to follow up visits were older age and the presence of postoperative gastrointestinal symptoms. The negative predictors were surgery related re-admissions and belonging to an ethnically minority group. Contrary to our study hypothesis, no correlation was found between adherence to follow up and weight loss.

Conclusion

A significant percentage of patients do not adhere to follow up. We have found a positive correlation between follow up and compliance to postoperative recommendations. Future interventions based on these negative predictors for follow up may help to improve postoperative adherence.

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CONCERNS AND BENIFITS OF MINI GASTRIC BYPASS AFTER 3000 CASES IN IRAN.

Post-operative care

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Background

Minigastric bypass is becoming more popular, due to increasing reports supporting the operation as a short, straightforward procedure with low complication-rates and excellent outcomes we decide to report our personnel experience about concerns and benifits of Minigastric Bypass.

Introduction

The MGB is a short, simple, low-risk operation. It is easily reversed or revised as needed. It has now been shown in short- and long-term studies that MGB results in excellent weight loss, good resolution of co-morbidities and high levels of patient satisfaction. The power of the MGB comes from the fact that it has restrictive and mostly malabsorptive components; additionally it produces hormonal changes and also lowers the patient's bile acid pool.

Objectives

Our objective is to highlight the benifits and main concerns of Minigastric Bypass in our experience and also how can resolve the main concerns.

Methods

3012 morbidly obese patients in five different hospitals under supervision of MIS research centre Iran Medical University, Mean \pm SD age was 38.33 ± 10.42 years, 2325 female and 687 male. Mean \pm SD of weight was 122.6 ± 21.91 kg Mean \pm SD of BMI was 46 ± 6.05 kg/m² Patients underwent laparoscopic MGB, Conversions, reversals, revisions were excluded

Results

Our main Concerns are, Marginal Ulcer, Malnutrition—Hypoproteinemia, Dumping Syndrome, Diarrhea, Steatorrhea and Flatulence, Bile gastritis, Cholelithiasis, Fatal steatohepatitis, severe weight loss. Resolution of T2DM in 90 % of patients, hypertension in 80 %, dyslipidemia in 70 %, and sleep disorders in 90%

Conclusion

It has now been shown in short- and long-term studies that MGB results in excellent weight loss, good resolution of co-morbidities and high levels of patient satisfaction.

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LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS IN A PATIENT WITH SYSTEMIC LUPUS ERYTHEMATOSUS

Post-operative care

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Introduction

Systemic Lupus Erythematosus (SLE) is an autoimmune chronic disease which can affect various organic systems. Therefore, its course and manifestation are highly variable, from indolent to fulminant. This pathology affects around 20 to 150 cases for each 100,000, being more prevalent on woman. Usually, patients are considered high surgical risk due to surgical wound infection, dehiscence of the anastomosis and longer time for healing.

Objectives

To report a case of a patient with SLE submitted to a laparoscopic Roux-en-Y gastric bypass surgery (LRYGB).

Methods

Case study of a 47 years old patient with BMI of , with a nine years obesity history, insulin-dependent Mellitus Diabetes type 2, systemic arterial hypertension and LES, which was submitted to LRYGB.

Results

The procedure occurred in March 2017, without intraoperative and postoperative complications.

Conclusion

About two-thirds of SLE patients are overweight or obese, and those are more likely to experience loss of functional capacity, impair quality of life, increase fatigue and worsen pain. Therefore, further studies of LRYGB are needed on contraindication, weight loss, improvement of comorbidities and how it affects SLE.

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ANEMIA OUTCOME AFTER LAPAROSCOPIC MINI BYPASS : ANALYSIS OF 107 CONSECUTIVE PATIENTS

Post-operative care

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Background

The prevalence of obesity has dramatically increased globally. Weight loss procedures are known to be an effective method with relatively low complication rate and satisfactory results.

Introduction

Laparoscopic mini-gastric bypass is known as a modified Mason loop procedure with compatible results to laparoscopic LRYGB and is believed to have even less complication rate

Objectives

Despite adequate supplement therapy, anemia is one of the challenges in patients undergoing LMGB. Thus, we aimed to review the prevalence and severity of anemia in patients undergoing LMGB

Methods

A prospectively-maintained database of patients referring to Hazrat Rasoul Akram hospital who underwent LMGB from December 2013 to October 2014 reviewed retrospectively

Results

A total of 113 consecutive patients were included in the study. The mean age was 38.7 ± 9.8 years. Mean Body mass index (BMI) was 45.5 ± 6.1 kg/m² preoperatively and 36.7 ± 5.5 kg/m² and 33.0 ± 5.3 kg/m² three and six months after the procedure, respectively. (P = 0.001) Mean excess body weight loss after the procedure was 20% and 53% at three and six months post operatively Serum hemoglobin (Hb) level decreased significantly in three months (P = 0.036) and remained unchanged in six months compared to 3-month (P = 0.385). Vitamin B12 level increased significantly in three months (P = 0.010) and then decrease in six months to the preoperative level (P = 0.889).

Conclusion

LMGB is a safe, feasible and an effective alternative weight loss procedure. Simply, anemia can be prevented by utilizing therapeutic dose of multivitamin in patients who underwent this procedure.

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BIBLIOMETRICS ANALYSIS: HOW SHOULD WE DO THE POSTOPERATIVE CARE IN BARIATRIC SURGERY IN MAINLAND CHINA

Post-operative care

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Introduction

In recent five years, an increasing number of obese patients have been accepted surgical treatment in mainland China. Studies have shown postoperative nursing care is crucial to outcome of the bariatric surgery. There is no consensus regarding optimal postoperative care in bariatric surgery and foreign nursing model is not completely applicable to domestic, because of the difference condition (medical model, Shortage of nursing human resource, etc).

Objectives

To understand the current status and development trend of postoperative care in bariatric surgery in mainland China and to provide the guidance for related research.

Methods

The literatures of postoperative care in bariatric surgery in mainland China between 1st January 2012 and 31st December 2016 was searched. Selected literatures were examined and bibliometric analysis was conducted on the publication time, care essentials and care model.

Results

A total 47 papers were included and the number increased annually. The top ten most frequently used keywords about postoperative care essentials and model are monitoring of vital signs, complications prevention, dietary guidance, pain care, psychological counseling, health education, early mobilization, deep venous thrombosis prevention, blood glucose, airway nursing (essentials) and multiple nursing, Individual careing, case management, routine nursing model, nurse case managers, followed up, continuing nursing care, communication devices, nursing clinical pathway, peer-education model (model).

Conclusion

Researchers attached increasing importance to postoperative care in bariatric surgery in the past years in mainland China. The concept of Enhanced recovery after surgery impacts on the postoperative care essentials in bariatric surgery. Routine nursing model combine with case management and instant communication devices like Wetchat is an effective model for postoperative management.

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WERNICKE'S ENCEPHALOPATHY AFTER CONVERSION FROM SLEEVE GASTRECTOMY TO GASTRIC BYPASS

Post-operative complications

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Background

Wernicke's encephalopathy develops in individuals who have had bariatric surgery due to intractable vomiting, poor nutrition, or malabsorption resulting in low thiamine levels. One review estimates the incidence of Wernicke's encephalopathy at 1 in 500 patients after bariatric surgery. 80–84% of patients who developed Wernicke's encephalopathy were women.

Introduction

A 22-year-old white female presented to the emergency room for confusion, memory loss and numbness extending from her breasts to her knees bilaterally over the preceding 2 days. Two weeks before presentation, she developed vertigo and gait instability that were evaluated at her local urgent care clinic. She was diagnosed with benign positional vertigo after a CT scan of the brain revealed no abnormalities. Further investigation revealed that she had undergone a sleeve gastrectomy that was converted to a Roux-en-Y gastric bypass one month previously.

Objectives

To present a case of wernicke's encephalopathy that developed one month after gastric bypass surgery due to persistent vomiting.

Methods

We admitted this patient to the general medicine ward and performed a battery of laboratory tests including vitamin levels and MRI of the brain.

Results

MRI of the brain revealed increased T2 signal symmetrically in the medial thalami and enhancement of bilateral mammillary bodies compatible with Wernicke's encephalopathy. Thiamine level was markedly decreased at 27 nmol/L. She was treated with Intravenous thiamine which led to partial resolution of her nystagmus and memory loss. However, her ataxia persisted.

Conclusion

Wernicke's encephalopathy after bariatric surgery is an underreported condition that mandates prompt treatment to avoid irreversible neurologic damage and death.

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TO WHAT EXTENT DOES POST-HOSPITAL DISCHARGE CHEMOPROPHYLAXIS PREVENT VENOUS THROMBOEMBOLISM AFTER BARIATRIC SURGERY? RESULTS FROM A NATIONWIDE COHORT OF MORE THAN 110,000 PATIENTS

Post-operative complications

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Introduction

Venous thromboembolism (VTE) is a major concern after bariatric surgery (BS), especially during post-hospital discharge (PHD) period. No large-scale study has previously focused on the clinical value of PHD chemoprophylaxis.

Objectives

The aim of this study was to assess the incidence, risk factors and the impact of PHD chemoprophylaxis on VTE in patients undergoing BS.

Methods

In this nationwide observational population-based cohort study, all data from patients undergoing BS were extracted from the French National Health Insurance database (SNIIRAM) from 1st January 2012 to 30th September 2014. Logistic regression models were used to compute odds ratios (OR) for potential risk factors for VTE occurring within 90 postoperative days (POD). The association between use of PHD chemoprophylaxis (heparin) and VTE was also assessed.

Results

The majority (56%) of the 110,824 patients had sleeve gastrectomy (SG). VTE rates during the first 30 and 90 POD were 0.34% and 0.51%, respectively. On multivariate analyses, major risk factors for VTE during the first 90 POD were: history of VTE (OR=6.33 95% CI (4.44-9.00)), postoperative complications (9.23 (7.30-11.70)), heart failure (2.45 (1.48-4.06)) and open surgery (2.38 (1.59-3.45)). PHD chemoprophylaxis was delivered to 75% of patients. No use of PHD chemoprophylaxis (1.27 (1.01-1.61)) was an independent predictive factor of VTE during the first 90 POD (in the GBP group: 1.51 (1.01-2.29)).

Conclusion

In the modern era of BS, this nationwide study shows a non-negligible rate of VTE especially after SG, depending on the individual risk level. Use of PHD chemoprophylaxis may decrease the risk of PHD VTE.

□ **P.403**

IS IRON DEFICIENCY IDENTIFIED AFTER BARIATRIC SURGERY IN THE COMMUNITY?

Post-operative complications

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Background

A significant number of anemias after bariatric surgery remain unexplained.

Introduction

Bariatric surgery also has the potential to cause a variety of nutritional difficulties. The most common micronutrient deficiencies are of vitamin B12, iron, calcium, and vitamin D.

Objectives

Examine the follow up of Iron and ferritin post-operatively from the Clinical Practice Research Datalink (CPRD).

Methods

Data extracted for all patients that underwent Bariatric surgery and had recorded iron measurements in the community.

Results

From the CPRD there was a total of 4414 patients that underwent Bariatric surgery. There were 10,165 recorded serum Ferritin or serum iron levels measured for 2391 (54.2%) patients. More patients had post-operative measurements (7071) 69.6% than pre-operative 3091 (30.4%). Around 41.9% of post-operative measurements were abnormal readings. There were 230/1529 (15%) abnormal serum iron measurements post-operatively with a mean 13.56 $\mu\text{g/dL}$ (SD 8.8 $\mu\text{g/dL}$). There were also 1,456/7,692 (16.9%) abnormal post-operative ferritin measurements mean 75.4 ng/mL (SD 116.9 ng/mL). Measurements ranged from a minimum of 5 months post-operatively to 567 months post-operatively (Mean 39.6 SD 46.2 months). Pre-operative BMI was a significant dependent factor for Ferritin loss post-operatively (R^2 0.1, $p=0.00$).

Conclusion

Post-operative nutrient deficiency is important to oversee in the community. It is vital that this is harvested in primary care by the general practitioner after Bariatric surgery. Serum iron and ferritin are of the nutrients that needs better monitoring and regulation.

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GASTROSEAL: A NOVEL STENT DESIGN FOR THE MANAGEMENT OF POST-BARIATRIC SURGERY LEAKS

Post-operative complications

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Introduction

Fully covered stents have been used to treat leaks with significant success, however, stent migration remains a major problem. The use of very large stents reduces migration and improves stent coaptation to the lumen walls, however, they are plagued by adverse events such as severe intolerance, bleeding and perforation.

Objectives

To test a novel large fully covered expandable stent with a particular mesh design and physical properties that render it less liable to migration yet much less traumatic than conventional large stent

Methods

A pilot study to test Gastroseal stent which has the following properties:

1. Ultra-large size (Diameter: 28mm shaft/ 36mm edges, Length: 24cm)
2. The distal end is curved and rolled in making a smooth contact between the stent and the duodenal/antral.
3. knitted nitinol mesh which is longitudinally compressible and has almost nil axial force, making it highly conformable to the tortuous lumen anatomy and reduces the pressure exerted by the distal end onto the duodenal wall.

Results

Gastroseal stents were inserted in 3 patients with post-sleeve gastrectomy leaks between 7-30 days postoperatively. No analgesics or antiemetics were required after the first 72 hours. One stent migrated in a capacious sleeve and was readjusted endoscopically. The stents were extracted successfully after 6 weeks. No ulcers were visualized at the sites of stent impaction. All leaks healed completely.

Conclusion

Gastroseal stents are safe and effective in the management of post-sleeve gastrectomy leaks. This design is particularly well tolerated and does not cause deep ulcerations or perforations as described with conventional large stents.

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CONTINUOUS POSITIVE AIRWAY PRESSURE AND ANASTOMOTIC OR STAPLE LINE LEAKAGE IN BARIATRIC SURGERY

Post-operative complications

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Introduction

Obstructive sleep apnea (OSA) is a common disease in morbidly obese subjects. Unrecognized and inadequate perioperative care of OSA results in increased perioperative morbidity and mortality. Continuous positive airway pressure (CPAP) therapy is advised for moderately severe OSA to avoid the preventable risk of perioperative complications. However, due to the provided positive pressure, CPAP is thought to cause an increased risk for anastomotic or staple line leakage, which is one of the most feared complications in bariatric surgery.

Objectives

To evaluate whether perioperative CPAP usage is associated with an increased risk of anastomotic or staple line leakage after bariatric surgery.

Methods

All patients who underwent bariatric surgery including an anastomosis or staple line were eligible for inclusion. Only patients with information regarding OSA severity as defined by the apnea-hypopnea-index (AHI) and postoperative CPAP usage were included.

Results

From November 2007 to August 2016, postoperative CPAP status was documented in 2135 patients: 497 (23.3%) used CPAP postoperatively whereas 1637 (76.7%) used no CPAP. Mean BMI was 44.1 kg/m² (SD 6.6). Anastomotic or staple line leakage occurred in 25 patients (1.2%). Leakage rate was not associated with CPAP usage (8 (1.6%) in CPAP group versus 17 (1%) in non-CPAP group, p=0.300).

Conclusion

CPAP usage is not associated with a higher risk of anastomotic or staple line leakage after bariatric surgery. In order to increase perioperative safety and patient based care, CPAP is recommended in all diagnosed moderately severe OSA patients scheduled for bariatric surgery.

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COMMONLY USED RISK SCORING SYSTEMS ARE POOR PREDICTORS OF COMPLICATIONS IN PATIENTS UNDERGOING BARIATRIC SURGERY

Post-operative complications

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Background

Bariatric surgery is considered safe and is associated with a low rate of mortality, but post-operative complications have significant implications for cost, service utilisation, and long-term patient outcomes.

Introduction

The Obesity Surgery Mortality Risk Score (OS-MRS) and Modified Montefiore Obesity Surgery Score (MMOSS) are commonly used to risk stratify patients and determine post-operative location.

Objectives

We set out to determine whether OS-MRS or MMOSS could predict post-operative complications in our patients having primary bariatric surgery.

Methods

A retrospective analysis of OS-MRS, MMOSS and 30-day complication rate (Clavien-Dindo Grade \geq 2) was conducted for 708 patients undergoing primary gastric bypass or sleeve gastrectomy at our institution between 2007 and 2016.

Results

The overall incidence of 30-day complications was 10%, falling to 5% for 2015-16. Threshold for a positive test was set at \geq 4 for both tests. Positive predictive value was 10.5% for OS-MRS and 8.4% for MMOSS. Negative predictive value was 90% for OS-MRS and 89% for MMOSS. Area under the receiver operator characteristic curve was 0.55 for OS-MRS and 0.53 for MMOSS.

Conclusion

Both the OS-MRS and MMOSS were poor predictors of post-operative complications in a large cohort of patients undergoing primary bariatric surgery. In light of the low mortality rate associated with bariatric surgery, efforts to improve patient outcomes should increasingly be directed to predicting and preventing post-operative complications. In view of the observed limitations of risk scoring systems in predicting complications, clinical judgement should play a central role in determining post-operative location.

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MANAGEMENT AND A PROPOSED CLASSIFICATION OF LEAKAGE AFTER OAGB/MGB

Post-operative complications

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Background

Leakage is a dreaded complication of Bariatric Surgery.

Introduction

One anastomosis/Mini Gastric Bypass (OAGB/MGB) is gaining popularity worldwide. There is no agreement on the management strategy of leakage after OAGB/MGB.

Objectives

We describe our experience with leakage in the first 300 cases of OAGB/MGB, and propose a classification and a management strategy of leakage after OAGB/MGB.

Methods

We performed 300 OAGB/MGB procedures between 2011 and 2016. Fifteen cases were complicated with leakage (5 %.)

We have proposed a classification system based on general Clinical, Abdominal and Drain manifestations, and Radiological and Lab Results.

Results

We applied this classification and accordingly 12 cases were successfully treated by conservative management with closure of the leaking fistula.

In 3 cases we re-operated for leakage control. In one case (Patient 14) re-laparoscopy was performed on the first postoperative day. The leaking point could be identified and sutured and the leakage stopped afterwards.

Two cases were treated by open surgery to convert the OAGB/MGB into RYGB combined with endoscopic stenting and drainage (Patient 13 and 15.) We had no mortality. The average hospital stay was 9 days for all the patients (range: 2 – 28 days), 10 days for the conservative management group , 6 days for Patients 13 and 15, and 2 days for Patient 14.

Conclusion

Conservative management is a valuable treatment option for certain leakage cases after OAGB/MGB. The proposed classification may be a useful tool for appropriate management, saving a considerable number of patients the risks of reoperation.

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AN ABSCESS IN HIDING – AN UNUSUAL CAUSE FOR AN INFECTED GASTRIC BAND.

Post-operative complications

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Introduction

A 46-year-old female, who had a gastric band fitted in 2010, initially presented to the outpatient clinic with an 8-month history of persisting infected sinus over her gastric port site. She attributed this to an infected insect bite she had sustained whilst on holiday however grew concerned when the wound would not heal.

Objectives

To demonstrate an unusual presentation of a recognised complication associated with laparoscopic assisted gastric band (LAGB) and how conventional investigations can miss it.

Methods

Following an upper GI endoscopy that showed no evidence of band erosion, the gastric band port was removed in December 2014 with the wounds healing completely on review in clinic. The patient was admitted to hospital with sepsis of unknown origin in June 2015. Both an USS and CT failed to find a cause for the sepsis. Following discussion at MDT the decision was made to remove the band.

At laparoscopy, a perigastric abscess was found between the band and the stomach. This was drained following removal of the band and subsequent OGD showed no evidence of erosion.

Results

The patient made an uncomplicated recovery and was discharged home to complete an oral course of antibiotics. Histology of the band showed inflamed capsular fragments in keeping with surrounding infection.

Conclusion

This case highlights the need for a high level of suspicion when dealing with chronically infected port sites. Diagnostic imaging may not accurately depict certain complications following bariatric procedures. The need for surgical intervention should always be considered in patients failing to respond to conventional treatment.

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PORTOMESENERIC VEIN THROMBOSIS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

Post-operative complications

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Introduction

Portomesenteric vein thrombosis (PMVT) is a rare complication after laparoscopic sleeve gastrectomy (LSG), with potentially lethal consequences due to the risk of mesenteric ischemia.

Objectives

The aim of this study is to describe demographic characteristics, clinical presentation and hospital management of patients with PMVT after LSG.

Methods

Retrospective study of patients with diagnosis of PMVT who underwent LSG in DIPRECA Hospital, between 2006 and 2016. Variables analyzed: gender, age, body mass index (BMI), clinical presentation, treatment, doses and duration of thromboembolic prophylaxis, contraceptive method and thrombophilia testing results. Descriptive statistics were used.

Results

Of 1471 LSG, 5 patients developed clinical PMVT (0.3%). 100% of the patients were women. The mean age and BMI was 39.8 years and 37.2 kg/m² respectively. The most prevalent symptom was epigastric pain irradiated to the upper right quadrant (100%), vomiting (2) and fever (1). In all patients contrast tomography was the tool for image diagnosis. All patients received prophylactic low molecular weight heparin: Enoxaparin 0.8–1 mg/kg 6 hours after surgery until discharge, and pneumatic compression and anti-embolism stockings for 24 hours. All were treated with anticoagulant therapy for at least 6 months, except 2 patients with thrombophilia. 2 patients with intrauterine devices and 2 had smoking history. 1 patient required segmental bowel resection, with favorable outcome.

Conclusion

Portomesenteric vein thrombosis is an infrequent complication after LSG. In this series, all patients were female and 40% had thrombophilia. A high level of suspicion is required to make a prompt diagnosis and treatment to avoid potentially complications.

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ZERO-MORTALITY RATE OVER 3 YEARS OF MANAGEMENT OF ACUTE SEVERE POSTOPERATIVE GASTRIC BYPASS COMPLICATION IN THE FRENCH NETWORK OSEAN

Post-operative complications

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Introduction

Centralizing regional postoperative complication (PC) management could present a promising track to approach a zero-mortality rate even in cases involving severe, acute PCs.

Objectives

Evaluate the effect of centralizing PC management after GBP in the OSEAN network.

Methods

All patients with severe PCs in this network were referred to our center. All acute (≤ 30 days) GBP complications referred between 2013 and 2017 were included in the analysis.

Results

During the study, 216 patients were referred to our center, 26(12.03%) of whom experienced acute, severe PCs after GBP. All patients were admitted to the intensive care unit, and 17 (65.4%) presented with failure in at least two organs. The mortality rate was nil after 13(median; IQR: 4–27.7) months. The median age was 43.5(37.5–49.0) years. Upon the primary surgery, BMI was 39.3(36.0–44.3) kg/m² and 7 (27%) patients had previously undergone bariatric surgery. Patients were referred 11.5(5–21.5) days after the primary surgery, and primary surgical revisions were performed in 17 cases (65.40%) in the originating center. After admission, 19 required surgical interventions, and 2 required only interventional endoscopies. The PCs were primarily anastomotic fistulas (10 gastrojejunal; 6 jejuno-jejunal; 3 both). The length of the hospital stay was 13.5(9.5–19.75) days. When the first surgical revisions were not performed in our center, patients required additional surgical revision ($P < 0.001$); therefore, the hospital stays were longer ($P = 0.01$).

Conclusion

The quality of the primary surgery revision is the cornerstone of managing acute severe PCs after GBP. The effect of centralizing PC management after GBP must be evaluated in future studies.

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SYMPTOMATIC GALLBLADDER DISEASE IN PATIENTS FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY

Post-operative complications

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Introduction

Obesity and rapid weight loss are broadly accepted risk factors for the development of cholelithiasis. The incidence of symptomatic gallbladder disease (SGBD) requiring cholecystectomy following laparoscopic sleeve gastrectomy (LSG) ranges widely in the existing literature.

Objectives

This study seeks to establish the incidence of SGBD at a single institution following LSG and identify risk factors associated with SGBD in the LSG patient

Methods

An IRB approved retrospective chart review was conducted on patients who underwent LSG between 2010 and 2016. Patients with prior cholecystectomy or preoperative diagnosis of cholelithiasis were excluded from secondary review.

Results

593 patient charts were reviewed and 148 patients were excluded from secondary review. In the remaining cohort of 445, 34 (7.64%) developed SGBD requiring cholecystectomy. The average age of subjects requiring cholecystectomy was 36 and the group was 95% female. The average body mass index (BMI) of patients in the SGBD cohort was 46.3 prior to LSG and 33.6 at the time of cholecystectomy. The average time between LSG and cholecystectomy was 466 days (Range: 14 to 1309).

Conclusion

This study contributes additional data on the incidence of symptomatic gallbladder disease following laparoscopic sleeve gastrectomy. The incidence of SGBD, average age of subjects requiring cholecystectomy and time elapsed between LSG and cholecystectomy were in line with other papers currently in the literature.

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GASTRO-PLEURAL FISTULA AFTER GASTRIC SLEEVE: CASE REPORT

Post-operative complications

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Background

Expose importance of early diagnosis and management of gastro-pleural fistula

Introduction

Is a rare condition; Defined as communication between a traumatized area of the digestive tract and pleura. Manifested in patients with history of pulmonary procedures, abdominal trauma, gastric and bariatric surgery. Treatment should be multidisciplinary; Conservative management with antibiotics, stent, parenteral feeding is preferred in comparison to surgical management.

Objectives

Present a Case of 43 years woman, BMI 48 without other diseases, she had a gastric sleeve surgery by laparoscopic; The procedure was performed without complications; Post-surgical tests without leaks; Releasing her in good condition. Two months later she returned with pneumonia, bad health condition, back and left shoulder pain, cough was exacerbated after eating;

Methods

Were performed: CT with double contrast, demonstrating left basal pneumonia, without pleural effusion, abdomen free of collections or contrast leaks; Fluoroscopy free of contrast leaks; Bronchoscopy with culture intake; Upper Endoscopy evidencing orifice and fistula to pleura at 1cm of the gastroesophageal junction. Partially coated stent was placed, intravenous antibiotics, pulmonary therapy, starting oral diet, gastric protector. When she improved her health status, she was released from the hospital.

Results

Eight weeks later Stent was removed, showing fistula resolution; She has been asymptomatic for six months.

Conclusion

Gastro-pleural fistula is a rare complication that can occur after bariatric surgery, more frequently in gastric sleeve than in gastric bypass. It requires immediate diagnosis and treatment. Conservative treatment with stents and antibiotics in gastro-pleural fistula is effective and less invasive if applied timely compared to only antibiotics or surgical management

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CURRENT MANAGEMENT OF DUMPING SYNDROME AFTER ROUX-EN-Y GASTRIC BYPASS: WHEN IS SURGICAL INTERVENTION JUSTIFIABLE?

Post-operative complications

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Introduction

DS entails a continuum of symptoms varying from vague to invalidating neuroglycopenia. It is suggested that it has a certain role in the weight loss effect for it acts penalizing in the event of high caloric intake.

Objectives

Two main questions arise: how should we deal with (refractory) dumping syndrome (DS) and when is reversal of Roux-en-Y gastric bypass (RYGB) or other surgical intervention justifiable?

Methods

A comprehensive search was performed in Cochrane, Google Scholar, PubMed, and Research gate on the management of DS and potential indications for surgical interventions.

Results

Primary management in controlling DS should consist of dietary changes including small frequent meals containing high fiber, complex carbohydrate, and protein rich foods. Acarbose is believed to avoid postprandial hypoglycemia by decreasing the hyperinsulinemic response. (Long acting) octreotide analogues significantly reduce symptoms and improve quality of life, but their role is still under investigation.

Medical and dietary refractory DS is rarely encountered.

Surgery is suggested only as a last resort. Since it entails restoration of pyloric function and duodenal continuity, full reversal of RYGB or conversion to modified sleeve gastrectomy should be the intention. All other causes of hyperinsulinemic hypoglycemia should be excluded first.

Therefore, some authors suggest placement of a gastrostomy tube delivering nutrients in the excluded stomach to document improvement of symptoms before surgery.

Conclusion

Focus on intense dietary management should be the main approach in the management of DS. Reversal of RYGB is suggested as a final course of action, used only when all else has failed.

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LONG-TERM MICRONUTRIENT DEFICIENCIES IN POOR RESPONDERS AFTER BARIATRIC SURGERY

Post-operative complications

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Introduction

Micronutrient deficiencies are one of the most common long-term complications after bariatric surgery.

Objectives

To analyse prevalence of anaemia and microelement deficiencies following vertical sleeve gastrectomy (VSG) and Roux-en-Y gastric bypass (RYGB) in the literature and compare them to poor responders after bariatric surgery (failing to achieve diabetes remission, 20% weight loss or regaining weight).

Methods

Cross-sectional analysis of demographic data, blood tests and body composition measurements of poor responders after VSG or RYGB from our own database was performed and compared to published studies with case volume >50 and follow-up >12 months (systematic review).

Results

44 patients (63.6% women), aged 52.4±9.7 with BMI 36.2±7kg/m², body fat percentage 40.56±8.4, HbA1c 58±8mmol/mol and diabetes duration of 16.8±7.2years underwent 7 VSG and 37 RYGB (mean follow-up 4.9±2.7years). No correlation was found between micronutrient deficiencies and age, length of follow-up, BMI or body composition. Results were compared to 17 studies from the systematic review.

Table 1. Prevalence of micronutrient supplementation and deficiency (%)

	VSG		RYGB	
	Other studies	Poor responders	Other studies	Poor responders
Multivitamins supp	66	42	23-55	48
Iron supplementation	-	14	29-60	21.6
Anaemia	4-26	14.3	14.7-27.1	32.4
Low ferritin	24	42.9	20.6-32.4	60.0
Vitamin D deficiency	20-39	71.4	4-39	93.3
Vitamin B12	9	0	1.2-8.4	2.7
Folate deficiency	0-15	0	0-21	0

Conclusion

Micronutrient deficiencies are common following both VSG and RYGB. Poor responders have higher prevalence of anaemia and micronutrient deficiencies than general surgical bariatric population. This may be related to low compliance with supplementation regimes therefore close long-term monitoring of these patients is crucial.

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LONG –TERM NEUROLOGIC COMPLICATIONS OF BARIATRIC SURGERY AT MACKAY MEMORIAL HOSPITAL

Post-operative complications

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Introduction

The increasing prevalence and comorbidities of severe obesity are known. Nowadays, bariatric surgical procedures are the most effective treatment modality. However, more neurological complications have been created by this procedure. Neurological complications might be the result of mechanical or inflammatory mechanisms, yet primarily result from micro-nutritional deficiencies.

Objectives

The purpose of this review is to analyse the neurological complications after malabsorptive procedures or restrictive procedure for bariatric surgery at our hospital.

Methods

This retrospectively study collects total of 212 patients in 9 years who underwent the bariatric surgery. We search the medical chart, based on the key words including: Dizziness, Vertigo, Giddiness, Unstable gait, Fall down, Numbness, Visual discomfort. We analyse the relations between surgical methods, age, gender, BMI, onset time and the body weight loss rate.

Results

10 out of the 212 patients (4.72%) have neurologic complications (1 case in gastric banding, 2 cases in gastric banding and plication, 7 cases in Roux-en-Y gastric bypass). The mean of the onset time is 18.6 weeks and the most common symptoms are dizziness and vertigo. The Roux-en-Y gastric bypass group has the highest relative risk and lowest number need to harm.

Conclusion

After procedures for bariatric surgery, nutritional deficiencies are common. Intractable vomiting and rapid weight loss are the most common reasons for neurologic complications. Laboratory evidence of a nutrient deficiency may not be accompanied by clinical manifestations. Therefore, we must always keep in mind of neurological examination, micro-nutritional deficiencies and neurologic complications when we face patients who undergo bariatric surgeries.

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LEAKS IN FIXED-RING BANDED SLEEVE GASTRECTOMIES: A MANAGEMENT APPROACH.

Post-operative complications

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Background

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Introduction

The use of a Fobi ring to prevent pouch dilatation is sometimes used in Roux-en-Y gastric bypass (RYGB). Recently, it has been extrapolated to laparoscopic sleeve gastrectomy (LSG) procedures by placing a fixed-ring band a few centimeters below the gastro-esophageal junction (GEJ).

Objectives

What is the consequence if a patient develops a leak?

Methods

Over 18 months, all patients with either a conventional LSG or a fixed-ring banded sleeve gastrectomy (BLSG) who presented with a proven leak complication were included. The management approaches along with the surgical, endoscopic and percutaneous procedures used were examined.

Results

6 patients had a BLSG leak and 6 had a LSG leak. All patients had leak resolution. There was no significant difference in body mass index (BMI), time to leak, initial white cell count (WCC) and C-reactive protein (CRP) levels between the two groups. LSG patients required a median of 2 endoscopic procedures (range 1-3). Stents were deployed in three patients. All BLSG patients required a single surgical intervention with laparoscopic washout, drainage, removal of band +/- feeding jejunostomy. One stent was deployed in one BLSG patient. BLSG leak resolution was demonstrated at 34 ± 12 days versus 85 ± 12 days in the LSG group ($p < 0.05$).

Conclusion

The BLSG is a new modification of the sleeve gastrectomy procedure. This study presents a management strategy for leak resolution employed in BLSG patients. The presence of a foreign body as a persistent nidus of infection mandates band removal.

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EVALUATION OF THE GLASGOW PROGNOSTIC SCORE IN BARIATRIC PATIENTS

Post-operative complications

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Background

Bariatric surgery is the most effective option to provide long-term weight loss, but concerns about the safety still exist. Defining subgroups of bariatric patients will possibly lead to the identification of risk profiles enabling a reliable prediction of perioperative patient outcome.

Introduction

Several studies suggested a relationship between CRP and an increased risk of cardiovascular, cerebrovascular and overall in-hospital mortality. Combining albumin and CRP into a risk stratification score, the Glasgow Prognostic Score (GPS) can be used for prognosis assessment of clinical outcome, but was not yet evaluated in bariatric patients.

Objectives

The aim of this study was to evaluate the utility of GPS for risk stratification in bariatric surgery.

Methods

We conducted a retrospective analysis of primary bariatric procedures. Patients with both an elevated CRP and hypoalbuminemia were allocated a GPS of 2, patients with one abnormal parameter were assigned a score of 1, while patients with neither of these abnormalities were allocated a score of 0.

Results

In 761 patients, Leakage rate was 0,92% and mortality rate was 0,39%. There was no association between GPS and complication rate ($p=0.547$). An elevated GPS was more common in super obese patients ($p<0.0001$), in patients with dyslipoproteinemia ($p=0.044$) and hypertension ($p=0.029$). A tendency toward higher GPS in patients with type II diabetes was seen ($p=0.051$).

Conclusion

GPS fails to predict mortality and morbidity in patients undergoing bariatric surgery. GPS correlates with the severity of obesity and is likely to be associated with metabolic syndrome. Further studies are needed to assess its influence on clinical long-term follow-up.

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RECURRENT HYPOGLYCEMIA AFTER SUBTOTAL PANCREATECTOMY, A CASE OF POST-GASTRIC BYPASSES HYPERINSULINISM WITH NESIDIOBLASTOSIS

Post-operative complications

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Background

Hyperinsulinemic hypoglycemia with neuroglycopenia after gastric bypass may due to the changes in gut hormonal.

Introduction

Most patients with postprandial hypoglycemia will respond to nutritional and medical treatment.

Objectives

A very small number of patients may have poor response to treatment and surgery may be considered.

Methods

CASE PRESENTATION

Results

A 37-year-old female with recurrent severe fasting and postprandial symptomatic hypoglycemia that occurred 6 months after laparoscopic single anastomosis gastric bypass (LSAGB). The hypoglycemia was associated with increased insulin and C-peptide but all diagnostic modalities for localizing an insulinoma were negative. Medical management include alpha-glucosidase inhibitors or octreotide treatment but failed to control symptoms and the patient underwent subtotal pancreatectomy. The surgical tissue examination confirmed the diagnosis of nesidioblastosis. After surgery the patient had full remission but 5 months after the severe hypoglycemia recurred. All medical treatment fails again; the patient underwent GB reversal and revision to sleeve gastrectomy. However, this time it was well-controlled after surgery

Conclusion

GB reversal and revision to sleeve gastrectomy may be efficacious for patients with this rare condition.

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ACUTE CONVERSION OF EARLY SLEEVE GASTRECTOMY LEAK TO ROUX-EN-Y GASTRIC BYPASS: A CASE SERIES

Post-operative complications

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Background

The management of sleeve gastrectomy leaks is a controversial area.

Introduction

We propose a novel method of converting an early leaking sleeve gastrectomy to a Roux-en-Y gastric bypass in the acute setting, regardless of whether or not the defect can be visualised. Our method of undertaking a major surgical reconstructive procedure in this setting is seemingly counter to traditional surgical dogma, with two anastomoses within a septic field. All three cases were performed within a large private hospital location.

Objectives

To demonstrate that acute conversion to Roux-en-Y gastric bypass in early sleeve gastrectomy leaks in haemodynamically stable patients is safe and efficacious.

Methods

We present three cases of early sleeve leak in haemodynamically stable patients where the conversion to a gastric bypass acutely was completed successfully.

Results

All three patients manifested their leak prior to discharge from hospital and were operated within 8 hours of initial symptoms and diagnosis. One patient had an open procedure, the other two were managed laparoscopically. Average overall length stay was 22 days. None of the patients required any subsequent endoscopic or interventional radiological procedure. One patient had a wound infection and one had cellulitis around a feeding gastrostomy tube. There was no mortality. All leaks were radiologically and clinically healed within 6 weeks. This compares favourably to patients who have laparoscopic drainage and endoscopy.

Conclusion

Early conversion of acute gastric sleeve leak to Roux-en-Y gastric bypass can be successfully performed in selected patients in the acute setting. Larger patient cohorts are required to assess overall patient safety.

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BARIATRIC SURGERY IN CIRRHOTIC PATIENTS: IS IT SAFE?

Post-operative complications

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Introduction

Cirrhotic patients are known to have high risk of postoperative complications (10%). 90 % of bariatric patients suffer from non alcoholic fatty liver disease (NAFLD) and 50% of them may develop non alcoholic steatohepatitis (NASH) which can progress to cirrhosis.

Objectives

The aim of this study was to assess whether presence of cirrhosis at the time of bariatric surgery leads to increased rate, severity of complications and length of stay.

Methods

A cohort of 99 bariatric patients, between 2003 and 2016, who had undergone liver biopsy at the time of bariatric surgery were reassessed for histological outcome and divided into two groups Group: I (Cirrhosis: n=24) and Group: II (NASH: n=41, NAFLD: n=22 and Non NAFLD: n=12). Medical notes were retrospectively assessed for development of 30-day postoperative complications, severity of complications (Clavien Dindo classification) and length of stay. Patient characteristics are expressed as Median (Range).

Results

Patients characteristics were significantly different between groups: Age (yrs): Group I: 53(37-66), Group II: 42(24-67), BMI (kg/m²): Group I: 46(38-63), Group II: 52(38-81), Weight (kg): Group I: 126 (90 -186), Group II: 145(105-222), $p < 0.05$. There was no significant difference in complications: Group I: n=9/24, Group II: n=12/74, $p > 0.05$, severity of complications: Group I: 2(1-3), Group II: 2(1-3), $p > 0.05$ and overall length of stay: Group I: 5(2-20), Group II: 3(1-43), $p > 0.05$.

Conclusion

The risk of non bariatric surgery is high in cirrhotic patients (10%). This relatively small sample size suggests that bariatric Surgery may be safely performed in patients with liver cirrhosis without portal hypertension.



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INTERNAL HERNIA FOLLOWING LRYGB: EMERGENCY OR NOT?

Post-operative complications

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Introduction

Internal hernias (IH) are a well recognised complication of Laparoscopic Roux-en-Y Gastric Bypass (LRYGB), with an incidence of around 4%. Delays in treatment can have devastating consequences including bowel ischaemia and short gut. There is currently no international consensus on when to take patients with IH to theatre.

Objectives

To establish the optimal time to take the patient with IH to theatre.

Methods

We reviewed two cases of the management of IH following LRYGB at our unit.

Results

The patients presented to our unit with pain six years (Case 1) and two years (Case 2) after LRYGB. In both cases the patients had normal physiology and biochemistry. Case 2 had a CT scan that showed swirl sign, suggestive of IH. Both patients underwent diagnostic laparoscopy within less than 6 hours from presentation to the A&E department and ischaemic bowel of the IH was found intraoperatively. Following reduction of the IH the bowel recovered and they did not require resection.

Conclusion

Clinical and radiological results in patients presenting with abdominal pain secondary to IH may be falsely reassuring and firm diagnosis can only be confirmed by laparoscopy. A low threshold for early surgical intervention can save patients from significant comorbidity. We do believe the earlier the surgery in such cases the less technical difficulties one might face. Our policy is to perform a diagnostic laparoscopy at the time of presentation.

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PERSISTING DYSPHAGIA AND ESOPHAGITIS WITHOUT GERD AFTER MGB.

Post-operative complications

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Introduction

The majority of complications after MgB occur at the gastro-jejunostomy (proximal anastomosis): bleeding, fistulae and leaks, anastomotic stenosis, marginal erosion and ulceration are some of them.

An uncommon complication of MgB is achalasia with only few cases reported in the literature.

Objectives

This case report aims to underline the significance of performing an esophageal manometry in cases of persisting dysphagia after MgB surgery.

Methods

A 47 years old woman has been admitted to our hospital due to regurgitation and dysphagia to solid foods and liquids 6 months after MgB operation complicated with a leak, conservatively treated. Past medical history included renal agenesis. An upper GI series revealed a stenosis of the EGJ, so an endoscopic esophageal dilatation was performed. A month later she has been readmitted with dysphagia and dehydration. A stent was placed under endoscopic visualization. Four days later the stent has been removed endoscopically due to dislocation, while there was no evidence of stenosis at this time. Symptoms persisted, so we decided to proceed with an oesophageal manometry, revealing an achalasia Typ II (Chicago Classification). The patient underwent a laparoscopic Heller myotomy and was discharged on 3rd postoperative day, tolerating liquid diet well.

Results

On the follow up three months later, the patient was asymptomatic with normal renal function.

Conclusion

Although regurgitation, cough, and aspiration are symptoms that can be found in the morbid obese patients, in cases of persisting dysphagia and esophagitis without GERD after MgB surgery, an esophageal manometry can be diagnostic for achalasia as the cause of the symptoms.

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CHRONIC SALMONELLA INFECTION FOLLOWING ROUX-EN-Y GASTRIC BYPASS SURGERY FOR MORBID OBESITY. TREATED SUCCESSFULLY BY A LAPAROSCOPIC CHOLECYSTECTOMY.

Post-operative complications

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Background

Introduction

Public Health England reported nearly 8,500 cases of Salmonella in 2015. The gall bladder is often the reservoir in patients and for chronic carriers cholecystectomy is the treatment of choice. Most carriers remain asymptomatic.

Objectives

In patients who have had a gastric bypass, the reduced acid secretions may increase the risk to several bacterial infections. The use of Proton pump inhibitors and the association with the risk of enteric infections has been reported previously. Patients undergoing RGBY are routinely prescribed PPI's following surgery, further reducing acid suppression and increasing the risk to infections transmitted through the oral-faecal route.

Methods

We report a case of chronic infection caused by salmonella and cured by a laparoscopic cholecystectomy after RYGB for obesity. This patient presented with a 2 year history of chronic abdominal pain, loose stools and excessive weight loss. Her stool and urine cultures were positive for Salmonella. Despite multiple courses of antibiotics she remained positive.

Results

Following laparoscopic cholecystectomy the patient made an excellent recovery and at 12 months follow up she had gained 7kg in weight with complete resolution of her symptoms.

Conclusion

We report the first case of chronic infection caused by salmonella and cured by a laparoscopic cholecystectomy after RYGB. Many algorithms have been reported in the literature for the investigation and management of chronic abdominal pain and excessive weight loss following RGBY but none of them have included stool and urine culture as part of the work up. Currently, routine concomitant cholecystectomy is not justified during roux-en-y gastric bypass.

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A COMBINED PROTOCOL FOR VENOUS THROMBOEMBOLISM PROPHYLAXIS

Post-operative complications

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Introduction

Morbidly obese patients are at high risk for developing venous thromboembolism (VTE) and may be associated with significant morbidity and mortality

Objectives

Aim of this study is to give the low dosage of Low Molecular Weight Heparin (LMWH) with Pneumatic Compression Device (PCD) for minimizing the risk of bleeding in the patients undergoing bariatric surgery.

Methods

From November 2015 to February 2017, we operated 235 patients (mean BMI 45.7 kg/m² and age 37.2 years). Twenty-four Laparoscopic Roux N Y gastric bypass, 16 Laparoscopic Mini Gastric bypass and 193 Laparoscopic Sleeve Gastrectomy and 2 Laparoscopic Re-Sleeve were performed in our clinic. We applied a combined protocol for VTE prophylaxis to our bariatric patients. The patients received 0,2 ml of Nadroparine (Fraxiparine, GlaxoSmithKline), 12 hours before the operation. A PCD (The Kendall SCD™ Compression System) is applied to patient during the operation and PCD is left on the patient following 24 hours. Nadroparine 0.4 ml is started subcutaneously after PCD is removed from the patient and same dosage of Nadroparine is given daily to the patients for fifteen days following the bariatric operation. Ambulation within 2 hours of surgery and frequently is encouraged. This VTE prophylaxis protocol was applied to every patient undergoing bariatric operation. Only exclusion criteria are the patients with history of VTE and pulmonary embolism.

Results

No thrombotic events were observed at the postoperatively and 1, 3, 6 months follow-up. Two bleedings occurred requiring transfusion.

Conclusion

To use low dosage of LMWH with PCD is very effective for VTE prophylaxis.

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DO TACHYCARDIA AFTER BARIATRIC SURGERY PREDICTS A DEVASTATING COMPLICATION?

Post-operative complications

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Introduction

Sleeve gastrectomy is the most common procedure done for bariatric patients worldwide. Postoperative leak and hemorrhage are the two most common major complications after sleeve gastrectomy. Incidence ranges between 1-2% for leakage, 3-5% for bleeding

Objectives

The aim of our study was to investigate the relation between tachycardia and early postoperative complication and to rule whether tachycardia is a sufficient parameter to declare reoperation

Methods

Retrospective analysis of 717 patients who underwent bariatric surgery

Results

717 patients underwent both sleeve gastrectomy and high gastric bypass by two experienced surgeons using same technique. 67 (9.3%) of these patients developed tachycardia in the postoperative phase with a mean heart rate of 113. patients were routinely followed up in the outpatient clinic till now. 1 (1.5 %) patient out of the 67 was diagnosed with leakage and treated conservatively. 5 patients (7.4%) were diagnosed as having a postoperative bleeding, one of them underwent reoperation. In 61 (91%) patients the tachycardia was attributed to postoperative pain or other minor complications. all were discharged home with no consequences.

Conclusion

The most common cause of tachycardia postoperatively was mainly due to pain and minor complications. Postoperative tachycardia has not been correlated with postoperative leakage, and if a patient develops tachycardia, bleeding must be ruled out

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EFFECTIVENESS OF A NEW STRATEGY FOR THE MANAGEMENT OF GASTRO CUTANEOUS FISTULAS AFTER BARIATRIC SURGERY BY ENDOSCOPIC INTUBATION USING A KEHR DRAIN.

Post-operative complications

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Introduction

Endoscopic double pigtail drains can be considered as the reference for fistulas after bariatric surgery <1 cm in diameter, but the management of fistulas of larger diameter is still far from standardization.

Objectives

The aim of this study is to present the preliminary results of the use of a Kehr drain in case of fistulas with a diameter >2cm.

Methods

Six patients (1 male, 5 females) presented a gastrocutaneous fistula at the top of the gastric tube whose orifice was >2cm at endoscopy with a drainage flow >50cc for >14 days. Mean preoperative age, weight and BMI were 49 (34-69) years, 136 (118-156) kg and 46 (43-50) kg/m², respectively. Bariatric procedures were 2 SG, 2 RYGB and 2 OAGB. All patients underwent peritoneal toilet and drainage for severe sepsis without detecting any evident leak at methylene blue dye test. Some days later endoscopy was performed, a naso-cavitary drain was placed for continuous washing during 10 days, as well as a Kehr drain to intubate the fistula path.

Results

Average hospital stay was 52 (27-85) days, mean time to Kehr removal was 79 (41-163) days, and complete healing was observed after 106 (54-212) days on average from bariatric operation. A transitory leak around the Kehr was usual, not preventing oral feeding. No major complication was observed.

Conclusion

This preliminary experience shows that endoscopic intubation with a Kehr drain can be a safe and effective strategy for the management of large fistulas at the level of the gastric staple line.

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MID-TERM FOLLOW-UP (3 YEARS) OF PATIENTS WITH BARRETT'S ESOPHAGUS AFTER SLEEVE GASTRECTOMY

Post-operative complications

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Background

Gastro-esophageal reflux disease (GERD) and its possible sequelae are the most significant long-term complications after Sleeve gastrectomy (SG).

Introduction

In our recently study 110 patients were submitted to Esophagogastroduodenoscopy (EGDS) and GERD symptoms 58 months after SG. A non-dysplastic Barrett's esophagus (BE) was histologically diagnosed in 19 patients (17.2%).

Objectives

To evaluate the mid-term (3 years) effectiveness of proton pump inhibitors (PPI) on the clinical and histological evolution of BE patients.

Methods

The 19 patients were prescribed 40 mg daily of PPI for the first three months after the BE diagnosis, followed by 3 years of 20 mg/daily. Every 6 months clinical evaluation including Visual Analog Scale (VAS) symptoms and EGDS with biopsy every year were performed.

Results

All patients completed the 3 years follow-up. Chronic PPI therapy was tolerated in all patients but one spontaneously interrupted the PPI intake. A satisfactory control of GERD symptoms was achieved in 17/19 patients (89%) complaining GERD symptoms at the time of BE diagnosis. VAS mean score significantly decreased as compared with initial values (acid reflux 2.6 ± 3.8 vs 0.0 ± 0.2 $p < 0.001$; regurgitation 3.8 ± 3.6 vs 0.3 ± 1.2 $p < 0.001$; heartburn 6 ± 3.1 vs 0.2 ± 0.8 $p < 0.001$). Two patients (10.5%) developed a low-grade dysplasia BE despite a continuing PPI intake. No dysplasia was found out in the remaining 17 BE patients.

Conclusion

Chronic PPI therapy induced satisfactory control of GERD symptoms in BE patients after SG at mid-term follow-up. A progression from metaplastic to dysplastic BE can occur despite PPI therapy. In these patients a close endoscopic follow-up, should be recommended regardless of GERD symptoms.

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LAPAROSCOPIC MANAGEMENT OF STOMACH SLEEVE OBSTRUCTION DUE TO TORSION/TWISTING.

Post-operative complications

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Introduction

Stomach sleeve obstruction is a known complication after Laparoscopic Sleeve Gastrectomy (SG). It results in absolute intolerance to liquid and food intake. The obstruction of sleeve may be because of stomach torsion, twisting, kinking, folding, adhesions and Stenosis/ narrowing.

Objectives

Few patients of sleeve obstruction due to twist can be treated without converting into gastric bypass by doing meaningful gastropexy

Methods

Two patients with absolute intolerance to liquid intake were received on the day five and on the day twelve after undergoing primary laparoscopic sleeve gastrectomy. It was possible to reach pylorus only with great difficulty and high level of manoeuvrability during endoscopy. The laparoscopic finding was twisting and partial torsion due to laxity of the sleeve. Gastropexy was done by taking intermittent stitches involving posterior fixed structures like left crush, pancreatic capsule and mesocolon in both the cases.

Results

The recovery in terms of excellent tolerance for liquid intake was immediate and that too without recurrence.

Conclusion

Distal passage for food and liquid in the lumen of sleeve should remain very smooth. The lumen should accept arrival of the Ryle's tube or Gastric calibration tube up to antrum without any assistance. The design of the sleeve may be improper from beginning or it may mutate because of abnormal adhesions any time during postoperative course.

Symptoms and endoscopic findings are diagnostic of the problem.

Laparoscopic correction of the architecture of the sleeve by doing adhesiolysis and gastropexy is successful if done meaningfully.

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LAPAROSCOPIC REVERSAL OF ROUX-EN-Y GASTRIC BYPASS FOR INTRACTABLE HYPOGLYCEMIA

Post-operative complications

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Background

Hypoglycemia can occur after laparoscopic Roux-en-Y gastric bypass (RYGB) as part of "late" dumping syndrome, which is usually not life threatening, and can be managed with dietary modifications. However, hyperinsulinemic hypoglycemia may lead to neuroglycopenic symptoms and require hospitalisation.

Introduction

Intractable hypoglycemia may occur post-RYGB, due to hyperfunctioning of beta-cell mass, lack of regression post surgery, or GLP-1 induced proliferation. One treatment option is reversal of RYGB with restoration of functional pylorus and duodenal continuity.

Objectives

To present a case of intractable hypoglycemia after laparoscopic RYGB, managed by reversal of the bypass

Methods

The patient had undergone laparoscopic RYGB at some other centre. At the time of primary surgery his BMI was 34.3 kg/m² and he was uncontrolled diabetic on insulin (HbA1c 8.80 gm%). He presented to us with BMI 27.5 kg/m² and remission of diabetes, but with recurrent hypoglycemic episodes. He was worked up to confirm diagnosis. Patient was unable to follow dietary modifications due to his work. The only option was RYGB reversal.

Results

The patient was counselled about weight regain and that diabetes may return, He underwent laparoscopic reversal surgery. Gastro-jejunostomy was disconnected. As the Roux limb was short (35 cm) it was excised. The small bowel continuity was restored by a jejunojejunostomy. Finally stomach pouch was joined back to remanant stomach. Post operatively patient did well and was discharged on 3rd post-operative day, At 2 years follow-up he has BMI 31.3 kg/m² and is diabetic controlled on oral medication.

Conclusion

Reversal of RYGB may be required in case of intractable hypoglycemia.



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DELAY IN DIAGNOSIS OF INTERNAL HERNIA : A DISASTER FOR PATIENT.

Post-operative complications

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Introduction

Although Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) is one of the most frequently performed and effective bariatric procedures, it is associated with some complications , of which internal hernia (IH) is one of the commonest. A delay in diagnosis of internal hernia can be life threatening

Objectives

Our objective is to increase awareness in physicians of all specialties caring for post bariatric surgery patients and to stress on low threshold to obtain early surgical consultation in patients with unexplained abdominal pain.

Methods

A 25 year old male patient with initial BMI - 54.3 , lost 45 kgs and reduced BMI to 28.3 after LRYGB , presented with pain abdomen and vomiting for 6 days for which patient was taking iv analgesia .CECT was done which showed dilated bowel loops with swirling of mesentric vessels .Diagnostic laparoscopy showed jejuno-jejunal mesenteric defect with internal herniation having gangrenous small bowel. Resection anastamosis of gangrenous segment was done and eventually patient was salvaged .

Results

Our case confirms the dictum to have low threshold for a surgical evaluation in a post bariatric surgery patient who is having acute abdomen signs.

Conclusion

The occurrence of internal hernia has increased with laparoscopic Roux-en-Y gastric bypass due to less postoperative adhesions. These herald signs of internal herniation should prompt early surgical consultation. Physicians and surgeons other than bariatric surgeons need to be educated about this potentially life-threatening complication so early diagnosis and treatment can avoid catastrophic bowel gangrene.

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THROMBOEMBOLIC DISEASE IN BARIATRIC PATIENTS: EXTENDED PROPHYLAXIS?

Post-operative complications

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Introduction

Obesity is an independent risk factor for venous Thromboembolism and PE is the leading cause of morbidity and mortality following bariatric surgery. As Factor Xa (an indicator of LMWH) clearance increases with increasing body weight, higher dose LMWH is required for obese patients.

Objectives

The aim of this study was to compare our extended Thromboembolism protocol (modified NICE protocol) against deviations from protocol. We studied postoperative thromboembolic and haemorrhagic complications between the two groups.

Methods

A cohort of 273 patients who had undergone bariatric surgery under present protocol (PP) was matched with a group of 221 patients that had deviated from protocol (DFP). Groups were studied for Age, BMI, Gender, Co morbidities and Prev DVT/PE. Patients were compared for their postoperative development of thromboembolic disease and post operative bleeding. Patients were also studied for their preoperative exposure to thromboembolic risk factors like smoking, hormone replacement therapy and clotting disorders. Data is represented as Median (Range) in order of DFP vs. PP.

Results

Groups were similar in terms of Age {44(38 -52) vs. 45(37-51)}, BMI {50(45 -55) vs.49(43 -54)}, Gender (M: F: 1:3), co morbidities and previous history of DVT/PE. Development of PE was significantly higher in DFP group compared to PP group (n=4 vs.1, p<0.05). There was no significant difference in post operative bleeding (n=3 vs.5, p=0.5), pre operative smoking (n=26 vs.31, p=0.2), pre operative HRT (n=1 vs.3,p=0.5) and clotting disorder (n=2 vs.1,p=0.5).

Conclusion

A weight related, increased LMWH thromboprophylaxis for extended period of time may significantly reduce thromboembolic complications without increasing haemorrhagic complications.

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ALTERNATIVE TREATMENT OF PORTO-MESENTERY VENOUS THROMBOSIS(PMVT) AFTER LSG WITH SMV & SMA CATHETERIZATION

Post-operative complications

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Introduction

PMVT is relatively uncommon but severe surgical complication after LSG, the incidence of PMVT was relatively rare in oriental patients.

Objectives

37-year-old women with BMI 55, with comorbidity of hypertension, severe OSAS. She received LSG for treatment of her morbid obesity uneventfully. However, suddenly onset of severe abdominal developed during POD 11, CT scan showed edematous change of segmental proximal jejunum with prominent thrombus formation over porto-mesentery trunk. The blood tests were all within normal length except significant elevated D-dimer.

Methods

The patient started IV infusion heparin immediately. The SMA catheter was inserted for indirect thrombolytic treatment with Urokinase at D2. Extended progression of thrombosis noted in follow up CT scan and the general condition was deteriorated. Exploratory laparotomy performed and 350cm of necrotic small bowel were resected, followed with insertion of SMV catheter. Direct thrombolytic treatment via SMV catheter with Urokinase was started accompanied with indirect thrombolytic(SMA) and IV heparin infusion.

Results

The thrombolytic treatments ended after D7, re-exploration with removal of SMV catheter and re-anastomosis of small bowel. The IV heparin infusion continuous with keep 2 times from normal of aPTT. Gradually shifted to oral Warfarin from IV heparin after oral intake started. She was extubated on D21 and follow up CT scan showed partially resolved of PMVT.

Conclusion

PMVT is rare complication after LSG, IV infusion of Heparin is reported to be effective treatment in most cases. In cases with suspected small bowel necrosis, salvage surgery with small bowel resection followed with aggressive direct and indirect thrombolytic treatment is suggested.

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LAPAROSCOPIC MANAGEMENT OF ACUTE SMALL BOWEL OBSTRUCTION WITH CHYLOPERITONEUMO 5 YEARS FOLLOWING ROUX-EN-Y GASTRIC BYPASS

Post-operative complications

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Introduction

While Chyloperitoneum is infrequently reported in the literature, it is not an uncommon finding. A patient with acute abdominal pain and small bowel obstruction (SBO) following a Roux-en-Y gastric bypass (RYGB) requires a high suspicion of internal hernia.

Objectives

Study of a case of laparoscopic management of acute small bowel obstruction with chyloperitoneumo 5 years following RYGB.

Methods

Our patient is a 34 year old female with history of laparoscopic RYGB in 2010 and laparoscopic repair of internal hernia 2011 who presented with symptoms consistent with a small bowel obstruction. Her CT scan was consistent with SBO and concerning for an internal hernia at the Peterson's defect.

The patient underwent an exploratory laparoscopy with the findings of chylous ascites and a constrictive adhesive band where a piece of small bowel was trapped.

The band was divided, releasing the incarcerated bowel, which had become congested with chyle. The space between her Roux limb and gastric remnant was closed with a poly-filament non-absorbable suture in a running fashion. The patient had an uneventful post-operative recovery.

Results

Review of literature about post-operative small bowel obstruction with chyloperitoneum following RYGB

Conclusion

Chyloperitoneum is infrequently reported in the literature but not an uncommon finding following RYGB with SBO.

Our case illustrates that not all small bowel obstruction is caused by internal hernia through the surgically created mesenteric defects.

It also demonstrates the need for prompt resuscitation, early CT scan evaluation and involvement with the bariatric surgery team followed by prompt surgical intervention by laparoscopy to avoid serious complications.

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HEMATOMA IN TRANSVERSE MESOCOLON : MANAGEMENT OF A RARE CAUSE OF HEMORRHAGE POST LAPAROSCOPIC SLEEVE GASTRECTOMY

Post-operative complications

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Background

Hemorrhage is a known complication after Laparoscopic Sleeve Gastrectomy (LSG), with an incidence of 1-6%. We present a rare cause of post-operative hemorrhage after LSG.

Introduction

Post-operative hemorrhage after LSG may be intra-luminal or extra-luminal into the abdominal cavity. The most common etiology of both is staple-line. Other common causes include injury to the liver or spleen, or bleeding from the abdominal wall. We present the management of a rare cause of post-operative bleed after LSG.

Objectives

To demonstrate laparoscopic management of unusual bleeding post-LSG

Methods

33-year female, BMI 45.2 kg/m², no co-morbidities underwent a standard laparoscopic Sleeve gastrectomy. Surgery and post-operative recovery was uneventful. Post-operative gastro-graffin study was normal. She was discharged on second post-operative day. She presented 10 days later with fatigue and abdominal distension. There was palor and tachycardia of 120/min. Her blood pressure was 100/60 mm Hg. There was a significant drop in hemoglobin from 13.4 gm% (pre-operative) to 8.7 gm%. She was taken up emergently for diagnostic laparoscopy

Results

On diagnostic laparoscopy there was 1 L hemoperitoneum with large hematoma in transverse mesocolon. On evacuation, there was no active bleeding from the mesocolon, hence lesser sac was opened which revealed bleeding from pancreatic bed. Attempts were made to over-sew this, but the sutures cut through as the pancreatic tissue was friable. Hemostasis was achieved with the aid of flowable hemostatic agent, and oxidised regenerated cellulose. Patient recovered uneventfully.

Conclusion

Pancreatic bed is rare source of bleed post-LSG. We successfully managed to control bleeding laparoscopically, with the aid of hemostatic agents.

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VENOUS THROMBOEMBOLISM AFTER BARIATRIC SURGERY IN THE MIDDLE EAST REGION

Post-operative complications

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Introduction

Venous thromboembolism (VTE) is a major cause of morbidity and mortality after bariatric surgery.

Objectives

To study the incidence of VTE in the Middle East region after bariatric surgery

Methods

A questionnaire to study VTE after bariatric surgery was sent to members of the Pan Arab Society for Metabolic and Bariatric Surgery (PASMBS).

Results

Eighty two surgeons (most in >5 years in private practice with volume >125 cases per year), (63%) responded. The most commonly performed procedure was the Sleeve Gastrectomy (56%), followed by Adjustable Gastric band (13%), Single Anastomosis Gastric Bypass (10%) and Roux-En-Y (9%). A scoring tool for VTE was used by 62% of surgeons (39% as part of the electronic medical record) and 78.6% of surgeons used Caprini risk assessment tool. The incidence of VTE was 0.001% (150/121482 patients), and 62% of surgeons reported having at least one incident of VTE. Sequential compression devices were used by 57% of surgeons. Regarding chemoprophylaxis; 90% of patients considered moderate or high risk and 98% of patients considered very high risk patients received chemoprophylaxis preoperatively. Postoperatively, 98.5% of patients across all risk categories received chemoprophylaxis. Post-discharge, chemoprophylaxis was continued in the moderate, high and very high risk patients 82%, 95%, and 98% respectively.

Conclusion

The incidence of VTE in the Middle East region appears lower than expected, risk assessment and chemo-prophylaxis are commonly used.

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SMOKING AND BARIATRIC SURGERY

Post-operative complications

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Background

Obesity becomes epidemic all over the world. It is associated with unhealthy eating habits , less physical activity and smoking. Bariatric surgery has been proven to be effective for the treatment of severe obesity and associated health problems.

Introduction

Smoking before or after bariatric surgery can alter the outcome of surgery in terms of weight loss and postoperative complications. Few studies had been conducted to identify the relation between smoking and outcomes of bariatric surgery.

Objectives

The aim of this study is to review the published articles that correlates smoking with the outcomes of bariatric surgery.

Methods

An online search has been conducted in PubMed, Embase and Google Scholar to identify published articles correlating smoking to the outcome of bariatric surgery using the words smoking and bariatric/ weight loss surgery.

Results

overall 14 studies were included in the review. These studies had shown strong correlation between obesity and smoking having synergistic effect in the development of metabolic syndrome. Smoking after bariatric surgery increases the incidence of marginal ulcers, strictures and fistulas with higher incidence of developing pulmonary complications and venous thromboembolism. One study had shown increase in the rate of anxiety in those candidate for bariatric surgery. Another study has shown no relation between cessation or severity of smoking to postoperative weight loss. Clear recommendations are in place to avoid smoking before and after bariatric surgery but still bariatric surgery is offered to the smokers.

Conclusion

Smoking can alter the outcome of bariatric surgery in terms of complications with less effect on weight loss.

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LAPAROSCOPIC CHOLECYSTECTOMY POST BARIATRIC SURGERY: DOES URSODEOXYCHOLIC ACID POST OPERATIVELY PREVENT GALLSTONE FORMATION?

Post-operative complications

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Background

Rapid weight loss is a risk factor for gallstone formation, including patients who have undergone bariatric surgery. Literature suggests that ursodeoxycholic acid reduces the incidence of gallstones in this patient group.

Introduction

Within our unit, one surgeon routinely prescribes ursodeoxycholic acid and another does not. We wanted to evaluate the effect of these strategies.

Objectives

To assess the incidence of gallstone disease requiring cholecystectomy post bariatric surgery. To assess the timing of symptom onset, and the effect of ursodeoxycholic acid.

Methods

Prospectively collected data of patients who underwent bariatric surgery and subsequent laparoscopic cholecystectomy between 2014 and 2016. Computer records, Patient clinic letters and discharge summaries were analysed.

Results

470 bariatric procedures performed, with 31 subsequent laparoscopic cholecystectomies performed (6.60%); 30 elective, 1 emergency procedure. 4/128 patients received ursodeoxycholic acid for 6 months needed cholecystectomy (3.13%) compared to 27/342 with no ursodeoxycholic acid needing cholecystectomy (7.89%) ($p=0.0924$). There was no difference in mean time from operation to symptom onset of 17.89 months ($p=0.2852$) or excess body weight loss of 69.47% ($p=0.9426$). 19 patients had day surgery, with median LOS of 0 days. There was 1 complication; bile leak post emergency cholecystectomy and CBD stone extraction.

Conclusion

Incidence of cholecystectomy post bariatric surgery is low, with most patients not receiving ursodeoxycholic acid. The results suggest increasing the use of ursodeoxycholic acid, however the sample size is too small to confirm it reduces cholecystectomy rates. The delay between index operation and gallstone formation suggests longer follow up times or screening post operatively for gallstones may be useful.



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THE ROUX-EN-Y FISTULOJEJUNOSTOMY LIKE A SURGICAL SOLUTION FOR THE FISTULA AFTER A SLEEVE GASTRECTOMY: IT IS A GOOD TECHNIQUE?

Post-operative complications

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Background

The sleeve gastrectomy is a very common technique for obesity patients and it has excellent results.

Introduction

The fistulas after a sleeve gastrectomy are a dangerous complication and its management is difficult.

Objectives

To resolve the fistulas with a surgical procedure like the Roux-en-Y fistulojejunostomy.

Methods

We present four patients affected of a fistula after a sleeve gastrectomy. Three females and one male. The fistula appeared two or three days after the surgery, except one case which appeared ten days later. We wait 19 and 6 months to repair the fistula in the two first cases, respectively, and two months to repair the next two cases. We tried some treatments (surgical drainage, suture the fistula, stents, conservative management, nutrition, endoscopic procedures), without any success.

Results

In our Bariatric Unit we made 382 Sleeve Gastrectomies, with 6 Fistulas (1,57%). We have one exitus (0,26%), one case with conservative solution and four fistuloyeyunostomies. In all cases we control the fistula, and the main pass after the surgery was through the jejunum, instead the stomach. The patients lost weight the same if they had had a gastric by-pass or a sleeve gastrectomy.

Conclusion

The Roux-en-y fistulojejunostomy is a safe and good solution for patients with a fistula after a sleeve gastrectomy. The literature is discussing about the best technique after a sleeve failure with a fistula, if conservative or surgical treatment. If the conservative treatment failed, we prefer a surgical solution. And two questions: the best technique? and, the best moment for the redo surgery?

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MORTALITY FROM BARIATRIC SURGERY IN THE MIDDLE EAST REGION

Post-operative complications

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Introduction

Bariatric surgery is safe with mortality rates similar to laparoscopic cholecystectomy.

Objectives

To study mortality related to leak after bariatric surgery in the Middle East region.

Methods

A questionnaire to study complications after bariatric surgery was sent to members of the Pan Arab Society for Metabolic and Bariatric Surgery (PASMBS).

Results

Eighty two surgeons (most in >5 years in private practice with volume >125 cases per year), (63%) responded. Total number of cases done exceeded 121,000 cases. The most commonly performed procedure was the Sleeve Gastrectomy (56%), followed by Adjustable Gastric band (13%), Single Anastomosis Gastric Bypass (10%) and Roux-En-Y (9%). Overall rates of mortality 0.29%, leak 1.1%, VTE 0.001% and re operation rate was 0.94%. Forty surgeons (49%) did not have any mortalities in their experience. The commonest three causes of mortality were leak 24%, pulmonary embolism 22.2%, and re-operation 15.9%. Leak rate was 1.1% and 24% of patients with leak died. Reoperation for any reason was 0.94%.and the mortality of re-operation was 15.9%.

Conclusion

Mortality rate after bariatric surgery are similar to international rates. The commonest causes of mortality are leak, pulmonary embolism and re-operation. One in every 4 patients with leak died.

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LAPAROSCOPIC CONVERSION OF ROUX-EN-Y GASTRIC BYPASS TO SLEEVE GASTRECTOMY FOR INTRACTABLE IRON-DEFICIENCY ANEMIA – VIDEO PRESENTATION

Post-operative complications

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Introduction

Iron deficiency anemia (IDA) is one of the complications after laparoscopic Roux-en-Y gastric bypass (LRYGB). Its incidence was 62.5% among premenopausal females after LRYGB. Iron supplement via oral/intravenous routes remains the main solution and the revisional surgical procedure for intractable IDA was rarely mentioned.

Objectives

We report a 26-year-old menstruating, female patient underwent Roux-en-Y gastric bypass for super-super obesity (BMI: 60.6 Kg/m²) in 2006. She had intractable IDA 3 years after initial LRYGB and was referred for further revisional surgery.

Methods

The patient underwent the revisional surgery with conversion to sleeve gastrectomy laparoscopically.

Results

The operation time was 180 minutes and the blood loss was 50 mL. The patient had an uneventful recovery and she was discharged 6 days later. The hemoglobin level improved gradually and she did not have any iron supplement via intravenous route thereafter. The hemoglobin level was 11.7 g/dL in the 52th months after this revisional surgery.

Conclusion

Based on our experience, laparoscopic conversion to sleeve gastrectomy could be an effective and technically feasible solution for intractable IDA after LRYGB.

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IMPAIRED LIVER FUNCTION AFTER RYGB AND OAGB- A CASE SERIES

Post-operative complications

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Background

Metabolic surgery has successfully been utilized to reverse or prevent further progression of non-alcoholic fatty liver disease (NAFLD).

Introduction

However, single cases have shown substantial deterioration of liver function after radically malabsorptive procedures as the jejunoileal bypass (JIB) and the biliopancreatic diversion (BPD). In Roux –en- Y gastric bypass (RYGB) and one-anastomosis gastric bypass (OAGB), clinically evident deterioration of liver function has not been reported.

Objectives

The aim of our study was to evaluate major liver function impairment after metabolic surgery in patients treated at the Medical University of Vienna, Department of Surgery.

Methods

Consecutive in- and outpatients after metabolic surgery between March 2014 and August 2016 who presented with severe liver dysfunction were included in this case series.

Results

In total, 9 patients (m:f=2:7; median age 40a, range=30-66a) are reported. Deterioration of liver function occurred after RYGB (n=5) and OAGB (n=4) after a median postoperative time of 12 months (range=2-88 months). Liver steatosis/fibrosis occurred in 66.7%, cirrhosis in 33.3%. Elevation of transaminases, impairment of coagulation parameters, thrombocytopenia, hepatic encephalopathy, ascites and hypalbuminemia were present in 44.4%, 77.8%, 66.7%, 22.2%, 55.6% and 100%, respectively. Median % excess weight loss (%EWL) was 113.3% (range=85.2-129.7%).

In 7 patients bypass' length reduction or reversal led to an improvement of symptoms, determinable by imaging, histology and blood tests. One patient required liver transplantation, one patient died due to septic shock.

Conclusion

Significant dysfunction of the liver can also occur after RYGB and OAGB. Bypass reversal/elongation of the intestinal resorption length led to a rapid improvement of liver function.

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CHRONIC ABDOMINAL PAIN AFTER RYGB – SURGICAL FINDINGS AND OUTCOMES

Post-operative complications

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Introduction

Chronic abdominal pain of uncertain aetiology following LRYGB is well described.

Objectives

We present findings, management and outcomes following elective diagnostic surgery in a multicentre study.

Methods

Data captured over 10 years from electronic record databases in two bariatric units was reviewed. Cholecystectomies were included when aetiology of pain remained uncertain despite gallstone disease. Fisher's exact test was used for statistical analysis.

Results

57 operations were performed on 39 patients (11:28 M:F, median 48years). Median time from RYGB was 2 years (0.5-11years). 24 patients had one operation, 15 had two or more. Findings included internal hernias(28), adhesions (24), hockey stick (8), cholelithiasis (8), negative laparoscopy (5), gastro-gastric fistula(2) and anastomotic stenosis(4).

Where one procedure was performed per operation, symptom resolution was highest after hockey stick resection (2/3), internal hernia repair (9/15), cholecystectomy(3/5) and lowest after adhesiolysis (3/11). Refashioning of gastro-jejunostomy or jejunojejunostomy improved symptoms in half of patients (2/4).

Internal hernia repair alone or with hockey stick resection or cholecystectomy (11/17) was significantly more effective than adhesiolysis alone or with hockey stick resection or cholecystectomy (4/16) $p=0.0366$.

There was a trend towards worse outcomes with multiple operations with 19/24 symptom-free after one operation versus 8/15 after two or more ($p=0.0786$).

Reversal of RYGB was performed in 3 patients. Pain resolved in two patients who had one reoperation but not in the patient who had four before reversal.

Conclusion

Finding the cause of chronic abdominal pain following RYGB can be difficult and confounded by multiple findings at laparoscopy. Outcomes were significantly worse following multiple operations.

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DIAGNOSTIC LAPAROSCOPIES FOR INTERNAL HERNIA FOLLOWING ROUX-EN-Y GASTRIC BYPASS

Post-operative complications

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Introduction

Abdominal pain following RYGB raises concern of internal hernia. Delayed diagnosis and ischaemic bowel can have serious implications. Radiological investigations can be equivocal. Diagnosis laparoscopy (DL) is the safest way forward.

Objectives

To assess rates of DL at our bariatric centre and the detection rate of preoperative imaging in diagnosing IH.

Methods

All patients undergoing DL to investigate abdominal pain post RYGB over a 3 year period in a single centre were identified retrospectively from theatre logs. Baseline characteristics, preoperative investigations and intraoperative findings recorded.

Results

57 patients underwent DL. 47 females with mean BMI of 49.9kg/m². At the time of RYGB 25 patients had closure of the mesenteric and Peterson's defects by either sutures or clips, 14 were not closed, and details were not available for 18. Average EBWL was 71.9% at time of reoperation. Mean time from RYGB to DL was 36 months (range 4-95 months). At laparoscopy only 45% had an IH. 77% had either one of both defects open needing closure. 62% with an IH were detected on preoperative CT. Incidence of IH was 3.7% following RYGB in our unit. No patients required bowel resection. 2 cases required conversion to open. 5 patients had recurrence of IH during the 3 years.

Conclusion

There should be low threshold for DL in patients suspected to have IH to avoid patients developing ischaemic bowel requiring resection as observed in our study. CT is not diagnostic and hence decision should be made on clinical correlation. Patients should be preferably managed in tertiary bariatric unit.



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TECHNIQUES OF PORT SITES CLOSURE DURING BARIATRIC SURGERY

Post-operative complications

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Background

Trocar site hernia is a serious complication after bariatric surgery.

Introduction

Obesity and the difficulty of closure of the port site have resulted in an increase in the incidence of trocar site hernia.

Objectives

We present in this video different techniques of port site closure after sleeve gastrectomy or Roux en Y Gastric bypass to minimize the risk of hernia occurrence.

Methods

We close all trocar sites above 10 mm of diameter using either the endoloop or a device designed for trocars' closure in obese patients (Weck EFX® Endo Fascial Closure System).

Results

All techniques are safe and feasible. The advantages of the device is that it is relatively simple, less invasive, less time-consuming at the expense of a more elevated cost.

Conclusion

The TSH rate after bariatric surgery is underestimated and could result in disastrous consequences. All defects above 10 mm should be closed regardless of the technique.

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LAPAROSCOPIC MANAGEMENT OF INTERNAL HERNIA IN 34 WEEKS PREGNANT WOMAN AFTER GASTRIC BYPASS

Post-operative complications

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Introduction

Internal hernia after laparoscopic gastric by-pass (LGBP) occurs in 0,2-5% of cases. Its occurrence during pregnancy is a dangerous condition for the fetus and mother

Objectives

Laparoscopic surgery for internal hernia after LGBP in 34 weeks pregnancy is feasible

Methods

35 years old and 34 weeks pregnant woman, who had a LGBP 2 years earlier, was admitted to the hospital with post-prandial abdominal pain and vomiting. Other than that, a physical examination, routine laboratory workup and abdominal ultrasound did not reveal any pathological finding. An abdominal MRI was performed and was inconclusive. She was unable to return oral feeding due to nausea and pain, and a laparoscopic exploration was performed. Reverse Trendelenburg position, open pneumoperitoneum and high trocar placement were used, and Petersen's hernia containing all common limb was observed. The small bowel was repositioned pushing it through the defect and there was no irreversible ischemia, no resection being required. The Petersen space was closed with a running non-absorbable suture. The post-operative period was unremarkable and 4 weeks later a healthy baby boy was born.

Results

laparoscopic treatment of internal hernia after LGBP is feasible as late as 34 weeks pregnancy

Conclusion

The possibility of internal hernia should always be considered in pregnant woman with history of LGBP who present with abdominal pain. Early diagnosis and correct treatment are critical to successful outcome. Videolaparoscopy is an efficient approach even in late pregnancies.

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STANDARDIZATION OF INTRAOPERATIVE TECHNIQUE AND POST-OPERATIVE MANAGEMENT LEADS TO EXTREMELY LOW MORBIDITY AND MORTALITY: 30-DAY OUTCOMES OF PRIMARY BARIATRIC SURGERY IN A SINGLE SURGEON COHORT OVER 7 YEARS

Post-operative complications

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Introduction

Bariatric surgery (LYRGB, LSG and LAGB) has been proven to be the only effective long-term treatment for morbid obesity. These are technically challenging operations with low but significant risks of complications and mortality.

Objectives

The aim of this study was to assess the 30-day outcomes of primary bariatric surgery in a single surgeon cohort over seven years.

Methods

A prospectively maintained database of all patients undergoing surgery using a standardized intra and post-operative approach was analyzed. Data on demographics, length-of-stay (LOS), conversion to open, 30-day complications and mortality were reviewed.

Results

Between March 2010 and February 2017, 550 patients (426 female, 124 male) underwent surgery (LRYGB (50.7%), LSG (38.2%) and LAGB (10.5%)). The mean age was 44.2 (Standard Deviation (SD)10.2) years and BMI was 47.7 (SD 6.74). The ASA grades were ASA-I: 6pts (1.1%), ASA-II: 296pts (53.8%), ASA III: 243pts (44.2%) and ASA IV: 2pts (0.4%). The OSMRS classes were OSMRS-A: 262pts (47.6%), OSMRS-B: 234pts (42.5%) and OSMRS-C: 54pts (9.8%). The average LOS was 2.35 (SD1.96). There were no conversions to open surgery or in-patient mortalities. A total of 10 patients developed inpatient complications, of whom 8 required re-laparoscopy. There were 13 readmissions within 30-days of surgery (2.3%), one of whom required re-operation.

In-Patient Complication (n=10, 1.82%)

	n
Chest infection	5
Haemorrhage	3
Severe abdominal pain	1
Gastric thermal injury	1

Readmissions (n=13, 2.36%)

	n
Vomiting/dysphagia	4
Chest infection	3
Non-specific abdominal pain	2
Internal hernia	1
Anastamotic ulcer	1
Chest pain	1
Biliary colic	1

Conclusion

The systematic approach with standardization of intraoperative technique and post-operative management lead to a very low complication rate and no mortality.

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30-DAY READMISSIONS OF 4894 PATIENTS IN THE LAST FOUR YEARS SUBMITTED TO BARIATRIC SURGERY IN A SRC BARIATRIC CENTER

Post-operative complications

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Introduction

Bariatric surgery is the most effective and safe method to treat morbid obesity and its comorbidities. Nevertheless, there are risks of complications and mortality, mainly in the first 30 days after the procedure. We know that the expertise of the surgical team, especially concerning diagnosis and treatment of complications is essential to lower rates of morbidity and mortality in the future.

Objectives

To analyse complications and hospital readmissions for clinical care or surgical treatment in the first 30 days after surgery.

Methods

This prospective and observational study included 4894 patients submitted to laparoscopic gastric bypass and sleeve gastrectomy by our bariatric and metabolic center of excellence since January 2013 to January 2017.

Results

Of the 4894 patients operated, there were 175 patients suffering perioperative complications (3,5%) that need hospitalar readmission until 30 days. From them, 71% (125 - 2,5% of all patients) did not require surgery. Most common causes were nausea/vomits, dehydration, thromboembolic events and bleeding, all resolved with clinical treatment. In other hand, 29% (50 - 1,0% of all patients) needed a new surgical intervention. All cases of bleeding and, mainly, intestinal obstruction. They were all treated by laparoscopic surgery. There was no leak and no mortality in this period.

Conclusion

We have a low incidence of complications and hospital readmissions (3.5%) when we compare with another bariatric excellence centers. Only 1,0% of patients needed surgical treatment in the first 30 days after bariatric surgery and all of them had a good evolution. There was no mortality.

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INTERNAL HERNIATION AFTER ROUX-EN-Y GASTRIC BYPASS SURGERY: ADDED VALUE OF CT ANGIOGRAPHY

Post-operative complications

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Introduction

Computed tomography (CT) is often inconclusive for diagnosing internal herniation after Roux-en-Y gastric bypass (RYGB) surgery. One promising alternative is to assess the intestinal blood supply for signs of internal herniation.

Objectives

Investigating the applicability and added value of CT angiography (CTA) for diagnosing internal herniation.

Methods

RYGB patients clinically suspected for internal herniation included in this study underwent a standard abdominal CT and an abdominal CTA. Diagnostic laparoscopy served as gold standard for diagnosing internal herniation. From the CTA, a three dimensional reconstruction (3D CTA) of the mesenteric arteries and surgical staples was created. The 3D CTAs were assessed and compared for the presence and type of internal hernia that was found upon laparoscopy.

Results

Fifteen patients were prospectively included for CTA, eight patients also underwent diagnostic laparoscopy. In one case, both mesenteric defects were closed upon laparoscopy. In three cases, an active internal hernia was found. In the remaining four patients, no internal herniation was found, although one or both mesenteric defects were open. The 3D CTA of the subject with closed defects was regarded as representing normal anatomy in RYGB. The 3D CTA of the subjects with active internal hernias demonstrated remarkable differences in comparison to the control 3D CTA. In particular, alterations in the course of the arteries of herniated intestinal limbs were seen. Furthermore, entero-enterostomy staple lines were migrated or orientation was changed.

Conclusion

This study indicates that 3D CTA is a promising technique for diagnosing internal herniation. Further study should confirm the added value of this novel method.

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THE NEED OF CT-SCANNING AND SURGERY FOR ABDOMINAL PAIN AFTER LAPAROSCOPIC ROUX-Y GASTRIC BYPASS

Post-operative complications

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Introduction

Acute and chronic abdominal pain is a common complain after Roux-Y-gastric bypass (RYGB). The use of CT-scans and its consequences need further investigation.

Objectives

To study the use of CT-scans for abdominal pain and abdominal operations after RYGB in a cohort with long term follow-up.

Methods

Data on all 530 patients who underwent RYGB at Aalesund Hospital in Norway between 2004 and 2011 were prospectively registered into a separate database. All CT-scans at public hospitals and surgical procedures were registered.

Results

Mean follow-up was 97 months (60-153months). 20.7% had 1 CT-scan, 7.9% had 2 CT-scans, 4.7% had 3 CT-scans and 6% had ≥ 4 CT-scans for abdominal pain during the eight years follow-up. 22.6% underwent abdominal operations in the observation period (16.2% had 1 and 6,4% had ≥ 2 operations), gynecology excluded. The purpose of operation was 1.4% postoperative complications, 5.1 % acute operation for suspected internal hernia (IH), 4.2 % semi-elective operation for suspected IH, 8.7 % cholecystectomy, 2.3% appendectomy, 3.2% hernias, 0.8% perforated GEA-ulcer. Almost half of the patients (48%) who had a CT-scan underwent an operation, and most of those operated (83%) underwent a CT-scan.

Conclusion

Following RYGB abdominal pain is very common. In the present cohort with a mean follow-up of eight years, 39% of the patients suffered from abdominal pain with the need of one or more CT-scans. One in ten had multiple CT-scans, and one in five patients underwent abdominal surgery.

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LAPAROSCOPIC MANAGEMENT OF EARLY SMALL BOWEL OBSTRUCTION AFTER ROUX-EN-Y GASTRIC BYPASS

Post-operative complications

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Background

Overall early complication rate after bariatric surgery range between 0.8 to 10%.

Introduction

Early complications after Roux-en-Y gastric bypass occur on the first 30 postoperative days and include: gastrointestinal bleeding, anastomotic leak, bowel obstruction, wound infection and thromboembolic events.

Objectives

The purpose of our study is to determine our early complication rate and analyze the management and etiology of early small bowel obstruction in our institution.

Methods

A retrospective review of our patient database from January 2011 to December 2015 who underwent laparoscopic Roux-en-Y gastric bypass was performed.

Results

147 consecutive patients were included in our study (74 Female and 73 Male), mean age 39.2 years and mean preoperative body mass index 45.9 kg/m². Early complications occurred in 8 patients (5.4%), including 2 pneumonia, 4 wound infections, and 2 small bowel obstructions (1.3%) that required surgical management. The causes of bowel obstruction were obstruction at the jejunojejunostomy from kinking or narrowing in the first patient and intraluminal bleeding from the gastric remnant in the second patient. Both required laparoscopic exploration and had favorable outcomes. There was no mortality in our series.

Conclusion

A low incidence of early complications was observed in our review. Due to the immediate diagnosis and treatment of the two cases of small bowel obstruction in our institution, prevention of further catastrophic complications such as staple line disruption, anastomotic dehiscence or bowel ischemia was prevented.



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MANAGING MBG LEAK

Post-operative complications

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Background

Mini Gastric Bypass is the most commonly performed procedure at our centre. Incidence of leaks in laparoscopic Bariatric procedures is 1-2%. GI leaks can occur from Gastrojejunal anastomosis site or staple line.

Introduction

we introduce our technique of fixing up the leak after a mini gastric bypass. The reversal of mini gastric bypass is the best way to revise it.

Objectives

We need a safe and robust technique to repair a mini gastric bypass. Working in a septic environment causes issues as there is edema in bowel wall.

Methods

The gastro jejunostomy of the mini gastric bypass is taken down. The gastrogastic anastomosis is performed and the afferent bowel loop is anastomosed to the afferent.

Results

the patient stood the procedure well.

Conclusion

A complete reversal of mini gastric bypass is a safe and fool proof technique to salvage a leaked mini gastric bypass.

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UNEXPECTED INTRAOPERATIVE FINDINGS AND COMPLICATIONS IN BARIATRIC SURGERY

Post-operative complications

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Introduction

Bariatric surgery continues to be the best treatment for morbid obesity. Morbidity-mortality has been well analyzed, however there is a lack of studies describing intraoperative complications or unexpected findings.

Objectives

To analyze intraoperative findings, complications, and additional surgical procedures in bariatric surgery.

Methods

A retrospective study with every patient submitted to bariatric surgery between January 2013 and March 2016 at a single Institution. All operative information was collected prospectively and aimed to describe any perioperative unexpected finding, change of surgical plan and complications. Also an early morbidity analysis was performed.

Results

Four-hundred and five patients were operated. Female sex comprised 82% of cases with a mean age of 38 yo and a mean BMI of 44.2 kg/m². There were 350 RYGBP (86.2%), 47 LSG (11.6%) and 3 conversions (0.7%). The intraoperative findings were adhesences (15.8%), abdominal wall hernias (5.9%), liver diseases (3.2%), hiatal hernias (2.5%), GI tumors (0.7%), among others. Thirty-five associated surgeries were performed, mainly: Cholecystectomy (2.5%), hiatal hernia repair (1.7%) and abdominal hernia repair (1.2%). The three main intraoperative complications were: Positive methylene blue test (3%), problems with GJ anastomosis (1.8%) and visceral perforation (2.4%). A change in the operative plan was observed in 0.9%, whereas impossibility for compelling the bariatric procedure was 1.2%. Early complications (<30 days) rate was 11.6%.

Conclusion

Unexpected intraoperative findings modified the surgical approach but did not modify the outcome; also, we found there is no relation between intraoperative complications and early postoperative complications.



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ORTHOSTATIC INTOLERANCE FOLLOWING BARIATRIC SURGERY

Post-operative complications

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Background

Rarely the post bariatric surgery patient may develop symptoms like syncope, palpitations, cognitive impairment, headache, and fatigue etc. Orthostatic Intolerance reflects an inability of the autonomic nervous system to adequately respond to the orthostatic stress of gravity.

Introduction

Orthostatic intolerance refers to a heterogeneous group of disorders of hemodynamic regulation characterized by insufficient cerebral perfusion resulting in symptoms upon standing and relieved by becoming supine.

Objectives

Obese patients with high adipokines like leptin, have significantly higher heart rate. After bariatric surgery the concentration of leptin decreases and leads to a decrease in heart rate. The drop in leptin level is proportional to the reduction in BMI, which could explain the association of magnitude in the drop in BMI and development of sinus bradycardia. Weight reduction has been shown to reduce sympathetic stimulation and augment parasympathetic drive resulting in improved resting cardiac vagal tone. The combination of these effects contributes to development of sinus bradycardia in postbariatric surgery patients. Sinus bradycardia is generally asymptomatic and does not require treatment. But in some cases it may be very severe and may need parasympatholytics and occasionally pacemakers

Methods

Reporting 3 cases of orthostatic hypotension/intolerance following Bariatric surgery. Due to lack of awareness of this condition in our bariatric community, they were being wrongly treated as dumping syndrome, psychiatric illness etc. After proper evaluation by a multidisciplinary team of specialists it was concluded as orthostatic intolerance.

Results

All the cases were adequately treated medically and one patient required cardiac pace maker.

Conclusion

Awareness of the potential association between bariatric surgery, weight loss and new onset orthostatic intolerance is important for providing timely care. Otherwise they may get inadequate or wrong treatment.

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MALNUTRITION, BEDSORES AND BARRETT ESOPHAGUS AFTER A VERY RESTRICT LAPAROSCOPIC SLEEVE GASTRECTOMY.

Post-operative complications

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Background

Laparoscopic Sleeve Gastrectomy (LSG) is the standard in the surgical management of morbid obesity. Although technically it is not a demanding surgery like the gastric bypass, its complications are harmful.

Introduction

The revisional surgery has an incidence of 5-8%. In Fundacion Valle del Lili , 90% of patients who consult for revisional surgery are due to problems with LSG (mostly reflux and vomit) and extreme cases with malnutrition.

Objectives

to describe a severe complication after a LSG

Methods

A 22 y/o female patient with spindle trauma, BMI 32 whit LSG performed 5 years ago. she came to my office 3 years ago with BMI 15 with sacrus bedsores with chronic osteomyelitis, Severe reflux with hemorrhagic esophagitis and changes compatible with barrett's esophagus. I ordered multiples exams: blood test Albumin 2.8 , fluoroscopic study showed 20% gastric reservoir and antrum torsion and Endoscopy with visible staples at the esophagogastric junction and antrum torsion with difficult passage to the endoscope to duodenum.

It is programmed for laparoscopic reconstruction Y-en-roux previous nutritional recovery

Results

It is carried out surgery: is evidenced a hiatal hernia, twisting of the sleeve with staple line on the anterior wall of the stomach with torsion of the antrum. Gastrectomy is performed at the antrum level and reconstruction y-en-roux. In the pop tolerating every hour 3 ounces of smoothies, without vomiting now with soft diet and regain weight and totally close of bedsores

Conclusion

The beneficial effects of bariatric surgery may be hampered by technical failures that cause great patient morbidity.

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THE EFFECTS OF A PROPHYLAXIS PROTOCOL FOR POSTOPERATIVE NAUSEA AND VOMITING ON THE LENGTH OF HOSPITAL STAY

Post-operative complications

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Background

Postoperative nausea and vomiting (PONV) commonly occur following bariatric procedures.

Introduction

PONV, accordingly, may lengthen the duration of the hospital stay.

Objectives

To determine the effects of an aggressive prophylaxis protocol for PONV on the length of hospital stay (LOS).

Methods

The prophylaxis protocol consisted of 10 mg Dexamethasone (IV) administered intraoperatively and on postoperative Day 1, along with early (4 hour) postoperative introduction to PO fluids. PONV severity was assessed by the need for, dosage and frequency of rescue medications (ondansetron, promethazine). The effectiveness of the protocol was determined by comparing the severity of PONV and LOS for 104 Roux-en-Y gastric bypass (RYGB) and sleeve gastrectomy (SG) patients before and after the protocol was initiated.

Results

We found that LOS, before and after the prophylaxis protocol, increased with severity of PONV ($p < 0.001$). Following initiation of the prophylaxis protocol, the percentage of patients with severe PONV declined from 44% to 13% and the percentage of patients with no reported nausea or vomiting increased from 25% to 67%. LOS decreased from a mean of 2.15 days pre-protocol to 1.44 days post-protocol ($p < 0.0001$), i.e. 2.10 to 1.52 for RYGB and 2.22 to 1.35 for the SG. Reduction in LOS resulted in a cost savings of \$418.00 per person.

Conclusion

A protocol involving high dose dexamethasone and early intake of fluids improves the incidence and severity of PONV and significantly reduces the duration of hospitalization.

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CLINICAL APPROACH TO POSTOPERATIVE BARIATRIC EMERGENCIES BY MEANS OF A SMARTPHONE APPLICATION

Post-operative complications

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Background

Morbid obesity is a growing incidence disease that poses a serious impact to health and bariatric surgery is currently its most effective long-term treatment

Introduction

However, there can occur several complications and one main concern of bariatric teams is the initial attention to patients in the postoperative period who present with emergencies. This management is usually provided by emergency room physicians, not specialists in this surgical area, which can often lead to diagnostic delay and consequent worsening of the patient's prognosis

Objectives

The objective was to develop a software for smartphones to help the initial approach for these patients

Methods

Flowcharts and guidelines found in the medical literature directed to these complications were used as an artificial intelligence mechanism for the app. These algorithms were searched at IFSO, NIH, ASMBS, BOMSS and SBCBM sites and in Medline and Scielo databases

Results

The app works through a module in which the likely diagnosis is reached along with suggestions for initial management and another one with additional information to the user. Tests used simulated clinical situations and the app was found to be fast to use in 97.6%; easy to employ in 96.4%; correct diagnosis was reached in 97.6% of the time; and it provided appropriate initial management recommendations in 92.8% plus partially appropriate at 7.2%

Conclusion

The developed app can help manage postoperative emergencies of bariatric patients, aiding the attending physician to diagnose and initiate the first therapeutic measures and also to identify the clinical situations where referral to the bariatric team is urgent and mandatory

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INTESTINAL OCCLUSION SECONDARY TO HEMOBEZOARD

Post-operative complications

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Background

One of the causes of different intestinal obstruction to internal hernia after gastric bypass by laparoscopy is obstruction of the intestinal lumen by clots, known as hemobezoar

Introduction

a case of a 36-year-old male patient, who underwent gastric bypass with obesity and uncontrolled diabetes 2

Objectives

Gastric bypass was performed with a mechanical stapler, without immediate trans or postoperative complications. One day after surgery, a water-soluble contrast test was performed, without leakage. Two days later, the patient presented generalized acute abdominal pain, without fever, nausea or tachycardia. A simple and contrasted abdominal CT was performed without contrast leakage, but distended accessory stomach; Distension of small bowel, without free fluid in the abdominal cavity

Methods

per symptomatology and tomographic findings, diagnostic laparoscopy was performed, distention of intestinal limb, all anastomosis were explored without being stenosed; In jejunum-jejunum anastomosis greater dilation and blood content were visualized. Anastomosis on omega was performed before the common limb, multiple clots that caused obstruction at that level, were drained, two blake drains were placed

Results

the patient presented the appropriate evolution, presented 8 bloody stools. 2 globular packets were transfused

Conclusion

Hemobezoard are the second cause of occlusion after gastric bypass, manifested in the immediate postoperative period, with predominant symptoms of gastric dilation and require a special precision in its management to avoid devastating complications.

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THE EFFECT OF LAPAROSCOPIC BARIATRIC SURGERY ON SERUM FIBRINOGEN LEVEL OF OBESE MALAYSIANS: A PROSPECTIVE STUDY

Post-operative complications

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Background

Introduction

Elevated plasma fibrinogen has been associated with increased risk of deep vein thrombosis (DVT) and pulmonary embolism (PE) among obese individuals.

Objectives

To determine the effect of bariatric surgery on plasma fibrinogen level.

Methods

Fifty-one patients awaiting laparoscopic bariatric surgery were prospectively recruited and followed-up over a 3-month period. Those with pre-existing DVT, PE, deranged liver function and clotting disorders were excluded. Anthropometry measurement, plasma fibrinogen level and lower-limb Doppler ultrasound was performed pre-operatively and again at 1 and 3 months following surgery

Results

Approximately 60.8% of patients were female, with mean age 40.86 ± 10.3 years, mean weight of 120.62 ± 3.8 kg and median pre-operative BMI of 44 (IQR 12.73) kg/cm². At three months, BMI reduced to 33.76 (IQR 9.13) kg/cm² with mean total body weight loss (TBWL) of 26.25 ± 1.07 kg ($p = 0.00$). Mean pre-operative fibrinogen level was slightly elevated at 4.07 ± 1.00 g/L but reduced to 3.9 ± 1.7 g/L ($p = 0.217$) at 3 months. The mean fibrinogen difference before and after surgery was 0.06 ± 0.98 ($p = 0.79$). There was no correlation between fibrinogen difference and TBWL at 3 months ($p = 0.195$). There was statistically significant correlation between fibrinogen level and BMI at 3 months ($R = 0.3$, $p = 0.03$).

Conclusion

Reduction of BMI following laparoscopic bariatric surgery has shown to have a decremental effect on fibrinogen level suggesting a potential protective mechanism of weight loss surgery against thrombosis.

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CONVERSION FROM GASTRIC BYPASS TO DUODENAL SWITCH SECONDARY TO DUMPING SYNDROME

Post-operative complications

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Background

Dumping syndrome, corresponds a varied of gastrointestinal and systemic symptoms that results from secondary alterations seen after gastric resection and the loss of the gastric reservoir function

Introduction

This was a female patient who underwent laparoscopic gastric bypass, but 3 months later presented data compatible with early dumping syndrome and failed nutritional and pharmacological treatment

Objectives

clinical case was assessed by multidisciplinary team concluding to perform revision surgery and to evaluate possibility of conversion from Gastric Bypass to Duodenal Switch

Methods

laparoscopy is performed, initially the alimentary limb was divided immediately to level of common limb, marking the distal portion with two clips.

Results

measured 100cm limb from the ileocecal valve, marked with two distal clips and one proximal, continue measuring 50cm more and section, leaving one end of a bile and alimentary limb, we carry the bile limb for anastomosis at 100cm from the valve where the previous marking was; Both ends of the common limb are anastomosed and the food limb was reinstalled. Division of gastro jejunum anastomosis, section of major omentum and short vessels of the stomach remaining, gastro-gastro anastomosis in two planes with manual suture, vertical gastrectomy; The duodenum was dissected with a harmonic scalpel, passing 3-4 cm posterior to the pylorus, sectioned and performed duodenum ileus anastomosis with manual suture two planes, hermeticity test with negative methylene blue leakage.

Conclusion

conversion of Bypass to duodenal Switch is possible and safe in patients with dumping syndrome where dietary and pharmacological management have failed



P.460

DRAIN EROSION IN MANAGEMENT OF GASTRIC BYPASS LEAKS

Post-operative complications

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Introduction

A leak at the gastro-jejunostomy is a major complication of a gastric bypass associated with significant morbidity and mortality. Percutaneous drainage is a non-surgical option depending on the clinical condition of the patient.

Objectives

To review the risk of erosion into the bowel of percutaneously placed drain when managing anastomotic leak.

Methods

Prospective analysis of retrospectively collected data of all Roux-en-Y Gastric bypass between 2015-16 with anastomotic leak. Computer records, clinic letters and endoscopy reports were reviewed.

Results

Three patients had an anastomotic leak. Two were managed using percutaneous drains. One had a drain in for two weeks and the other for ten weeks. Persistent drain output of oral intake was noted which prompted investigation using OGD and swallow studies which confirmed erosion through the bowel at a site other than the leak. This was managed by gradual withdrawal of the drain. Simultaneous use of a partially covered oesophageal stent to help heal the anastomosis was used in the first patient and conservative management in the second. Imaging confirmed healing of the leaks and the drain erosion site. Satisfactory result achieved at 3 months follow up.

Conclusion

Percutaneous drainage can be an effective non-surgical management of an anastomotic leak. Consideration must be given to the length of time the foreign body is left in situ. In our experience keeping a drain in for longer than two weeks increases risk of erosion. We recommend judicious monitoring of the drain output and the clinical condition of the patient. Patients should be managed in tertiary bariatric unit.

□
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THE ROLE OF C- REACTIVE PROTEIN (CRP) IN PREDICTING SEPTIC COMPLICATIONS AFTER SLEEVE GASTRECTOMY

Post-operative complications

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Background

The septic complications after laparoscopic sleeve gastrectomy (LSG) are major factors of the morbidity and mortality of the operation. Early detection and treatment of a staple line leak or an abdominal abscess are very important.

Introduction

Early biomarkers that can discern the patients at risk for a septic complication before its clinical or radiologic manifestation would be invaluable.

Objectives

To elicit abnormal elevation of CRP in the early postoperative period after LSG in patients that eventually developed a septic complication.

Methods

This is a cohort study. Ten patients that developed a septic complication (leak, abscess) after LSG were matched with 20 controls in terms of BMI, sex, age, comorbidities. The control group had an uneventful postoperative course. All operations were performed by the same surgeon. CRP was measured on the 2nd postoperative day and the two groups were compared.

Results

Mean CRP in the control group was 6.8 mg/dl, while in the septic group 12.5 mg/dl. An independent t-test showed weak but evident statistically significant difference between the two groups ($p=0.03$).

Conclusion

The group that eventually developed a leak or an abscess had significantly higher CRP in the early postoperative period. Most importantly, the septic complication manifested itself days or weeks later. This means that an exceedingly high CRP in the early postoperative period can be a prognostic factor for septic complications.



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SOLID ORGANS INFECTIONS: RARE COMPLICATIONS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY: A REPORT OF FOUR CASES.

Post-operative complications

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Background

Laparoscopic sleeve gastrectomy (LSG) is gaining popularity for the treatment of morbid obesity. It is a simple, low-cost procedure resulting in significant weight loss within a short period of time. LSG is a safe procedure with a low complication rate. The most significant complications are staple-line bleeding, stricture, and staple-line leak

Introduction

Formation of liver and splenic abscesses is an extremely rare consequence of LSG. Liver abscess has been reported in one case report while splenic abscess has been reported in five case reports after LSG

Objectives

Case reports and literature review.

Methods

Case reports and literature review.

Results

We report two cases of a pyogenic liver abscesses and two cases of splenic abscesses after laparoscopic sleeve gastrectomy (LSG).

Conclusion

As LSG becomes more popular, clinicians need to be aware of uncommon, but potentially serious complications related to it.

□
P.463

AMPLATZER DEVICE; A NEW HOPE FOR CHRONIC LEAKS AFTER SLEEVE GASTRECTOMY

Post-operative complications

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Background

Laparoscopic sleeve gastrectomy is the most popular operation done worldwide. Chronic leak is the most challenging complication after sleeve gastrectomy.

Introduction

AMPLATZER device (Nitinol mesh) was designed originally for ASD closure with excellent success rate. It is very malleable and can fit any fistulous tract.

Objectives

Management of difficult long standing resistant chronic leaks after sleeve gastrectomy

Methods

53y old patient with chronic leak after sleeve gastrectomy. Four different trials for management of leak were done during the 4 months following the operation which failed to close the leak that was transformed into gastrocutaneous fistula.

The first trial was using covered mega stent upon leak discovery on the 9th postoperative day, followed by ovasco and covered megastent as the second trial. The 3rd trial was done using histoacryl, while the last trial was done using endoscopic clips with covered stent.

After 4 months Amplatzer plug device was used to close the chronic fistula.

Results

Using a combined endoscopic with interventional radiology techniques, Amplatzer device was introduced through the abdominal wall and placement of a covered stent was done at the same setting.

The amount of leak discharge decreased gradually with formation of granulation tissue at the fistula site till it stopped 1 month after insertion. The patient completed 8 months after fistula closure.

Conclusion

Till now no single method has been agreed upon as a gold standard for management of chronic leaks. Amplatzer device is a very promising hope for management of chronic leaks. It has been tried for 4 more patients and results will be presented.

□
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RE EXPLORATION RATE AFTER BARIATRIC SURGERY- REVIEW OF 1404 CONSECUTIVE CASES

Post-operative complications

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Background

Laparoscopic approach to bariatric surgery has revolutionized the treatment of morbid obesity. Prospective randomized studies have shown that laparoscopic bariatric surgery has fewer complications than the open approach. Nevertheless laparoscopic bariatric procedures are associated with a unique set of complications and sequelae with a risk of severe morbidity and mortality if not handled timely.

Introduction

Early post operative reexplorations may be required secondary to anastomotic leaks, gastrointestinal bleeding and intestinal obstruction. Diagnosing an early leak or small bowel obstruction may be difficult. Key to success lies in having a low threshold for reexploration in a case of doubtful recovery.

Objectives

To study the re exploration rate after bariatric surgery in 1404 cases in a 5 year follow up

Methods

All the patient data from Jan 2011 to December 2016 was analysed to determine the incidence of re explorations, the cause, duration after primary surgery and the management strategies.

Results

Working in a high volume center, we present our review of 1404 bariatric procedures in the past five years out of which 73 cases were re explored (5.1 % re exploration rate)The presentation would include videos of similar reexplorations at a high volume Bariatric surgical centre in northern India.

Conclusion

Delayed post operative reexplorations are usually secondary to internal hernias causing small bowel obstruction, marginal ulceration leading to bleeding / perforation / strictures. With the increase in number of bariatric procedures, the incidence of revisions are increasing as well thus adding another paradigm to reexplorations.

□
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IMAGING POST BARIATRIC SURGERY: WHEN THE INTERPRETATION IS A CHALLENGE. FROM NORMAL TO ABNORMAL ANATOMY

Post-operative complications

E. Dorado

FUNDACION VALLE DEL LILI - cali (Colombia)

Background

In Colombia, the overweight population is 51% and 30% are morbidly obese, 10% had diabetes and 25% hypertension. It is clear the benefits of bariatric surgery in the management of morbid obesity

Introduction

After any bariatric procedure (Gastric Bypass or Sleeve Gastrectomy) fluoroscopic upper gastrointestinal test and CT Scan are major imaging test used to evaluate the anatomy.

Objectives

To describe imaging studies the abnormal findings after bariatric surgery and how to interpret them.

Methods

In a 10-year period we reviewed fluoroscopic and CT scan studies post- bariatric surgery bariatric operated at the Fundacion Valle del Lili or other institutions and described the abnormal findings correlating with the surgical findings when they underwent revisional surgery or medical management of complication.

Results

The most performed procedures in Colombia are Laparoscopic gastric sleeve (LSG) and Y-en-Roux gastric bypass(LYRGB) , therefore the most frequent abnormal findings are related to these two procedures.

In some occasions for the radiology service it is challenge to interpret the abnormal findings secondary to bariatric procedures

In LGS we found fistulas, gastropleural fistulas, kincking, hourglass, redundant fundus, torsion of the antrum and gastric reservoirs of 20% associated with malnutrition.

In bypass: internal hernias, gastrogastic fistulas, bypass with very wide anastomosis, ulcers.

Most of these patients were taken to revisional procedures where the findings were correlated.

Conclusion

Bariatric surgery is useful as a tool for weight loss and management of metabolic diseases, but inadequate technique can lead to nefarious results and fatal complications and is very important know how interpret this findings.

□
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FIRST CASE REPORT OF BILE LEAK FROM THE DUCT OF LUSCHKA IN A PATIENT WITH MINI-GASTRIC BYPASS: THE CHALLENGE OF MANAGEMENT.

Post-operative complications

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Introduction

The incidence of Bile duct injury after laparoscopic cholecystectomy approaches 0.11%-1.4%. Ducts of Luschka are the second most common site of bile leaks. The rarity of these ducts with cases of anatomical alterations in the gastrointestinal tract such as mini-gastric bypass makes the management a challenging option.

Objectives

Hereby we present a unique case of 28 year old female patient with mini- gastric bypass who had done uneventful cholecystectomy. Day 3 postoperatively patient complained of diffuse abdominal pain. Computed tomography showed free fluid in the abdomen. Liver enzymes were normal. Relaparoscopy showed leaking bile duct of Luschka, which was closed by surgical clips and drains left in the spaces. However bile leak continued for 4 weeks then stopped. Patient did well after all.

Methods

Endoscopic retrograde cholangiopancreatography with sphincterotomy played a crucial role for diagnosis and treatment of bile leaks with success rate near 94%. However no data were available using this method in a patient with Mini-gastric bypass procedure. Many authors have argued the role of relaparoscopy, but it is still an important way for adequate drainage and control of bile leakage. The only significant factor in determining clinical outcome in cases of non-surgical management is the type of bile duct injury.

Results

None

Conclusion

To the best of our knowledge, this is the first case report of bile leak from duct of Luschka after mini-gastric bypass treated successfully with relaparoscopy and drainage. Herein we will discuss all the available options of treatment and the challenge of it.



P.467

HOW TO FIX UP AN OBSTRUCTED REMNANT IN MINI GASTRIC BYPASS?

Post-operative complications

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Background

The video depicts the technique of management of an obstructed remnant after a mini gastric bypass.

Introduction

mini gastric bypass is a technique in which a long tubular pouch is made and a loop pouch jejunostomy is done. The remnant has to drain well the secretions filled in it. A faulty first horizontal firing may obstruct the remnant completely causing dilatation of remnant.

This technique envisages a simplified way to manage a totally obstructed remnant after a mini gastric bypass.

Objectives

Presenting the technique and safest exit strategy for managing mini gastric bypass remnant obstruction.

Methods

Verrus needle is used to create pneumoperitonium. An optical port is inserted at supra umbilical region. Two 12mm ports are inserted in line with optical port in mid clavicular line. Another two 5 mm ports are inserted in mid clavicular line in right and left subcostal region.

The diagnostic laparoscopy is done. A massively dilated remnant is observed. A gastrotomy is made of size 2 cm. The bowel is counted 30 cm distal to pouch jejunal anastomosis of previous surgery.

A loop of the bowel 30 cm distal to previous anastomosis is anastomosed with gastric remnant to give it a way out. The remnant is decompressed.

Results

The patient stood the procedure well and the symptoms due to a dilated remnant resolved.

Conclusion

loop remnant gastro jejunostomy distal to previous anastomosis in an obstructed remnant following mini gastric bypass is a safe exit strategy for managing the obstruction.



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CROHN'S DISEASE POST GASTRIC BYPASS OPERATION: IS THERE AN ASSOCIATION?

Post-operative complications

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Introduction

Bariatric surgery is increasing in the world. UK performed 5704 bariatric surgeries in 2016 according to the National registry. Association between Roux-en-Y gastric bypass(RYGB) and crohn's disease has not been established. Not many cases have been reported of patients developing crohn's disease after bariatric surgery.

Objectives

To investigate incidence of crohn's disease after bariatric surgery in our single bariatric tertiary centre in the UK.

Methods

Retrospective analysis of prospectively collected data of all patients undergoing bariatric surgery in our unit was done. Computer records, clinic notes and General Practitioner notes were reviewed.

Results

Two patients developed crohn's disease after RYGB. 57 years ex-smoker male with past history of laparoscopic cholecystectomy and BMI 42.5kg/m² had RYGB. He had excess weight loss(EWL) of 82%. Four years post surgery, he developed terminal ileal crohn's. He is managed successfully by medical management. 37 years female smoker with no family history of Inflammatory bowel disease(IBD) had RYGB at BMI 58kg/m². She developed colonic and complex fistulating perianal diseases 1 year after the operation. She needed immunotherapy, multiple perianal surgeries and defunctioning loop ileostomy over following 5 years. EWL was 103%. Patient needed reversal of her bypass and is making satisfactory progress at 3 month follow up.

Conclusion

The incidence of obesity and crohn's disease are increasing in the world. Patients having persistent chronic diarrhoea, perianal abscesses, excessive weight loss or malnutrition following RYGB should be suspected of IBD. They should be managed in tertiary bariatric unit. Early referral to gastroenterology team should be considered.

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ANASTOMOTIC ULCERS POST ROUX-EN-Y GASTRIC BYPASS – THE EFFECT OF NSAIDS AND PPI'S

Post-operative complications

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Background

The incidence of anastomotic ulcers post roux-en-y gastric bypass (RYGB) varies from 0.6-16%. It is recommended to avoid using NSAIDs due to the risk of marginal ulcers.

Introduction

The use of PPI and NSAIDs post bariatric surgery varies between surgeons in our unit with no consensus on the optimal length of treatment.

Objectives

To analyse the incidence of anastomotic ulcers in our population. Evaluate whether use of NSAIDs or duration of PPI treatment had any effect on ulcer rates.

Methods

Retrospective analysis of prospectively collected data was performed. Electronic records of patients undergoing RYGB between 2014 and 2016 were reviewed.

Results

245 patients underwent RYGB. 110 (44.90%) patients had PPI for 6 months. 134 (54.70%) patients having PPI for 1 month or less. 163 (66.53%) patients had NSAID for less than 4 weeks. 50 (20.41%) patients required OGD. 14 (5.71%) patients had an anastomotic ulcer. 7/14 patients with ulcers had 6 months PPI prophylaxis ($p=0.7849$). 7 had 1 month PPI. Mean time for the ulcer to develop was 11 months. 6 patients developed an ulcer despite no NSAID use, 5 patients developed ulcers had 2 weeks or less NSAID ($p=0.3888$). 6 (42.86%) patients with ulcers were smokers.

Conclusion

Use of short term NSAIDs post op does not seem to have an impact on anastomotic ulcer rates. The duration of PPI use also has little impact on ulcer rates despite the increased cost of prolonged treatment. This questions the cost effectiveness of this strategy. Smoking however had an impact as an independent risk factor for ulcer formation.

□
P.470

GERD AND HIATUS HERNIA AFTER BARIATRIC SURGERY

Post-operative complications

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Introduction

Bariatric surgery, when combined with lifestyle changes is a successful treatment modality in the obese patient. Roux-en-Y gastric bypass (RYGB) is considered to be an optimal surgical treatment option for GERD in the morbidly obese patient. Nevertheless, a subgroup of patients suffer from recurrent or persistent GERD after their gastric bypass. The literature clearly suggests an increased incidence of GERD and hiatus hernia following Laparoscopic Sleeve Gastrectomy (LSG). Unfortunately, limited treatment options are available in these patients.

Objectives

Our objective is to illustrate a safe and durable surgical option in the treatment of patients with medically refractory GERD and Hiatus Hernia post LSG & RYGB.

Methods

After placing trocars, a lysis of adhesions and standard dissection of the hiatus is performed. A primary crural repair with interrupted nonabsorbable sutures is performed. Fundoplication using remnant of stomach in case of RYGB and crurorraphy using distal sleeve with conversion in to RYGB in case of sleeve gastrectomy is to be done as an effort to prevent migration of stomach pouch in the mediastinum.

Results

No peri-procedural complications were encountered. Standard post-antireflux surgery clinical follow-up is to be taken. GERD clinical questionnaire at 1 month after the surgery demonstrated excellent GERD symptom control without dysphagia.

Conclusion

The Hill procedure can be a valid treatment for the post RYGB and crurorraphy with conversion in to gastric bypass surgical patient with GERD in which the gastric fundus is absent or inaccessible thus eliminating standard fundoplication as a reasonable option. This also represents a safe and durable treatment of GERD in these uniquely challenging patients.

□
P.471

SLEEVE GASTRECTOMY: SHOULD THIS BE THE OPERATION OF CHOICE IN SMOKERS?

Post-operative complications

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Introduction

Both smoking and obesity are major causes of preventable death throughout the world. Smoking is well known to be a risk factor for patients undergoing surgery and population based studies have previously identified smoking to be associated with a higher risk of perioperative mortality and thromboembolism. With falling mortality and complication rates associated with bariatric surgery, the effect of smoking status and outcome in modern surgical practice is yet to be clearly defined. Furthermore, whilst the increased incidence of marginal ulceration, strictures and fistula is well documented following gastric bypass in smokers, outcomes following sleeve gastrectomy are less well reported.

Objectives

The aim of this study was to compare perioperative outcomes in patients undergoing sleeve gastrectomy amongst smokers and non smokers. A secondary outcome measure was to compare excess weight loss.

Methods

293 consecutive patients who underwent sleeve gastrectomy at a regional referral unit were studied. Length of stay, readmission rate, reoperation rate and in hospital mortality were compared in smokers and non smokers. Excess weight loss at 18 months was also compared.

Results

6.9 % of patients who underwent sleeve gastrectomy were smokers. The smoking and non smoking groups were well matched for age and pre-operative body mass index. There was no difference in median length of stay, mortality, readmission rate or reoperation. Excess weight loss was, however, significantly greater in the non smoking patients (55.6% versus 32.5%).

Conclusion

Whilst sleeve gastrectomy remains a safe procedure regardless of smoking status, greater weight loss may be achievable with smoking cessation.

□
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PROGRESSIVE FATTY LIVER DISEASE NINE MONTHS AFTER LAPAROSCOPIC MINI-GASTRIC BYPASS SURGERY: A CASE STUDY

Post-operative complications

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Introduction

Mini-gastric bypass (MGB) is a popular bariatric procedure. However, its effect on non-alcoholic fatty liver disease (NAFLD) has not yet been comprehensively studied.

Objectives

We present a case of progressive NAFLD after MGB.

Methods

A 57-year-old non-alcoholic female with a body mass index (BMI) of 42.8 kg/m² underwent MGB without any incident. A concurrent liver biopsy showed an NAFLD activity score (NAS) of 2/8.

Results

She presented at postoperative month eight with edema, vague abdominal pain, nausea, and vomiting and was hospitalized. Her BMI had dropped to 25.7 kg/m². Her blood workup revealed mild anemia, mildly elevated liver enzymes, and hypoalbuminemia (2.5 g/dL). Liver ultrasound revealed grade-2 fatty liver. She received parenteral nutrition and intensive nutrient supplementation. Nevertheless, with regard to unsuccessful supportive measures and rising liver enzymes, revisional surgery –gastrogastrostomy- was performed. Her liver biopsy demonstrated a NAS of 7/8 at the time of revisional surgery. Her postoperative course was uneventful and she was discharged after one week.

Conclusion

Bariatric surgery has shown favorable results regarding improvement of NAFLD in morbid obesity. This beneficial effect has been linked to the amount of weight loss. However, case reports have shown deteriorating liver function and NAFLD even after significant weight loss. They all have in common significant weight loss in a relatively short period of time. There may also be a connection between specific bariatric surgery procedures and this phenomenon. Future studies comparing the effect of various bariatric procedures, including MGB, are necessary to help decide the optimal procedure for patients with this condition.

□
P.473

REVISIONAL SURGERY IN ABDOMINAL PAIN AFTER RYGBP

Post-operative complications

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Background

The revisional surgery after the RYGP is getting space in mild abdominal pain for the past years. The acute abdomen as complication of an RYGBP procedure can be result of many complications, such as mesenteric ischemia or bowel obstruction.

Introduction

A 39 years old female patient that was submitted to an RYGBP two years ago (BMI of 41,7kg/m²), was presenting mild abdominal pain in three distinct episodes for the last month. At the time of the clinical examination she had a BMI of 23,2 kg/m². The patient had no sign of acute abdomen. The CT scan showed no conclusive results.

Objectives

Show an early laparoscopic approach in mild abdominal pain with no diagnosis in a patient that underwent a RYGBP previously.

Methods

The patient underwent a diagnostic videolaparoscopic approach. We used 4 portals (5mm and 10mm). No stapler was needed. The mesenteric suture took one Silk 2-0.

Results

The intraoperative time was 35 minutes. The procedure had no early postoperative complications. No blood loss was registered. The patient was discharged two days after the procedure and had no symptoms. One month follow up showed no abdominal pain symptom.

Conclusion

The early approach of the abdominal pain can be a feasible treatment in unknown diagnosis. The comorbidity of the procedure was none in comparison to the comorbidity that the late diagnose may lead.

□
P.474

CATASTROPHES IN BARIATRIC SURGERY

Post-operative complications

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Introduction

*Bariatric surgery considered as major surgery

*Risk and complications usually related to obesity & related co-morbidities

That is why :

-We stress quitting smoking prior to surgery

-Advice losing weight prior to surgery, to decrease risk and complication as much as we can.

Objectives

Gentle manipulation of tissues, preservation of blood supply, and accurate apposition of tissue layers

Methods

BLEEDING

Male patient with morbid obesity refractory to gastric band with weight regain.

Leakage

Protocol of management for acute or chronic leaks as follows:

- 1) Stabilizing the patient
- 2) Control sepsis and nutritional support
- 3) Immediate Laparoscopic Surgical Intervention when safe.

•Case Review No.2

Case Review No.3

•Case Review No.4

Laparoscopic esophagojejunostomy for management of gastric leak

(Acute Leak)

(Chronic Persistent Leak)

Thromboembolism

(Portal Vein Thrombosis)

Results

as conclusion

Conclusion

A bariatric surgeon will face a variety of challenges

Key is thorough knowledge of surgical anatomy and applying Halstead principles of Tissue handling laparoscopically as well: "Gentle manipulation of tissues, preservation of blood supply, and accurate apposition of tissue layers"

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P.475

CONVERSION OF THE ADJUSTABLE GASTRIC BAND IN GASTROPLASTY WITH INTESTINAL DERIVATION IN ROUX-EN-Y IN ONE STEP PROCEDURE

Post-operative complications

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Introduction

Obesity is a chronic disease that affects 13% of the world population, causing great financial and social impact since it is associated with several pathologies. Several surgical techniques were developed aiming at reducing weight and improving comorbidities and quality of life.

Objectives

To report 29 cases of patients that underwent to a gastric band conversion to a laparoscopic Roux-en-Y gastric bypass (LRYGB) during a single surgery.

Methods

A literature review was carried out on databases and the following retrospective analysis of the cases submitted to revision surgery.

Results

Among the 29 patients, the mean Body Mass Index (BMI) before the gastric band was 38.6 (35.17-48.65) kg / m², after placing the band the minimum BMI was 38.97 (30.77-47.86) kg / m² and after 30 months of follow-up after conversion, the mean BMI was 31 (23-44) kg / m². There were two early complications of stenosis, resolved with endoscopic dilatation, and fistula, without the need for surgical intervention.

Conclusion

The conversion of the gastric band to LRYGB was indicated by failure for patients to lose weight or problems with the band, such as slippage. In addition, the single-procedure conversion technique has the advantages of shorter hospitalization period, decreased anesthesia, decreased patient waiting time, improved cost-effectiveness, fewer operations, as well as having the same morbidity and mortality rates compared to surgery in two procedures. LRYGB is a safe technique and allows for additional weight loss in patients who have had complications with the band or have not had adequate weight loss.

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EARLY COMPLICATIONS POST LAPAROSCOPIC SLEEVE GASTRECTOMY; A SINGLE-CENTER EXPERIENCE AND LITERATURE REVIEW

Post-operative complications

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Background

Laparoscopic sleeve gastrectomy (LSG) is a novel restrictive bariatric surgery that is rapidly being adopted by surgeons worldwide given its effectiveness and safety in terms of weight loss and minimal complications. This is one of the largest single-centered series to evaluate the perioperative safety as well as the learning curve of LSG.

Methods

We performed a retrospective review of prospectively collected data for all patients who have undergone LSG at our institution from January 2007 till December 2013 with a follow-up interval of 1 month post-operatively. The incidence of perioperative complications reflected by prolonged length of hospital stay or readmission within 1 month was evaluated.

Results

456 patients underwent LSG with a mean age of 35.2 years (± 10.45) and mean body mass index (BMI) of 41.7 kg/m² (± 6.7). Mean operative time was 2.8 hours with a 0.65% conversion rate. Mean length of hospital stay was 4.87 days. Thirty-day perioperative complication rate was 9.42% and included major abdominal hemorrhage (1.5%), leak (0.7%), sleeve stricture (0.2%) as the most dreadful complications. No perioperative mortality occurred. Reoperation and readmission rates were 1.75% and 2.63%, respectively. The mean length of hospital stay, operative time, and postoperative complications decreased with an increase in the number of LSGs performed over the years. The only factor associated with complications was prolonged operative time.

Conclusion

LSG is a relatively safe procedure with minimal perioperative morbidity and mortality. Complications reported at our institution, were comparable, even more favorable to some international series.

□
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SURGICAL PROPOSAL FOR TREATMENT OF SEVERE MALNUTRITION AFTER BARIATRIC SURGERY: CASE REPORT.

Post-operative complications

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Introduction

The growing number of bariatric surgeries in the world has intensified the concern about its long-term effects, especially in relation to nutritional deficiencies of micro or macronutrients. When there is excessive loss of macronutrients, adequate replacement can not always be achieved, and in some cases revision of surgery may be necessary.

Objectives

Description of revision technique

Methods

Literature review and medical record analysis.

Results

ACGO, Female, 42 years old. underwent bariatric surgery in Y-Roux (BGRY) in 2008 and until September 2015 had diarrheal episodes of mild to moderate intensity. He did not use multivitamins. November 2015 the episodes intensified and there was a progressive worsening of the condition. The patient so with 60 kg started polyvitamin therapy - maintained for a year - proving to be ineffective, with a significant drop in total cholesterol and albumin values. During 12 month follow-up, patient presented significant weight loss (weight 43 kg, BMI 17.22), still had severe diarrhea, and kwashiorkor aspect, suggestive of a disabsorptive syndrome. A gastroenteroanastomosis was performed between the excluded stomach and the alimentary limb associated with surgical stenosis of the efferent limb, with the intention of keeping the restrictive component (pouch) intact. After surgery, the patient progressed well with normalization of exams and resolution of diarrhea and malnutrition.

Conclusion

Revisional surgery performed as an alternative to resolve nutritional deficits installed after BGRY leading to a significant clinical and laboratory improvement of the patient.

□
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IDIOPATHICALLY DEBILITATING THIGHS PAIN AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

Post-operative complications

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Background

A 36-year-old male with BMI 44.3 kg/m² had chronic low back pain for about four years and the MRI revealed only mild disc bulging without cord compression. One of his cousin had idiopathic polyneuropathy since his twenties.

Introduction

He had received laparoscopic sleeve gastrectomy for weight control. The general anesthesia time was three hours. Intermittent pneumatic compression device was applied for venothrombosis prevention and wrapped up to mid-thigh level.

Objectives

On postoperative day 1, he complained of severely anteriolateral thighs pain regardless of position. Three days later, he was discharged with oral liquid diet intake smoothly.

One-and-a-half month after the operation, he suffered from difficulty in urination and defecation. Besides, severely painful sensation with mild numbness over lateroanterior aspect of both thighs bothered him since the operation. He had very poor quality of life and could not work anymore.

Methods

A lumbar MRI exam was arranged which revealed no evidence of spinal stenosis nor narrowing of the intervertebral foramens. The lower limb electromyography/nerve conduction velocity study showed mild middle and lower lumbar radiculopathy without denervation. This abnormally painful sensation had no response to oral acetaminophen, NSAIDs, gabapentin, and morphine. Only oxycodone could relieve his debilitating symptoms.

Results

He took oxycodone for more than six months and this annoying pain resolved gradually.

Conclusion

The mechanism of his acute onset bilateral thighs pain is still uncertain. No evident spinal cord compression nor peripheral neuropathy was detected. This case which shows that idiopathically acute bilateral thighs pain may occur immediately after laparoscopic sleeve gastrectomy and lasts for six months.

□
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THORACIC COMPLICATIONS OF BARIATRIC SURGERY; OVERLOOKED OR UNDERREPORTED ENTITIES

Post-operative complications

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Introduction

Saudi Arabia is considered one of the fastest growing economies and populations in the world. The growth and prosperity, however, have brought pronounced changes in the lifestyle of our people. Most notably, eating habits are less healthful, and the level of physical activity has declined. Consequently, obesity is increasing in the Kingdom at an alarming rate.

The Bariatric surgery falls into three main categories: malabsorptive, restrictive, and mixed. Nowadays, most cases are going for malabsorptive approach, for example, gastric sleeve. The complications of the bariatric procedure usually related to a stapler or surgical port sites but we notice there are some complications extend beyond the abdominal compartment to include the thoracic cavity affecting the effect esophagus, diaphragm, lung or others. Unfortunately, most of them are under reported.

Therefore; we will conduct this study to shed light on the thoracic complications of bariatric procedures specifically, and report those cases to make them available in the literature. The data collection will reveal the different thoracic complications after bariatric surgery procedures.

Objectives

To report the thoracic complications for patients who underwent bariatric surgery in a University hospital in the eastern province of Saudi Arabia.

Methods

Case series in a single institute (KFHU)

Results

Identify the risk factors and the cause of Thoracic complication post bariatric Surgery. The best management of those complications and the prognosis.

Conclusion

Long-term thoracic complications post-bariatric procedure is rarely reported. This could be due to inadequate follow-up, loss of contact with many patients, and lack of specific symptoms.



P.480

A RARE, LATE COMPLICATION FOLLOWING GASTRIC BYPASS SURGERY – AN INTERNAL HERNIA WITH A TWIST.

Post-operative complications

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Introduction

Gastric bypass surgery is a commonly performed bariatric procedure, with significant evidence to support its role in weight loss and subsequent health benefits. It is performed laparoscopically, which aids recovery time and minimises the risks of post-operative complications. However, it is a technically challenging procedure, and is associated with considerable morbidity in certain patients.

Objectives

To illustrate the clinical presentation, imaging as well as intra-operative techniques used in an unusual case. We aim to increase awareness about a rare long-term complication seen following bypass surgery.

Methods

10 years following antecolic, antegastric bypass surgery, with a revision of Roux 7 years after, a 51-year-old female presented with diarrhoea and vomiting. This was associated with epigastric pain, radiating to shoulder blades. A CT scan was performed which suggested acute pancreatitis as well as raising the possibility of small bowel obstruction secondary to an internal hernia. At laparoscopy, a 20cm dilated blind end of the biliopancreatic limb was found. Upon delineating the anatomy, it was noted to be sliding into a defect at the jejuno-jejunal anastomosis. Small bowel was reduced, the redundant biliopancreatic limb was resected and the internal hernia was closed.

Results

The patient made an uneventful post-operative recovery. Histology showed reactive change. At follow up there have been no further symptoms.

Conclusion

This case demonstrates a rare, late complication in a gastric bypass patient. It illustrates the value of early surgical intervention, even when the history and initial investigations did not fit with the typical set of symptoms for an internal hernia.

□ **P.481**

ENDOSCOPIC CLIPPING AS AN OPTION IN TREATMENT OF POSTOPERATIVE LEAKING AFTER SLEEVE GASTRECTOMY

Post-operative complications

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Background

Female 35 years after sleeve gastrectomy. Postoperative period was smooth. The patient was released home on day 3.

Introduction

On 13 she appealed to the clinic with complaints of weakness, malaise, received infusion therapy, and then opened vomiting with blood. The patient ran diagnostic endoscopic procedure, no - data for the ongoing bleeding . Monitoring patient's condition - getting worse, - in the dynamics - hemoglobin decline. We made a decision to do relaparoscopy. Intraoperative - in abdominal cavity up to 1.5 liters of blood. The source of bleeding was not found . Intraoperatively we performed test for leakage of stomach joints - swollen stomach - seamed wealthy. Established swab to the greater curvature of the stomach, a installed drainages to pelvis and to the spleen.

Objectives

2 days after relaparoscopy gastric content began to flow through drainage. On gastroscopy – 6 cm from the incisure cardialis – 2 failures 0.5 and 0.8 cm. The patient has fever 39 C, X-ray of chest – hydrothorax to 6 ribs on the left side. Punctured (received serous-hemorrhagic fluid. Swab is removed – no active bleeding. Abdominal cavity is well drained, irrigated with antiseptic.

Methods

We decided to perform endoscopic clipping. During endoscopy we clipped fistulas with 3 clips each and strengthened this line with acrylic glue.

Results

On a second day after procedure no fluid in the drainage – it was removed.

Conclusion

We offer endoscopic clipping as a convenient non-invasive method for treating joint failure after a gastrectomy

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VALUE OF LOW CALORIE DIET BEFORE SLEEVE GASTRECTOMY: PROSPECTIVE RANDOMISED STUDY.

Pre-operative management

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Background

Introduction

Bariatric surgery represents the best long-term treatment modality for morbid obesity and its comorbidities. Some published data concluded increased morbidity and mortality with high BMI. Therefore, many bariatric surgeons recommend a preoperative weight loss through a 2 week low caloric diet (LCD). It has been suggested that the use of this regimen could be beneficial in terms of weight loss, operative times, and complication rates. Other surgeons claim that preoperative LCD regimen raises cost and morbidity due to increased catabolic state.

Objectives

to evaluate the impact of the use of a 2 week preoperative LCD compared with no dietary regimen in patients undergoing laparoscopic sleeve gastrectomy in a randomized trial.

Methods

Forty patients (BMI 50.5 ± 2.4 kg/m²) scheduled for sleeve gastrectomy were prospectively enrolled in the study. Patients were randomly allocated to a 2-week preoperative LCD regimen (20 patients) or no preoperative dietary restriction (20 patients). Both groups were compared in terms of operating time, intraoperative bleeding and complications, 30- (T1) and 60-day (T2) weight loss.

Results

Operative time was significantly shorter in group of patients who underwent preoperative LCD than other group of patients with no dietary restriction (80 min vs 95 min respectively, P 0.03). Intraoperative bleeding and morbidity were similar among both groups. Body weights, BMI, waist circumference, were significantly lower at T1 and T2 in the 20 patients who completed the preoperative LCD regimen.

Conclusion

Low calorie diet before sleeve gastrectomy is beneficial in reduction of operative time and improving early postoperative weight loss during first 2 months after surgery. A longer follow up is recommended.

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A CLINICAL AND ECONOMICAL REVIEW OF UGI VERSUS EGD IN THE PREOPERATIVE WORKUP OF A BARIATRIC PATIENT

Pre-operative management

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Introduction

Introduction: Upper gastrointestinal series (UGI) and esophagogastroduodenoscopy (EGD) have both been utilized in the preoperative workup of the bariatric patients.

Objectives

Objectives: We aim to provide a clinical and economic perspective in performing UGI versus EGD for patients undergoing preoperative workup for laparoscopic sleeve gastrectomy.

Methods

Methods and Procedures: In this retrospective study, we compared UGI versus EGD in the preoperative workup of bariatric patients in a single urban high volume bariatric center. All EGDs were performed by one bariatric surgeon. There were 170 and 157 patients in the EGD and UGI groups respectively. The endpoints include the procedure costs, physician reimbursements, rate of hiatal hernia diagnosis, effect on operative planning. Inclusion Criteria: Male or Female, BMI>35 w/comorbidities (HTN, DM, GERD, OSA), BMI>40, Preoperative workup for sleeve gastrectomy or lap band, and adult patients greater than 18y/o.

Results

Results: The rate of diagnosis of hiatal hernia in the EGD vs UGI groups were 98/170 (57.6%) and 24/157 (14%) (P<0.01) respectively. Average size on EGD was 2.37cm and 2 patients with Barrett's were identified. Average size on UGI was small with 2 patients having tertiary contractions. Of patient who underwent surgery, 61/113 in EGD group and 24/157 in UGI group underwent a hiatal hernia repair (P<0.01). The average Medicare fee for an EGD vs UGI was \$261.27 vs \$128.48.

Conclusion

Conclusions: A preoperative EGD is economically comparable and provides superior clinical information in the preoperative workup and surgical planning of a bariatric patient.

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SCREENING FOR OBSTRUCTIVE SLEEP APNOEA BEFORE BARIATRIC SURGERY - A WORTHWHILE EXERCISE OR AN UNNECESSARY DELAY?

Pre-operative management

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Introduction

At the time of referral and assessment, if patient's are suspected to have undiagnosed Obstructive Sleep Apnoea (OSA), they are sent for sleep studies with a view to commencing Continuous Positive Airways Pressure (CPAP) prior to undertaking bariatric surgery. Screening criteria at our Bariatric Centre for investigating patients with possible OSA relies on a STOP-BANG score of ≥ 5 before they are referred to the sleep study.

Objectives

To evaluate the selection criteria for polysomnography prior to surgery and the time taken to perform sleep studies.

Methods

A retrospective review of all patients who were referred to the bariatric service between January and July 2015 at a single tertiary referral centre and who were also referred for preoperative sleep studies was undertaken. Time taken to perform the sleep studies followed by the subsequent diagnosis of OSA needing CPAP was also measured.

Results

72 patients were studied. 10 were already known to the respiratory service, 7 had already been referred for sleep studies, three patients did not attend their sleep studies, and one withdrew from the surgical pathway. Of the remaining 50 patients, the median STOPbang score was 5, with median time to sleep study of 2 months, 24 (48 %) were diagnosed with OSA requiring CPAP. 7 patients were not compliant with CPAP use.

Conclusion

Selection criteria for referral for sleep studies need to be more stringent with over half of patients not requiring CPAP before surgery. Although waiting times for sleep studies were not excessive, unnecessary testing may delay surgery.



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IS ROUTINE PREOPERATIVE ESOPHAGOGASTRODUODENOSCOPY SCREENING NECESSARY PRIOR TO LAPAROSCOPIC SLEEVE GASTRECTOMY? REVIEW OF 1555 CASES.

Pre-operative management

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Background

Routine preoperative oesophagogastroduodenoscopy (p-OGD) screening in patients generally undergoing bariatric surgery remains controversial

Introduction

the decision to perform p-OGD should be individualized in bariatric surgery patients after thorough discussion with the surgeon, taking into consideration the type of bariatric procedure performed

Objectives

Given the uncertainty in the literature about whether routine p-OGD should be done to all patients scheduled for LSG, therefore, the current study examined 1555 patients who underwent LSG at Hamad General Hospital, Doha in order to assess the utility of routine p-OGD prior to LSG.

Methods

retrospectively retrieved and systematically reviewed the demographic, clinical and histopathologic data extracted from the medical records of all patients who had undergone primary LSG for morbid obesity at HGH (February 2011 - July 2014, N= 1555). We also observed patients' clinical findings and postoperative course.

Results

OGD findings indicated that: about half (49.3%) of the patients were normal, (Group 0); no patients had gastric cancer or varices (Group 3); 40.1% had mild disease, (Group 1) (e.g. gastritis, duodenitis, esophagitis); and 10.5% were categorized as Group 2 which, according to Sharaf et al (2004)

Conclusion

Routine pre-operative OGD before LSG is not required . OGD might be required only in symptomatic patients.

□
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PRE-OPERATIVE MASSIVE WEIGHT-LOSS IN GIANT OBESE PATIENTS, THE STIER METHOD

Pre-operative management

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Background

In giant obese patients, pre-surgical conditioning therapy is mandatory in order to achieve technical and physical operability.

Introduction

While intragastric balloon was currently the preferred technique in Europe, some 7 months are required to achieve sufficient weight loss. We were compelled to develop a faster-acting conditioning therapy to achieve operability in the short term.

Objectives

We combined liraglutide, a glucagon-like peptide-1 (GLP-1) receptor agonist and known inducer of weight loss, with a leucine-based amino acid infusion generally administered to patients with liver failure, hoping to potentiate weight loss and reduce liver volume.

Methods

We use an amino acid infusion, the primary component of which is the branched-chained amino acid leucine (13.09g per 1000ml). It was administered in combination with a daily subcutaneous injection of liraglutide, a GLP-1 analogue and a low-energy nutrition containing 800 kcal per day. A matched pair study design (4:1) with 2 treatment conditions was used. Cohort 1 received liraglutide, leucine infusion and diet; Cohort 2 exclusively liraglutide and diet.

Results

Mean initial BMI in group 1 was 68,2 kg/m² and in group 2 68,8 kg/m² (initial weight 209,34kg versus 194,69 kg). Mean weight loss was 18,59 kg versus 9,48 kg over an average of 17,4 versus 22,65 days treatment duration, accordingly 1,06 kg versus 0,42 kg weight loss per day.

Conclusion

We subsume a complementary effect of liraglutide and leucine-based amino acid infusion on weight loss potentiation and liver condition improvement in giant obese patients as pre-conditioning therapy prior to weight loss surgery.

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HISTOPATHOLOGY FINDINGS OF SLEEVE GASTRECTOMY SPECIMENS ARE ASSOCIATED WITH PREOPERATIVE SYMPTOMS OF THE PATIENTS?

Pre-operative management

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Background

The prevalence of sleeve gastrectomy has led to a large number of "normal" gastric specimens in patients without significant symptoms.

Introduction

Despite the lack of symptoms gastritis seems prevalent in these patients and also the rare gastric polyps and stromal tumors (GISTS) are present.

Objectives

To ascertain the prevalence of gastritis and gastric tumors in the extracted LSG specimens.

Methods

Specimens from 304 LSG from the years 2009-2016 were inspected retrospectively. The pathology reports were grouped according to the presence of gastritis, helicobacter pylori, gastric polyps or GISTS.

Results

Gastritis was discovered in 94 (31%) specimens and H. Pylori in 29 (9.5%). These results did not correlate with the preoperative symptoms of our patients according to our statistical analysis. Gastric polyps were found in 3 (1%) patients and one GIST (0.3%). The size of the GIST was 2cm, with low mitotic factor (<1/50 high powered fields) and Ki-67<10%.

Conclusion

Pathology is present in a large percentage of LSG specimens. The presence of gastritis and H. Pylori is higher in the morbidly obese than in the general population. Further studies are needed in order to determine whether that observation is of any clinical importance or gastric pathology is simply underestimated in general population. The presence of polyps or GISTS, although it doesn't demand further treatment, may warrant closer endoscopic observation.

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IS PRE-OPERATIVE WEIGHT LOSS ASSOCIATED WITH BETTER LONGER TERM WEIGHT LOSS IN PATIENTS UNDERGOING VERTICAL SLEEVE GASTRECTOMY FOR MORBID OBESITY?

Pre-operative management

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Introduction

Previous studies have shown that pre-operative weight loss, whilst beneficial in reducing peri-operative morbidity, has no effect on long term weight loss outcomes in adjustable gastric band and Roux-en-Y gastric bypass for morbid obesity. There is however limited data on the impact of pre-operative weight loss on outcomes following vertical sleeve gastrectomy.

Objectives

To assess the impact of pre-operative weight loss on longer term weight loss of patients following vertical sleeve gastrectomy (SG) using a national database.

Methods

The UK National Bariatric Registry (NBSR) was interrogated to identify all patients who underwent SG between January 2009 and June 2014. The patients were grouped into those that lost weight pre-operatively and those that did not. Peri-operative and medium term outcome data was collected and analysed.

Results

In 1612 cases of SG, patients lost weight pre-operatively, whereas in 734 cases they either gained weight or stayed the same weight.

	Pre-operative weight loss (n=1612)	No pre-operative weight loss (n=734)
Mean % total weight loss at follow up (standard error of mean; SEM)	27.6 (0.3)	22.7 (0.4)
Mean days to follow up (SEM)	457 (7.7)	425 (12)
Number of re-admissions within 30 days (%)	47 (2.3)	29 (4.0)
Number of re-operations within 30 days (%)	22 (1.4)	13 (1.8)
Median length of hospital stay in days (inter-quartile range)	2 (2-3)	2 (2-3)

Although peri-operative outcomes between the two groups were comparable, patients who failed to lose weight pre-operatively had a significantly worse post-operative weight loss ($p < 0.0001$).

Conclusion

Pre-operative weight-loss is associated with better medium term weight loss outcomes for patients undergoing SG.

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CAUSES OF ATTRITION OF PATIENTS AWAITING BARIATRIC SURGERY WHILST ON THE PRE-OPERATIVE PATHWAY

Pre-operative management

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Introduction

Relatively little is known about patients who are referred to bariatric services but are subsequently discharged preoperatively.

Objectives

To analyse the reasons for preoperative discharge and identify differences between this group and the surgical group.

Methods

A retrospective analysis of patients dropping out of the bariatric pathway over a 6 year period was undertaken. This group of patients were compared with our database of patients undergoing bariatric surgery over the same period.

Results

129 patients were discharged from bariatric services preoperatively. The mean age and BMI on referral was 47.7 and 48.7 respectively, not significantly different to the surgical group. Discharged patients were however more likely to be male than the surgical group (41.1% vs 29.2%, $p=0.011$). Rates of hypertension (51.2% vs 41.0%, $p=0.04$), ischaemic heart disease (12.5% vs 6.1%, $p=0.0223$) and obstructive sleep apnoea (30.2% vs 19.1%, $p=0.008$) were significantly higher in discharged patients. Patients spent a mean of 418 days on the pathway and lost a mean of 1.4kg in weight, significantly less than the preoperative weight lost by patients going on to have surgery ($p=0.0002$). The most common reason for discharge was either patient choice (53.5%) or a lack of engagement with the pathway (35.7%).

Conclusion

A significant number of patients are discharged from the bariatric pathway preoperatively. These patients are more likely to be male and have a higher risk of a number of comorbidities. Discharge is usually due to patient choice or an unwillingness or inability to engage with the needs of the pathway.

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EVALUATING A SERVICE CHANGE AIMED TO IMPROVE THE QUALITY OF PATIENT CARE FOR BARIATRIC SLEEP STUDIES PATHWAY.

Pre-operative management

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Background

The Lung Function and Sleep Unit at the Whittington Hospital provide home sleep studies to assess bariatric surgery pathway patients (BSPP) whom have an increased chance of suffering obstructive sleep apnoea (OSA), determined by a STOPBANG of ≥ 4 .

Introduction

The rate of non-attendance (DNA) for the sleep studies was high, potentially causing a delay in the patient's pathway. The waiting time of >6-wks was also highlighted as unacceptable and likely contributed to the DNA rate and ultimately the quality of patient care.

Objectives

With demand from the Bariatric service increasing, alongside limited time and space available to assess BSPP for OSA, there was a necessity to develop a sleep pathway that would address these factors.

Methods

BSPP were switched from performing a multichannel home sleep study to two nights' overnight oximetry (OO). The oximeters were distributed in groups at the end of popular bariatric clinics meaning patients could take away the diagnostic study the same day as their referral and staff time was reduced. The online request was amended for the bariatric team to select the time and date of an appointment if the same day was not possible.

Results

By offering group sessions of OO on the day of referral the DNA rate dropped from 27% to 9% showing a 66% ($p < 0.001$) improvement. Furthermore, time spent establishing a diagnosis dropped by 39.0%.

Conclusion

The intervention of a group session offered on the same day as requested dramatically improved DNA rates, reduced physiologist time spent establishing a diagnosis and will ultimately improve BSPP satisfaction.

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INTRAGASTRIC BALLON PREVIOUS TO BARIATRIC SURGERY IN HIGH RISK SUPEROBESE PATIENTS. AN ALTERNATIVE TO THE TWO STAGE SURGERY

Pre-operative management

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Background

A two stage approach with an initial sleeve gastrectomy (SG) has been suggested in the high risk patients (BMI>50, male, previous thrombosis, metabolic syndrome, age...), but the second stage is rarely performed (<3%) for several reasons.

Introduction

Intragastric ballon (IGB) has demonstrated efficacy in weight loss in the short term

Objectives

We evaluate the use of IGB prior to surgery to reduce the risk in superobese patients.

Methods

A retrospective cohort study was conducted. Patients who underwent bariatric surgery between 2006 and 2016 were included. Patients with risk factors of morbimortality were offered to have IGB during 6 months prior to bariatric surgery. Variables: age, BMI, diabetes, hypertension, previous thrombosis, Sleep apnoea, gender, technique, preoperative weight loss, postoperative complications, leak, haemoperitoneum, occlusion, hospital stay. Patients with and without IGB were compared

Results

655 patients were included. IGB was used in 118 patients. The group of patients with IGB had more incidence of metabolic syndrome, male gender, and higher BMI. Total preoperative weight loss were superior in patients with IGB $18,89\pm 9,2$ vs $8,28\pm 10,45$ kg ($p<0,005$), also the percentage of preoperative weight loss $12,53\pm 5,85$ % vs $6,85\pm 8,98$ %. Gastric bypass was performed in 72,4% of high risk patients. Mortality was 0% in the whole series. Complications were similar in the high risk group than in the rest.

Conclusion

IGB previous to bariatric surgery may be an alternative strategy for higher risk patients, and one stage surgery could be safely performed

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IMPLEMENTATION OF EHEALTH INTO A BARIATRIC PROGRAM; 2 YEARS EXPERIENCES

Pre-operative management

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Introduction

The concept of support by eHealth in maintenance and commitment in chronic diseases applies perfectly to the bariatric patient. Benefits of bariatric eHealth programs have been reported, although it remains difficult to assess the value of each component like informative factsheets, elearning modules, forum, connected devices and video consulting. Experiences of 2 years eHealth in a large obesity center could be useful.

Objectives

Description of the statistics of platform use in order to highlight important components and share experiences.

Methods

Following the first year wherein continuous improving of the contents was achieved by feedback of patients and obesity team, the activity data and navigations data of the 1517 patients entered into the BePATIENT platform in the last 12 months, were analysed.

Results

A total of 11016 visits to the platform were included. On average 14.1 pages were viewed. One-third (36%) of the 1517 patients made only one entry, The proportion of patients reconnect to the platform more than 25 times increased over time from 2 to 15%. One out of four visits endured more than 15 minutes. The use of desktop, smartphone and tablet was by 59%, 27% and 14% respectively. 11.6% completed the eLearning. 42.3% watched all videos and 4.5% read all factsheets. Six patients connected their wireless devices to the platform.

Conclusion

It takes time to compose the contents. Then it results into more reconnections and longer visits including videos watched and elearnings completed. The center has experienced better informed patients.

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DEFINING BARIATRIC TIER 3 POPULATION- A PORTRAIT FROM THE NORTH EAST OF ENGLAND

Pre-operative management

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Background

In England, the prevalence of obesity among adults rose from 14.9% to 26.9% between 1993 and 2015.

Introduction

The increased obesity epidemic requires an updated description of patients' characteristics.

Objectives

To define the current preoperative features of obese patients in a hospital based multidisciplinary medical weight loss program (Tier 3). This may update the current trends for stakeholders and inform perioperative planning.

Methods

Data of 678 patients were collected prospectively from April 2015 to January 2017 at a large Bariatric Centre in England. Key elements were demographics, employment status and comorbidities.

Results

There were 500 females (74%) and 178 males. The median BMI at initial assessment were 46 (range 33-85), weight 126 (range 77-255) Kg, and age 45 (range 17-75) years. About 4% (25/678) were above 65 years. Half were employed (349/678). The majority (84%) do not smoke but over 54% consume alcohol. A large proportion (91%) was ASA 2, a quarter (26%) was diabetic and dyslipidaemic; 36% were arthritic and suffers from GORD. One in 10 females have polycystic ovary. More than a quarter (175/678) had obstructive sleep apnoea with 20% requiring CPAP. Thirty two patients (23% of all CPAP users) were on this treatment prior to entering Tier 3.

Conclusion

This portrait provides a current profile on a large group of patients within Tier 3 who may require targeted multidisciplinary perioperative considerations. Awareness that 1 in 5 patients have severe OSA will alert the anaesthetist. The surgeon's knowledge of the prevalence of alcohol, tobacco use and GORD has implications for counselling patients appropriately.

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PRE-OPERATIVE VERY LOW CALORY DIET (VLC) VS VERY LOW CALORY KETOGENIC DIET (VLK)

Pre-operative management

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Introduction

Adequate accessibility to the abdominal cavity is one of the major limiting factor of bariatric surgery and it is mainly due to liver steatosis and visceral obesity. Pre-operative diet may play an important role as far as patients' fitness for surgery, post-operative outcomes and successful weight loss.

Objectives

The present study was aimed to compare weight loss and surgical outcomes in two groups of patients who were offered two different pre-operative kinds of diet: Very Low Calory Diet (VLC - 900 KCal) and Very Low Calory Ketogenic Diet (VLK - 700 KCal).

Methods

Patients candidate for bariatric surgery (Laparoscopic Sleeve Gastrectomy and Laparoscopic Gastric Bypass) were registered and assessed according to pre- and post-diet BMI, liver steatosis (US scan), operative time, length of stay and drainage output. Patients choice influenced the type of diet. T-Student test was used to compare the two groups of patients

Results

From January through December 2016, 206 patients candidates for bariatric surgery, were enrolled in this study. There were 165 F and 41 M, the mean age was 44.08 years. In total 74 patients chosed VLC while 107 patients chosed VLK diet. Pre-diet mean BMI was 44.1 for VLC group and 46.1 for VLK group, while immediately pre-op BMI were 42.1 and 44.2, respectively. Operative time and drainage output were the only factors that resulted significantly correlated with diet induced BMI reduction (61,07 vs 69,31 min; $p=0,0004$ and 142,01 vs 189,57 ml; $p=0,0001$).

Conclusion

VLK seems to allow a better and safer surgical approach for bariatric surgery candidates.



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PRE-SURGICAL PREDICTORS OF POST-SURGICAL WEIGHT LOSS: ROLE OF DIETETIC FOLLOW-UP AND PATIENT ENGAGEMENT

Pre-operative management

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Introduction

The degree of weight reduction post-surgery can vary substantially between patients, influenced by their ability to sustain diet and lifestyle modifications.

Objectives

The aim of this study was to evaluate the impact of patient engagement with the MDT pre-surgery on post-surgical weight outcomes through our joint Tier 3 and 4 weight management service.

Methods

An audit was conducted of the prospectively collected patient data within our Tier 3 and Tier 4 weight management service (n=55). Full patient anthropometric and clinical contact data from first dietetics appointment to 9-month post-surgical follow-up were collected.

Results

Our data identified that intensity of dietetic appointments has a significant impact on weight reduction ($P < 0.01$). Patients with less than 2 "did not attend" (DNA) appointments prior to surgery had significant reduction in weights on the day of surgery as well as 3, 6 and 9 months post-surgery ($p = 0.007$). It was also noted that a higher BMI entering the care pathway was also associated with a higher frequency of DNAs prior to surgery ($r = 0.315$, $p = 0.019$); with patients who missed more than 7 appointments taking 50% longer (2.4 vs. 1.6 years) to meet the criteria for surgery. Multiple linear regression analysis revealed that dietetic follow-up intensity was the only independent predictor of pre-surgery DNA frequency ($r = -0.338$, $p = 0.017$), after accounting for starting BMI, pathway duration and psychology follow-up.

Conclusion

Taken together, these results support the notion that more intense dietetic follow-up appointments may reduce the risk of multiple cancellations and poor surgical outcomes.

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PRE-OPERATIVE 5% WEIGHT LOSS AS A CRITERION FOR SURGERY: IS THIS A GOOD PREDICTOR OF METABOLIC OUTCOMES POST-SURGERY?

Pre-operative management

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Introduction

To receive bariatric surgery, patients within our weight management service are required to lose 5% of their excess weight, as an indicator of dietary and lifestyle adherence supporting long-term weight loss post-surgery. However, nationally there is little consistency as to which measures represent good predictors of lifestyle adherence and weight loss success.

Objectives

The aim of this study was to evaluate whether the extent of pre-surgical weight loss was a good predictor of long-term metabolic health outcomes following bariatric surgery.

Methods

An audit was conducted of the prospectively collected patient data within our Tier 3 and Tier 4 weight management service (n=100). Patient anthropometric and serum HbA1c data were collected from the first dietetics appointment to 3, 6, 9 and 12-month post-surgery.

Results

Patients who achieved $\geq 5\%$ EWL had a significantly lower BMI at all post-surgical follow-ups and significantly lower HbA1c (39.6 vs. 57.6 mmol/mol, $p = 0.026$) at 12 months post-surgery, regardless of initial BMI. Higher pre-surgical EWL rates ($\geq 20\%$) resulted in significantly lower BMI at 3 months-post surgery but did not confer any significant additional benefit in the longer-term for either BMI or HbA1c levels.

Conclusion

Our data suggests that pre-surgical EWL $> 5\%$ can predict superior metabolic outcomes post-surgery and is a reliable indicator of adherence to lifestyle changes. Thus, the present findings support the continuation of a 5% EWL cut-off as a reliable criterion for surgery and successful outcomes.

□ **P.497**

SCREENING FOR MENTAL HEALTH EXCLUSIONS PRIOR TO BARIATRIC SURGERY: PRELIMINARY ANALYSIS OF 18 MONTHS DATA

Pre-operative management

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Introduction

Although bariatric surgery is an effective form of weight management, some patients regain weight and/or show reduced wellbeing post-surgery. One possible explanation includes pre-surgery mental health and suitability for surgery. Due to issues concerning diagnosis, conceptualising problems as cause or consequence of excessive body weight, and the ethics of withholding surgery, pre-surgery screening remains controversial.

Objectives

To explore the feasibility and detection rate of a pre-surgical screening tool in bariatric surgery.

Methods

Following a survey of psychologists working in bariatric surgery, three mental health problems were identified as contraindications to surgery: alcohol and drug misuse, and suicidality. Accordingly, all patients entering the bariatric pathway at a UK hospital, over 18-months, completed validated measures for these contraindications. Those that reached the threshold for any contraindication were referred for extra within-service psychological assessment and then either referred back to their GP for additional psychological support or passed back into the surgical pathway.

Results

Out of 373 patients (Male = 99; Female = 274), 370 completed the screening tool. 300 (81.1%) continued into surgery and 70 (18.9%) were recommended for further psychological assessment. Of these, 67 (18.1%) returned to the surgical pathway and 3 (0.8%) were referred to their GP for further support, with surgery delayed.

Conclusion

This study indicates feasibility for an online screening tool within a bariatric service and identified 0.8% of patients as requiring additional pre-surgical psychological support. The results are discussed in terms of the tool's efficacy and effectiveness and whether or not it should be adopted as routine.

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HEPATIC VOLUME REDUCTION IN OBESE INDIVIDUALS FOLLOWING OMEGA-3 POLYUNSATURATED FATTY ACID SUPPLEMENTS VERSUS VERY LOW CALORIE DIETARY RESTRICTION.

Pre-operative management

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Background

A large liver can be a bariatric surgeon's nightmare as it interferes with the operative field particularly during posterior fundal and hiatal dissection. Various methods have been employed to achieve hepatic volume reduction (HVR) prior to surgery.

Objectives

To compare the effect of Omega-3-Polyunsaturated Fatty Acid (PUFA) supplements and very low calorie dietary restriction (VLCD) on hepatic volume.

Methods

A total of 52 obese patients were randomized into two groups. For various reasons only 41 patients were included for final analysis; VLCD group (n=20) and Omega-3-PUFA group (n=21). MRI volumetry of liver, weight, and serum Alanine Transaminase (ALT) levels were measured at enrollment and again at 4 weeks.

Results

Mean HVR of VLCD group and Omega-3-PUFA group at day-30 was 37.10 + 15.76 cm³ and 34.88 + 9.99 cm³. Comparative analysis of HVR between the two groups showed no statistical difference (p=0.29). Similarly, there was no statistical difference in ALT levels of both groups. Significant weight loss (kg) was noted in both VLCD and Omega-3-PUFA group, measuring up to 2.21 + 2.29 and 2.85 + 4.62, although no statistical difference was noted when compared between the two (p=0.58).

Conclusion

Pre-operative hepatic volume and weight reduction were noted in both groups with no superiority of one modality over the other. As dietary restriction is often confronted with non-compliance, Omega-3-PUFA does appear to be a more attractive alternative. A larger study including cost effectiveness analysis may be able to further ascertain the economic impact and feasibility of pre-bariatric surgery Omega-3-PUFA supplementation in a developing economy.



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FROM BARIATRIC TO ONCOLOGICAL SURGERY: THE ROLE OF ROUTINE PREOPERATIVE UPPER ENDOSCOPY IN BARIATRIC SURGERY

Pre-operative management

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Introduction

Routine preoperative upper gastrointestinal endoscopy (UGE) for bariatric surgery is still controversial. The optimal assessment for upper gastrointestinal tract in bariatric patients is not well defined although the prevalence of clinically relevant lesions found on the UGI is described in some observational studies

Objectives

Value of preoperative routine UGE in making treatment decisions

Methods

The present study highlights the clinical usefulness of preoperative UGE based on two real cases taking place in our practice.

Results

Preoperative routine UGE prior to laparoscopic revisional surgery and gastric bypass surgery, showed adenocarcinoma in asymptomatic patients changing the initial surgical bariatric approach to an Oncological surgery.

Conclusion

Preoperative routine UGE for bariatric surgery has a high diagnostic significance and low cost in relation to its effectiveness. Since, findings with this conventional exploration allow changes in the therapeutic strategy and also provide an adjustable treatment to every patient, preoperative routine UGE should be recommended

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P.500

CAN STRUCTURED PSYCHOSOCIAL EDUCATION IMPROVE HEALTH RELATED QUALITY OF LIFE OUTCOMES FOLLOWING BARIATRIC SURGERY?: A PILOT STUDY

Pre-operative management

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Introduction

Pre-operative bariatric education is deficient especially regarding psychosocial wellbeing; patients want more education about psychosocial aspects of surgery. Knowledge gained from qualitative interviews was used to develop a psychosocial educational course which forms the intervention in a pilot controlled clinical trial assessing the feasibility of using education to improve health-related quality of life outcomes following bariatric surgery.

Objectives

To assess the feasibility and acceptability of using this educational course in a controlled clinical trial

Methods

Forty-nine pre-operative patients (25 control, 24 intervention) were recruited. Intervention patients attended a two-session educational course before surgery. Topics included: relationship with food, body image changes, mindfulness, dealing with guilt/shame and relationships. Patients from both groups completed the BAROS assessment and PHQ-9 depression inventory at three, six and twelve months post-operatively.

Results

Follow up: 52% in the control, and 58% in the intervention group. Sixteen patients completed the educational course. No statistical analysis was performed. BAROS: at 12 months three patients were classed 'failure', five 'fair', two 'good' and three 'very good'. In the intervention, four were classed 'failure', two 'fair', seven 'good' and three 'very good'. There was no differences in PhQ-9 scores.

The course received excellent feedback from all patients who attended.

Conclusion

Pre-operative psychosocial education is important and should be routinely delivered. A full randomised controlled trial of this nature is feasible; this study will help to inform the design of a future large scale study. This may help improve outcomes (at least from a subjective patient perspective) for bariatric surgery patients.

P.501

IS LONG TERM MICRONUTRIENT SURVEILLANCE IN PRIMARY CARE HAPPENING?

Primary care and the bariatric surgery patient

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Introduction

Micronutrient surveillance following bariatric surgery is mandatory. Post-surgical follow up in the UK is only commissioned for 2 years, thereafter patients are discharged back to Primary Care (PC). The British Obesity and Metabolic Surgery Society (BOMMS) has published national guidelines recommending annual surveillance of; Urea and Creatinine (U&E); Liver Function Tests (LFT); Ferritin; Folate; Calcium; Vitamin D; Parathyroid hormone (PTH); Vitamin B12; Zinc and Copper.

Objectives

To audit micronutrient testing compliance against guidelines.

Methods

Patients undergoing either a primary sleeve gastrectomy (SG) or Roux-en-Y bypass (RYGB) after January 2010 were identified from our trust database. Only patients with a minimum of 2 years post-operative follow up were included. Blood results were searched for micronutrient tests. Patients that had died were excluded.

Results

In total 420 patients met the inclusion criteria; RYGB 75.2% [n=316], SG 24.8 % [n=104]. Tertiary care (TC) follow up continued beyond 2 years in 15.95 % [n=67]. Compliance with surveillance bloods is reported in table 1.

Of 353 patients discharged back to primary care, 135 received no follow up bloods (38.2%). In those checked (n=218) compliance is reported in table 1.

Table 1. Compliance with guidelines in %

	UE, LFT	Ferritin	Folate	Ca	Vit D	PTH	B12	Zinc	Copper
PC	93.1	87.6	84.4	77.1	70.2	38.1	82.6	49.1	49.1
TC	98.5	83.6	95.5	95.5	95.5	55.2	97	91	91

Conclusion

Follow up and compliance with national BOMSS guidelines is variable in primary care. On-going follow up of patients by specialist units should be considered.

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PHYSICIANS DEMOGRAPHICS AND BELIEFS ARE RELATED TO PATIENT REFERRAL FOR BARIATRIC SURGERY

Primary care and the bariatric surgery patient

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Introduction

Despite being considered a disease in the last decade, obesity is still regarded by many as a life choice. Individual physician characteristics and beliefs about obesity might relate to patient referral patterns for obesity surgery.

Objectives

To study the relation between individual characteristics & beliefs and bariatric surgery.

Methods

In October 2016 an online questionnaire was sent to practicing doctors in Portugal and 242 completed the questionnaire. Statistical analysis was done with SPSS v22. Due to non-normal distributions non-parametric tests were selected.

Results

Most physicians were female (53%) and median age was 41 years old. Mean BMI was 23.9 (17.7 - 39.1) and the mean referral score (0-10) for patients under international guidelines was 8.2. Physicians age (corr 0.132; p=0.04) and weight (corr 0.134; p=0.04) were weakly but significantly correlated with patient referral. Physicians practice time was positively correlated with referral (corr 0.160; p=0.01) and increasing prior referrals is mildly correlated with referral scores (corr 0.359; p<0.001). Physicians who believe that obesity is a disease are more likely to refer for bariatric surgery (p=0.001). Physicians who believe that patient could treat obesity by following a restrictive diet (p=0.002) and an exercise plan (p=0.001) are less likely to refer for bariatric surgery. Physicians who believe obese patients to score low on willpower are less likely to refer them for surgical treatment (p=0.01).

Conclusion

Individual physicians characteristics such as age and weight and their beliefs about obesity are related to their referral pattern. Identification of this bias is paramount to tailor educational activities.

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VALIDITY OF CLINICAL DIAGNOSIS IN THE MORBIDLY OBESE FROM THE CLINICAL PRACTICE RESEARCH DATALINK

Primary care and the bariatric surgery patient

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Background

The UK-based (CPRD) is an appreciated source of longitudinal primary care records and epidemiological research, data quality and reliability must be contemplated.

Introduction

Concordance between clinical diagnosis varies due to accuracy of clinical coding in the CPRD.

Objectives

The aim was to interrogate clinical diagnoses for a sub-cohort of obese patients. Clinical morbidity diagnoses was inter-validated against medication records to assess validity.

Methods

Interrogate CPRD using a statistical package.

Results

There were 414,522 patients with a clinical diagnosis of obesity or BMI>30Kg/m² from the CPRD, to narrow the cohort we focused on medcodes of BMI>=40Kg/m², 24,653 (5.9%) patients. They had 9,074,347 related clinical episodes with varying diagnoses.

The (24,653 patients) had documented prevalences 1,444 (5.9%) with hyperlipidemia, 4207 (17.1%) hypertension, 7814 (31.7%) Diabetes, 5517 (22.4%) Osteoarthritis, 2237 (9.1%) Obstructive sleep apnoea and 816 (3.3%) Myocardial events around the date of obesity diagnosis. To validate this was cross referenced with medications.

Subsequently agreement using Cohen's Kappa coefficient. Overall there was modest agreement between diagnosis and treatment. While 5.9% had a diagnosis of hyperlipidemia, 36.9% were on medication, 3.9% both [Kappa coefficient 0.038 (p=0.00)]. Hypertensives 7.1%, 14.8% were on anti-hypertensives, of which 6% both [Kappa agreement of only 0.08 (p=0.00)]. Diabetic diagnosis 14.5% and anti-diabetic medications were prescribed in 25.4%, 11.1% agreed with a [0.46 (p=0.00) Kappa agreement].

Conclusion

Overall there was modest agreement between diagnosis and treatment. This demonstrates that therapy is a better depiction of co-morbidity in CPRD. It is important to consider how well the disease of interest is recorded before planning research.

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PERCEPTIONS AND BARRIERS TO BARIATRIC SURGERY AMONG PHYSICIANS

Primary care and the bariatric surgery patient

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Introduction

Most patients eligible for bariatric surgery are never consulted in a multidisciplinary bariatric team.

Objectives

In order to expand access it is necessary to understand the doctors' perceptions about surgery and barriers to patient referral.

Methods

In October 2016 an online questionnaire was sent to practicing doctors in Portugal and 242 answered.

Results

Two thirds of the doctors had referred patients to bariatric surgery, only 30% referred more than 10 patients. Only 34% identified the mortality rate <0,5% and 13% perceived the complication rate to be >10%. The mean recommendation score (scale 1-10) for patients fulfilling the current international guidelines were higher for surgeons and lower for primary care (8.8 vs 7.9; $p=0.007$). The most valued strategies for increasing referral were easy access to Obesity Centers and nutritional care. Most agree that obesity is a disease, associated with increased cardiovascular risk and that weight loss is difficult. Most believe that bariatric surgery is safe and that most patients achieve good long-term results. The strongest barrier to referral was the perceived short and long-term complications of bariatric surgery but 33% of the surgeons, 37,5% of endocrinologists and 42% of the primary practitioners believed that if patients followed nutritional recommendations they would not need surgery ($p=0.04$).

Conclusion

Most participants were aware of treatment guidelines for bariatric surgery and its effectiveness. Risks and complications were overestimated and some doctors believe that following nutritional recommendations might avoid surgery. Peer education might be an effective way of improving patient access.



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PPI USE AFTER ANTI-REFLUX SURGERY IN THE OBESE; IS IT LIFELONG?

Primary care and the bariatric surgery patient

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Background

Anti-reflux surgery has been suggested as an alternative to lifelong use of proton pump inhibitors (PPI) in Gastro Oesophageal Reflux Disease.

Introduction

There is a continuing increase in long-term use of PPI after anti-reflux surgery and possible adverse effects.

Objectives

To examine PPI use after antireflux surgery in the UK in obese patients through long term community follow up from CPRD.

Methods

The community based database was examined for details of anti-reflux surgery.

Results

Read terms were used to extract all patients with a clinical diagnosis of obesity ($BMI \geq 30$), within which 470 patients underwent anti-reflux surgery. GORD was documented diagnosis in 386/470 (84.6%) of patients that underwent a fundoplication or anti-reflux surgery from clinical primary care records in obesity. A quarter of the cohort were smokers and 66.8% were female.

When combined with treatment records there were 22,303 PPI prescriptions for 382 patients. Of these 281 (73.6%) were on a PPI prior to the procedure and interestingly 324 (84.8%) after intervention. Considering, 223 (58.7%) were on a PPI before and after anti-reflux procedures. The mean duration for continuation of PPI following surgery ranged between 0 to 21 years (mean 7.4 years SD 4.9).

Gender, smoking, BMI group and a clinical diagnosis of GORD were not significant independent covariates on multiple linear regression.

Conclusion

PPI use after anti-reflux surgery is higher than otherwise described, patients became long-term PPI users. Better awareness is advocated in the community and patients should be made aware that long-term PPI therapy is often necessary after anti-reflux surgery.

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ACCURACY OF BODY MASS INDEX RECORDING IN BARIATRIC SURGERY; A DESCRIPTIVE STUDY FROM THE CLINICAL PRACTICE RESEARCH DATALINK (CPRD)

Primary care and the bariatric surgery patient

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Background

The CPRD is an ongoing primary care database as a rich source of health data research tool. The CPRD has been widely used for large observational studies.

Introduction

BMI has been an important covariate in longitudinal database studies in CPRD, but the completeness and representativeness of the BMI data has been variably documented.

Objectives

The aim was to interrogate completeness of documented BMI measurements in Bariatric surgery patients.

Methods

Extraction through database manipulation using statistical package.

Results

Of 414,522 patients with a BMI>30 from the CPRD, 4,414 (1.1%) patient had a clinical medcode for Bariatric surgery. There were 162,098 BMI recorded measurements for the 4,414 patients pre-operatively and 148,503 post-operatively. Pre-operatively there were 3,120 (71.2%) documented BMI measurement (Mean 40.6Kg/m² SD 8.0Kg/m²) entries. Similarly, post-operatively 2988 (72.1%) had recorded entries (Mean 37.2Kg/m² SD 8.3Kg/m²). Only 2,462 patients (55.8%) had BMI measurements both before and after bariatric surgery.

After eliminating erroneous documented recordings documented weight averaged 116.5Kg (SD 28.4Kg) and height 1.7m (SD 0.1m). Comparing documented and measured means using Paired sample T Test reported a BMI difference pre-operatively of 0.8 Kg/m² SD 4.3Kg/m² (p= 0.00) while post-operatively was 0.9Kg/m² SD 3.6Kg/m² (p=0.00). Majority BMI documentation was in BMI 40-45 in 763 (17.1%) of patients.

Conclusion

Completeness of BMI data in CPRD varied in Bariatric patients. More than 25% of patients had no BMI measured before or after surgery. As a surrogate marker of height and weight measurement for this type of surgery, this is not often carried out in this subset of patients.

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ACCESSIBILITY AND THE PATIENT PATHWAY TO METABOLIC SURGERY ACROSS EUROPE

Primary care and the bariatric surgery patient

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Introduction

Metabolic surgery improves quality of life and reduces obesity-related healthcare costs, mortality and morbidity. Access to metabolic surgery and the patient journey can determine the success of treating the obesity epidemic.

Objectives

To provide an overview of patient's pathway and access to metabolic surgery in European countries.

Methods

Expert representatives from the 51 European countries were sent an electronic self-administered online questionnaire, which was piloted to ensure construct validity and question flow.

Results

34 out of 51 countries responded, covering 93% of the European population. Referral practices differed. Multidisciplinary-team discussion was mandated in 78% of countries. 59% had a period of conservative treatment varying from 4 weeks to several years. Waiting times from decision to operation for surgery were ≤ 3 months in 74%, but > 1 year in 10%. Experts consider the patients' access to bariatric surgery fair or good in 57%, excellent in 3% and poor or very poor in 40% of countries. Overall care of bariatric patients was considered fair or good in 63%, excellent in 10% and poor or very poor in 27%. The commonest cited problem with respect to access to bariatric surgery was a lack of funding, followed by issues with referral, lack of a bariatric registry, social prejudice, access/funding to plastic surgery and lack of patient awareness. Common themes for improving the system included increasing the budget, education, politics and adherence to guidelines.

Conclusion

This first pan-European study shows large differences in the pathway and access to metabolic surgery. Lack of funding, education and structure fuels this disparity.

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ANTI-REFLUX SURGERY IN OBESITY; A STUDY FROM THE CLINICAL PRACTICE RESEARCH DATALINK

Primary care and the bariatric surgery patient

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Background

To date, conflicting results have been obtained regarding the association between anti-reflux surgery outcomes and pre-operative obesity.

Introduction

Gastro-oesophageal reflux disease (GORD) is common in obese patients; however, obesity has long been considered a risk to laparoscopic anti-reflux surgery with Laparoscopic gastric bypass being the gold standard.

Objectives

To interview a clinical primary database (Clinical Practice Research Datalink) for documented prevalence of GORD and activity of fundoplication in this cohort.

Methods

The clinical database was examined to assess antireflux surgery.

Results

Only 470 (0.1%) patients were coded with fundoplication or anti-reflux surgery. (64.3%) female and 240 (52.6%) were smokers. Body Mass Index (BMI) was recorded 5,872 times for the 470 patients. 324 (71.1%) had pre-operative BMI records while 411 (90.1%) had post-operative and 203 (43.2%) had both. Mean BMI was 32.7 Kg/m² (SD 4.75Kg/m²) with a maximum recorded BMI of 64.8Kg/m². From first BMI measurement to antireflux averaged 57.6 months (SD 114 months).

A paired T test comparison of both pre and post-operative mean BMI indicated that there was an increase of 2.1Kg/m² (SD 5.5Kg/m²). There were 3 (0.64%) patients underwent subsequent Bariatric surgery post antireflux in 1,2 and 20 years respectively.

There were 34% diabetics, 16.4% hypertensives and 11.7% hyperlipidemics within this cohort.

Conclusion

BMI documentation in patients undergoing anti-reflux surgery is suitable relating to other studies. In an obese population, due to the demonstrated increase in BMI and possible resolution of comorbidities we advocate to consider referral to Bariatric services for a definitive gastric bypass.

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PENETRATION OF BARIATRIC SURGERY IN A MEDICAL COMMUNITY

Primary care and the bariatric surgery patient

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Background

There is a paucity of data regarding knowledge and attitudes of doctors towards obesity and bariatric surgery.

Introduction

Counseling and referral behavior among health care professionals might be determined by personal views on bariatric surgery.

Objectives

Aim of this study was to assess knowledge, current conceptions and clinical practice of doctors regarding obesity and bariatric surgery.

Methods

A self-administered survey was administered to 500 doctors of different medical specialties.

Results

The response rate was sixty percent. Even though, almost half of the participants could define morbid obesity and obesity-related comorbidities, only 8.7% felt educated about bariatric surgery. Participants had little knowledge of various types of bariatric procedures. A minority of doctors (24.7%) acknowledged the existence of a bariatric center in their area. Only, 21.3% of doctors referred a patient to a bariatric center. Reasons for not referral included: lack of interference with bariatric surgery (37.3%), refusal of patients (35.3%), increased operative costs (17.3%), lack of confidence in bariatric surgery (6.3%), and lack of access to a nearby bariatric center (3.7%). The majority of doctors would be interested in familiarizing with bariatric surgery, even though they remained reluctant to interfere with the postoperative follow-up of patients.

Conclusion

The penetration of bariatric surgery in the medical community remains limited, despite its proven effectiveness in great, sustained weight loss and resolution of obesity-related comorbidities. A great effort should be attempted in order to inform healthcare providers on the evolution of bariatric procedures, the potential benefits and the existence of certified Bariatric Centers.

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LIVER FUNCTIONING IN MORBIDLY OBESE PATIENTS PRIOR TO BARIATRIC SURGERY AND AFTER A 2-3-YEAR FOLLOW-UP

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

Massive weight loss after bariatric surgery improves metabolic profiles but its efficacy in the treatment of liver lesions is different. The aim of this study was to assess liver functioning prior to the biliopancreatic diversion (BPD) and in the context of a long-term follow-up.

Objectives

Sixty patients with a mean BMI of 50,99 plus-or-minus 8,44 (ranging from 40 to 75) underwent BPD from 1999 to 2008 at the Perm Regional Hospital (Perm City, Russia).

Methods

Liver functioning was estimated by an ultrasound examination prior to the surgery and at follow-up. Liver biopsies were performed during surgery. Steatosis was scored according to a procedure described Brunt et al. (2000), the activity of nonalcoholic fatty liver disease (NAFLD) was estimated according to a procedure described by Knodell et al. (1981). There were ten patients with a follow-up biopsy that was obtained 26-30 months after the BPD.

Results

Prior to BPD ultrasound liver examination showed that all patients had 1-3 stages of steatosis. Morphological changes were characterized by steatosis, fibrosis and NAFLD for all patients. The results indicated that prior to the surgery the severity of steatosis and NAFLD were correlated with patients' BMI. Ultrasound examinations 26-30 months after the surgery showed an improvement of steatosis. Follow-up biopsies showed that the extent of steatosis, lobular necrosis, ballooning degeneration decreased, however, mononuclear infiltrates in the portal tracts increased from 1,2 plus-or-minus 0,6 to 2,8 plus-or-minus 0,7 ($p=0.01$). Fibrosis showed a tendency to increase at follow-up.

Conclusion

The reduction of BMI after BPD improved steatosis, lobular necrosis, ballooning degeneration, however, mononuclear infiltrates showed an increase.

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PSYCHOLOGICAL CHARACTERISTICS AND EATING PROFILES OF INDIVIDUALS SEEKING BARIATRIC SURGERY: A CASE FOR ROUTINE PSYCHOLOGICAL ASSESSMENT OF ALL PATIENTS.

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

The function of the psychological assessment has evolved to focus on determining readiness for surgery and to identify psychosocial risk factors which can be ameliorated through psychological intervention. This approach involves assessing the psychosocial needs of all (rather than selected) patients seeking bariatric surgery.

Objectives

To provide psychosocial information about a complete cohort of patients seeking bariatric surgery in a UK NHS bariatric surgery service.

Methods

The routine psychological assessment involves completing mood and eating behaviour questionnaires and a semi-structured interview.

Results

Descriptive assessment data from 1067 consecutive patients who attended a UK NHS bariatric service between April 2012 and February 2017 is presented. Responses on the self-report eating behaviour questionnaire indicated 40% of patients binge eat and 60% reported emotional eating patterns. 63% and 55% scored above caseness for anxiety and depression (using the HADS), respectively. 45% reported contact with a mental health service (15% current, 30% past). 13.6% had made suicide attempts and 10% reported current/past deliberate self-harm. 30% reported a history of trauma which they perceive has impacted on their eating/weight. 54% reported avoiding situations because of anxiety about how others judge their weight.

Conclusion

These data indicate high rates of psychological difficulties amongst the cohort of patients seeking bariatric surgery, not just those who are specifically selected for psychological assessment. It is important to assess all patients to avoid possible selection bias and to identify unmet need. It is imperative to identify these psychosocial difficulties to provide interventions to mitigate their potential long-term impact on adjustment, adherence and weight loss/gain.

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PATIENT EXPERIENCES OF THE PSYCHOSOCIAL ASSESSMENT IN BARIATRIC SURGERY

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

There has been no research to date investigating patients' experiences of the bariatric psychosocial assessment. This is an important area as the assessment is often viewed as serving a gatekeeping function to surgery.

Objectives

The aim of this study was to examine the experiences and expectations of individuals undergoing a psychosocial assessment for bariatric surgery in England.

Methods

Fifty-seven patients completed a confidential survey after their initial psychosocial assessment. The survey included items related to the perceived utility and importance of the assessment, beliefs regarding the purpose of seeing a psychologist and identification of target areas for psychological interventions. Descriptive statistics and thematic analysis were used to analyse the data.

Results

Survey responses indicated the perceived utility and importance of the psychosocial assessment were rated favourably. The majority of patients (77.4%) self-identified one or more areas that would benefit from psychological intervention (commonly identified areas were: changing eating patterns [44%], body image [38%] and low mood [37%]). Forty-three percent reported they had made a personal disclosure to the psychologist that they did not/could not share with others in the multi-disciplinary team. An emerging theme was that patients viewed the assessment as a test of "fitness" for surgery.

Conclusion

The experiences of patients indicated the perceived value of providing an initial bariatric psychosocial assessment and identified commonly held beliefs related to the purpose of the assessment. A clear role for psychology was identified insofar as multiple targets for intervention were self-reported by patients.

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PSYCHOSOCIAL DETERMINANTS OF WEIGHT LOSS AFTER BARIATRIC SURGERY

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

Bariatric surgery is the most effective treatment for morbid obesity, but weight regain remains an important problem. Very few studies have evaluated psychosocial factors that impact post-surgical outcomes.

Objectives

To identify psychosocial determinants that influence weight loss at 3, 6, 12 and 36 months after bariatric surgery

Methods

This is a single-institution retrospective study of a prospectively collected database. We included all patients with complete information on their follow-up, who underwent primary sleeve gastrectomy and Roux-en-Y gastric bypass between 01/2006 and 06/2013. Age, body mass index (BMI), partnership status, pet ownership, ability to walk one-block without shortness-of-breath (SOB), previous diets, eating disorder, smoking status, and taking hypoglycemic agents (OHAs) were selected as important variables. Multiple imputation was used to address missing data.

Results

Study cohort included 550 patients. Lower baseline BMI and undergoing Roux-en-Y gastric bypass predicted more weight loss at all time points. Participants with higher BMIs or on OHAs at baseline lost less weight. Non-partnered participants had more difficulty maintaining their weight loss at 3 years after surgery. Other statistically significant baseline reported variables included: no SOB on exertion, smoking; and having a pet. Stratifying by gender revealed that most of the associations were significant only in women.

Conclusion

Baseline fitness, being partnered, having a pet, and smoking status are important psychosocial risk factors. In women, addressing baseline psychosocial determinants can play an important role in achieving durable weight loss up to 3 years after bariatric surgery.

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MEN CLASSIFIED AS 'OBESE' AND THEIR RELATIONSHIP WITH FOOD PRIOR TO UNDERGOING BARIATRIC SURGERY

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

Eating from birth onwards is closely connected with interpersonal and emotional experiences and, therefore, its psychological and physiological dimensions cannot be strictly differentiated.

Objectives

This research aims to gain an in-depth understanding of obese men's relationship with food prior to having weight loss surgery, as there is a paucity of studies solely representing men's idiosyncratic views and opinions.

Methods

This research adopts a qualitative design and uses interpretative phenomenological analysis (IPA) to analyse the data as it has been shown to be an effective approach when little is known on a topic, there is novelty and complexity, and there are issues relating to identity and sense making. Eight participants have been recruited through two well renowned charities: (1) the British Obesity Surgery Patient Association (BOSPA and (2) Weight Loss Surgery Information and Support (WLSinfo). Participants were invited to take part in a 60-minute face-to-face semi-structured interview and asked questions regarding their relationship with food prior to receiving bariatric surgery.

Results

The over-arching theme of 'Food and the masculine-self' emerged with five inter-related superordinate themes: (1) 'Family milieu: past and present', (2) 'Food as the self-soother', (3) 'Socio-cultural ramifications', (4) ' Food and self-identity', and (5) ' Food and weight loss surgery expectations'.

Conclusion

The findings increase our understanding and knowledge on how best to support men psychologically prior to undergoing bariatric surgery. Additionally, it gives men a voice in a field where the preponderance of the literature in qualitative research has solely focused on women's narratives

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P.515

IS THERE AN ASSOCIATION BETWEEN PRE-OPERATIVE DEPRESSION SCORES AND TOTAL WEIGHT LOSS POST SLEEVE GASTRECTOMY?

Psychology and bariatric surgery - pre and post-op challenges

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¹Nepean Hospital - Sydney (Australia), ²Hospital for Specialist Surgery AND Nepean Hospital High incidence of depression in obese populations is well-reported. While several studies examine impact of bariatric surgery on post-operative psychological well-being, fewer have analysed influence of pre-operative depression on weight loss outcome - Sydney (Australia)

Introduction

High incidence of depression in obese populations is well-reported. While several studies examine impact of bariatric surgery on post-operative psychological well-being, fewer have analysed the influence of pre-operative depression on weight loss outcomes. Furthermore, this question has been limitedly applied to Laparoscopic Sleeve Gastrectomy (LSG) versus the other bariatric procedures.

Objectives

Given the increasing utilisation of LSG, we aim to evaluate the relationship between pre-operative Beck's Depression Index (BDI) scores and post-operative Total Weight Loss (TWL).

Methods

111 patients underwent LSG. BDI, a validated tool for assessing psychometric properties, was completed pre-operatively. Additional psychological history and medications were obtained during patient interview. Pre and post-operative BMI, TWL and Excess Weight Loss (EWL) % were recorded.

Results

Among the 82 females and 29 males, the mean pre-operative weight and BMI is 123 kg and 42.7, respectively. Mean post-operative weight and BMI at one year is 85.1 kg and 29.6, respectively. This equates to a mean TWL of 37.9 kg. The median BDI score is 13 (range 0-36), correlating to 'mild' depression. Females reported a higher average BDI score. BDI scores were significantly associated with TWL. Majority (39.6%) of patients reported minimal depression; while mild, moderate and severe depression was scored in 31.5%, 23.4% and 5.4% respectively.

Conclusion

In our cohort, a significant association was found between pre-operative BDI scores and TWL post LSG. This highlights the significance of pre-operative assessment for depression and makes implications for the involvement of early psychological services to improve both, bariatric-specific and psychosocial outcomes.

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IS THERE A RATIONALE FOR USING PATIENT-REPORTED OUTCOME MONITORING OF HEALTH-RELATED QUALITY OF LIFE WITH CLINICAL FEEDBACK IN BARIATRIC CARE?

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

Bariatric surgery is associated with sustained improvements in health-related quality of life (HRQOL). However, an important minority of the patients have small improvement in HRQOL, or get worse after surgery. Especially mental aspects of HRQOL seem challenging. Thus, novel axillary interventions are needed.

Objectives

An overview of systematic reviews was conducted to summarize the effectiveness of patient-reported outcome monitoring and clinical feedback systems (PRO/CFS) on HRQOL — regardless of the reason for being a patient. We discuss the rationale for using this approach as part of preparation and follow-up after bariatric surgery.

Methods

Systematic searches were performed in The Cochrane Library, PROSPERO, Epistemonikos, HTA, DARE, CINAHL, Medline, Embase, PsycINFO, BMJ Clinical Evidence, PDQ-Evidence, and PubPsych. Separate searches for patients in obesity treatment were performed. Two reviewers independently screened references until final inclusion, and critically appraised included reviews using PRISMA-checklist.

Results

We identified 1087 potentially relevant studies - 32 articles were screened in full-text. Five systematic reviews met inclusion criteria's, and were included in the overview. All included reviews were assessed good to moderate quality. The effectiveness of PRO/CFS on patients HRQOL is not conclusive. The feedback systems and use towards patients are highly variable in all trials. No trials using PRO/CFS in obesity treatment were identified.

Conclusion

PRO/CFS lacks robust evidence related to HRQOL, but seems effective in i.e. psychiatric treatment, or symptom burden in cancer treatment given its done correctly. In our opinion, there is a rationale for testing PRO/CFS in patients undergoing bariatric surgery.

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CAN BARIATRIC SURGERY IMPROVE SELF ESTEEM IN OBESE? - A PROSPECTIVE STUDY

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

Obesity adversely affects not just physically but psychologically as well. And with the immense pressure from the society to stay fit and thin, it can lead to feelings of low self esteem. Bariatric surgery induces significant and sustained weight loss along with improvement in co-morbidities thus improving self esteem.

Objectives

The present study is the first of its kind study in the Indian population that aims at comparing the impact of bariatric surgery on self esteem among obese patients.

Methods

In the present study, 150 patients were prospectively evaluated using the IWQOL (Lite) at baseline and at a two-year follow up. The patients were evaluated for their self esteem. 54 males and 96 females participated in the study and the mean age range was 38.95 years.

Results

The pre operative mean BMI changed from 43.70 to 33.86 after undergoing bariatric surgery. The mean self esteem score pre operatively was found to be 28.43 which changed to 13.77 post operatively. Data was analyzed using *Paired Samples t-test*. There was a statistically significant difference found between the two groups when compared at baseline and at two-years (*Mean 14.553, SD 5.279 and $p= 0.00$*).

Conclusion

Self esteem is severely affected in morbidly obese patients and the same can be improved with bariatric surgery which not only induces weight loss but also resolves obesity related co-morbidities, which in turn improves quality of life. Improvement in psychological co-morbidities is of as much importance as any other physical co-morbidity of obesity.

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EXPLORING THE EXPERIENCES OF WOMEN WHO DEVELOP RESTRICTIVE EATING BEHAVIOURS AFTER BARIATRIC SURGERY

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

There is a growing body of research looking at the development of eating disorders after bariatric surgery however there has been limited focus on the increasing number of people who develop more restrictive eating disorder patterns after surgery. Distinguishing between eating disorder related thoughts and behaviours, and changes in eating patterns that are a consequence of the surgery is complex. Furthermore, their weight loss if viewed in isolation of their disordered eating may be interpreted by others (including team members) as highly successful. The development of problematic eating behaviours is linked with complications after surgery and has a harmful impact on psychological well-being.

Objectives

This project will focus on the experiences of women who meet the criteria for restrictive eating behaviours after weight loss surgery and provide much needed information to understand this.

Methods

A qualitative semi-structured interview was conducted with five participants. The data was analysed using Interpretative Phenomenological Analysis (IPA).

Results

Analysis of the results is currently underway and in it's final stages. Emerging themes include the impact of excess skin, intense negative cognitions around weight and eating, and the impact of past experiences on their current way of thinking and behaving.

Conclusion

Individuals with problematic restrictive eating behaviours are increasingly presenting to services. This, in part, led to the removal of specific weight criterion in the DSM-V criteria for Anorexia Nervosa. The findings of this study give voice to women who are experiencing these difficulties, shed light on possible early warning signs and highlight the importance of psychological follow-up following surgery.



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ROLE OF PSYCHOLOGY SUPPORT IN PATIENTS BEFORE AND AFTER BARIATRIC SURGERY – VIEW FROM THE UK

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

Psychological factors can contribute to poor outcomes following bariatric surgery necessitating appropriate assessment and management of bariatric patients.

Objectives

The aim of this study was to ascertain the current practice of psychological assessment and management of patients in the UK.

Methods

A 10 question online survey was sent to members of British Obesity and Metabolic Surgery Society (BOMSS). Questions ranged from the presence of a psychologist in the bariatric team, to proportion referred for assessment, triggers for referral, as well as support pre and post surgery.

Results

The survey received 66 responses. 77% reported that a psychologist is part of the bariatric team with a third referring all patients pre-surgery. 37% reported a referral rate of less than 25%. Triggers for referral included widely accepted criteria such as history of mental health condition, ongoing mental health problems, eating disorders, substance misuse, personality disorder, learning disability or suicidal ideation. Majority reported referral for cognitive criteria such as expectations of surgery (72%) and ability to make and maintain necessary life style changes (95%). Over half (58%) offered assessment and treatment if indicated in the pre-op period, with the rest referring the patients to primary care or community mental health service for treatment. 74% reported psychologists offering support to post-surgical patients to help adjust to life after surgery with 41% believing that this had a significant impact on outcomes.

Conclusion

There is wide variation in provision of psychology services suggesting need for standardisation of pathways to maximize the chances of good long term outcome after bariatric surgery.

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A PSYCHOLOGICAL COMPREHENSION OF WEIGHT REGAIN AFTER BARIATRIC SURGERY

Psychology and bariatric surgery - pre and post-op challenges

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Background

A psychological comprehension of weight regain after bariatric surgery

Introduction

At 10 years post-operatively, approximately 10% of patients undergoing gastric bypass failed to maintain at least a 5% reduction in their initial weight. In addition, the rate of improvement/resolution of comorbidities was less impressive after ten years than at the two-year, possibly due to weight regain over time.

Objectives

To broaden the current understanding of the psychological and environmental aspects related to weight regain in patients undergoing bariatric surgery, based on empirical research with a group.

Methods

The group was composed by up to 15 people who undergone gastric bypass surgery for at least three years ago and had recovered at least 10% of the minimum weight achieved with weight loss. Twelve bimonthly group sessions were held, recorded and transcribed with topic-generator discussions that were related to obesity and weight regain.

Results

From the thematic analysis, three main themes emerged: (1) function of food, (2) environmental cues, and (3) being suggestible, which were transcended by tension between expectations of success versus failure, past identity as fat person versus future identity as thinner person and self-criticism versus self-esteem.

Conclusion

After up to 10 years people describe their failure in terms of function of food, environmental cues and being suggestible which is transcended by a sense of tension. They therefore fluctuate within this tension between who they were, what they are and what they want to be but cannot move forward and trapped by function of food.

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PSYCHOSOCIAL DETERMINANTS OF WEIGHT LOSS AFTER BARIATRIC SURGERY

Psychology and bariatric surgery - pre and post-op challenges

F. Vedrenne-Gutiérrez ¹, D.G. Gutiérrez-Monroy ¹, L. Kaouk ², H. Plourde ³, M. Hendrickson-Nelson ³, A. Andalib ²

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Introduction

Bariatric surgery is the most effective treatment for morbid obesity, but weight regain remains an important problem. Very few studies have evaluated psychosocial factors that impact post-surgical outcomes.

Objectives

To identify psychosocial determinants that influence weight loss at 3, 6, 12 and 36 months after bariatric surgery.

Methods

This is a single-institution retrospective study of a prospectively collected database. We included all patients with complete information on their follow-up, who underwent primary sleeve gastrectomy and Roux-en-Y gastric bypass between 01/2006 and 06/2013. Age, body mass index (BMI), partnership status, pet ownership, ability to walk one-block without shortness-of-breath (SOB), previous diets, eating disorder, smoking status, and taking hypoglycemic agents (OHAs) were selected as important variables. Multiple imputation was used to address missing data.

Results

Study cohort included 550 patients. Lower baseline BMI and undergoing Roux-en-Y gastric bypass predicted more weight loss at all time points. Participants with higher BMIs or on OHAs at baseline lost less weight. Non-partnered participants had more difficulty maintaining their weight loss at 3 years after surgery. Other statistically significant baseline reported variables included: no SOB on exertion, smoking; and having a pet. Stratifying by gender revealed that most of the associations were significant only in women.

Conclusion

Baseline fitness, being partnered, having a pet, and smoking status are important psychosocial risk factors. In women, addressing baseline psychosocial determinants can play an important role in achieving durable weight loss up to 3 years after bariatric surgery.

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COMPULSIVE EATING, DEPRESSION, ANXIETY AND IMPULSIVITY IN BARIATRIC SURGERY CANDIDATES: A CORRELATIONAL ANALYSIS

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

The obese population that fits the criteria for bariatric surgery has a higher than usual prevalence of psychiatric symptoms, such as Compulsive Eating, depression, anxiety and impulsivity, that may or not be correlated to each other.

Objectives

To investigate the correlation between the psychiatric symptoms experienced by bariatric surgery candidates.

Methods

This transversal descriptive study contains a randomized sample of 74 patients that fit the inclusion criteria for bariatric surgery established by the Brazilian Society of Bariatric and Metabolic Surgery. Four questionnaires were applied via online forms: BES (Binge Eating Scale), BDI (Beck Depression Inventory), BAI (Beck Anxiety Inventory), BIS-11 (Barratt's Impulsivity Scale).

Results

The findings showed no association between BMI with age ($R=0.111$, $p>0.005$) and the psychological variables: Binge Eating Scale ($R=0.031$, $p>0.005$), Beck Depression Inventory ($R=0.007$, $p>0.005$), Beck Anxiety Inventory ($R=0.027$, $p>0.005$), Barratt's Impulsivity Scale ($R=0.084$, $p>0.005$). There was a correlation between Binge Eating Scale with depression ($R=0.533$, $p<0.005$) and anxiety ($R=0.534$, $p<0.005$), respectively. Data showed inverse association between depression and impulsivity ($R=0.204$, $p<0.075$).

Conclusion

In regard to compulsive eating, there was a correlation with depression and anxiety that seem to increase proportionally. There was no correlation between symptoms of anxiety and impulsivity. However, the association between symptoms of depression and impulsivity was statistically significant.

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ANALYSIS OF IMPULSIVE BEHAVIOUR IN OBESE PATIENTS ENROLLED IN A BARIATRIC SURGERY PROGRAM

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

Impulsivity and its role in Human behaviour has been generating interest in how it may impact patients that underwent bariatric surgery. Impulsive behaviour is mainly characterized by change in action without conscious evaluation as well as reckless behaviour and an inclination to act with no previous planning.

Objectives

To investigate the presence of impulsive behaviour in candidates for bariatric surgery and its prevalence in both genders.

Methods

This transversal descriptive study analysed a sample of 76 patients that fit the inclusion criteria for undergoing bariatric surgery established by the Brazilian Society of Bariatric and Metabolic Surgery. The research instrument applied was the online version of the Barratt Impulsivity Scale (BIS-11) during the preoperative phase of the patient's treatment. This particular questionnaire aims to analyze three components of the impulsive behaviour: Attention impulsivity, motor impulsivity and difficulty with planning.

Results

There was no significant correlation between impulsivity, body mass index (BMI) and age amongst the individuals of both genders in this sample group.

Gender	Mean	N	Std. Deviation
Female	66,90	52	5,460
Male	67,33	24	8,406
Total	67,04	76	6,480

The prevalence of impulsive behaviour was $8,75 \pm 6,26\%$ and there was no significant difference between genders ($66,9 \pm 5,4$ vs $67,3 \pm 8,4$ respectively).

Conclusion

It became evident through this analysis that there are similarities in both genders regarding impulsive behaviour. However, longitudinal studies with larger samples are needed to verify if this findings translate to the overall population.

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IMPACT OF PSYCHOLOGICAL FACTORS ON WEIGHT LOSS AMONG OBESE MALAYSIANS FOLLOWING LAPAROSCOPIC BARIATRIC SURGERY.

Psychology and bariatric surgery - pre and post-op challenges

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Background

Obesity has been frequently linked to mental health issues namely low self-esteem, anxiety and depression.

Objectives

To examine the impact of anxiety, depression and self-esteem on Excess Weight Loss (EWL) after bariatric surgery, during the acute weight loss period.

Methods

Thirty-two obese individuals awaiting bariatric surgery were prospectively recruited and followed-up thrice: before surgery (T0), three months (T1) and six months (T2) following surgery, during which, they were interviewed and anthropometric measurements taken. Hospital Anxiety and Depression Scale (HADS) was used to screen for Anxiety and Depression while self-esteem was measured using Rosenberg Self-Esteem Scale. Descriptive statistical analysis, repeated measure ANOVA and multilevel mixed model regression analyses were conducted.

Results

The patients were mostly women (n=20, 63%), of Malay ethnic background (n=23, 72%) with a mean age of 39.56 ± 10.58 years. There was a significant drop in BMI across time ($p < 0.01$). Mean self-esteem scores were 19.65 ± 4.56 , 21.23 ± 4.15 and 22.37 ± 3.45 . Anxiety ($p < 0.01$), depression ($p < 0.05$) and self-esteem ($p < 0.02$) differed significantly across the time-line. Regression coefficients for anxiety depression and self-esteem were -2.78, -2.82 and 1.90.

Conclusion

Anxiety and Depression reduced significantly over time whereas self-esteem increased. Increase in Anxiety and Depression scored by a unit were associated with a reduction of 2.8 units in EWL, longitudinally. Increase in self-esteem by a unit was associated with increase in EWL by 1.9 units. Therefore, continuous management of anxiety and depression following surgery is essential for optimal and durable weight loss over a period of time.

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UTILISING A PRE-OPERATIVE PSYCHOLOGICAL QUESTIONNAIRE TO PREDICT WEIGHT LOSS SURGERY CHOICES AND WEIGHT LOSS OUTCOMES

Psychology and bariatric surgery - pre and post-op challenges

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Background

We have set up a private UK bariatric service, integrating from the start a multidisciplinary bariatric screening questionnaire which incorporates the PHQ-9 (Patient Health Questionnaire) depression questionnaire.

Introduction

PHQ-9 allows categorisation into no depression (0-4), mild (5-9), moderate (10-14), moderate/severe (15-19) and severe depression (20-27).

Objectives

We feel that mental health is a key factor in successful outcome following bariatric surgery.

Methods

Patients who presented to us were self-funding self-referral or GP referrals.

Results

38 Bariatric procedures, 25 Laparoscopic sleeve gastrectomies (LSG), 8 endoscopic gastric balloon (EGB) insertions and 5 Laparoscopic gastric bands (LGB). Average age 40, Age range 23-61, 85%F. Mean PHQ-9 score 6.4, median score 5.5, range 0-24.

36.9% PHQ-9 normal range. Average pre-operative BMI of 39.7. Excess weight loss 1 month 31.6%, 3 months 42.7%, 6 months 54.1% and 12 months 77.5% of which LSG 71.4%, EGB 21.4% and LGB 7.1%.

34.2% PHQ-9 mild range. Average pre-operative BMI 40.5. Excess weight loss 1 month 25.8%, 3 months 40.6%, 6 months 50.5% and 12 months 74.3% of which LSG 53.8%, EGB 23.1% and LGB 23.1%.

15.8% PHQ-9 moderate range. Average pre-operative BMI 40.2. Excess weight loss 1 month 31%, 3 months 42%, 6 months 75.3% and 12 months 79.3% of which LSG 83.3%, EGB 0% and LGB 16.7%.

5.3% PHQ-9 severe range: Average pre-operative BMI 39.7. SG 50% and EGB 50%.

Conclusion

Despite differing pre-surgery PHQ-9 scores patients can achieve similar weight loss outcomes when provided with multidisciplinary support.

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PREVALENCE OF COMPULSIVE EATING IN PATIENTS UNDERGOING BARIATRIC SURGERY

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

Obesity and compulsive eating can have a causal connection in which the compulsive behavior is the main cause of weight gain and can be correlated to the severity of the excess weight.

Objectives

To investigate the compulsive eating behaviour and its correlation with body mass index (BMI), gender and age in bariatric surgery candidates.

Methods

This transversal descriptive study showcases a randomized sample of 73 patients that fit the inclusion criteria for bariatric surgery proposed by the Brazilian Society of Bariatric and Metabolic Surgery. The research instrument Binge Eating Scale (BES) was employed preoperatively for this group in an online format.

Results

There was no significant correlation between compulsive eating, BMI and age in both genders in this particular sample. However, compulsive eating was prevalent in $8,75 \pm 6,23\%$ of patients.

Gender	Mean	N	Std. Deviation
Female	7,56	50	4,730
Male	11,35	23	8,272
Total	8,75	73	6,267

Female subjects presented with symptoms of compulsive eating less often than their male counterparts ($7,56 \pm 4,7\%$ vs $11,3 \pm 6,2\%$ respectively).

Conclusion

According to our data analysis, the prevalence of compulsive eating was higher amongst male subjects. Interestingly the results obtained in this analysis are not in accordance with the current literature. That only highlights the need for further investigation.

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THE TRANSOPERATIVE INTERVENTION AS A STRATEGY TO INCREASE ADHERENCE TO TREATMENT.

Psychology and bariatric surgery - pre and post-op challenges

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Introduction

The psychologist faces several difficulties in the treatment of overweight patients after do the bariatric surgery. One of them is the low adhesion to the postoperative treatment. This was subject for many authors and related to the bariatric surgery this is widely discussed: Assis & Nahas (1999), Wilsin & Schlam (2004), Toral & Slater (2007). In

a field research with psychologist engaged with bariatric surgery teams in Rio de Janeiro , 2013, they related that only 20% of the patients return for a psychologist treatment after the surgery. (Burkle, 2013).

Objectives

On this research, we verified if interventions during the transoperative phase - contacts during the phase immediately prior to surgery, visits during hospitalization and the first days of recovery - impact on adherence to psychological treatment.

Methods

The interventions began to be performed by a psychologist in January 2014, in a bariatric surgery team in Rio de Janeiro. Until then the team had a history of average adherence to treatment of 50% of patients operated.

Results

It was observed that after the interventions were performed, there was a 20% increase in the number of patients that adhered to the treatment.

Conclusion

Transoperative interventions may be considered as an effective strategy to increase adherence to treatment, although we consider that other factors may have influenced these results.

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THE OUTCOME OF THE EFFECTIVENESS AND SAFETY OF BARIATRIC AND METABOLIC SURGERY IN JAPAN STUDIED WITH JAPANESE REGISTRY BY JSTO

Quality in Bariatric Surgery

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Background

In Japan, Japanese Society for the treatment of Obesity and Metabolic Disorders(JSTO) was established in 2008 .

Introduction

The registry system of the surgical cases had begun by the society for the development of the bariatric surgery outcome in Japan.

Objectives

In this study, the indication, effectiveness and safety of the bariatric surgery in Japan were clarified using data base compiled by JSTO.

Methods

1061 cases of the bariatric surgery including 42 of Banding method, 335 of Bypass ,679 of Sleeve gastrectomy and 5 of others in 2008.1-2015.12 which was the period from the start of the JSTO. Preoperative BMI, complication, intraoperative incidents, reoperation and postoperative complication were examined and the effect on body weight and metabolic complications were examined after follow up of 279 days (mean).

Results

In the mean value of 1061 cases, BMI was 41.8 and the rates of preoperative complication were DM 60.2%,Dyslipidemia 68.8%,Hypertension 60.7%and SAS 73.9%. Intraoperative incident rate was 2.3%(injury,bleeding,staple trouble).Postoperative complication rate was 8.6% (bleeding, stenosis, leakage,abscess,etc) and reoperation rate was 2.4%. The median of postoperative hospital stay were 4.0 days. The outcomes were 27.9kg of the average body weight decreasing and in each operation method respectively, by Banding, 93.3% DM, 67.0% Hypertension, 47.8% Dyslipidemia improved, by Sleeve gastrectomy, 94.3% DM, 73.1Hypertension, 71.0% Dyslipidemia improved and by Bypass, 97.2% DM, 42.7% Hypertension and 52.4 % Dyslipidemia improved.

Conclusion

The operations were safely performed with the operative mortality 0% and morbidity 8.6% and the good outcome on the body weight and DM were obtained in most of the cases.

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STANDARDISING SURGICAL INTERVENTIONS IN LARGE SCALE RCTS: THE BY-BAND-SLEEVE STUDY

Quality in Bariatric Surgery

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Background

Surgical practice for severe obesity is predominantly informed by surgeon experience and single centre case series.

Introduction

Well designed and conducted multi-centre RCTs are lacking and standardising surgical interventions in trials is complex.

Objectives

This study presents how to quality assure standards of surgery within a multi-centre trial.

Methods

The By-Band-Sleeve Study is funded by the UK National Institute of Health Research and run by a registered clinical trials unit. It initially compared adjustable gastric band with Roux-en-Y gastric bypass. It has adapted to include Sleeve gastrectomy (sample size 1341). Regular independent oversight committees monitor adverse events and outcomes. Protocols for the three trial interventions have been developed from the literature, 'real-time' observation of procedures in theatre, and consensus discussions with the trial team. Adherence to surgical protocols is monitored during the trial and deviations investigated. Intervention protocols are discussed with the trial team before modification in line with emerging high quality evidence.

Results

11 centres have randomised 712 patients and 320 procedures are complete to date. Crossover rates are less than 7% and follow up more than 80%. Adherence to surgical standards for each procedure is high. Four protocol deviations for Band placement have occurred. Currently it is not possible to reach consensus regarding recommendations for closure of mesenteric defects despite good evidence and practice varies within the trial (and is monitored).

Conclusion

It is possible to establish and monitor standards of surgery within a multi-centre RCT. Detailed recording of adherence will inform how trial results are implemented in practice.

□ **P.531**

RECOMMENDATIONS OF QUALITY-OF-LIFE MEASUREMENT INSTRUMENTS FOR BARIATRIC AND BODY CONTOURING SURGERY: A SYSTEMATIC REVIEW.

Quality in Bariatric Surgery

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Introduction

Quality of Life (QoL) has been recognized as a main outcome measure in bariatric surgery (BS) and body contouring surgery (BCS). Nevertheless, recommendations about the most appropriate measurement instrument(s) of QoL have never been made based on quality standards and criteria.

Objectives

To systematically assess the methodological quality of existing instruments developed and/or validated for QoL measurement in BS and BCS.

Methods

We conducted a systematic literature search in PubMed, Embase, PsychINFO, CINAHL, Cochrane Database Systematic Reviews and CENTRAL identifying studies on measurement properties of BS and BCS QoL instruments. For all eligible studies, we assessed the quality of the measurement properties and methodological quality with the Consensus-based Standards for the selection of health Measurement INstruments (COSMIN) checklist. Four degrees of recommendation were assigned to validated instruments (A-D).

Results

Out of 3863 articles, a total of 22 articles describing 20 instruments were included. No instrument met all required quality items (category A). From the three instruments (the BODY-Q, the Body-QoL and the "bariatric and obesity-specific survey (BOSS)") that have the potential to be recommended depending on further validation studies (category B), the BODY-Q performed best. Fifteen instruments had poor adequacy in at least one quality item (category C). Two instruments were minimally validated (category D). The most commonly used instrument in BS and BCS, the Short-Form 36, has never been validated in the bariatric population.

Conclusion

The BODY-Q, developed for BS and BCS, showed the highest quality standards and criteria. An international consensus procedure should be undertaken to agree on the preferred QoL instrument(s).

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QUALITY INDICATORS OF METABOLIC SURGERY ACROSS EUROPE

Quality in Bariatric Surgery

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Introduction

Metabolic surgery has proven itself as a tool not only in treating obesity, but also its related comorbidities. However, its provision is not standardised or equitable across Europe.

Objectives

To assess the quality of provision of metabolic surgery in all European countries. To highlight good practice and facilitate collaborative learning.

Methods

This study recruited expert representatives from all 51 European countries. A 37-point electronic self-administered online questionnaire assessing guidelines and other quality indicators was developed and piloted to ensure construct validity and question flow.

Results

34 out of 51 countries responded, covering 93% of the European population. 78% of the countries had eligibility criteria for bariatric surgery and 43% for plastic (contouring surgery), with 69% adherence to IFSO guidelines. 53% had reimbursement criteria for metabolic surgery and 43% for plastic surgery. The number of hospitals performing bariatric surgery varies from 0 to 150 per country. Only 29% of the countries have case number criteria for bariatric centre status. The criterion for a high-volume centre ranged from 40 to 250 procedures per year. An official training program exists in 27% of the countries. National registries exist in 40% of the countries. 57% thought fundamental changes needed to be made to the bariatric service in their country; 10% thought the service works well.

Conclusion

This study shows a wide variation in quality indicators of metabolic surgery. Such criteria should be standardised on a European level with clear guidelines and audit of these. A pan-European database could assist this process.

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IS BARIATRIC SURGERY SAFE IN LOW VOLUME CENTERS? A FIVE-YEAR EXPERIENCE IN THE NORTH EAST OF ENGLAND.

Quality in Bariatric Surgery

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Introduction

The strong correlation between surgical case-volume and bariatric surgery outcomes is well established. We propose factors such as standardization of the surgical technique, surgical fellowship, center setup, and patient pathway as promising tools for smaller centers to match the outcomes of the "centers of excellence".

Objectives

Our study aims to report the safety outcomes of bariatric surgery in a low-volume unit and compare it with international standards.

Methods

We retrospectively analysed the pre-operative and follow-up data representing the consecutive patients (n=449) who attended the bariatric center from 2011 to 2016. All procedures were performed by two bariatric surgeons who are identical in their training and technique. The data describes patient characteristics, surgery type, %EBWL, co-morbidity resolution, hospital stay, 30-day and 1-year complication rates, and the 30-day re-admission and re-operation rates. Data access was provided by NBSR, the statistics were performed using SPSS and the significance level was set at 0.05.

Results

All patients lost more than half of their excess body weight at one year follow-up regardless of the procedure type. All co-morbidities responded positively to surgical intervention with a median resolution rate of 95%. Bleeding and leak rates were 0.9% and 0.5% respectively. Our results were comparable to national and international standards across the major safety domains. (Figure1)

Figure 1: A Comparison of the major safety outcomes

*DMH: Darlington memorial hospital . *NHS: National Health Service registry database *ACS-BSCN: American College of Surgeons -- Bariatric Surgery Centre Network

Safety outcomes	DMH*	NHS-RD*	ACS-BSCN*
30-day mortality	0.2%	0.27%	0.12%
1-year mortality	0.2%	0.4%	0.25%
30-day readmission rate	3.5%	0.7%	4.5%
Length of stay (days)	2	2	2.5

Conclusion

Bariatric surgery is a safe procedure, even when performed in low-volume centers. The standardization of surgical technique, intensive surgical training and dedicated patient pathway are crucial elements for safer surgeries.

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RELIABILITY AND VALIDITY OF A BRIEF OBESITY-SPECIFIC QUALITY OF LIFE MEASURE FOR USE IN CLINICAL PRACTICE AND FOR BARIATRIC SURGERY REGISTRIES

Quality in Bariatric Surgery

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Introduction

While validated measures of obesity-specific QOL (e.g. Impact of Weight on QOL-Lite [IWQOL-Lite]) are widely used, routine measuring of QOL in clinical practice and in bariatric surgery registries requires brevity and quick scoring. Therefore, a brief, obesity-specific tool (QOL-OS) was developed, using patient focus groups and input from bariatric surgery professionals.

Objectives

To test reliability and validity of QOL-OS in a cross-sectional study.

Methods

The 8-item QOL-OS (physical functioning, bodily pain, discrimination/bias, sleep, sexual life, social activities, work/school/daily activities, and self-esteem) was developed to provide a total score on QOL, where higher scores indicate better QOL. QOL-OS and IWQOL-Lite questionnaires were completed by 109 patients (BMI = 41.7; % with age <40 years = 34.9%; % female gender = 75.2%) prior to sleeve gastrectomy and 95 patients (BMI = 29.4; % with age <40 years = 29.5; % female gender = 78.9) 2-years post-sleeve gastrectomy. We report Cronbach's α , Spearman rank correlations and differences in QOL-OS between operated and non-operated patients with independent-sample t-tests.

Results

Cronbach's α for QOL-OS total score was 0.90. Both individual QOL-OS items and total score were higher in the post-surgical versus pre-surgical group ($p < 0.001$). The standardized mean QOL-OS total score difference between groups was 1.7 standard deviations, which is considered large. QOL-OS total score correlated significantly with IWQOL-Lite total score ($r_s = 0.82$) and BMI ($r_s = 0.57$) ($p < 0.001$).

Conclusion

The QOL-OS holds promise in providing immediate QOL feedback to the bariatric team and for quality surveillance.

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GERMAN BARIATRIC SURGEONS: STATUS QUO

Quality in Bariatric Surgery

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Introduction

Outcomes after bariatric surgery are highly dependent on training and expertise of the bariatric surgeon.

Objectives

To examine the current population of bariatric surgeons registered in the German Society for Bariatric and Metabolic Surgery regarding training, case-volumes and opinions on educational strategies.

Methods

Between February and March 2017 an online poll was conducted. Three weekly reminders were sent out. Data were analyzed using descriptive statistics. Data was reported as median (interquartile range), percentages were adjusted for completed answers only. Questions focused on surgical education and training in the field of bariatric surgery.

Results

A total of 214 (51%) of the 417 members responded. A median of 14.5 (8-20) years of surgical experience after initial training, with a specific bariatric experience of 7 (4-13) years was reported. The total cumulative bariatric case volume was 250 (85-500) cases, with an annual case volume of 45 (20-80). Regarding training, we found that the most common approaches were "learning by doing" (71%), "course participation" (71%) and "observerships" (70%). Fellowships and the use of operating videos were less frequently applied strategies (19%/ 47%). Interestingly, observerships (94%) and course participation (89%) were rated as very important/important, whereas "learning by doing" (62%), watching operation videos (59%), and fellowships (48%) were less frequently perceived as important/very important training strategies.

Conclusion

Although we have high-volume centers and seasoned experts, the majority of surgeons still require a more structured approach to bariatric specialization with higher case volumes. Due to the restrictive nature of funding procedures through insurers in Germany educational training is difficult.

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17 YEARS IN BARIATRIC SURGERY – EXPERIENCE OF A REFERENCE CENTER IN BRAZIL AFTER 4820 CASES

Quality in Bariatric Surgery

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Introduction

The bariatric scenario has changed over the years; surgery is now well established as a safe and primary treatment for morbid obesity. The laparoscopic approach is the preferable choice in skilled hands. The most performed procedures around the world are gastric bypass and sleeve gastrectomy. Acknowledging the changes along the learning curve, and analyzing the results obtained along the years to maintain the quality of treatment expected in a center of excellence, is mandatory.

Objectives

To study the 4820 cases performed in a reference center in Brazil in order to keep a high level of quality service.

Methods

This study was designed in a historical cohort study with retrospective data of patients treated by the same surgeon of CITOM from 2001 to 2017.

Results

From June 2001 to March 2017, there were 4820 bariatric surgeries performed by the same surgeon in CITOM. The bariatric procedure mostly performed is the Gastric Bypass (52%) and the Sleeve Gastrectomy (47%), initially by the open convention approach (23%) and after laparoscopically (77%), which is the approach used for all cases nowadays. Regarding gender, 20% of the patients submitted to surgery were male, and 80% were female. The complication rate is 2% and mortality rate is 0,2%.

Conclusion

Bariatric surgery is a safe procedure when performed in a reference center. Sleeve gastrectomy has become more popular in recent years because of the lower rate of complications and the good results of weight loss and comorbidities resolution.

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COMPARISON BETWEEN THE PERCENTAGE OF EXCESS WEIGHT LOSS WITH VARIABILITY OF IDEAL WEIGHT FORMULA VS THE PERCENTAGE OF EXCESS BMI VS TOTAL WEIGHT LOSS FORMULA TO MEASURE SURGICAL SUCCESS OF BARIATRIC SURGERY IN MÉXICO CITY

Quality in Bariatric Surgery

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Introduction

The body mass index(BMI) is the most commonly used method to measure and classify obesity,percentage of excess weight loss(%EWL) is used tool to measure and evaluate the results,in recent years the total weight loss(%TWL) has gained popularity by improving the measurement and evaluation of results after surgery

Objectives

We analyzed the initial BMI,preoperative and %excess BMI loss(%EBMIL) compared with %EWL with three formulas of IBW; WHO,Broca index(BI) and Metropolitan Life Insurance Company(MLIC) and TWL

Methods

The success of the surgery is classified depending on the formula used for %EWL according to Reinhold's criteria(modified for this study) in successful(>75%),good(50-75%) and failure(<50%),according to Baltasar's criteria for %EBMIL as successful(>65%),good(50-65%) and failure(<50%) and TWL as success(>20%) and failure(<20%)

Results

Of 400 patients,154 patients were included,123 female and 31 male with a mean age of 38 years,mean initial BMI 45.83 and mean preoperative BMI 43.78,differences were found when comparing initial weight mean 124.06Kg vs pre-surgical weight mean 118.45Kg($p<0.001$),ideal weight compared with three different formulas($p<0.001$).The %EWL compared with variability in the formula of ideal weight, finding differences in all($p<0.001$) except when comparing %EWL with ideal weight WHO vs MLIC formula($p=.317$),when comparing the %EWL vs %EBMIL to measure the success of the surgery according to Baltasar's criteria and Reinhold's criteria,were found higher success rate in %EBMIL(successful=106,good=32,failure=16) compared to %EWL with IBW WHO formula(successful=88,good=50,failure=16),MLIC formula(successful=89,good=49,failure=16),IB formula(successful=63,good=73,failure=18)($p<0.001$) and with total weight loss,initial weight (successful=148,failure=6) and pre-surgical weight(successful=139,failure=15)($p=<0.001$)

Conclusion

Further testing and the use of body compositionn measuring techniques are needed to find the best way to report weight loss success.

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FURTHER SURGERIES AFTER A PRIMARY BARIATRIC PROCEDURE: CLASSIFICATION AND OUTCOME

Quality in Bariatric Surgery

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Introduction

Common bariatric procedures include intragastric balloon treatment, gastric banding, sleeve gastrectomy and gastric bypass surgery. The National Bariatric Surgery Registry defines minor revisions as re-operations for complications of bariatric surgery and major revisions as subsequent bariatric surgery.

Objectives

We present our 10 year experience on revision and subsequent operations for patients who underwent primary bariatric procedures.

Methods

Retrospective audit carried out in a district general hospital in the UK. Patients were identified using bariatric databases from each of the 3 bariatric surgeons from 2006 to 2016. Using electronic patient records, data was collected on primary bariatric procedures and subsequent operations. This was then classified as major revision surgery, minor revision surgery, indirectly related to bariatric procedures and unrelated to bariatric procedures.

Results

A total of 1099 bariatric procedures were performed between years 2006-2016. 75% of the patients were female (n=821) and 25% were male (n=270). Age ranged from 20 -67 years with a median age of 46. Data was unavailable for 8 patients. There were a total of 155 intragastric balloons, 144 gastric bands, 212 sleeve gastrectomy and 586 gastric bypass operations. Major revision rates ranged from 57% after gastric balloon treatment (n=89) to 3% for gastric bypass operation (n=16). Minor revisions ranged from 33% for gastric banding (n=47) to 8% for sleeve gastrectomy (n=16).

Conclusion

Intragastric balloon treatment is used as a less invasive adjunct for weight loss before more invasive surgery and this is reflected in the major revision rates. Gastric banding is associated with increased complications requiring minor revision surgery.

INTERNATIONAL CONSENSUS CURRICULUM FOR LAPAROSCOPIC SLEEVE GASTRECTOMY: A PROFICIENCY FRAMEWORK

Quality in Bariatric Surgery

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Introduction

The intersection of simulation and proficiency in laparoscopic surgery has generated significant interest in surgical education. Sleeve gastrectomy is currently the most commonly performed bariatric operation worldwide however there is no standardised training curriculum for this procedure.

Objectives

We present the evidence base for establishing a curriculum with proficiency measures in bariatric surgery. We propose utilising Delphi methodology to achieve consensus in establishing a framework for training in laparoscopic sleeve gastrectomy.

Methods

A systematic literature review has been undertaken of surgical curricula formed utilising Delphi methodology. The proposed sleeve gastrectomy curriculum will encompass technical, cognitive and non-technical components of the procedure. A model stomach allowing for all major components of sleeve gastrectomy will be presented.

Results

Since 2004, 13 independent papers describe the use of Delphi methodology informing procedural curricula. Disciplines include general surgery, gynaecology, spinal, plastics and vascular however none include bariatric surgery. Most tasks essential to simulation and training require consensus of Cronbach's alpha >0.8 for final inclusion.

We present the consensus curriculum which would allow formation of an international framework for bariatric surgeons teaching the procedure. Results of the International Consensus Conference for Sleeve Gastrectomy will inform the framework.

Conclusion

Utilising a comprehensive literature review we present a teaching curriculum for laparoscopic sleeve gastrectomy. The consensus framework constructed by a Delphi group of subject matter experts will form a basis for standardised teaching and allow future research into validated proficiency measures. Our expectations are that based on the literature, the consensus curriculum will assist in improved technique and patient outcomes.

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COMPLETED CONSENT FORMS IN PATIENTS UNDERGOING BARIATRIC SURGERY: ARE THEY FIT FOR PURPOSE? A RE-AUDIT FROM A REGIONAL BARIATRIC CENTRE IN THE UNITED KINGDOM

Quality in Bariatric Surgery

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Background

Sleeve gastrectomy (SG) and gastric bypass (RYGB) are considered major abdominal procedures and often performed in obese patients with significant perioperative risks.

Introduction

We previously demonstrated significant variability and deficiencies in completion of consent forms for SG & RYGB patients. A standardised bariatric surgery specific consent form (BMS1) was developed and implemented.

Objectives

To re-examine whether implementation of BMS1 improved the quality of the preoperative consent process.

Methods

Consent forms from 88 consecutive patients who underwent RYGB and SG between January and December 2015 were studied. Twenty-two domains including benefits and risks were assessed.

Results

There were 42 RYGB and 46 SG compared to, respectively, 88 and 21 in the baseline audit. BMS1 was used in 72% of patients with mean±SD age 42±12 years. All patients were consented for benefits, risks of bleeding and infection. There was marked improvement in completeness and consistency of the consent process across 17 domains examined. For example, 80% were consented for visceral injury and reoperation compared to less than 5% in the baseline audit. Specific complications such as loose skin, reflux and weight regain were stated in 78% compared to 8%, 11% and 58%, respectively. In addition, risk of nerve injury and reoperation was mentioned in 75% but less than 3% in the baseline study.

Conclusion

A standardised bariatric surgery specific consent form improves the consistency and thoroughness of informed consent and should be implemented as standard care in bariatric pathways.

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SURGERY2.0: A NEW WAY TO IMPROVE QUALITY AND SAFETY IN (BARIATRIC) SURGERY

Quality in Bariatric Surgery

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Background

The operating room is a complex and high risk setting in hospitals. Globally, each year, about 234 million operations performed with 1 million deaths and 7 million disabling complications worldwide.

Introduction

In case of adverse events in operating theatre, generally at least 2 of the team members are involved and the root cause is a lack of non technical skills with a mishap in human factor (e.g. communication, leadership).

Objectives

In proactive view of clinical risk we focused on surgical outcome before and after crew resource management (CRM) training adapted from aviation industry for operating room teams.

Methods

International literature has been analyzed on CRM medical training designed to decrease human error by improving non technical skills such as situation awareness, decision making, communication, teamwork.

Results

"Association between implementation of a medical team training program and surgical mortality" , (Jama,2010) reported a retrospective study with a contemporaneous control group conducted in the Veterans Health Administration (USA), between 2006-2008, before and after CRM medical training experienced an 18% reduction in annual mortality (95%CI) in trained facilities compared with 7% among those not yet trained.

Conclusion

Crew Resource Management (CRM) operating-room training improves safety culture and outcome especially where is properly integrated into educational and management systems. Technical skill is not able alone to perform a safe surgery in a complex environment like operating theatre. It's necessary to stratify on it ergonomics, understood as an engineering approach to human factor and risk knowledge. This is Surgery 2.0.

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PERI-OPERATIVE ABNORMALITIES AND THE DILEMMA OF DECISION MAKING IN BARIATRIC SURGERY.

Quality in Bariatric Surgery

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Introduction

The peri-operative incidental findings in bariatric patients are not uncommon; However, the consequences on the surgical outcomes are variable . Furthermore, there is paucity in the literature regarding the optimum management of these findings, leaving the decision to the surgeon's judgment.

Objectives

This study aims to discuss the effect of various peri-operative abnormalities on bariatric surgery from a five-year experience in a single active bariatric unit.

Methods

We retrospectively analysed the peri-operative and follow-up data representing the consecutive patients (n=449) who attended the bariatric centre from 2011 to 2016. Data access was provided by NBSR, the statistics were performed using SPSS and the significance level was set at 0.05. Patients with incidental peri-operative findings met our inclusion criteria.

Results

Significant incidental findings (Figure 1) were identified in 18 cases (4%) of the patient cohort. In 16 cases (3.8%) the surgeons proceeded with the operation while switching the surgery; from Roux-en-Y Gastric Bypass (RYGB) to sleeve gastrectomy (SG) in 14 cases, RYGBP to Mini gastric bypass (MGB) or Gastric balloon in the other two. The surgery was postponed in two cases. When weighed against the potential metabolic and weight loss outcomes, the risk of surgical complications was the determinant factor in these decisions.

Figure 1: Incidental findings and surgical outcomes.

Incidental findings	number of cases	Percentage	Surgical outcomes
Pancreatitis/ history	1	0.2%	RYGB to SG
Hepatomegaly	1	0.2%	RYGB to SG
Splenomegaly	1	0.2%	RYGB to SG
Adhesions	11	2.4%	RYGB to SG
Ectopic pancreatic tissue	1	0.2%	Surgery postponed
GIST	1	0.2%	Surgery postponed
Extensive adhesions	1	0.2%	SG to gastric balloon
Short small bowel mysentery	1	0.2%	RYGB to MGB

Conclusion

Our study supports the evidence that peri-operative findings are important determinants in the surgical management of bariatric patients.

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OUR BEST PITCH FOR BARIATRIC SURGERY IS LONG TERM QUALITY OF LIFE

Quality in Bariatric Surgery

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Background

Background: The impact of morbid obesity on physical and psychological health is now recognized.

Introduction

Introduction: Years ago, we studied that impact on the quality of life (QoL) of 112 patients seeking bariatric surgery. Six domains affected by morbid obesity were identified and from which was constructed the Laval Questionnaire. Our cohort of 67 patients treated versus 45 waiting to undergo surgery confirmed the validity, reliability, responsiveness and interpretability of this new questionnaire to be used.

Objectives

Objectives: We compared the self-administered Laval questionnaire to measure the quality of life outcome, positive or negative, in the same patients that had responded previously. The patients indicate how their obesity affected their life.

Methods

Methods: Our present study concerns the same cohort of 112 patients. On the enrollment, we reported 1 patient had died of non-DS related cause, 1 suffered head trauma with severe sequelae and 6 never had surgery. Of the 104 patients, we reached 90 patients who were given a choice between receiving the Laval questionnaire by mail or by electronic mail. Both methods required each patient to fill the questionnaire personally.

Results

Results: Higher scores meaning better quality of life were expected after weight loss (BMI decreased from 52.2 to 33.8 kg/m²). Data analysis are available to evaluate persistence of QoL benefits and compared results before and after surgery.

Conclusion

Conclusion: Previous studies had indicated high relevance of the self-administered Laval questionnaire. Long term data were necessary to support its use in the long term follow-up of patients undergoing Bariatric Surgery.

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THE BARIATRIC NETWORK OF VENETO REGION (VON): IMPROVING CARE THROUGH AFFORDABILITY

Quality in Bariatric Surgery

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Background

Obesity-related healthcare costs are soaring -up and clash with continuous budget constraints. Bariatric practice is basically interdisciplinary and demands dedicated resources and expertise that are mainly institution-related.

Introduction

No local health authority has yet implemented a plan to coordinate the bariatric activity within the administered territory. Regione Veneto has a population of more than 6 M inhabitants and a prevalence of obesity around 9%. Healthcare at large is delivered through different networks of care. The Regional Administration, the primary healthcare provider and payor, promoted the constitution of Veneto Obesity Network (VON) in collaboration with Healthcare Professionals.

Objectives

VON may play a key role in terms of resource allocation, standard healthcare provision and coverage, risk management and costs containment. Moreover, such a network can significantly boost research and partnership at large.

Methods

VON is based on a "hub and spokes" mode. Hub is granted privileges of planning and coordination in collaboration with Regional Health Authority, referral for spokes and headquarter for research and partnerships programs.

Inpatient/outpatient activities and outcomes will be assessed and recorded according to the Regional Authority requirements.

Results

The network was approved in 2016, encompassing Centers with consolidated bariatric practice and facilities.

The shared pathway of care was released and published in the Official Bulletin of the Region. Six interdisciplinary groups were constituted among the existing affiliated Accredited Centers.

Conclusion

VON was designed to deliver comprehensive care for obese people, in order to improve outcomes, reduce care variability and costs.

Longitudinal assessment will provide new insights on the best practices for obese patients.



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ENERGY LEVELS AND TIREDNESS AND LENGTH OF SLEEP AFTER SLEEVE GASTRECTOMY IN THE FIRST FEW MONTHS AFTER SURGERY - WOULD THEY INCREASE

Quality in Bariatric Surgery

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Background

When ever one goes on a diet, that person feels lethargic and very depressed and do not want to do much physical activity from lack of calories.

Introduction

The effect of sleeve gastrectomy on weight loss is well known with good calorie restriction and SG is the most commonly performed bariatric surgery. we wanted to find how it is affecting the people in their early postoperative period with their low calorie intake

Objectives

We only looked at the patients who underwent SG and want to prove the hypothesis that SG increases the energy levels because of the change in insulin resistance and the good sleep they get

Methods

We looked at all the patients who had SG and collected in a prospectively collected database. All the information is voluntarily given initially and later this has been sought out . Energy levels and how they feel towards the end of the day. Also we tried to find how they slept in the night

Results

There were totally 552 patients who had sleeve gastrectomy as a single stage procedure. there was information about the energy levels and tiredness in 325 patients. All these patients had very high energy levels from the second week, but they felt tired towards the end of the day. 257 patient commented that they slept for longer hours.

Conclusion

SG appears to improve the quality of life with very high energy levels and good amount of sleep. These are feeling tired because of more physical activity with less calori intake.

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THE UTILITY OF HIGH-PRESSURE METHYLENE BLUE DYE TEST DURING PRIMARY AND REVISIONAL BARIATRIC SURGERY

Quality in Bariatric Surgery

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Introduction

Leak following bariatric surgery is associated with morbidity and rarely mortality. Intra-operative high pressure methylene blue leak test (HPMB) is a technique employed to confirm integrity of anastomoses and staple lines. Despite this, evidence for its use remains limited. We evaluated the role of HPMB in detecting and preventing leaks.

Objectives

To assess the utility of high pressure methylene blue in predicting leak following bariatric surgery.

Methods

A cohort of patients who underwent primary or revisional Laparoscopic Sleeve Gastrectomy (SG) or Laparoscopic Roux-en-Y Gastric bypass (RYGB) between 2012 and 2016 were assessed. All patients had routine HPMB. Demographics, HPMB positivity, post operative leaks and outcomes were recorded.

Results

811 patients underwent surgery, 608(75%) RYGB, and 203(25%) SG. 66(8.1%) were revisional procedures.

One HPMB was positive, which necessitated staple line reinforcement with a suture. There were 5 postoperative leaks, all of whom had negative intraoperative HPMB: 3 SG patients; and 2 RYGB patients (gastro-jejunostomy leaks). There was no statistical relationship between positive HPMB and leak ($p=0.99$)

Conclusion

Despite routine HPMB, there was only one positive test. Whilst HPMB may demonstrate technical failure, this study suggests that there is no role for its routine use in bariatric surgery. Discontinuation would reduce patient risks of anaphylaxis to the dye; cost; and intra-operative time.

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LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS VS SINGLE ANASTOMOSIS GASTRIC BYPASS VS RESLEEVE GASTRECTOMY AFTER SLEEVE GASTRECTOMY WEIGHT REGAIN

Revisional surgery

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Introduction

Laparoscopic sleeve gastrectomy (LSG) has become the most performed bariatric procedure as of 2015. However, inadequate weight-loss may present the need for revisional procedures.

Objectives

To compare the efficacy of laparoscopic re-sleeve gastrectomy(LRSG), laparoscopic Roux-en-Y gastric bypass(LRYGB) and single anastomosis gastric bypass(SAGB) in attaining successful weight loss following initial LSG.

Methods

A retrospective analysis was performed on all patients who underwent LSG at Amiri and Royale Hayat Hospital, Kuwait from 2008-2017. A list was obtained of those who underwent revisional bariatric surgery after initial LSG, and their demographics were analyzed.

Results

A total of 102 patients underwent revisional bariatric surgery, of which 40.2% underwent LRYGB, 36.3% underwent LRSG, and 23.5% underwent SAGBP. 84% of the patients were female. The mean weight and BMI prior to LSG for the LRSG, LRYGB and SAGBP patients were 137.1Kg and 49.9Kg/m², 135.2Kg and 50.5Kg/m², and 125.8Kg and 48.2Kg/m² respectively. The mean BMI showed a drop from 42.03 to 31.6 1 year post-revisional surgery for the LRSG group, 42.67 to 34.74 for LRYGB, and 41.8 to 29.97 post SAGBP. LRSG showed better excess weight loss(%EWL) results 1 year post-revisional compared to LRYGB with 62.09% vs. 47.18%, however, at the 2-year mark, the LRSG group showed weight regain(EWL=57.11%), while patients that underwent LRYGB continued to show a decrease(EWL=67.16%). Patients that underwent SAGBP showed promising early results, with 51.78% EWL at 6-months.

Conclusion

Revisional bariatric surgery is a safe and effective method for the management of inadequate weight loss following primary LSG.

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DESTINY OF FAILED ADJUSTABLE GASTRIC BANDINGS: DO ALL PATIENTS UNDERGO FURTHER BARIATRIC SURGERY?

Revisional surgery

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Background

LAGB is associated with a high rate of reoperation: the main indications are weight loss failure, dysphagia, GERD symptoms, slippage and erosion.

Introduction

The number of Laparoscopic adjustable Gastric Bandings (LAGB) requiring removal has increased throughout the years.

Objectives

The aim of the study was to evaluate the outcomes of subsequent bariatric procedures and to analyze patients who didn't undergo secondary surgery.

Methods

Data collected from consecutive patients submitted to LAGB removal from 2008 to 2016 at our Institution were retrospectively analyzed. 155 patients were enrolled in the study: 139 females and 16 males (mean age 44years). Mean time between LAGB placement and removal was of 6,5 years.

Results

77 patients were submitted to revisional procedures (55 were converted to Laparoscopic sleeve gastrectomy –LSG– and 20 to laparoscopic Roux en-Y gastric bypass –LRYGB); 78 didn't have any secondary surgery. At the moment of removal average body mass index was 41,1 ($\pm 6,73$) in the first and 34,6 ($\pm 6,76$) in the second group; mean percentage of excess weight loss (EWL) was 19% ($\pm 0,43$).

52% of patients with unsatisfactory weight loss and 57% of those suffering from dysphagia were not submitted to further bariatric procedures. Most of the patients without banding regained weight: mean BMI after 12 months was 41,9 ($\pm 7,84$). Additional surgery provided significant weight loss: EBWL was 32% in LSGs and 42% in LRYGBs.

Conclusion

Both gastric bypass and sleeve gastrectomy are effective surgical options after LAGB removal, leading to appropriate weight loss. Further bariatric surgery procedure after band removal should always be considered.

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OUTCOMES OF GASTRIC BAND REVISION AMONG 110 CONSECUTIVE PATIENTS: EXPERIENCE WITH SLEEVE GASTRECTOMY, ROUX-Y-GASTRIC BYPASS AND OMEGA LOOP GASTRIC BYPASS

Revisional surgery

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Background

The optimal procedure for failed Laparoscopic adjustable gastric banding (LAGB) is unclear.

Introduction

Options include revisional Roux-y-gastric bypass (r-RYGB), Single anastomosis gastric bypass (r-SAGB) and Sleeve Gastrectomy (r-SG).

Objectives

Compare the effectiveness and safety of r-RYGB, r-SAGB and r-SG after failed LAGB.

Methods

Retrospective review of a prospectively collected database of r-RYGB, r-SAGB and r-SG between 2006 and 2015.

Results

110 patients underwent r-RYGB (64), r-SAGB (14) and r-SG (32) after failed LAGB. Concomitant LAGB removal was done in 63.3% while the rest underwent a 2-staged procedure. R-RYGB and r-SAGB patients were heavier than r-SG at the time of LAGB placement and at revisional surgery. The BMI in r-RYGB and r-SAGB (43.09 and 43.81 Kg/m²) > r-SG group (40.44 Kg/m²). R-SG patients tended to be younger with less co-morbidities than r-RYGB and r-SAGB. Follow up was achieved in 91.8%, 80%, 72.3%, and 64.6% of patients at 6, 12, 24, and 36 months after revision. Percentage TWL at 3 years was significantly lower in the r-RYGB group compared with r-SAGB and r-SG (23% vs. 30% and 35%). Percentage EWL at 3 years was significantly lower in r-RYGB compared to r-SG and r-SAGB (58% vs. 89% and 84%). There were no mortalities and no major differences in morbidity in the 3 groups. The most common short-term complications were leak, obstruction and bleeding (2.8%).

Conclusion

In select patients undergoing revision of failed LAGB, r-LSG gives excellent results matching r-RYGB and r-SAGB. For heavier patients r-SAGB appears to give better weight loss at 3 years than r-RYGB.

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THREE-YEAR OUTCOMES OF REVISIONAL LAPAROSCOPIC GASTRIC BYPASS AFTER FAILED LAPAROSCOPIC SLEEVE GASTRECTOMY: A CASE-MATCHED ANALYSIS

Revisional surgery

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Background

Previous studies suggest laparoscopic Roux-en-Y gastric bypass (LRYGB) as a reasonable treatment approach to address weight loss failure after laparoscopic sleeve gastrectomy (LSG).

Introduction

But data focusing on long-term outcomes are still lacking.

Objectives

The purpose of this study was to evaluate weight and comorbidity outcomes comparing revisional LRYGB (rLRYGB) with primary LRYGB (pLRYGB).

Methods

Retrospective single-centre case-matched analysis was conducted at a bariatric tertiary referral centre. Between January 2009 and July 2013, 239 patients were entered into a prospective database, and 32 patients undergoing rLRYGB (cases) were matched with 32 patients undergoing pLRYGB (controls) for sex, age and BMI. The end point was data at 3 years of follow-up. Thirty-one patients (12.9%) were lost to follow-up during the study period

Results

There were no significant differences in patient demographics or median BMI (kg/m²) for pLRYGB or rLRYGB (42.8 ± 12.1 vs. 42.3 ± 11.5, respectively; p = 0.748). Coexisting comorbidities were rated similarly in both groups. At 3 years, the percentage of excess weight loss (74.4 ± 23.3 vs 52.0 ± 26, respectively; p = 0.007) was higher for pLRYGB than rLRYGB, while similar improvements of coexisting comorbidities could be observed.

Conclusion

rLRYGB is a feasible and practical surgical approach that allows effective weight loss at 3 years of follow-up and alleviates refractory reflux symptoms. Although weight loss is lower compared to pLRYGB, resolution or improvement of coexisting comorbidities appears similar. Therefore, rLRYGB seems to be a reliable procedure to address failure after LSG.

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LAPAROSCOPIC OMEGA LOOP GASTRIC BYPASS AFTER FAILED ADJUSTABLE GASTRIC BANDING AS ONE STEP PROCEDURE RESULTS OF FIRST 100 CASES

Revisional surgery

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Background

OLGB is gaining popularity throughout the world, in 2017 we published the results of our first 1500 cases and it was promising and now we need to spotlight the Benefit of OLGB as a redo procedure

Introduction

Adjustable gastric band was more popular 10 years ago with more patients needing revisions for weight regain nowadays. The concept of transforming restrictive procedure to a malabsorptive one is adopted by many surgeons

Objectives

To present our experience in converting adjustable gastric banding to OLGB as one step procedure

Methods

From March 2014 to January 2017, 100 cases of failed gastric banding where converted to OLGB, 16 of them males and 84 females. Mean age 36.6 (20-56), and preoperative body mass index 46.2 kg/m² (37-68). Period of band application was 5.5 years (2-11). Type 2 DM affected 23 patients, hypertension 28. Mean follow up 22 months (12 to 32). Upper endoscopy used preoperative to exclude perforation

Results

All procedures were completed laparoscopically. Mean operative time was 74 minutes (58-112). Mean length of hospital stay 36 hours (24-96). No conversion to open surgery or mortality. One intra-operative complication. Peri-operative morbidity 2 cases . All patients experienced excess weight loss (EWL) with mean 76% (35%-95%) and 6% of patients had less than 50% EWL. Hypertension resolution 85.7 (24 of 28) and T2DM remission 91% (21 of 23) No record of weight regain to date. Symptomatic bile reflux 2 patients (2%)

Conclusion

With a relatively lax pouch OLGB is a good option after Band, complications are few. Longer follow-up is required

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MEDIUM-TERM OUTCOMES AFTER REVERSAL OF ROUX-EN-Y GASTRIC BYPASS

Revisional surgery

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Introduction

Roux-en-Y gastric bypass (RYGB) can be reversed into normal anatomy (NA) or into sleeve gastrectomy (NASG) to address undesired side effects. Concomitant Hiatal Hernia Repair (HHR) may be required.

Objectives

Reporting weight evolution, progression of the condition that had demanded reversal, side effects, quality of life (QoL) and patient satisfaction

Methods

Retrospective study on surgical complications and mid-term effects of NA and NASG. weight evolution, progression of the condition that had demanded reversal, side effects, quality of life (QoL) according to Moorehead-Ardelt and patient satisfaction evaluated by a custom made questionnaire.

Results

Twenty-five participants to the study, 13 NA, 12 NASG, 15 HHR. Mean follow-up time was 5.3 ± 2.3 years. Reversal corrected early dumping, malnutrition, diarrhea, and nausea/vomiting. For hypoglycemic syndrome, resolution rate was 6/8 (75%). NA caused significant weight regain (14.2 ± 13.7 kg, ($p=.003$)). NASG caused some weight loss (4.8 ± 15.7 kg (NS)). Gastrostomy placement gave complications at reversal in 5 of 7 individuals. Eight patients suffered a severe complication, including leaks (1 NA vs. 3 NASG). Eight out of 14 (57.1%) patients who previously had never experienced gastro-esophageal reflux (GERD) developed de novo GERD after reversal, despite HHR. Patient satisfaction was good for 11 NA participants (85%) vs. 6 NASG (50%). Overall QoL score was 19 ± 4.7 .

Conclusion

RYGB reversal is effective but pre-reversal gastrostomy may be an aggravating factor for complications and the development of de novo GERD was high. QoL is good but patient satisfaction is poor in the NASG group.

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REVISIONAL SURGERY DOES NOT PRODUCE SAME WEIGHT LOSS AS PRIMARY PROCEDURES

Revisional surgery

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Introduction

Revisional bariatric surgery is increasing worldwide. Weight regain after bariatric procedures is one of the commoner indications for revisions. Many published series showed similar weight loss outcomes to primary bariatric procedures.

Objectives

We wanted to review our experience and results in revisional bariatric surgery.

Methods

We retrospectively reviewed our prospectively collected bariatric database. We searched for revisions for weight recidivism with conversions into sleeve gastrectomy (LSG) or Roux-En-Y gastric bypass (LRYGB). Our primary end point was Excess weight loss percent (EWL%) at one year after the conversion. Complications: Leak, bleeding, stenosis, readmissions and reoperations were secondary endpoints. We compared the patient who underwent conversions with matched patients who underwent primary LSG and LRYGB

Results

We identified 80 (19.8%) patients who underwent revisional procedures. 58 patients underwent revisions due to weight recidivism. 47 patients were conversions to LRYGB and LSG. Conversions from adjustable gastric banding (41 patients) were the most common for revisions. EWL% at one year for revisions was 61% compared to 82% in primary cases. Conversions to LRYGB (36 patients) EWL% at one year was 73% compared to 80% in primary cases. Conversions to LSG (11 patients) EWL% at one year was 49% compared to 83% in primary cases. Conversions to LSG failed to reach 50% EWL% in 63.6% of patients. Complications occurred in 16.3% of cases in revisional vs 11.9 % in primary. No mortalities in either group.

Conclusion

Revisional procedures are relatively safe but produce inferior weight loss results to primary procedures, especially LSG.

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REVISIONAL GASTRIC BYPASS FOR FAILED RESTRICTIVE PROCEDURES: COMPARISON OF SINGLE-ANASTOMOSIS (-MINI) AND ROUX EN Y GASTRIC BYPASS

Revisional surgery

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Introduction

10-50 % of patients who received restrictive bariatric surgeries may require re-operation for unsatisfactory weight loss or weight regain. Failed restrictive procedures are usually managed with conversion to another bariatric procedure with a favour of conversion to laparoscopic gastric bypass.

Objectives

to evaluate two different bypass techniques, laparoscopic RY gastric bypass (RYGB) versus single anastomosis (mini-) gastric bypass (SAGB) as a revision option for failed restrictive bariatric surgeries.

Methods

From May 2001 to December 2015, total of 116 patients with failed restrictive bariatric surgeries underwent laparoscopic revisional bypass surgery (81 R-SAGB and 35 R-RYGB). Among them, 81 were failed after vertical banded gastroplasty (VBG) and 35 were after adjustable gastric band (AGB). The demographic data, surgical parameters and outcomes were studied.

Results

The average age at revision surgery was 35.7 years and the average BMI before re-operation was 37.2 kg/m². The main reasons for the revisions were weight regain, inadequate weight loss and intolerance. R-RYGB had significantly longer operative times than R-SAGB. Major complication occurred in 12 patients without significant difference between R-SAGB group and R-RYGB group. At one year follow up, weight loss was better in R-SAGB than R-RYGB. At five year follow up, a significantly lower haemoglobin level was found in R-SAGB group.

Conclusion

Both SAGB and RYGB are acceptable options for revising a restrictive type of bariatric procedures with equal safety profile. R-SAGB was shown to be a simpler procedure with better weight reduction than R-RYGB but anaemia is a considerable complication at long-term follow up.

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ROUX EN-Y GASTRIC BYPASS AS A REVISIONAL PROCEDURE FOR A FAILED GASTRIC BAND: A REVIEW OF 125 CONSECUTIVE CASES.

Revisional surgery

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Introduction

Laparoscopic adjustable gastric bands (LAGB) are often associated with good outcomes, however a significant group of patients may require revisional surgery for poor weight loss or band-related complications.

Objectives

To evaluate the safety and efficacy of revisional roux-en-Y Gastric bypass (RYGB) after LAGB from a UK tertiary bariatric centre.

Methods

We performed a retrospective analysis of a prospectively maintained database of patients underwent conversion of LAGB to RYGB between Jan-2010 and Oct-2016. Patient demographics, preoperative comorbidities, reasons for band failure, operative outcomes and % excess weight loss (%EWL) 12-, and 24-months were included.

Results

RYGB was performed in 125 patients (121 laparoscopic, 4 open). Female:Male = 9:1. Mean±SD age and BMI of 43.2±10 years and 47.6±7.7 kg/m², respectively. Comorbidities included type II diabetes mellitus (18%), hypertension (26%), dyslipidaemia (20%), sleep apnoea (8%), osteoarthritis (23%), and acid reflux (26%). Indications for band revision were inadequate weight loss (39.2%), slippage (28.8%), vomiting/reflux (13.6%) or others(18.4%). A planned single-step RYGB was performed in 91 (72.8%) patients. There was no postoperative mortality. One patient (0.8%) required an unplanned conversion to open RYGB due to extensive adhesions. Two patients (1.6%) had postoperative bleeding, of whom one (0.8%) required relook laparoscopy. Six patients (5%) developed a gastro-jejunal stricture requiring endoscopic dilatation. Mean±SD %EWL at 12-, and 24-months were 64±17.9%, and 66.4±22.5%, respectively.

Conclusion

In this study, revisional RYGB is associated with very low complication rates and excellent EWL at 2-years. Conversion of a failed LAGB to RYGB is a safe and effective procedure when performed in an experienced bariatric unit.

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EARLY OUTCOME OF THE IMPLEMENTATION OF STANDARDIZED BARIATRIC SURGERY PROCEDURES IN DUBAI HOSPITAL BARIATRIC CENTRE

Revisional surgery

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Introduction

The standardized fully stapled laparoscopic Roux-en-Y gastric bypass (FS-LRYGB) procedure (Dillemans B. et al. *Obes Surg.* 2009 Oct;19(10):1355-64.) and laparoscopic sleeve gastrectomy (LSG) can minimize the morbidity and mortality in morbidly obese patients.

Objectives

To evaluate 30 days hospital morbidity, mortality, reoperations and re-admissions.

Methods

we have retrospectively analyzed 828 consecutive patient who underwent bariatric surgical procedures from 2012 to january 2017

Results

In total 514 LSG and 314 FS-LRYGB including 54 redo surgeries were performed. The average preoperative BMI reached 45.40 (33.97-72.85 kg/m²). The average hospital stay was 3.25 (range: 2-15) days. We had no anastomotic or stapler line leakage and the mortality rate is 0%. The main early postoperative complications included gastrointestinal hemorrhage (6 cases) - which were managed conservatively in 3 cases (0.36%), 3 needed laparoscopic re-intervention (0.36%); two postoperative wound infection (0.24%) and one port-site hernia (0.12%). We had 7 readmissions in the first 30 postoperative days due to epigastric pain (0.36%), anaemia (0.12%) and wound infection (0.36%). The average percentage of excess BMI loss (%EBMIL) within the first month is 19% and excess weight loss (%EWL) 15%.

Conclusion

The implementation of standardized bariatric procedures from one center to another can be conveyed successfully and effectively, as the same results were achieved as in the originating hospital regarding early postoperative outcome. Complete standardization has contributed to achieve low postoperative morbidity rates and 0% mortality in Dubai Hospital.

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QOL FOLLOWING REVISIONAL BARIATRIC PROCEDURE IN A UK REFERRAL CENTRE

Revisional surgery

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Introduction

Revisional surgery is a challenging but essential part of modern bariatric practice. The most common revisional operation is Laparoscopic Gastric By-Pass(LGBP) and to some extent Laparoscopic Sleeve Gastrectomy(LSG).

Objectives

The aim was to evaluate the safety, efficacy and post-operative quality of life of revisional surgery, using the Moorhead-Ardelt II questionnaire. Secondary aim points were the assessment of weight loss and co-morbidity resolution following revisional bariatric surgery.

Methods

A prospectively collected database was analysed of patients undergoing revisional bariatric surgery after failed primary bariatric procedure. Indications, peri-operative data and QOL were recorded. Values are expressed as median(range).

Results

Between May 2013 and March 2017, a total of 104 patients, age 44.2(22.0-67.0) years, 91 females and 13 males, underwent revisional bariatric surgery (103 LGBP and 1 LSG). The time interval since the primary operation was 7.13(1.00-26.00) years. The primary operations included Gastric Banding(n=89), Sleeve Gastrectomy(n=10), Gastric Bypass(n=1) and Vertical Gastroplasty(n=3), and Gastric Plication(n=1). Indications included: weight-loss failure(n=46), complication of primary procedure(n=48) and non-resolution of co-morbidities(n=10). No mortality was recorded, 1 patient developed a leak from the gastro-jejunal anastomosis and was managed by laparoscopy, wash-out and drains. Body mass index (BMI) prior to primary procedure was 54(36.3-87.5) kg/m². Associated maximum %excess BMI loss was 41.5(8.7-93.0) before dropping to a lowest of 21.40(-10.20-65.20) before revision. Postoperatively, %BMI loss increased to 67.20(13.00-175.70) at 10.76(1.00-36.00) months following revision. Post-revisional MAII score was 0.96(-1.3-2.5), indicating "fair QOL".

Conclusion

Revisional bariatric surgery is a safe and effective operation achieving good weight-loss and "fair QOL" outcome.

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REVISIONAL LAPAROSCOPIC GASTRIC BANDING SURGERY: AUSTRALIAN EXPERIENCE

Revisional surgery

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Introduction

Laparoscopic Adjustable gastric Banding (LAGB) has been a popular bariatric procedure in Australia over the last 15 years. There has been an increasing demand for revisional bariatric surgery due to LAGB weight loss failures and complications. There is a paucity of data of revisional LAGB to other bariatric procedures, and this study represents the largest such series in Australia.

Objectives

This study aims to review the indications, safety and efficacy of a two staged revisional LAGB to sleeve gastrectomy (SG) or bypass surgery, within a single private institution in Australia.

Methods

A retrospective cohort study with prospectively collected data from 1 January 2012 to 28 February 2017 for all patients requiring revisional procedures following LAGB.

Results

250 patients had undergone revisional surgery from a cohort of 2790 LAGBs. A total of 2211 SGs were performed during the study period. Follow up 12 months and 24 months in 151 and 99 patients. Mean age of 48.7 years and a female predominance of 79.5%. Indications: band complication in 25 pts, weight regain or inadequate weight loss in 101, persistent reflux and dysphagia in 74. 46% of patients with more than 2 indications. The morbidity was 0.7% (no leaks) and mortality 0%. At 24-month follow up, the mean EWL following revision surgery was 48.1% (95% CI: 39.7-56.5%) and the mean overall EWL was 56.1% (95% CI: 50.1-62.2%).

Conclusion

Revisional SG following failed LAGB is safe and effective with satisfactory short term weight loss. we will continue to follow this cohort in the medium to long term.

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SURGICAL MANAGEMENT OF WEIGHT REGAIN AFTER DISTALISATION OF A ROUX-EN-Y GASTRIC BYPASS

Revisional surgery

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Background

In case of weight regain after a Roux-en-Y gastric bypass (RNY); adding malabsorption by distalization of the entero-enterostomy could result in further weight loss. Until the end of 2013 we preferred distalization type A/Brolin. However, results in terms of sustained weight loss were unpredictable and, in general, disappointing. Since 2014 we perform the more radical distalization (type B/Sugerman).

Introduction

A 43-year old patient presented at our outpatient clinic with weight regain after a laparoscopic RNY. Her initial bodyweight was 124kg (length 169cm, BMI 43.4kg/m²). Her post-operative weight dropped to 85kg (BMI 29.8kg/m²), but she regained weight up to 109kg (BMI 38.2 kg/m²). At this point, a laparoscopic type A distalization procedure was performed. Her current weight is 114kg (BMI 39.9kg/m²), this weight regain is not due to loss of restriction and therefore a redo distalization procedure was proposed.

Objectives

In this video we present a relatively simple surgical way to enhance the malabsorptive part of a failed Type A distalization.

Methods

The procedure exists of reducing the long alimentary limb to a 2m limb and formally excluding 4.8m of small bowel. The excluded bowel was not resected since it was isoperistaltically connected.

Results

After a three month follow-up period the patient is well and has lost 8kg.

Conclusion

Shortening of the alimentary limb can be a feasible technique for patients with weight regain after a distalization type A procedure of a RNY. On short notice; this procedure resulted in significant weight loss without adverse effects. However, longer follow-up is needed to evaluate long term effects.



P.562

CONVERSION OF LAPAROSCOPIC SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS

Revisional surgery

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Introduction

Laparoscopic sleeve gastrectomy (LSG) is associated with good long-term weight loss. However, approximately 5-10% of patients will not have adequate weight loss and would need revision or conversion procedures. The indications for conversions after LSG include inadequate weight loss or weight gain, sleeve strictures, anastomotic leaks or fistula, and uncontrolled gastroesophageal reflux disease (GERD). Revision laparoscopic sleeve gastrectomy and Roux-en-Y Gastric Bypass (RYGB) are both effective in addressing inadequate weight loss however, RYGB is more appropriate in patients with GERD.

Objectives

This video aims to show the surgical maneuvers of a conversion RYGB after a failed LSG, and the corresponding short-term results.

Methods

Eight years after LSG, a 41-year old male underwent conversion RYGB because of inadequate weight loss and GERD.

Results

Intraoperatively, careful adhesiolysis of the previous operative site, creation of an adequate stomach pouch and proper anastomosis are the important steps in conversion RYGB. Short term results after conversion RYGB showed adequate weight reduction and relief of GERD.

Conclusion

Roux-en-Y gastric bypass is a safe and effective conversion technique in a patient with failed LSG and GERD.

□
P.563

GASTROJEJUNAL REANASTOMOSIS AS A TREATMENT FOR MARGINAL REFRACTORY ULCER AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS.

Revisional surgery

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Introduction

Marginal Ulcer is one of the most common and potentially life -threatening complication of Roux - en-Y gastric bypass (RYGB) with a variable incidence of 0.6 -16 % and with an unclear multifactorial pathogenesis. Gastrojejunal reanastomosis is an option for the treatment of the refractory marginal ulcer after RYGB.

Objectives

Present a case study of an intractable marginal ulcer after a RYGB which was managed surgically with a gastrojejunal reanastomosis.

Methods

This is the case of a 40 years old woman who underwent laparoscopic RYGB for morbid obesity in November 2014. 3 years later she consults for epigastric pain, food intolerance and anemia. An upper endoscopy evaluation revealed a 1 cm anastomotic ulcer with a necrotic component. After aggressive medical therapy, failure of ulcer resolution was demonstrated. Surgical laparoscopic revision was offered. A marginal ulcer penetrated to the liver was identified. After a careful dissection, liberation from the liver was performed. The gastrojejunal anastomosis was resected and remade using a circular stapler N° 21. Postoperative evolution was satisfactory tolerating oral intake 48 hours after the surgery.

Results

Patient went without complications during and after the surgery with total symptoms resolution 4 weeks after the surgery given by normalization of hemoglobin level, complete oral intake and an adequate BMI maintenance.

Conclusion

Gastrojejunal reanastomosis is a feasible surgical option in patients with refractory marginal ulcer after Roux-en-Y gastric bypass.

□
P.564

IMPORTANCE OF GERD AS CAUSE OF REVISIONAL SURGERY

Revisional surgery

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Background

We will describe the revisional surgery indicated by GERD

Introduction

Pathological gastroesophageal reflux disease that does not respond to medical treatment is frequent after sleeve gastrectomy and is one of the main indications for bariatric revisional surgery

Objectives

Report the results of revisional surgery from SG to GBYR in GERD

Methods

From the protocol of study of revision surgery of the Bariatric Surgery Unit of Santa Maria Clinic performed between January 1, 2010 and December 31, 2016, it was found that 103 of 183 (56%) procedures were due to GERD. From these patients, a retrospective cohort study was performed, selecting those with revision surgery from SG to GBYR.

Patients were diagnosed under the Montreal Consensus criteria

Bariatric and endoscopic radiological studies were performed

A functional esophageal study was performed if necessary

Results

Of the study protocol of the 103 cases with GERD, 23% underwent revisional surgery as a single cause and 42% associated with weight regain. Sixty-one (57%) patients underwent revisional surgery from SG to GBYR. The mean BMI was 32.3 ± 6.83 68% already had a history of GERD prior to revisional surgery. A 63% presented concomitant hiatal hernia

Conclusion

This study demonstrates that GERD is common after SG, especially in patients with GERD prior to revisional surgery. Revisional surgery, particularly conversion from SG to GBYR is effective for GERD. Our main message is to select and evaluate adequately the patients candidates for bariatric surgery and to consider GBYR as the first choice in cases with GERD.

COMPARING THE OUTCOME OF THE SECOND RESTRICTIVE WEIGHT LOSS SURGERIES

Revisional surgery

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Introduction

Performing second weight loss surgery after restrictive weight loss surgery were common in some patients, in case of failed and complicated outcomes after Laparoscopic Adjustable Gastric Band (LAGB), and Laparoscopic Sleeve Gastrectomy (LSG).

Objectives

To review the outcome of second or multiple restrictive weight loss surgeries after failed weight loss of previous restrictive bariatric surgery.

Methods

Retrospective study analyses of a total 249 patients who underwent restrictive weight loss surgery by a single-surgeon from 2010 until 2015. Demographic data, operation_time, length_of_hospital_stay, post-operation_complications, %excess_weight_loss(%EWL), and %Total_weight_loss (%TWL) were collected.

Results

Sample comprised of 181(72.5%) female and 68(27.5%) male with a mean age of 35.7 years(17-58), and a mean BMI of 53.3 kg/m². Patients were grouped into three categories: Category_1: patients with history of LAGB and removed to LSG(N=219), Category_2: patients underwent Re-LSG with history of removing LAGB to LSG(N=14), and Category_3: patients underwent Re-LSG without any previous bariatric surgery(N=16).

Mean_of_%EWL

	During_removal_of_LAG_to_LSG	6Month_follow_up_after_LSG	During_previous_LSG_to_Re-LSG	6Month_follow_up_after_Re-LSG	Average
Category_1	43.2%	56.8%	N/A	N/A	67.6%
Category_2	37.0%	N/A	23.1%	40.0%	73.1%
Category_3	N/A	N/A	43.8%	56.2%	66.9%

Highest total mean of %EWL was observed in Category 2 correlated to number of bariatric surgeries undergone.

BMI comparison in all categories showed reduction from 52.8kg/m² to 31.1kg/m². The BMI changes were statistically significant between different restrictive bariatric surgery Categories(P<0.001).

In contrast, the early major complications after Re-LSG was slightly higher compared to removal LAGB to LSG. There was also no mortality.

Conclusion

Multiple restrictive bariatric surgeries were successfully performed to lose weight and demonstrated satisfactory short term effectiveness with acceptable postoperative risk.

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P.566

FIVE YEARS RESULTS AFTER RESLEEVE GASTRECTOMY

Revisional surgery

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Introduction

Laparoscopic sleeve gastrectomy(LSG) has rapidly become increasingly popular in bariatric surgery. However, in the long-term follow-up, weight loss failure and intractable severe reflux after LSG can necessitate further surgical interventions.

Objectives

The aim of our study was to evaluate long-term results (5 years) following resleeve gastrectomy(ReSG).

Methods

Eighteen patients underwent ReSG between October2008-April2012. All patients with failure after primary LSG underwent radiological evaluation and an algorithm of treatment was proposed. We have analyzed the 5-year outcome concerning weight loss and long-term complication after ReSG.

Results

Eighteen patients (16 women;mean age-39.8 years) with a body=mass-index(BMI) of 41.3Kg/m² underwent ReSG. The mean interval time from the LSG to ReSG was of 28.4 months(11-67months). The indication for ReSG was insufficient weight loss-11 patients(61.1%), weight regain-6 patients(33.3%), and gastroesophageal reflux disease(GERD)-1 patient.In 12 cases the gastrografen swallow results were interpreted as primary dilatation and in the remaining 6 cases as secondary dilatation.One patient died from gynecological cancer.Of the remainder, 2 patients underwent SADI and 2 patients underwent revisional surgery (ReSG/RYGBP) for reflux.The rest of 13 patients had available data at 5 years follow up. The mean excess weight loss (EWL) was 62.3% (range 3.3–100%).Of the 13 patients,9 patients had >50% EWL at 5 years.All cases were completed by laparoscopy with no intraoperative incidents. One case of gastric stenosis was recorded. No other complications or mortality were recorded.

Conclusion

At 5 years postoperative, the ReSG as a definitive bariatric procedure remained effective for 64.7%.ReSG is a well-tolerated bariatric procedure with low long-term complication rate.



P.568

LAPAROSCOPIC RE-SLEEVE GASTRECTOMY

Revisional surgery

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Background

Laparoscopic Sleeve Gastrectomy LSG has become an established bariatric surgical procedure.

Introduction

Revisional surgery is often required after LSG for failure to lose weight, weight regain or to manage complications and side effects. Re-sleeve gastrectomy can be done in select cases, but the high risk of leak and long-term failure limit its application.

Objectives

We present a case where re-sleeve gastrectomy was suitable and technically feasible.

Methods

A 41 year old female patient underwent LSG following a failed laparoscopic adjustable gastric banding about 7 years ago. Her weight was around 90 kgs with a BMI 32kg/m². The patient initially lost 10 kgs but subsequently regained all the weight back and more to reach 94 kgs. In addition, she developed significant reflux esophagitis and recurrent bouts of epigastric pain and vomiting. Barium swallow showed a large fundic remnant. A Laparoscopic re-sleeve gastrectomy was done.

Results

The Laparoscopic re-sleeve gastrectomy was performed in 120 minutes. The post-operative course was smooth and uneventful.

Conclusion

In select cases, particularly in cases of retained fundus a laparoscopic re-sleeve gastrectomy can be feasible and effective.



P.569

GASTRIC POUCH RESIZING AFTER ROUX EN Y GASTRIC BYPASS.

Revisional surgery

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Introduction

Among patients operated on bariatric surgery, 10-20% present long-term weight regain or do not lose weight. The resizing of the gastric pouch represents a therapeutic option in case of gastric by-pass failure for anatomical factors.

Objectives

The aim of this article is to present our series of gastric pouch resizing at Nice University Hospital.

Methods

A prospective database of patients operated of gastric pouch resizing at the CHU of Nice for gastric bypass failure in Y (RYGB) was established. All patients included a volumetric gastro-scanner for evaluation of the gastric volume and size of the anastomosis. The resizing of the pouch was calibrated on a tube of 34 Fr. After surgery, the patients were followed every 6 months with clinical examination and metabolic assessment.

Results

Forty-eight patients were included, including 42 women and 6 men. The average age was 46 years. The initial mean BMI was 43 kg / m². After RYGB, the mean minimum BMI was 29.4 kg / m². Before the resizing of the pouch, the mean BMI was 36.6 kg / m². The mean volume of the pouch was 199.3 ml, and the diameter of the anastomosis was 31.3 mm. Postoperatively, 3 patients developed gastric fistula, 1 patient had a gastro-gastric fistula and 1 patient had an intra-abdominal collection treated with radiological drainage. The average BMI at 1 year after gastric pouch resizing was 30.4 kg / m².

Conclusion

The resizing of the gastric pouch represents a feasible and effective therapeutic option in patients with gastric bypass failure for anatomical factors.

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P.570

OUTCOME OF SLEEVE REVISIONS FOR INADEQUATE WEIGHT LOSS OR WEIGHT REGAIN TO BGBP VS. MGB VS. RE-SLEEVE

Revisional surgery

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Background

Outcome of Sleeve revisions for inadequate weight loss or weight regain to BGBP VS. MGB VS. Re-sleeve

Introduction

The Sleeve gastrectomy operation in a significant number of patients will need revisional surgery because of either inadequate loss or weight regain. At this time there are various revisional operations after the sleeve gastrectomy.

Objectives

We wanted to determine the incidence and the outcome from revision of sleeve gastrectomy at our institution.

Methods

Records of all patients who had a sleeve gastrectomy from 2010 through 2015 from a prospectively kept database were reviewed to determine how many had a revision and the type and outcome of the revision. Patients who had the primary sleeve at another institution and came for a revision at our institution were not included in this study.

Results

74 (12.4%) patients who had surgery between 2010 and 2012 out of 535 patients had revision for inadequate weight loss or regain. Five were re-sleeved, 32 were revised to a mini-gastric bypass and 37 were revised to a banded gastric bypass. All the revised patients lost weight after one year but those that were re-sleeved started regaining weight and the patients with the mini-gastric bypass stabilized at the one year rate whereas there was more weight loss at two years of follow up in the banded gastric bypass group.

Conclusion

Re-sleeving is not a good revisional operation after a sleeve gastrectomy. The Mini-gastric bypass and banded gastric bypass are good revisional operations after the sleeve

□
P.571

ONE STEP VS TWO STEP SLEEVE GASTRECTOMY AFTER FAILED LAGB

Revisional surgery

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Background

Laparoscopic sleeve gastrectomy (LSG) is increasingly performed after failed laparoscopic adjustable gastric banding (LAGB).

Introduction

In revisional surgery after LAGB removal the choice of one-step vs two step procedure remains debatable.

Objectives

The aim of this study was to assess the safety and outcome of conversion of failed LAGB to LSG and to compare one-step vs two-step procedure approaches.

Methods

A retrospective analysis of prospectively collected data was performed on patients, submitted to conversion from LAGB to LSG from 2008 to 2016. Overall adverse event rate (postoperative complication or reoperation), length of stay (LOS), leak and bleeding rates, as well as mortality were evaluated. Body mass index (BMI) before and after the procedure was documented.

Results

A total of 55 patients were submitted to laparoscopic sleeve gastrectomy after band removal; 26 patients had a one-step procedure and 29 had two-step procedure. Mean time from band removal to SG for 2-stage was 11.5 ± 14.07 months. LOS (7.2 vs. 5.1 days, $p=0.164$) were similar. Overall postoperative complication rate was 7.7% for one-step procedure and 3.4% for two-step procedure ($p=0.48896$). Leak (0 vs. 3.4%, $p=1.0000$) and bleeding rates (3.85 vs. 0%, $p=0.4727$) were not different. There was one reoperation in two-step procedure group due to leak management. Average BMI following surgery was 32.96 ± 6.8 kg/m² after one-step procedure and 36.03 ± 5.71 kg/m² after two-step procedure, $p=0.244$ (excess weight loss was $46.05 \pm 20.9\%$ and $31.96 \pm 17.2\%$ respectively, $p=0.08$).

Conclusion

One step and two step are equally safe when converting LAGB to LSG. Therefore, a one step approach is preferable in term of cost effectiveness.

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P.572

CONVERSION TO ROUX-EN-Y GASTRIC BYPASS FOR OMEGA-LOOP (MINI-) GASTRIC BYPASS RELATED COMPLICATIONS

Revisional surgery

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Introduction

Data concerning the treatment of complications after Omega-loop (mini-) gastric bypass (OLGB) are scarce.

Objectives

To describe our experience in converting OLGB to Roux-en-Y gastric bypass (RYGB) for OLGB related complications using three different techniques, and report the respective postoperative outcome.

Methods

Retrospective chart analysis of patients thus treated between June 2008 and Mars 2016. Participants were contacted to evaluate the effect of the conversion.

Results

Twenty-eight patients underwent OLGB conversion to RYGB. The three main indication to perform conversion were early surgical complications (N=7 (leak (N=5), bleeding anastomosis (N=1), blow-out remnant (N=1))), bile reflux (N=6) and marginal ulcer at the gastroenterostomy (N=5). The deconstruction of the omega-loop was completed by transection of the afferent limb and anastomosis with the efferent limb (Lonroth technique) in 18 patients, dismantling of the anastomosis in 6 and resection of the distal gastric pouch and gastrojejunostomy in 4. Five patients suffered severe early postoperative complications (17.9%), 4 of which (80%) occurring after reinterventions in a septic abdomen. All complications were successfully managed non-surgically by stenting and/or image-guided puncture. Postoperative mortality rate was zero. Twenty-six participants (92.9%) were available for evaluation. Median follow-up time was 64.5 months (range 12-104). Median patient satisfaction score after conversion was 4.5/5.

Conclusion

OLGB related complications can safely be addressed by conversion to RYGB.

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P.573

CONVERSION OF FAILED SLEEVE TO SINGLE ANASTAMOSIS DUODENAL JEJUNAL BYPASS

Revisional surgery

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Background

Sleeve Gastrectomy may fail and there may be weight recedivism just like any other bariatric procedure.Video suggest our technique for revision of a sleeve.

Introduction

Single anastamosis duodenal jejunal bypass is a robust technique .We have revised sleeve gastrectomy into this procedure.

Objectives

A video representation of our technique.

Methods

5 ports are inserted after the pneumoperitonium is established through verrus needle. optical port is placed in midline just above the umblicus and 2 ports of 12mm are placed in midclavicular line on left and right side in same line of optical trocar, another 2 ports of 5mm are placed on both right and left side subcostal midclavicular line. liver retractor placed subxiphoid for proper visualisation. sleeve inspected for dialatation and all adhesions of previous surgery removed. resleeve done over 36fr bougie. 1st part of duodenum dissected and transected with help of white load. Duodeno-jejunal junction identified and loop duedono-jejunosomy performed handsewn in 3 layers 180cms far from duedeno-jujunal junction.

Results

Patient stood the procedure well.

Conclusion

Single anastamosis duodenal jejunal bypass is a safe technique to fix up a failed sleeve.

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P.574

OUTCOMES OF PRIMARY SLEEVE GASTRECTOMY VERSUS CONVERSION SLEEVE GASTRECTOMY IN MORBIDLY OBESE KOREAN PATIENTS

Revisional surgery

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Introduction

All revisional procedures are needed following primary bariatric surgery.

Objectives

This study aimed to compare with the results of primary sleeve gastrectomy (PSG) and conversion sleeve gastrectomy (CSG) after primary restrictive surgery.

Methods

From January 2013 to December 2016, 186 patients who underwent PSG or CSG were enrolled in this study, comprising 154 patients performed PSG and 32 patients performed CSG. All patients applied metal clipping at the end of stapling line and a continuous seromuscular suture at the resection margin to prevent leakage during operation. This study was a retrospective analysis of our prospectively collected database. Pre- and post-operative data were collected and analyzed.

Results

There were no difference in sex, but body mass index of CSG was lower as 36.8 ± 4.7 versus 33.0 ± 6.7 ($p < 0.001$), respectively. Forty one patients (26.6%) underwent 48 minor complications were noted in PSG, on the other hand, 10 patients (31.3%) underwent 11 minor complications in CSG, and there were no difference in minor complication in both group. But, 1 patient in PSG underwent re-laparoscopic exploration at 2 day after surgery due to pancreatic burn. Percentage excess body mass index loss (%EBMIL) at 3 months, 6 months, 12 months after surgery were 79.6 ± 34.6 in PSG versus 85.3 ± 45.9 in CSG ($p = 0.473$), 107.2 ± 46.6 versus 106.6 ± 53.7 ($p = 0.959$), and 124.0 ± 55.5 versus 131.2 ± 55.6 ($p = 0.585$), respectively.

Conclusion

PSG and CSG would be comparable in aspect of complication and weight loss. Therefore, CSG would be the strategy for conversion operations after failed primary restrictive bariatric surgery.

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P.575

SIMULTANEOUS LAPAROSCOPIC ADJUSTABLE GASTRIC BAND REMOVAL AND SLEEVE GASTRECTOMY

Revisional surgery

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Background

Revision procedures after Laparoscopic Adjustable Gastric Band placement are often necessary in cases of severe band-related complications, inadequate weight loss or weight regain. Inflammation and foreign body reaction make the procedure of band removal technically demanding.

Introduction

Laparoscopic Adjustable Gastric Band (LAGB) related complications often require revision procedures with band removal and/or conversion to Laparoscopic Sleeve Gastrectomy (LSG) or Roux-en-Y Gastric By-pass (RYGB). The optimal method of revision remains controversial. Single-stage removal and LSG or RYGB seems to be safe and efficient, while others suggest a two-stage approach.

Objectives

We present our 6-year experience concerning simultaneous LAGB removal and LSG.

Methods

We retrospectively analyzed 35 patients who underwent simultaneous LAGB removal and LSG, from January 2011 to December 2016. 10 men and 25 women. Average age 38 (18-49). Mean BMI before conversion was 48 and 45.5 respectively. All patients underwent preoperative endoscopy and barium swallow, with no sign of stomach perforation, erosion or severe band slippage. We emphasize on a case of a 41-year-old male, who had undergone two operations of gastric band placement. The first band had developed slippage, while the second one infection without erosion. However, a successful single-stage definitive LAGB removal and LSG was achieved.

Results

No severe postoperative complications were mentioned, while no conversion to open surgery was required. Mean weight loss in the first year was 70% of the excess weight.

Conclusion

Simultaneous laparoscopic gastric band removal and sleeve gastrectomy for morbid obesity seems to be safe and efficient, especially in cases of absence of gastric erosion.

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P.576

LAPAROSCOPIC RESTRICTIVE PROCEDURES AFTER FAILED GASTRIC BYPASS

Revisional surgery

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Background

Weight regain after laparoscopic gastric bypass (LRYGBP) is still a controversial issue in bariatric surgery and various surgical procedures were proposed.

Introduction

Re-do surgery for failed LRYGB is technically challenging and has been associated with high morbidity and mortality.

Objectives

The aim of the present study is to analyze the results of revisional surgery for weight regain in patients treated with LRYGBP.

Methods

Between January 2012 and June 2015 more than 600 redo procedures have been performed in our institution. Data have been retrospectively analyzed. 20 volume eater patients treated with restrictive redo surgery for weight regain after primary LRYGBP with a minimum follow-up of 12 months have been selected. Weight loss, perioperative morbidity and different surgical redo procedures have been analyzed and compared.

Results

20 patients underwent redo surgery: 3/17 M/F, mean age 45yrs, preoperative mean BMI 40.1 kg/m². 8 (40%) patients underwent pouch resizing, 4 (20%) patients underwent pouch/anastomotic revision, 8 (40%) patients underwent adjustable gastric banding. There were not laparotomic conversions, no mortality; 3 patients had postoperative bleeding treated conservatively. Patients had a statistically significant weight loss in terms of BMI at medium term. No statistically significant results were found among the 3 types of restrictive revisional procedures.

Conclusion

Restrictive revisional procedures for weight regain after primary LRYGBP can be effectively performed in volume eaters patients. A low complication rate and a good and sustained weight loss have been observed at mid term. Long term follow-up and further studies are needed to confirm the best surgical approach.

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P.577

SINGLE CENTER EXPERIENCE FOR REVISIONAL BARIATRIC SURGERY FOR UNSUCCESSFUL WEIGHT LOSS AND COMPLICATIONS

Revisional surgery

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Introduction

There are growing numbers of patients who require revisional bariatric surgery due to ineffective weight loss or complications from the primary surgery. The aim of this study was to review our experience with revisional surgery.

Objectives

We have retrospectively analyzed the indications for revisional bariatric procedures and assessed postoperative outcomes. From 2008 to 2017, 2504 patients underwent bariatric surgery at our institution. We have performed a total number of 66 revisional procedures.

Methods

There were 39 patients with failed primary gastric banding (GB), 17 with failed or complicated sleeve gastrectomy (SG), 7 with failed RYGB, two with failed gastric plication and one with previous intragastric balloon placement. Of the 39 patients with failed GB; 12 converted to RYGB and 18 converted to mini-gastric bypass (MGB). Remaining 9 were converted to SG. All patients with SG converted to a bypass procedure. Conversion to Distal RYGB was preferred for 7 patients with failed RYGB.

Results

The mean BMI prior to the first surgery was 46.0 ± 9.8 and for all patients. The mean BMI at revision was 39.7 ± 13.7 . The mean BMI for all patients at 6 and 12 months after revisional surgery were 32.4 ± 17.1 and 29.01 ± 15.2 respectively. The mean BMI was 27.04 ± 10.1 for patients converted to bypass procedure with failed or complicated SG. There was no mortality in all patients.

Conclusion

Revisional bariatric surgery is safe with similar outcomes in terms of BMI results and effectively treated the undesirable results from primary bariatric surgery. Revisional MGB is a good option for both failed GB and SG patients. Laparoscopic revisional surgery can be performed without a prohibitive complication rate.

□
P.578

LAPAROSCOPIC CONVERSION OF SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS FOR WEIGHT REGAIN AND REFLUX DISEASE IS SAFE AND EFFECTIVE.

Revisional surgery

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Background

Laparoscopic sleeve gastrectomy (LSG) is the most commonly performed bariatric procedure in the USA, Asia, UAE and the Middle East. However, weight regain and reflux disease are not uncommon long term complications.

Introduction

Conversion of LSG to RYGB have shown inadequate results and many surgeons advocate conversion to mal-absorptive procedures.

Objectives

We aim to study outcomes of conversion of LSG to RYGB at BMI Abu Dhabi.

Methods

Retrospective analysis of our prospective database for all patients who had laparoscopic conversion of LSG to Hand-sewn Roux-en-Y Gastric Bypass (LRYGB) with or without hiatal hernia repair for weight regain or reflux.

Results

Between 2011–2016, 19 patients had conversion of LSG to LRYGB, 73.7% were females, Mean age was 37 years (25-54), Mean BMI was 46.2 kg/m² (36.2-62.2). Mean initial BMI was 50.7 kg/m² (35.7-62.4) and Mean interval from primary surgery was 58 months (20-97), 21% had type II DM, 15.8% had HTN and 15.8% had previous LAGB. Indications for conversion were Inadequate weight loss in 68.4%, GERD in 10.5% or both in 21%. Hiatal hernia repair was performed in 52.6% of patients. Conversion to open 0%, Re-operation 0%, blood transfusion 0%, Venous Thrombo-embolism 0%, Leak 5.2%, stenosis 0% and Mortality 0%. GERD symptoms resolved in the immediate postoperative period and Excess weight loss percentage (EWL%) at 12, 24, 36 and 48 months was 50%, 49%, 49% and 68% respectively.

Conclusion

Conversion of LSG to LRYGB is effective for weight regain and reflux.



P.579

LAPAROSCOPIC SLEEVE GASTRECTOMY AS A REVISIONAL APPROACH FOLLOWING ADJUSTABLE GASTRIC BAND FAILURE: A RETROSPECTIVE STUDY

Revisional surgery

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Introduction

Laparoscopic Sleeve Gastrectomy is a feasible and acceptable option as a revisional surgery after failed Laparoscopic Adjustable Gastric Banding

Objectives

To compare the outcomes of primary LSG as compared to revisional LSG after failed LAGB

Methods

Retrospective analysis of 967 patients who underwent LSG during the years 2008-2011 at Rambam Medical Center

Results

Operative time was significantly longer in our study group. Perioperative complication rate and re-admission rate showed no significant difference. An obvious trend towards higher BMI in the study group compared to primary LSG was seen, starting as soon as 3 months after surgery. This difference reached a statistical significance at 4 years of follow up ($p=0.009$)

Conclusion

Our study suggests that LSG is a feasible and safe surgery after LAGB failure compared to primary LSG irrespective of the fact if the band is removed before or during surgery. It has been shown to be as safe a primary LSG. Better weight loss was achieved in the primary LSG group as compared to the revisional LSG. This difference started as soon as 3 months, and reached a statistical significance after 4 years

□

P.580
LAPAROSCOPIC REVERSAL OF ROUX-EN-Y GASTRIC BYPASS

Revisional surgery

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Introduction

Roux-en-Y gastric bypass (RYGB) is the most common bariatric procedure worldwide. It is one of the most effective operations to combat obesity and related metabolic disorders. However, a small fraction of patients can develop serious complications necessitating reversal of gastric bypass. The indications, technique, and outcomes of reversal of gastric bypass are not well reported.

Objectives

This video demonstrates the significant steps of our technique for reversal of Roux-en-Y gastric bypass.

Methods

To date three patients have undergone laparoscopic reversal of RYGB in our unit. Two of these were for excessive weight loss and malnutrition, and the third for recurrent ulcer at the gastro-jejunal anastomosis.

Results

Adhesions from the previous operation were divided to mobilise the gastric pouch, gastric remnant, and Roux limb. The gastric pouch was transected above the gastro-jejunostomy with an Endo-GIA tri-staple linear stapler (purple reload). A small opening was made in the 'new' pouch and gastric remnant, and a side-to-side functional anastomosis was fashioned with an Endo-GIA tri-staple linear stapler (purple reload). The defect was closed with 2/0 polyglactin 910 in two layers. The Roux limb was left in-situ without any entero-enteric anastomosis.

Conclusion

Reversal of gastric bypass may be indicated for several life-threatening reasons, and laparoscopic reversal of RYGB is feasible and well tolerated.

□
P.581

BARIATRIC REVISIONAL SURGERY. A SINGLE INSTITUTION EXPERIENCE

Revisional surgery

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Introduction

Since the spreading of primary bariatric surgery procedures, the number of patients requiring revisional procedure for failure or complication is increased. Revisional bariatric surgery is associated with remarkable complication rate and variable outcome.

Objectives

We evaluated our experience in revisional bariatric surgery in terms of complication rate and overall outcome.

Methods

Between March 2013 and December 2016, 1202 patients underwent bariatric procedures at our institution: 76 for revisional surgery(6.3%). We evaluated surgical options, complication rate and outcome.

Results

Failure of primary surgery was the indication for revisional surgery in 67(88%) patients with a mean BMI of 44.29 ± 4.5 Kg/m²(range:34.0-69.4). Revisional procedures for surgical complications were performed in 9 cases (12%): 2 for refractory acid reflux after sleeve gastrectomy (SG) and 7 for severe malnutrition -6 secondary to biliopancreatic diversion (BPD) and one after mini-gastric bypass (MGB)-. Overall 27 patients underwent Roux-en-Y Gastric Bypass (GBP), 21 MGB, 15 BPD and 4 SG, 6 restoration of DBP and one restoration of MGB. Eight patients developed postoperative complications: 4 leaks, 2 gastro-jejunal anastomosis stenosis, 2 anastomotic ulcers. All but one patient (one enterorrhagia following anastomotic ulcer endoscopically treated) who experienced complications underwent surgical reexploration. At mean follow-up of 24 months no other complications occurred. Among the 67 patients reoperated on for failure of primary surgery the mean BMI is 29.1 ± 4.2 Kg/m² (range:34.2-19.3).

Conclusion

It is not doubtful that revisional bariatric procedures are challenging operations. When indicated this surgery should be referred to high volume centers ensuring acceptable complication rate and adequate outcome.

□
P.582

LAPAROSCOPIC CONVERSION OF GASTRIC PPLICATION TO ROUX-EN-Y GASTRIC BYPASS

Revisional surgery

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Introduction

Laparoscopic greater curve plication (GCP) reduces gastric volume without resecting or implanting foreign bodies. Although early reports are promising with favorable short-term results, the long-term durability of its weight loss effect remains unclear. Emerging reports contrarily suggest a high incidence of unsatisfactory weight loss requiring surgical revision.

Objectives

To demonstrate how laparoscopic GCP was converted to Roux-en-Y gastric bypass (RYGB).

Methods

A 27-year-old lady with body-mass-index of 43.8 kg/m² received GCP for the treatment of morbid obesity, sleep apnea and dyslipidemia. Her postoperative weight loss progress was highly unsatisfactory. Her best percentage of excess weight loss (%EWL) was achieved at 1 year but was 25.3% only. By 3 years, her %EWL dropped to 8.1%. She then requested surgical revision for better weight loss. Laparoscopic conversion to RYGB was thus performed.

Results

This video shows how GCP was converted to RYGB. Adhesions between the proximal gastric tube and omentum were first divided. The two layers of plication stitches were cut to unfold the gastric wall. The devascularized fundus was resected to prevent delayed perforation. RYGB was followed using a circular stapling technique. After creation of the gastric pouch, a gastrojejunal anastomosis was constructed in Roux-en-Y fashion using a 25mm circular stapler. 100cm biliopancreatic limb and 100cm alimentary limb were chosen. A jejun-jejunal anastomosis was constructed using linear stapler. There was no perioperative complication. After 1 year after RYGB, her %EWL improved dramatically to 84.8%.

Conclusion

Conversion of GCP to RYGB was an effective and safe procedure in managing unsatisfactory weight loss after GCP.

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P.583

LAPAROSCOPIC CONVERSION OF FAILED SLEEVE GASTRECTOMY TO SINGLE ANASTOMOSIS GASTRO ILEAL BYPASS.

Revisional surgery

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Background

Weight regain after Sleeve Gastrectomy (SG) is increasingly reported in the literature. After a failed SG, the choice of a secondary procedure falls into many pathways: the conversion into a BPD/DS, into a RYGB, or a revisional-SG (Re-SG).

Introduction

Single anastomosis gastric bypass, and single- anastomosis duodenoileal (SADI) bypass represent a new alternatives. Recently De Luca et al described a new concept of bariatric surgery, the Single Anastomosis Gastro Ileal (SAGI) bypass.

Objectives

The aim of this video is to present the first conversion of a SG into a SAGI bypass.

Methods

We present the case of a 38-year-old woman, with a BMI of 43 kg/m² (weight 125 kilograms, height 1.70 meter), who underwent laparoscopic SG in September 2013. At 1 year follow up, she lost 35 kgs. However by Decembre 2016, she regained weight till reaching a BMI of 38 kg/m². 3D CT volumetry was performed that showed a pouch volume of 220 cm³.

Results

The postoperative course was uneventful. The SAGI consists of creating a small gastric pouch and a single gastroileal anastomosis, 3 meters from the ileocecal valve. We present in this video the laparoscopic conversion of SG into a SAGI with a hand sewn gastroileal anastomosis.

Conclusion

SG is the most frequently performed bariatric intervention worldwide. Insufficient weight loss or weight regain after SG is becoming more commonly encountered imposing a revisional surgery to be more performed.

□
P.584

NEOFUNDUS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY, IS RESLEEVE SAFE AND EFFECTIVE AS A REVISION SURGERY?

Revisional surgery

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Background

Laparoscopic sleeve gastrectomy (LSG) is becoming a very common bariatric procedure, based on several advantages.

Introduction

In the long-term follow-up, weight loss failure after primary LSG can necessitate further surgical interventions, and revisional sleeve gastrectomy (ReSG) can represent an option.

Objectives

We report a feasibility study including 6 patients undergoing a reSG with fundectomy for neofundus for progressive weight regain or insufficient weight loss after a Sleeve gastrectomy.

Methods

From April 2013 to february 2016, 6 patients underwent a reSG procedure for progressive weight regain or insufficient weight loss <50% of excess weight (EW). All patients with weight loss failure after primary LSG underwent radiological evaluation. If Gastrografin swallow showed a huge unresected fundus or an upper gastric pouch dilatation a reSG with fundectomy was proposed.

Results

3 males and 3 women underwent reSG. The LSG was realized for patients with a mean BMI of 46.3 (range 37.6–53). The mean interval time from the primary LSG to reSG was 32.5 months (range 12–55 months). All patients had a neofundus formation. All cases were completed by laparoscopy with no intraoperative incidents. The mean operative time was 58.6 ± 32.1 min. One post operative leak was noted at day 20.

The mean BMI before the reSleeve was 39.5 (range 33 - 43.2).

The mean BMI after the reSleeve decreased to 32.8 (range 28–37) in a mean time of 19 months (range 10 - 48 months).

Conclusion

The ReSG may be a valid option for failure of LSG in selected patients with secondary dilatation or neofundus formation.

□
P.585

REVISIONAL BARIATRIC SURGERY OF A SADI-S PROCEDURE WITH SEVERE BILIAR REFLUX SECONDARY TO A TWISTED SLEEVE

Revisional surgery

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Background

Single anastomosis duodeno-ileal bypass with sleeve gastrectomy (SADI-S) is an operation for morbid obesity based on the biliopancreatic diversion in which a sleeve gastrectomy is followed by an end-to-side duodeno-ileal diversion. The preservation of the pylorus makes possible the reconstruction in one loop, which reduces operating time and needs no mesentery opening.

Introduction

Revisional bariatric surgery (RBS) is consider when there is insufficient weight loss or weight regain, delayed complications associated with implants, or other intolerable side effects.

Objectives

We present a patient with sleeve gastrectomy with insufficient weight loss, converted to SADI-S and then converted to bypass to treat severe reflux symptoms.

Methods

We report the revisional surgery of a 55-year-old woman with a SADI-S procedure converted to laparoscopic Roux-en-Y gastric bypass (LRYGB) due to severe biliary reflux symptoms. The procedure was performed 1 year after receiving multiple unsuccessful treatments. We present upper gastrointestinal series, tomography, and endoscopy. 60% of distal sleeve was resected preserving 300 cm of biliopancreatic limb, 30 cm of alimentary limb and 320 cm of common limb.

Results

24 hours after surgery the patient tolerate oral intake with no gastrointestinal complains. An upper gastrointestinal series was performed and patient was discharged from the hospital 48 hours later.

Conclusion

On this case LRYGB was a safe and effective option with good results reversing reflux symptoms. No negative impact on weight loss results achieved with previous bariatric procedures was seen.

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P.586

LAPAROSCOPIC CONVERSION TO SLEEVE GASTRECTOMY FOR REFRACTORY IRON DEFICIENCY ANEMIA AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: A CASE SERIES

Revisional surgery

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Introduction

Despite routine iron supplement after surgery, laparoscopic Roux-en-Y gastric bypass (LRYGB) may cause iron deficiency anemia (IDA) due to the exclusion the majority of stomach, duodenum, and proximal jejunum. For those with severe iron deficiency, the mainstay treatment is intravenous iron and/or blood transfusion. However, its revisional surgical procedure was rarely mentioned.

Objectives

Herein, we report a case series of refractory IDA after LRYGB, who were managed with conversion to sleeve gastrectomy laparoscopically.

Methods

Prospectively collected data of 3 menstruating female patients, who underwent laparoscopic conversion to sleeve gastrectomy for refractory IDA after LRYGB between December 2011 and June 2014, were retrospectively analyzed. The mean duration of follow-up was 48 months.

Results

The mean interval from initial LRYGB to undergo the revisional surgery was 56.7 months and the mean, lowest hemoglobin level was 5.7 g/dL. The mean operation time of the revisional surgery was 203.3 minutes and the mean blood loss was 66.7 mL. The mean hospital stay after surgery was 7.7 days and only one patient experienced minor gastrogastic anastomotic leak after surgery (Day 4), which was managed conservatively without sequelae. During follow-up, the hemoglobin returned to the mean level of 11.8 g/dL with the iron supplement via oral route.

Conclusion

Based on our experience, laparoscopic conversion to sleeve gastrectomy could be a technically feasible and effective solution for refractory IDA after LRYGB.



P.587

GASTRIC POUCH RESIZE AND BANDING, IN LRYGBP WEIGHT REGAIN.

Revisional surgery

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Background

Weight regain after Roux-en-Y gastric bypass is not uncommon (5%–40%). Most commonly is resulting from a loss of restriction due to pouch dilatation.

Introduction

A 45-year-old woman, with BMI 49.2, had a LRYGBP in 2010. Percent excess BMI loss was significant up to 24 months postsurgery (BMI:30). Percent BMI loss was no longer significant after 36 months, and weight regain became significant within 60 months after surgery (BMI:38.9). Spinal disc herniation and hypertension were the comorbidities.

Objectives

Several surgical interventions with varying efficiency have been proposed in order to reduce pouch/stoma or to increase restrictive/malabsorptive effect of RYGB in patients with weight regain.

Our proposal, in significant weigh regain, is to evaluate the long term effect of the pouch resize and banding, in preventing further weight regain.

Methods

In our patient with dilated cul-de-sac, the resize of the pouch and the placement of a non-adjustable silicone ring loosely fitted around the gastric pouch was the selected approach.

Results

The pouch resize and the pouch banding are a "low risk" revisional surgery. No postoperative complications were achieved. There have been no erosions or slippage of the ring during this, so far, short follow-up.

Conclusion

Pouch dilatation, increase in stoma size are recognized causes of weight regain after RYGB. The choice of surgical intervention should be based on the balance between the risks of complications and extent of weight loss. In our opinion the pouch resize and/or the pouch banding are the treatment of choice in patient with pouch anatomical changes.

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P.588

POST GASTRIC BYPASS HYPOGLYCAEMIA- A VIABLE SURGICAL OPTION

Revisional surgery

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Introduction

Gastric bypass surgery is the most popular surgical treatment for obesity and obesity related comorbidities. It has significant procedure related or nutritional complications. A long term consequences of this surgery is post gastric bypass hypoglycaemia which was first described in 2005. Its prevalence is unknown and occurs 2 to 3 years after the surgery. The hypoglycaemic events are characterised by low blood sugars 2 to 3 hours after a meal. It does not occur with fasting and is confirmed with a mixed meal tolerance test after overnight fasting and insulin, C peptides and proinsulin levels.

The pathophysiology of this disease is not known. There is some evidence that there is an exaggerated increase in post prandial GLP-1, a reduction in ghrelin and an increase in islet cell mass.

Initial management is with diet modification and medication. If these fail, surgical option of pancreatectomy is advocated but this may result in insulin deficient diabetes. Another surgical option proposed is reversal of the bypass.

Objectives

To retrospectively review the outcome of three post gastric bypass patients with hypoglycaemia treated surgically after not responding to medical management

Methods

Three patients underwent revision of their gastric bypass involving a jejunal interposition on the biliary limb and restoring continuity.

Results

All three had an improvement in their symptoms with no procedure related complications and maintained a weight loss greater than 35kg

Conclusion

Revision of gastric bypass with a jejunal interposition is a viable surgical option to treat post gastric bypass hypoglycaemia

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P.589

NOVEL PROCEDURE;ROUX EN Y GASTRIC BYPASS AS A DEFINIT TREATMENT OF LEAK AFTER SLEEVE GASTRECTOMY.

Revisional surgery

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Background

Treatment of leak after sleeve is also expensive and with lot of comorbidities.we decide to do early RNYGBP after leak of sleeve gastrectomy.

Introduction

sleeve gastrectomy is commonest but sometimes leak.There are different types of treatment of leak and one of the treatment is stenting that is very expensive and need expertise to do it.

Objectives

To decrease the comorbidities and cost of treatment

Methods

Since 2015 four patients 2 male and 2 female,average age 34,average BMI 43.6.Leak occur 4-6 days.We did early laparoscopy and Irrigation.All leaks were at GE junction.With the help of endoscope during surgery we confirm stricture in 3 cases and twist in one at incisura angularis.we staples the gastric pouch just proximal to obstruction and did classic RNYGBP with 50 cm billiopancreatic limb and 150cm alimantery limb.We also insert a carrogate drain in the left subdiaphragm.All patients start clear liquid diet the day after surgery.we also did upper GI gastrografin study at 1st day,7th day and after one month.

Results

All patient tolerate clear liquid diet at 1st day of surgery and discharge at the 2nd day of surgery.In two cases with in one week there was no secretions in drain,one case had secretions till 15 th day of surgery and one case had secretions till one month.During two years followup of first case and about six months of last case no collection and abscess formation and routine weight loss is present.

Conclusion

we conclude early RNYGBP is better option after leak of sleeve gastrectomy especially expertise gastroentrolgist is not present.



P.590

PERFORMING LAPAROSCOPIC SLEEVE GASTRECTOMY IN A PATIENT WITH PREVIOUS MULTIPLE OPEN SURGERIES AND MANAGEMENT OF INTRAOPERATIVE BILIARY LEAKAGE

Revisional surgery

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Introduction

Reoperative bariatric surgery has become a common practice in many bariatric centers. Revision of a patient with failed and removed gastric band is not always easy, and previous open upper abdominal surgeries also make the reoperative bariatric surgery difficult. If these two problematic situations arise in the same patient one will be confronted with a challenging case. In this video, we also demonstrate how to deal with biliary leakage as seen during the operation.

Objectives

The aim of this video is to show our technique of performing a complex revisional bariatric surgery.

Methods

A 42 year old woman with a BMI of 43 had prior history of multiple open surgeries including gastric banding (conversion to open), open band removal, open cholecystectomy, open appendectomy and cesarean section. Dense adhesions and lack of clear anatomical identification were the most challenging issues. The bile stained fluid was noted in the operation field. Intraoperative gastroscopy was performed to see the gastric mucosal integrity. A small open bile duct was found and clipped successfully. Laparoscopic revisional procedure was conducted to perform a sleeve gastrectomy.

Results

The patient had an uneventful postoperative period. She was discharged on the fourth postoperative day.

Conclusion

Revisional bariatric surgery is more challenging than primary procedures and is associated with a higher rate of complication.



P.591

CONVERSION TO GASTRIC BYPASS AND REVISION OF CRUROPLASTY DUE TO PERSISTENT GASTROESOPHAGEAL REFLUX DISEASE AFTER INITIAL SLEEVE GASTRECTOMY AND CRUROPLASTY

Revisional surgery

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Introduction

Recently, dramatically increased numbers of bariatric procedures worldwide are followed by an increased incidence of revision surgeries, due to complications or failures.

Objectives

To evaluate the role of laparoscopic gastric bypass in the treatment of gastroesophageal reflux disease after sleeve gastrectomy.

Methods

A morbid obese, female patient, 55 years old, BMI 39.5 kg/m², with concomitant HBP, hyperinsulinemia and a 3 cm, non-complicated hiatal hernia, was operated in 2013 by laparoscopic sleeve gastrectomy (LSG) and concomitant hiatal hernia repair by posterior cruroplasty. 30 months afterwards a resolution of obesity and comorbidities was obtained, at BMI of 25.7 kg/m². Meantime, symptomatic, persistent gastroesophageal reflux disease, resistant to medical treatment, with a radiological confirmed recurrence of hiatal hernia, was registered.

Results

We present the video of laparoscopic conversion of gastric sleeve to R-en-Y gastric bypass (LGBP), with concomitant revision of the posterior cruroplasty. An important improvement of the patient's symptoms was achieved 3 months postoperatively, with suspension of medical therapy, maintained one year after intervention.

Conclusion

Conversion in LGBP is actually the best option of treatment in case of reflux disease after LSG.

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P.592

SHORT-TERM OUTCOMES OF LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS AS A REVISIONAL PROCEDURE, AFTER FAILED OPEN OR LAPAROSCOPIC VERTICAL BANDED GASTROPLASTY

Revisional surgery

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Introduction

In the past, the Vertical Banded Gastroplasty (VBG) was a commonly performed bariatric treatment option. A good strategy in patients with a failed VBG might be the conversion to a laparoscopic Roux-en-Y Gastric Bypass (LRYGB) .

Objectives

The aim of the current study is to analyze the safety and feasibility in a high-volume bariatric institution with patients requiring revisional LRYGB following a primary open or laparoscopic VBG.

Methods

All patients who underwent LRYGB as a revisional procedure after failed or complicated VBG from November 2004 to December 2016 were reviewed. Characteristics, BMI, operative time, intraoperative pitfalls, length of stay, early 30 days morbidity and mortality were analyzed.

Results

In total, 212 patients had previously a laparoscopic VBG (LVBG) and 99 patients were post- open VBG (OVBG). Average operative time was 118.37 (30-195) minutes in OVBG compared to 93.73 (35-180) minutes in LVBG. The mean hospital stay was 3.23±1.16 (1-9) days in the OVBG patients versus 3.05 (1-13) days in the LVBG group. Early complication rate was 9.09% in OVBG versus 6.60% in LVBG, with a reoperation rate of 2.02% (OVBG) versus 1.89% (LVBG). No mortality had occurred.

Conclusion

To our knowledge, this study on 311 patients is the largest single-center experience on conversion of OVBG and LVBG to LRYGB ever published so far. Revisional LRYGB following OVBG is technically challenging, time consuming with a slightly higher chance of early complications and reinterventions in comparison to the LVBG patients. We recommend that this type of revisional bariatric surgery should be performed in high-volume bariatric centers.

□
P.593

EARLY POSTOPERATIVE OUTCOME OF LAPAROSCOPIC CONVERSION OF FAILED SLEEVE GASTRECTOMY TO ROUX-EN-Y GASTRIC BYPASS IN DUBAI HOSPITAL BARIATRIC CENTER

Revisional surgery

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Introduction

Insufficient weight loss or weight regain after laparoscopic sleeve gastrectomy (LSG) has been reported in increasing number of patients.

Objectives

The reason of complications is multifactorial. In our institute we prefer to offer conversion to laparoscopic Roux-en-Y gastric bypass (RYGB).

Methods

In a prospectively kept database we have retrospectively collected 22 patients in total who underwent conversion from LSG to RYGB between 2013-2016. The patients' characteristics, indications for redo surgery, early postoperative outcome, evolution of BMI and improvement of comorbidities were analyzed.

Results

22 patients underwent the above mentioned procedure, female:male ratio 4.5:1, mean age 35.77 years (range: 19-61 years). Mean preoperative BMI was 43.2 (18.1-62.3 kg/m²), the average hospital stay: 3.09 nights. The reason of conversion in 90.9% of cases was weight regain or insufficient weight loss; 36.36% had reflux symptoms or persistent vomiting. Two patients (9.09%) suffered from severe malnutrition (after 14 months) or excessive weight loss/food intolerance 4 months after LSG. We had 0% mortality and no stapler line or anastomotic leakage. We had no in-hospital or short-term complications or readmissions within 30 days. The mean achieved lowest BMI was 36.44 (17.5-51 kg/m²) and most of the pre-existing comorbidities: reflux 100%, dyslipidaemia 100%, hypertension 83.3%, depression 100% has significantly improved. 95.45% of patients would do the procedure again.

Conclusion

The fully standardized laparoscopic conversion of LSG to a RYGB is a safe procedure with zero % mortality and very low morbidity rates. The increasing number of patients will provide more experience in our high volume bariatric center.

P.594

A DESCRIPTION OF MODIFIED REVISION FOR ROUX-EN-Y GASTRIC BYPASS (RYGB)

Revisional surgery

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Introduction

RYGB is the metabolic surgery that withstood the test of time, revising this surgery may prove to be a challenge. Shortening of the common channel is a technique used to increase excess weight loss after RYGB, but it comes at the cost of nutritional deficiencies without desired weight loss.

Objectives

To study patients who had a modified bypass technique of (RYGB).

Methods

Technique: we measure 25 cm from the gastrojejunostomy and resect the roux limb. We count 300cm from the (TI) then perform a 5-6cm side to side anastomosis. If the remaining roux limb that was previously anastomosed to the jejunojunostomy is less than 50 cm we resect it. If its more we restore the continuity of the bowel. The weight, BMI, co-morbidities, EWL % and the postoperative complications were analyzed.

Results

Twelve Patients underwent this procedure between 2012-2016, (N=10) females, with mean age (34.7 +/- 6.5) years.

	RYGB	Revision
F/U Time (months)	25.2	12.2
Initial BMI	52.8 ± 10.4	48.1 ± 15.6
BMI post operation	37.1 ± 10.1	34.5 ± 7.4
Initial body weight	143.5 ± 30.8	122 ± 27.6
EWL%	68 ± 33	53 ± 32.6

Nutritional deficiencies :

	(N=12)	patients developed deficiency
Vitamin D (75-250nmol/L)	88.58 +/- 19.1	2
Calcium (2.2-2.6 mmol/L)	2.41 +/- 0.5	1
Vitamin B (145-569 pmol/L)	173.7 +/- 22.1	1
Albumin (35 -47g/L)	36.13 +/- 2.34	4
Iron (11-31umol/L)	12.9 +/- 4.1	2
Transferrin (2.1-3.6g/L)	2.19 +/- 3.5	
Ferritin (11-307ng/ml)	44.8 +/- 12.1	
Mg (0.74-0.99mmol/L)	0.79 +/- 0.12	-

Conclusion

This novel revision of RYGB for failure weight loss, is safe, feasible and effective with acceptable nutritional deficiencies.

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P.595

CONVERTING 1290 FAILED GASTRIC BANDING PROCEDURES TOWARDS THE LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS: FEASIBILITY AND SAFETY IN A HIGH-VOLUME REVISIONAL BARIATRIC CENTER

Revisional surgery

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Introduction

The Roux-en-Y gastric bypass (RYGB) remains the preferred surgical conversional procedure for failed purely restrictive procedure as the laparoscopic adjustable gastric band (LAGB). However, since morbidity and early complication rates are reported to be higher than in primary RYGB, some surgeons prefer to perform this conversion in two stages instead of in one stage.

Objectives

We assessed the efficacy and the safety of this revisional approach in a large cohort of patients operated in a high volume bariatric institution.

Methods

Between 2004-2016, we identified a total of 1290 patients in which a secondary bypass was performed after a previous band placement. In 976 cases the band was still in place and a single-stage conversion procedure was planned. In the other 314 the LAGB was already removed prior to the RYGB. The feasibility of this approach and perioperative outcomes of these patients were evaluated and analyzed.

Results

A single-step approach was successfully achieved in 834 (85.5 %) of the 976 patients. During the study period, there was a significant increase in performing the conversion from LAGB to RYGB single-staged. No mortality or anastomotic leakage was observed in all groups. Only 60 patients (4.6 %) of the study group of 1290 patients had a 30-day complication (Clavien-Dindo Classification I-IIIb).

Conclusion

Performing a conversion of a LAGB to RYGB can be performed with a very low morbidity and zero-mortality in a high-volume revisional bariatric center. With increasing experience and full standardization of the conversion, the vast majority of operations can be performed as a single-stage procedure.

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OUTCOMES OF REVISIONAL BARIATRIC SURGERY IN A SINGLE CENTER IN MEXICO CITY

Revisional surgery

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Background

Bariatric surgery is the most effective therapy for morbid obesity. There has been an accelerated growth in the number of bariatric procedures annually. Due to this growing demand there is an increasing number requiring revision surgery due to undesirable results. Unsuccessful weight loss and anatomical complications are the two most common reasons.

Introduction

The choice of revision procedure depends on the primary bariatric procedures: Sleeve Gastrectomy (SG), Single Anastomosis Gastric Bypass (SAGB), Roux-en-Y Gastric Bypass (RYGB), Gastric Plicature (GP) and Single anastomosis Duodeno-Ileal Bypass with Sleeve Gastrectomy (SADI-S).

Objectives

This study aimed to evaluate the initial experience of revisional bariatric surgery at a single specialized center in Mexico.

Methods

We conducted a retrospective analysis to review the indications for revisional bariatric procedures in a Bariatric Surgery Center in Mexico.

Results

47 patients underwent bariatric revisional surgery at our institution between January 2008 to January 2017. The mean age was 41.77 ± 9.33 . The mean BMI was 42.12 ± 7.80 . Revisional surgery was performed laparoscopically in all patients. The indications for revisional surgery: failure in loss weight (46.8%), failure in weight loss with weight regain (19.1%), second stage (14.9%), gastroesophageal reflux (12.8%), gastroesophageal reflux with weight regain (4.3%) and twist sleeve (2.1%). The procedure performed: SG to RYGB (51.1%), AGB to RYGB (12.8%), SG to SADI-S (12.8%), SG to SAGB (8.5%), AGB to SAGB (6.4%), GP to RYGB (6.4%) and SAGB to RYGB (2.1%).

Conclusion

Revisional bariatric surgery can be successfully performed with laparoscopic approach with low risk. Selection for the proper revisional procedure can efficiently manage undesirable results from the primary surgery.



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CONVERSION OF MINI GASTRIC BYPASS TO GASTRIC SLEEVE BY LAPAROSCOPY

Revisional surgery

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Background

Dumping syndrome, corresponds a varied of gastrointestinal and systemic symptoms that results from secondary alterations seen after gastric resection and the loss of the gastric reservoir function

Introduction

Is a 55-year-old female patient, who underwent a mini-laparoscopic gastric bypass in May 2014 for a history of obesity and diabetes mellitus 2

Objectives

Two years after surgery the patient was in normal weight and remission of diabetes, however, she always presented multiple events of early dumping (demonstrated with glucose test) we prescribed nutritional and pharmacological management. 24 months follow-up where we detected data of moderate malnutrition; Dumping events persist. Nutritional and pharmacological management was unsuccessful

Methods

the case was session in a multidisciplinary committee, where we decided revision surgery and to evaluate the possibility of conversion of gastric bypass to gastric sleeve by laparoscopy

Results

Laparoscopic surgery was performed, dividing jejunal loop of gastric pouch; Gastro-gastro anastomosis with stapler; Section of short vessels, gastric sleeve calibrated at 38 fr; Negative methylene blue test.

Conclusion

one year after conversion, the patient has maintained her weight, normal glucose levels; Optimal nutritional control and no dumping event

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SIMULTANEOUS GASTRIC BAND REMOVAL AND GASTRIC BYPASS; A VIDEO FOR DETAILED TECHNIQUES

Revisional surgery

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Background

Until now, the procedural choice is Roux-en Y gastric bypass after failed gastric band. And two-step approach is favored for almost expert bariatric surgeon because revision gastric bypass is itself technically demanding.

Introduction

However recently, one-step approach is cautiously applied in a selected case. We tried one-step revision gastric bypass in uncomplicated gastric band patients.

Objectives

Here we report our technique.

Methods

Details as follows; Five trocars and one liver retractor were used same as conventional gastric bypass. After identifying gastric band, careful dissection near the buckle was done, unbuckled, and then band was removed. Sharp dissection with scissors was done anterior wall that lodged band and previous gastro-gastric suture until full mobilization of left liver. Dissection was continued until exposure of Angle of His. Next procedure was done as usual primary Roux-en Y gastric bypass. Water soluble contrast upper GI series was done on postoperative day one for check the leak.

Results

45-year old women had a gastric band in 2011 with BMI 37kg/m². She lost almost 20kg and then regained up to 100kg. She visited our hospital August, 2016 with BMI 39kg/m². During last 5 years, she never complained any band related complications. Revision was done simultaneously on November 24th 2016. Operation time was 209 minutes and she was discharged after 2 days. Postoperative recovery was uneventful.

Conclusion

In a selected patients like a no history of band related complication, one-step revision bypass can be applied safely.

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RESTORATION OF NORMAL ANATOMIC CONTINUITY AFTER GASTRIC BYPASS

Revisional surgery

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Background

Gastric bypass is the gold standard in bariatric surgery with excess weight loss at 4 years of over 50% in morbidly obese patients. Its reversion is a rare procedure that can be performed by laparoscopy.

Introduction

It is the case of a 23 year-old woman who Roux-En-Y Gastric bypass elsewhere despite a psychiatric preoperative contraindication. This intervention caused subsequently chronic abdominal pain. A laparoscopy was revealed an internal hernia. Despite this intervention, the patient did not notice any improvement and even rather described a new worsening with permanent abdominal pain.

Objectives

After multidisciplinary discussion and exclusion of all other possible causes, a complete reversion of the gastric bypass was performed 2 years after the initial intervention.

Methods

Adhesiolysis allowed to identify hiatal region, digestive loop, biliodigestive loop and common loop. No abnormalities were noted. A disconnection of the gastrointestinal anastomosis and Roux-en Y loop was performed, and continuity was restored by manual side-to-side gastro-gastric anastomosis and side-to-side mechanical jejuno-jejunal anastomosis.

Results

Postoperative course was uneventful. Radiological control on postoperative day 1 was normal (gastroesophageal transit). Refeeding was well tolerated and patient discharged after 7 days. During 1 month, the patient was relieved of her symptoms. She then developed severe abdominal pain again, for which we have no somatic explanation.

Conclusion

Roux-En-Y Gastric gastric bypass is an intervention that can be reverted by laparoscopy as well. Indication of reversibility should be exceptional, and decided by a multidisciplinary team.

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LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG) IN ONE STEP, AS REVISIONAL SURGERY TO LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING (LAGB) FAILURE.

Revisional surgery

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Introduction

LAGB was one of the most used bariatric procedures. Its success is based on simplicity and good short-term results. However, its use was declining due to the variability in their results and long-term complications. Is still controversial which is the best revision procedure and how many steps should be performed it, after LAGB's failure.

Objectives

To demonstrate our results of LSG as revisional surgery, after the failure of LAGB, in one step.

Methods

1020 LAGB patients were studied (1998-2013). Forty eight (4.7%) have been converted to other techniques, 20 of them underwent a LSG in one step as revision surgery for LAGB's failure, 15 women, 5 men, 53.2 years (sd±8.4). Mean preoperative weight to primary surgery was 122.6 kg (sd±19.1), with BMI 48.6 (sd±6.9). Time between primary and revision surgery was 119.6 months (sd±28). The causes of revision surgery were 13 LAGB defects (balloon leakage), 4 esophageal dilatation-megaesophagus and 3 weight loss failure. Bands were in normal position. Slippages and Erosions were excluded.

Results

Average operating time was 114.5 min (sd±26.8). No postoperative complications or operative mortality. The average excess weight loss (EWL) was 55.1% (6 months), 61.3% (12 months), 66.4% (18 months), 64.1% (24 months) and 61.7% (36 months).

Conclusion

LSG in one step is performed in a safe option as revision surgery at LAGB's failure in normal position. The complication rate and EWL% compared to the literature are similar to the LSG as primary surgery.

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REVISIONAL SINGLE-ANASTOMOSIS GASTRIC BYPASS FOR COMPLICATED LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING FOR BMI OVER 35 – A TWELVE-MONTH REVIEW

Revisional surgery

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Introduction

Although LAGB is a safe and effective bariatric procedure, many patients are re-presenting for weight re-gain or other complications. Up to 40% of these patients require revisional surgery.

Objectives

To assess the safety and durability of single stage conversion of LAGB to SAGB in patients intolerant to LAGB and who also fail to lose or regain weight.

Methods

A prospective bariatric database was reviewed to select patients with BMI >35kg/m² who underwent laparoscopic conversion from LAGB to SAGB over three years by a single surgeon in a single institution. Patient demographics, indications, conversion time frame, operative details, complications and weight profile were recorded.

Results

74 patients underwent laparoscopic conversion to SAGB. There were 67 females and 7 males. Mean age was 48 years. Indications for conversion were inadequate weight loss (36), patient intolerance (18), weight re-gain after band removal (8), prosthesis issues (5), gastric pouch dilatation (4), band erosion (2) and band slippage (1). All procedures were completed laparoscopically, with 53 patients undergoing a single stage conversion. The mean operative time was 73 minutes. Mean length of stay was 2 days. 30-day morbidity included gastro-jejunostomy structure (4), port site wound infection (1), bowel obstruction requiring Roux-en-Y gastric bypass (2) and re-admission for abdominal pain (1). The percentage excess weight loss at 6 weeks, 3, 6 and 12 months were 21.0%, 37.8%, 55.1% and 67.0% respectively.

Conclusion

Conversion from LAGB to SAGB shows a low 30-day morbidity and good short-term weight loss at 12 months.

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REVISION SURGERY OF A VERTICAL SLEEVE GASTRECTOMY AND CONVERSION TO A SINGLE ANASTOMOSIS GASTRIC BYPASS.

Revisional surgery

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Introduction

Single anastomosis gastric bypass (SAGB) has been reported as a relatively simple, rapid, and effective technique, the long-term results of which appear to be equal or better than those of standard Roux-en-Y gastric bypass (RYGB). Conversion of vertical sleeve gastrectomy to SAGB is justified in those patients with progressive weight regain and a poor metabolic control.

Objectives

Describe the results after vertical sleeve gastrectomy revision surgery for weight regain, with a single anastomosis gastric bypass as our revision strategy.

Methods

This is the case of a 38 years old female who underwent a vertical sleeve gastrectomy in November 2010 with a grade I Obesity and a BMI of (34,7 kg/m²). 7 years later she consults for progressive weight regain with a BMI: 35,6 kg/m². A revision surgery was offered. On February 2017 a conversion from vertical gastrectomy to a single anastomosis gastric bypass was performed. A 50 cc gastric pouch was created, and a 30 mm linear stapler was used for the anastomosis, the bilio-pancreatic limb was 200 cm distal to Treitz Ligament. Postoperative evolution was satisfactory tolerating oral intake 48 hours after the surgery.

Results

All the surgery was completed by laparoscopy with no incidents during or after the procedure. The BMI: 33 kg/m² after a 4 weeks follow up.

Conclusion

Vertical sleeve gastrectomy conversion to a single anastomosis gastric bypass is a feasible surgical option in patients with weight regain.

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THREE TROCARS LAPAROSCOPIC GASTRIC POUCH RESIZING FOR INSUFFICIENT WEIGHT LOSS AFTER ROUX-EN-Y-GASTRIC BYPASS

Revisional surgery

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Background

Insufficient weight loss is a major issue after bariatric surgery. After nutritional and psychological evaluation, endoscopic and radiologic investigations should be performed to find the potential cause of surgical failure.

Introduction

We report a case of a 41 years old female passing from a BMI of 47,4 to 37,5 kg/m² after 2 ½ years of surgery. Preoperative work-up showed a clear dilated gastric pouch.

Objectives

Surgical correction to increase weight loss.

Methods

3 trocars were placed in the abdomen. A percutaneous suture was placed in the apex of the right diaphragmatic crus to retract the left liver lobe. The first step consisted into expose the gastro-jejunal anastomosis and gastric pouch, hence an adhesiolysis by coagulating hook was performed. The hiatal hernia was reduced and cruroplasty was performed. Resection of the pouch was done by green cartridges, after have placed a 34Fr orogastric tube. The staple line was not entirely reinforced, but just between the staples applications. The blood loss was minimal. The operative time was 118 minutes.

Results

Postoperative course was uneventful with a discharge on 3rd postoperative day, after a gastrograffin swallow control. At visit consultation, she was doing well.

Conclusion

Insufficient weight loss after Roux-en-Y gastric bypass has to be considered by a multidisciplinary team. In front of a gastric pouch dilatation, revisional surgery is feasible, although it can be associated to postoperative complications.

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REVISIONAL SURGERY DUE TO ARTESIAN GASTRIC BANDING

Revisional surgery

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Background

Revisional bariatric procedures are becoming increasingly common. Although most of them will fail and may require a revisional operation. The main reasons are inadequate weight loss and weight regain. The gold standard revisional option is a laparoscopically conversion.

Introduction

The gastric band is a primarily restrictive procedure in the treatment of obesity. Initiated in the 1990s, it was performed in many countries to be safe and easy implement. However it presents therapeutic failure in 40% - 50% of the cases and 30% will need revisional surgery. This video shows the revisional surgery due to artesian gastric banding allocated in Peru.

Objectives

Show the revisional surgery and conversion procedure to gastric sleeve due to artesian gastric banding failure.

Methods

We conducted the revisional surgery by laparoscopic approach. The conversion strategy was removal of the gastric banding and sleeve gastric in the same procedure.

Results

There was no complications in procedure. Diet was introduced in the first post operative and patient return to ambulatory segment in 10th post operative with 5kg loss.

Conclusion

The gastric band is a therapeutic option in the treatment of obesity, but it can present unsatisfactory results and other complications. The use of artesian material can be associated with adverse evolution rates.



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SHORT-TERM FOLLOW-UP OF 73 PATIENTS WITH CONVERSION OF A FAILED SLEEVE GASTRECTOMY TO A LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS

Revisional surgery

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Introduction

Failures of a sleeve gastrectomy (SG) are reported in terms of weight regain on the long run or insufficient weight loss from the start. Other failures are related to complications, including stricture or coiling of the sleeve and drug resistant GERD. Though different surgical options can be offered, we prefer the conversion to a Roux-en-Y gastric bypass (RYGB).

Objectives

We assessed the feasibility and the early postoperative results of this revisional approach in a high-volume bariatric institution.

Methods

Between May 2008 and November 2016, 73 patients who underwent a laparoscopic conversion from SG to RYGB were identified from a prospectively collected database.

Results

A total of 73 patients (M:F = 1:1,9) with a mean age of 41 years old underwent the above mentioned procedure. In 67 cases (91,8%), the reason for conversion of SG to RYGB was insufficient weight loss or weight regain. In 6 patients (8,2%), the operation was carried out because of early or late complications of the sleeve procedure. Mean pre-operative BMI was 41,6 kg/m². Mean hospital stay was 2,7 nights. Surgical technical details include the trimming of the (dilated) gastric pouch in the majority of the patients and the performance of a circular stapled (25 mm diameter) gastrojejunostomy in all but two patients. No mortality nor anastomotic leakage was observed. Only 5 patients (6,8%) had a 30-day minor complication.

Conclusion

Laparoscopic conversion of a sleeve gastrectomy to a Roux-en-Y gastric bypass can be performed with a very low morbidity and zero mortality in a high-volume revisional bariatric center.



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ACUTE HIATUS HERNIA POST LAPAROSCOPIC SLEEVE GASTRECTOMY

Revisional surgery

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Background

The prevalence of obesity is rising worldwide

Bariatric surgery is the only effective treatment for severe obesity, offering long-term weight loss and remission or improvement of obesity comorbidities.

Introduction

Laparoscopic sleeve gastrectomy (LSG) has been performed as a treatment for morbid obesity for the past 16 years.

Like any other surgical procedure, laparoscopic sleeve gastrectomy has its own dark side or procedure related complications.

Objectives

We are presenting our experience and management plan for a patient who presented with acute hiatal hernia after uneventful laparoscopic sleeve gastrectomy (video presentation).

Methods

26 years old male presented with post operative symptoms and signs of gastric obstruction. Investigations confirmed presence of hiatus hernia.

Results

Patient was taken for diagnostic laparoscopy and repair of his Hiatus hernia. He did very well post operatively and was discharged in good condition.

Conclusion

Acute hiatus hernia is rare complication after laparoscopic sleeve gastrectomy but does occur. it may be under reported.

The actual cause is not well known but may be loss of fat in the hiatus has a role. treatment is surgical.

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OUTCOMES OF SLEEVE CONVERSION TO GASTRIC BYPASS: PRELIMINARY RESULTS

Revisional surgery

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Introduction

Laparoscopic sleeve gastrectomy (LSG) represents over 50% of the bariatric procedures done annually worldwide. Long-term results are still inconsistent, with controversial data on percentage of failed sleeves requiring revisional surgery. Conversion into laparoscopic R-en-Y gastric bypass (LGBP) is one of the options in case of insufficient weight loss (IWL), weight regain (WR), and/or severe gastro-esophageal reflux disease (GERD), with or without hiatal hernia.

Objectives

To evaluate incidence, indications and outcomes of LSG conversion to LGBP in a bariatric centre of excellence.

Methods

Database of morbid obese patients operated in our centre between 2012 and 2016 was reviewed. Patients reoperated for IWL, WR or GERD were retrospectively analysed for demographics, operative details, complications, GERD and comorbidities evolution, weight loss, and overall satisfaction after revision surgery.

Results

From 975 primary LSG performed, 13 patients (1.3%, 3M/10F, mean age 43.6 ± 10.7 years, initial mean BMI 44.0 ± 6.4 kg/m²) were converted to LGBP after a mean period of 42.6 ± 29.8 months. Causes of conversion were WR (30.8%) and GERD (69.2%). Mean operative time of LGBP was 150 ± 50 minutes, with a mean hospital stay of 5.2 ± 1.1 days. Mean BMI at revision time was 33.7 ± 7.1 kg/m², and 29.2 ± 4.5 kg/m² after 12 months. Overall satisfaction for postoperative evolution, GERD resolution and/or further weight loss was obtained in all patients, after a mean follow-up of 14.1 ± 8.9 months.

Conclusion

Conversion of failed LSG to LGBP is safe and effectiveness during short and medium term as concern weight loss and GERD remission. Long-term follow-up is mandatory to confirm data on weight loss durability.

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RESULTS OF RESECTION OF THE GASTRIC POUCH FOR WEIGHT REGAIN AFTER SLEEVE GASTRECTOMY OR GASTRIC BYPASS

Revisional surgery

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Introduction

The failure of bariatric surgery on long term was known.

Objectives

The aim of this study is to shown the results of one center specialized in redux bariatric surgery and nothingly after failure of bypass and sleeve procedure.

Methods

During year 2009 to 2017 , we have proceed 48 redux surgery, after failure or regain of weight, and we presents the results on BMI, loss of excess weights (LEW) and specific morbidity over 5 years.

Results

48 patients have been treated.

34 patients after LRYGBP, 2 after OAGBP, 12 after SG.

The median BMI of first surgery was 47 (range 35,6 to 78,8), and at the moment of redux surgery was 39,4 (range from 21,7 to 67).

In all patients, we proceed a resection of gastric pouch with ablation of former vertical stapled line (named sleeavage of gastric pouch).

The principal morbidity was 2 cases of late fistulae, one after 30 days treated medically and one after 90 days treated surgically.

Over 2 years after surgery, for 20 patients,the median BMI was 32,8 (range 21 to 44,9) and the median LOW was 50 % (range -80% to 111%)

Over 5 years after surgery, for 10 patients, the median BMI was 32,7 (range 26 to 44,9) and the median LOW was 38 % (range -80% to 89%).

Conclusion

Reduction of gastric pouch is feasible, with specific morbidity in case of failure of GBP or SG, the success can be not granted.

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REVISIONAL BARIATRIC SURGERY PERFORMED TOTALLY ROBOTIC

Revisional surgery

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Background

Revisional surgeries present a higher risk for morbidity/mortality than do primary procedures. The da Vinci robotic surgery system with its enhanced visualization and dexterity may improve operative outcomes for high risk patients.

Introduction

To our knowledge, there are currently very limited studies of the safety and effectiveness of totally robotic procedures for revisional bariatric surgery.

Objectives

To determine the surgical outcomes of a variety of revisional procedures performed totally robotic (TR).

Methods

A retrospective analysis of a prospectively maintained database included 178 TR revisional surgeries performed by a single surgeon including: a) 147 conversions to Roux-en-Y gastric bypass (RYGB) including 98 conversions from adjustable gastric band, b) 29 gastrojejunal anastomotic revisions with or without partial gastrectomy, and c) 2 RYGB reversals. Outcome measures were operative time, blood loss, length of stay (LOS), 30-day readmissions, 30-day reoperations, and mortality.

Results

For all surgical procedures, total time in surgery was 185.94 ± 73.8 min (40-517). Operative times were lowest for conversions to RYGB and highest for gastrojejunal anastomotic revision. Mean LOS for all patients was 3.13 ± 3.46 days (1-30). Perioperatively, there was one conversion, 0 leaks, and 0% mortality. The 30-day readmission rate was 10.04% (5.02% malaise, 5.02% physical complications), and the 30-day reoperation rate was 2.7%. With the totally robotic procedures, there were 0% 30-day anastomotic leaks, 0% strictures, and 0% mortalities.

Conclusion

Utilization of the da Vinci surgery system for totally robotic revisional bariatric surgery is safe and may be effective in lowering surgical risks and complications.

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LAPAROSCOPIC SINGLE-STAGE REVISION TO SLEEVE GASTRECTOMY AND ONE ANASTOMOSIS GASTRIC BYPASS FOLLOWING LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING

Revisional surgery

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Introduction

There is an increasing use of revision surgery following primary laparoscopic adjustable gastric band (LAGB) placement. The safety of laparoscopic single-stage revision (LSSR) compared to 2-stage revision is of interest to healthcare providers, patients and economists.

Objectives

To review early (within 30 days) and late (> 30 day) complications of our consecutive LSSR cases from LAGB to sleeve gastrectomy (LSSR-SG) and one anastomosis gastric bypass (LSSR-OAGB).

Methods

Retrospective analysis of our prospectively maintained database from November 2013 to March 2017.

Results

We identified 118 patients who had LSSR surgery. The majority, 79.9%, of patients were female. Seventy-five patients underwent LSSR-SG (mean age 44.0 +/- 1.3 years, weight 108.1 +/- 2.7 kg and BMI 38.8 +/- 0.90 kg/m²) and 43 patients had LSSR-OAGB (mean age 44.8 +/- 1.6 years, weight 135.5 kg +/- 4.4, BMI 48.4 +/- 1.3 kg/m²).

Three patients re-presented with early complications: 1 following LSSR-SG, left portal venous thrombosis; and 2 following LSSR-OAGB; functional bowel obstruction (n = 1) and abdominal pain (n = 1). There were 2 late complications, both following LSSR-OAGB; small bowel obstruction (n = 1) and worsening renal function due to high oxalate absorption (n = 1). There were no leaks or deaths following LSSR-SG or LSSR-OAGB.

Conclusion

None of the complications were thought directly related to the single-stage nature of the surgery. We believe both LSSR-SG and LSSR-OAGB are safe procedures that ameliorate the additional risks and costs associated with second stage surgery following LAGB.

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SLEEVE VS SLEEVE WITH DUODENOJEJUNAL BYPASS AS A REVISIONAL PROCEDURE

Revisional surgery

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Introduction

Revisional bariatric surgery is increasing worldwide. Weight regain after adjustable gastric banding (LAGB) is one of the commoner indications for revisions. Many published series showed similar weight loss outcomes when LAGB is converted to sleeve gastrectomy (LSG) compared to primary LSG. Our experience showed inferior weight loss in LAGB conversions to LSG (Excess weight loss (EWL) 49% at one year) in comparison to primary LSG (EWL 83% at one year). LSG with Duodenojejunal bypass (DJB) has not been studied as a revisional procedure.

Objectives

To study LSG with DJB in conversions from LAGB, given the high prevalence of type II Diabetes (DM) and smoking in our patient population.

Methods

We obtained institutional review board approval to perform LSG with single anastomosis DJB as a revisional procedure at Jordan Hospital in Amman, Jordan, on 5 patients, to review one year outcomes. Our primary end points were complications: Leak, bleeding, stenosis, readmissions and reoperations at 90 days and excess weight loss percent (EWL%) and at one year. Resolution of co-morbidities and mineral deficiencies were secondary endpoints.

Results

5 patients underwent LSG with single anastomosis DJB conversion from LAGB. One patient required early re-exploration for tachycardia but was negative. No other complications or readmissions within 90 days. EWL at one year was 74%. DM, hypertension, and increased triglyceride level resolved in all patients. Iron deficiency was commonest at one year requiring additional supplements.

Conclusion

Revisional LSG with DJB is safe and produce better EWL to LSG alone, but at the expense of more mineral deficiencies.



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MINI GASTRIC BYPASS AS A REVISIONAL SURGERY

Revisional surgery

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Introduction

Mini Gastric bypass (MGB) is a promising bariatric procedure with various benefits, although it is yet to gain wide acceptance, and routinely performed only in specialized bariatric centers. Here we describe our first-year experience in MGB with emphasis on its safety and efficacy as a revisional surgery.

Objectives

To evaluate the effectiveness of the MGB procedure as a primary bariatric surgery and as a revisional procedure in terms of weight loss and complications.

Methods

Retrospective analysis of all patients who underwent MGB between January 2015 and January 2016 was performed. Patient demographics, obesity related co-morbidities, operative and postoperative data, as well as first year outcomes were collected and analyzed.

Results

407 patients underwent laparoscopic MGB, Prior bariatric surgery was performed in 98 patients (24%). No conversions to an open approach were required. No patient died during follow-up. Patients who had a prior bariatric surgery suffered from increased rates of complications, both minor (8 patients (8.16%) vs 10 patients, (3.2%), $p < 0.0001$), and major (5 patients (5.1%) vs 5 patients (1.6%), $p < 0.0001$), more early reoperations (4 (4.08%) vs. 1 (0.3%), $p < 0.0001$), longer length of stay (2.44 days vs. 2.15, $p = 0.002$, and more early readmissions (5.1% vs. 1.9%, $p < 0.001$). The average excess weight loss (EWL) 1 year following surgery was $88.9 \pm 27.3\%$ and $72.8 \pm 43.5\%$ in patients that underwent primary and revisional SAGB respectively.

Conclusion

MGB may be performed safely, with promising efficacy, as both a primary and a revisional bariatric surgery, yet bariatric surgeons should expect a higher rate of complications and a lower %EWL after one year.

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REVISIONAL WEIGHT LOSS: AN AUSTRALIAN EXPERIENCE

Revisional surgery

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Background

Metabolic surgery is the most effective treatment for severe obesity, capable of producing more than 50% excess weight loss at ten-year follow-up^{1,2,3}. However, there is a paucity of data regarding revisional bariatric surgery.

Introduction

This study represents the largest Australasian series focusing on revisional bariatric surgery (n=250). The study was conducted in the Norwest Private Hospital and Hospital for Specialist Surgery (HSS), both private practices in Sydney, Australia.

Objectives

This study aims to review the reasons for revisional bariatric surgery and the efficacy and safety of revision bariatric surgery.

Methods

This is a retrospective cohort study with data prospectively collected from from 1 January 2012 to 28 February 2017 for all patients requiring revisional procedures following previous post-laparoscopic sleeve gastrectomy (SG) and more commonly adjustable gastric bands (LAGBs).

Results

There were low rates of morbidity (1%) and no mortality at 24-month follow up. Furthermore, satisfactory excess weight loss was achieved in the majority of the patients.

Conclusion

We therefore conclude that sleeve gastrectomy is a safe and valid option for revisional bariatric surgery.

□
P.614

RESURGENCE OF DIABETES MELLITUS FOLLOWING CONVERSION OF GASTRIC BYPASS TO SLEEVE GASTRECTOMY

Revisional surgery

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Background

Resolution of Type 2 DM after bariatric surgery is a known phenomenon attributed to several factors, including calorie restriction, gastrointestinal hormonal changes and/or bypass of upper gastrointestinal tract.

Introduction

In particular, Laparoscopic Roux-en-Y-Gastric Bypass (LRYGB) compared with Laparoscopic Sleeve Gastrectomy (LSG) has higher DM remission rates.

Objectives

We discuss a single case of DM resurgence following revisional bariatric surgery converting LRYGB to LSG.

Methods

Retrospective identification of bariatric patients undergoing revisional surgery (2006-2017) was performed and data collected from digital and clinical notes.

Results

Of 6 revisional LRYGB to LSG operations, one case of Diabetes resurgence was identified. A 65-year old male (BMI 46.5kg/m²) with Type 2 DM using 400 units insulin/day underwent RYGB in 2012, resulting in complete resolution of DM and all medication stopped.

Persistent hypoalbuminaemia and hypoglycaemia led to revision of RYGB to LSG in March 2015 (BMI 32.28kg/m²). Hyperglycaemia developed in the immediate postoperative period, Metformin was started. At 2/12 post-operative review, albumin had markedly improved but hyperglycaemia requiring insulin (100units) and metformin (500mg BD) continues to date.

Conclusion

In this unique case, we were able to examine the outcome of Diabetes following the 2 most common bariatric operations in the same patient. DM in remission for two years post-LRYGB resurfaced immediately after conversion to LSG, suggesting the reason for improved glycaemic control with LRYGB is predominantly caused by GI hormone alterations. LRYGB is a more effective operation for DM remission in patients with the same BMI and highlights the significant role of gut hormone alterations leading to improved glycaemic status.

□ **P.615**

ROUX-EN-Y GASTRIC BYPASS: OUTCOMES OF A CASE-MATCHED COMPARISON OF PRIMARY VERSUS REVISIONAL SURGERY

Revisional surgery

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Introduction

Laparoscopic Adjustable Gastric Banding (LAGB) and Laparoscopic Sleeve Gastrectomy (LSG) are popular bariatric procedures. Certain complications may necessitate revision. Adverse outcomes have been reported after revisional bariatric surgery. We compared patients undergoing revisional versus primary Laparoscopic Roux-en-Y Gastric Bypass (LRYGB).

Objectives

Compare weight loss and comorbidity outcomes in primary versus revisional gastric bypass

Methods

This is retrospective comparative 1:1 case-matched analysis of revisional LRYGB (rLRYGB - Group A) versus primary LRYGB (pLRYGB - Group B). Matching was based on Body Mass Index (BMI), hypertension and diabetes at LRYGB. BMI decrease at 6 and 12 months post-surgery, comorbidity resolution, operative time, morbidity and length of hospital stay (LOS) were compared. Overall BMI decrease i.e. change from before initial bariatric procedure to 12 months after revision for Group A was also compared.

Results

Median BMI (Inter-Quartile Range) for Group A decreased to 44.74(7.09) and 41.49 (6.26) at 6 and 12 months respectively, while for Group B corresponding figures were 38.74 (6.9) and 33.79 (6.64) ($p=0.001$ & $p=0.0001$). Overall decrease in BMI (Group A) was 9.8 while BMI decrease at 12 months post-LRYGB for Group was 15.2 ($p=0.23$). Resolution of hypertension was 63% (Group A) and 70% (Group B) ($p=0.6$). Diabetes resolution was 80% (Group A) versus 63% (Group B) ($p=0.8$). Operative time for Group A and B was 151 ± 17 and 137 ± 11 min, respectively. ($p=0.004$) There was no difference in morbidity and LOS.

Conclusion

Results after rLRYGB are comparable to pLRYGB. Revisional surgery is safe when performed by experienced surgeons in high-volume centers.

SLEEVE REVISION SURGERY - COMPARING MGB/OAGB AND SADI**Revisional surgery****A. Prasad**

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Background

Weight regain takes place in some patients after sleeve gastrectomy. Few of these patients opt for a revisional surgery. Single anastomosis duodeno ileal bypass and one anastomosis gastric bypass/ mini gastric bypass surgery have been offered as options.

Introduction

Patients who underwent revision surgery for weight regain after sleeve gastrectomy were offered single anastomosis duodeno ileal bypass (SADI) or one anastomosis gastric bypass/ mini gastric bypass (OAGB/MGB).

Objectives

Weight loss patterns were followed up in these patients to compare the results of these two procedures done in India.

Methods

In our small series with good followup, there were 13 patients who had sleeve to MGB and 9 patients who had a sleeve to SADI procedure done. All patients had a minimum follow up of 2 years.

Results

While neither procedure showed results that we see usually with a primary procedure, OAGB/MGB had lesser side effects than SADI. We will present comparative results of our series.

Conclusion

Revision surgery produced results inferior to primary surgery for both procedures. OAGB/MGB had lesser side effects than SADI

□
P.617

IS REVISION OF THE 'CANDY CANE' AFTER ROUX-EN-Y GASTRIC BYPASS (RYGB) WORTHWHILE?

Revisional surgery

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Introduction

An excessively long blind-end of the alimentary limb following RYGB, known as a 'candy cane' (CC), may cause adverse symptoms such as pain and weight regain. Very few studies have examined the efficacy of CC revision.

Objectives

To assess peri-operative and short term outcomes following CC revision.

Methods

All CC revision cases between 2010 and 2016 were identified from a hospital-wide bariatric database. Those with other major operative interventions at the same time as CC revision were excluded. Demographic, perioperative and follow-up data were retrospectively analysed.

Results

Fifteen eligible cases were identified. Fourteen patients (93%) were female, median age at revision was 46 years and revision occurred a median of 32 months after RYGB (range 6-78). Most common symptoms leading to revision were pain in 12 patients (80%), regurgitation or vomiting in 7 (47%) and weight regain in 5 (33%). No single patient had all three of these symptoms. Barium swallow was performed in 13 cases with a false negative rate of 23% (3/13). Median length of stay was 0 days (range 0-5). There were two intraoperative complications (13%): small bowel enterotomy with initial port insertion with re-look surgery during same admission, and intra-operative bleed requiring conversion to open. Of 12 patients for whom follow-up data was available, six had resolution of pre-operative symptoms (50%). Median follow up was 18 months.

Conclusion

CC revision after RYGB is technically simple and may offer complete symptom resolution in up to 50% of cases.

□
P.618

LAPAROSCOPIC REVISIONAL BARIATRIC SURGERY AFTER OPEN BARIATRIC OPERATIONS

Revisional surgery

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Background

There is limited data in the literatures about laparoscopic revisions after open bariatric surgeries and their results.

Introduction

Laparoscopic revisional bariatric surgeries are challenging operations and specially after open previous bariatric operations.

Objectives

This study will test the safety and feasibility of laparoscopic revisional bariatric surgeries after failed open bariatric operations in high volume obesity center.

Methods

This is a case series of retrospective review of medical data of the surgical team in high volume obesity center over the period from January 2003 to December 2016 in Prince Sultan Military Medical City.

Results

The total number of the patients over 14 years were 1765 of all bariatric operations. There were 245 (14.0%) Laparoscopic revisional bariatric operations (LRBS). 26 patients (1.5%) had laparoscopic revisional bariatric operations after failed open bariatric operations. They are 23 females and 3 male with age 23-63 years (Mean 41.7years), BMI 27.3-73.0 Kg/m² (Mean 45.1). All patients had revisional bariatric operations for weight regain and/ weight loss failure except two patients. There were 18 patients undergone laparoscopic revisional RYGB, 2 patients had laparoscopic revisional mini gastric bypass, 2 laparoscopic revisional sleeve gastrectomy, one laparoscopic revisional biliopancreatic diversion, one laparoscopic revisional greater gastric curvature plication, one reversal of VBG, one laparoscopic division of gastrocutaneous fistula. No mortality. No leak.

Conclusion

LRBS is feasible and safe after open bariatric operations. These surgeries are demanding and required high surgical skills. Main indication for revision is weight regain and/or failure of weight loss.

□
P.619

LAPAROSCOPIC BAND-SEPARATED GASTRIC BYPASS AS REVISIONAL PROCEDURE AFTER ADJUSTABLE GASTRIC BANDING

Revisional surgery

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Introduction

The most surgeons for conversion of failed gastric banding use to laparoscopic Roux-en-Y gastric bypass (LRYGB).

The laparoscopic one anastomosis band-separated gastric bypass (LOABSGB) and adjustable gastric banding similar to use of the band.

Objectives

The aim this study is evaluation LOABSGB as revisional procedure after adjustable gastric banding.

Methods

Between November 2015 and January 2017, we performed 12 revisional bariatric procedures. All patients (BMI>35) were used the band «Medsil». Patients (n=9) with unsuccessful weight loss were included and patients after band-erosion (n=3) were excluded from this study.

Surgical technique LOABSGB: the front wall of the stomach below the band was displaced in the upward direction through the ring band. Thus creating a mini-gastric pouch. A jejunal loop was created about 200 cm from the ligament of Treitz and anastomosed to the gastric pouch by hand using Vicryl 2/0 sutures.

Results

Seven of the nine patients with adjustable gastric banding after the unsuccessful weight loss were converted to LOABSGB. Two of the nine patients, this conversion failed because of a massive adhesive process in the upper section of the abdominal cavity. In these cases, we use laparoscopic one anastomosis gastric bypass with use a stapler as an alternative for LRYGB.

Weight loss significantly increased after revision: 3/9 patients were excellent results (BMI in normal range), 4/9 - very good (BMI in marginally overweight), 2/9 – good results (BMI in overweight).

Conclusion

Laparoscopic one anastomosis band-separated gastric bypass as revisional procedure after adjustable gastric banding is feasible, safe and highly efficient.

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P.620

SHORT-TERM OUTCOMES OF MID-SMALL INTESTINE ONE ANASTOMOSIS GASTRIC BYPASS IN REVISIONAL BARIATRIC SURGERY AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

Revisional surgery

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Introduction

Laparoscopic sleeve gastrectomy (LSG) is the most preferred bariatric procedure worldwide due to being a relatively technically simple and it's sufficient weight loss results, however, like the other bariatric procedures, weight gain and ineffective obesity-related comorbid resolution has been reported.

Objectives

The aim of this study was to show early outcomes after conversion of LSG to mid-small intestine one anastomosis gastric bypass (MI-OAGB).

Methods

This study which is a retrospective review of a prospectively collected database from November 2016 to February 2017. Steps of the technique; the pouch is created by stapling the sleeved stomach horizontally from the minor curvature, length of the total small intestine is measured from treitz ligamane to ileocaecal valv and mid-small intestine is marked with a suture. After the preparation of the gastric pouch and ileum, an antecolic gastroileostomi was created using stapler and completed with a running suture.

Results

Six patients (female, n=3) with a mean age of 39.6 ± 19.7 and a mean body mass index of 43.4 ± 7.7 were included in the study. Mean operation time was 78.8 ± 8.5 minutes and mean length of hospital stay was 3.1 ± 0.4 days. All operations were completed by laparoscopy. There were no complications and deaths. Percentage of mean excess weight loss was found $23.8 \pm 9.8\%$ in short-term follow-up period (mean 13.1 ± 3.6 weeks).

Conclusion

MI-OAGB appears to be relatively simple, fast and effective technique for resuming weight loss. It's possible malabsorptive side effects and complications rate may be less than the other revisional bariatric procedures, such as Roux-en-Y gastric bypass and biliopancreatic diversion with duodenal switch.



P.621

LAPROSCOPIC ROUX-EN-Y GASTRIC BYPASS REVERSAL WITH NISSENS FUNDOPLICATION

Revisional surgery

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Background

Sever gastro-esophageal reflux after Roux-en-Y gastric Bypass RYGB is uncommon but can be very disturbing to the patients.

Introduction

Laparoscopic Nissen's Fundoplication with RYGB reversal at the same time was not reported before in the litretures.

Objectives

To report the first case of laparoscopic Nissen's Fundoplication and RYGB reversal to be doen simultaneously and laparoscopically.

Methods

This is a video presentation for the patient post laparoscopic RYGB with sever GERD and deplitating hypogycemic attacks.

Results

53 years old male post RYGB 2005 with sever GERD symptoms and signs associated with sever hypoglycemic attacks malnutrition, depression, and hypertension. He had AGB in 1998 and removed in 2004. He has insisted for RYGB reversal as well as sought for the treatment of moderate hiatus hernia and sever GERD. After well pre-operative preparation, the patient underwent laparoscopic Nissen's Fundoplication with the reversal of RYGB. The patient had uneventful post-operative course and discharge with good condition. After 3 months asymptomatic for reflux with 4 kg increased in weight but no hypogycemic attacks

Conclusion

Simultaneous laparoscopc Nissen's fundoplication and RYGB reversal is safe and feasible but surgically demanding

□
P.622

ROUX- EN- Y GASTRIC BY PASS STILL HAS THE LEAST RE OPERATION RATE- 5 YEARS FOLLOW UP IN A HIGH VOLUME CENTER

Revisional surgery

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Background

The indications of revisions are inadequate of weight loss, Weight regain and Complications. Effectiveness outcome of any procedure can be assessed by the reoperation rate.

Introduction

Working in a high volume center, we present review of 1404 bariatric procedures in the past five years and the reoperation rate following it.

Objectives

To calculate the re operation rate of gastric by pass surgery

Methods

The total number of gastric by pass procedures done in last five years were 1132 out of 1404, sleeve gastrectomies were 269 out of 1404 and 3 gastric plications. The observed weight loss in gastric by pass patients in these cases was (on an average) 60 to 80% of their excess body weight. 61% of operated gastric bypass patients were diabetic and out of these, 83% showed significant reversal/ remission in their diabetic status.

Results

12 sleeve gastrectomies were converted to gastric bypasses (4.4%) and none of the gastric passes were revised in the last five years, one gastric by pass was reversed due to gangrene of small bowel caused by internal herniation. It is imperative for us to understand that all failures will not benefit from revision. It is the patients with anatomical causes of failure who would benefit from revision. Patients with behavioral causes of failure would only benefit with psychological counseling.

Conclusion

The principle of revisional RYGB for failed primary procedure is by adding further restriction to the gastric pouch, reducing the stoma size of Gastrojejunostomy, Increasing malabsorption by increasing the limb length.



P.623

REVISIONAL SURGERY: EXPERIENCE AND RESULTS IN 183 PATIENTS

Revisional surgery

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Background

Revisional surgery it is performed in patients who have already had some bariatric surgery, and require a second surgery because they failed with the first one. This may be due to complications of the first surgery, insufficient weight loss, weight reganancy or mismanagement of eating habits

Introduction

Bariatric surgery is the treatment that has proven to be the most effective in the management of obesity and remission of comorbidities. However, it is not exempt from failures and complications, resolving with revisionary and therapeutic procedures

Objectives

Present our results in Bariatric Revisional Surgery in 183 patients, during 7 years

Methods

A retrospective database analysis that identifies patients who are undergoing a revisional surgery between January 2010 and December 2016. Demographic, anthropometric, preoperative and perioperative data were obtained

Results

We identified 183 patients with a mean age of 44 ± 10.6 years, 70% women and a pre revisional surgery BMI of 34.8 ± 5.75 kg / m²

Reganancy of weight (RP) 36%, Gastroesophageal reflux (GER) 13% and anatomical alterations (AA) 3% as single cause

Conclusion

Revisional surgery is a feasible, effective and safe alternative in selected patients with failure and complications after the first bariatric procedure.

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P.624

REVISIONAL SURGERY IN PATIENT WITH PSORIASIS

Revisional surgery

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Background

Psoriasis is a chronic systemic disease with important skin manifestations, It is more frequent and severe in obese population.

Introduction

Female 51 years obesity hyperplasia Android, psoriatic rheumatopathy, IMC 40.1 vertical sleeve Gastrectomy in April 2014. 20 days postoperative episodes of anaphylaxis, with injuries papulomas in skin of the whole body, with biopsy positive for leukocytoclastic vasculitis

Objectives

She is endoscopy 2 months postoperative demonstrating sleeve with normal structure and 14 months new endoscopy observed dilation of the gastric fundus, Sweet's syndrome is suspected. Revisional surgery is decided to perform gastric bypass the 11/30/15.

Methods

Gastric bypass sleeve conversion occurs, 5 accesses are used to perform laparoscopic surgery, firm adhesions are in front of the stomach with liver, operative time was 180 minutes.

Results

Presents the gastrojejunostomy filtration, washing and drainage laparoscopic, required more jejunostomy, required 7 days of UTI, and high to 15 days postoperative. At 14 months presents adequate decrease of weight (45kg), with good nutritional controls, not present new episodes of reactions on skin, but continued in his psoriatic arthritis treatment.

Conclusion

Bariatric surgery for positive metabolic, skin, and quality of life results should be considered as a useful adjuvant therapy for obese patients with psoriasis. But in our case, the patient sharpens its manifestations in skin, which required the takes of corticoids by long term, generating a failure in the sleeve gastric, a possible sweet syndrome, that improved after the conversion to by pass gastric.

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P.625

SURGICAL TREATMENT OF THE GASTROESOPHAGEAL REFLUX AFTER THE BARIATRIC SURGERY

Revisional surgery

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Introduction

As the number of bariatric operations is rising annually, so an amount of the long term complications is growing also. Among them the most important is gastroesophageal reflux (GER). The aim of the presentation is to evaluate the surgical treatment of gastroesophageal reflux after bariatric surgery during the period in 2013-2016.

Objectives

During this period the 38 laparoscopic procedures were performed for GER after the bariatric surgery. Together with this surgical treatment of GER some type of bariatric operation was performed as the secondary operation.

Methods

We always focused on the presence and repair of hiatal hernia. The basic methods of investigation included gastroscopy and X-ray of the stomach (swallowing act).

Results

The causes and severity of GER were analyzed. Concurrently with the development of the GER the stagnation of the weight loss or even the weight regain occurred in all patients.

The reason of the GER in most cases was untreated or undertreated hiatal hernia. The other reason was the type of the choice of the bariatric procedure which is in the risk of the GER development.

In the reporting period, all patients who underwent the surgical procedure were without reflux and even weight loss was restored. Only 2 patients after hiatoplasty suffered from episodic heartburn – it was well controlled with PPI.

Conclusion

Issues of the GER after bariatric surgery are complicated, surgical treatment is sometimes very difficult. Nevertheless, we consider the active operating approach very important, as it will significantly improve the quality of the patient's life.

□
P.626

REVISION SURGERY FOR MORBID OBESITY - INDICATIONS AND OUTCOMES

Revisional surgery

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Background

Revision bariatric surgery can be associated with significant complexity and unpredictable outcomes. Counselling patients and managing expectations is an important part of the perioperative process. As the number of bariatric procedures continues to grow worldwide, an increasing number of patients are seen requiring second or third procedures.

Introduction

Patients may be considered for revision surgery in several contexts, such as following complications or after a previous failed procedure.

Objectives

To assess the indications and outcomes of the most commonly performed revision procedures in a single centre.

Methods

A retrospective review of revision procedures undertaken in a large tertiary referral centre was undertaken examining indications, post-operative outcomes, and complications between 2009 and 2016.

Results

The most commonly performed revision procedure was laparoscopic revision of sleeve gastrectomy to roux en y gastric bypass. 18 cases were identified with mean preoperative BMI of 43.1 (± 11.3). The commonest indication was secondary weight regain. Other indications were reflux and dysphagia. One patient underwent revision to bypass for failure of conservative measures following a staple line leak. Median post operative length of stay was 2 days. No conversions and no significant complications were identified.

Conclusion

Revision bariatric surgery is safe and is associated with comparable perioperative outcomes to primary procedures. Careful planning and the involvement of multidisciplinary colleagues remains crucial to the management of these patients.

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P.627

LAPAROSCOPIC REVISION ROUX EN-Y GASTRIC BYPASS PROCEDURE TO SLEEVE GASTRECTOMY FOR INTRACTABLE DUMPING SYNDROME

Revisional surgery

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Introduction

Roux-en-Y gastric bypass has remained the most popular bariatric procedure across the world. Revisional surgery for patients with inadequate weight loss after RYGB is not unheard of but perceived as difficult via laparoscopic technique.

Objectives

We present the case of a woman who underwent laparoscopic Roux en-Y gastric bypass procedure for type-II diabetes and morbid obesity. Re-operative indication in this patient was intractable dumping syndrome. We managed this case of failed bariatric procedure with sleeve gastrectomy laparoscopically.

Methods

We performed laparoscopic sleeve gastrectomy after a failed Roux en-Y gastric bypass. Preoperative upper GI endoscopy and blood tests came back as normal.

Results

A 54 year old woman underwent LRYGB for morbid obesity and type II diabetes. The patient had intractable dumping syndrome and regained weight. A laparoscopic sleeve gastrectomy and cholecystectomy was performed: After adhesiolysis, gastric outlet and the anastomosis were transected. Intraluminal stapler's anvil was placed using a dilator through the patient's mouth to the gastric pouch. Endoscopic intraluminal stapler was set through a cut in the antrum. Then the gastric pouch and the remnant stomach was joined together and reinforced. A new gastric pouch was created 2-cm proximally to the pylorus. Newly conjoined stomach was transected with linear stapler. Operation was finished as usual. No leaks or short-term complications were encountered. After the operation, postprandial hypoglycemia was resolved.

Conclusion

Revisional sleeve gastrectomy with laparoscopic technique after previous gastric bypass procedures like LRYGB may be seen as technically inconvenient but this case shows that laparoscopic revision is possible regardless of previous bariatric procedures.

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P.628

REVISIONAL SURGERY IN LAGB BALLOON LEAKAGE. LSG IN ONE STEP

Revisional surgery

#P.628

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Introduction

The LAGB for its simplicity and favorable short-term results was very popular procedure. In long-term complication, revisional surgery is needed. With balloon leakage can be performed debanding with rebanding or conversion to GBP, LSG or BPD.

Objectives

Show the technique of revisional surgery, debanding and conversion to LSG in one step.

Methods

Male 41 years, BMI 43.2, 141.5 kg, hypertension and dyslipidemia as comorbid conditions. In 2007 LAGB implant. Lower weight 89 kg, at 2 years. In 2015 loss of restriction and weight regain. Iopamidol test shows LAGB's balloon leakage.

Revisional surgery. Patient 41 BMI, 130 kg. Band onsite (normal position).

1st, Isolate buckle and the band opening which is left as a reference point.

2nd, "Ligasure" to release greater curvature.

3rd, Stapling (Covidien 60mm) starting with green cartridge and continuing with blue ones to His angle, having a 32 F calibration tube. Take out the opened band and the stapling is completed.

4th, Continuous suture "Prolene" 2/0 through gastric staple line.

No leaks in the methylene blue test.

The resected stomach and gastric band are removed.

Results

The loss weight was successful. No complications in the follow up.

Conclusion

LSG as revisional surgery it's a safe option against LAGB failure. The complication cause, balloon leakage in the deep folds can appear in some types of bands with the time. Performing it in one step is going to depend on the adhesions degree, band position and band complications.

□
P.629

IMPLEMENTATION AND ORGANISATION OF THE DA VINCI XI ROBOTIC SYSTEM TO PERFORM BARIATRIC SURGERY IN A MAXIMUM CARE HOSPITAL. EXPERIENCE WITH THE FIRST 100 CASES.

Robotic bariatric surgery

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Background

Robotic based minimally invasive surgery has recently gained increasing influence in urologic, abdominal visceral and gynecologic surgical interventions.

Introduction

The investment to acquire a da Vinci robotic system remains a major economic issue to many health care institutions.

Objectives

Motivation, time schedule and duration of implementation from scratch to cut were investigated in a hospital of maximum care. The Da Vinci Xi robotic system was placed in a shared OR for urology, gynecology and visceral surgery including bariatric operations.

Methods

In a series of 20 sessions dexterity and capability were trained with the simulator to use surgical instruments and simultaneous control of pedal panels for the camera and change of instruments. Nine different exercises for grasping, , tissue dissection, coagulation and suturing had to be performed on 3 increasing levels (basic, advanced, master) with analysis of results and trend reports. Information of time, management of instruments and efficiency were obtained and compared. Another 10 sessions were performed on a phantom.

Results

Total training time was 3 months including continuous education. The exercises described could be performed on all levels at the end of this period allowing to apply the technique to urologic, gynecologic and visceral operations including bariatric surgery. Between september 2016 und march 2017 one hundred robotic assisted operations were performed in an increasing number.

Conclusion

Robotic surgery in the abdomen using the Da Vinci System requires a high degree of logistic preparation with a complex and pertinent training of the surgeons and assisting staff.

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P.630

ROBOT-ASSISTED SLEEVE GASTRECTOMY IN MORBIDLY OBESE VERSUS SUPER OBESE PATIENTS

Robotic bariatric surgery

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Introduction

This study evaluates our technique and outcomes for robot-assisted sleeve gastrectomy (RSG) for morbidly obese (MO) and super obese (SO) patients

Objectives

To assess and compare the outcomes of RSG between MO and SO patients

Methods

A retrospective analysis of patients who underwent RSG at a single center was performed. The staple line was imbricated with No. 2-0 polydioxanone in all cases. The SO (body mass index ≥ 50 kg/m²) subset of patients was compared with the MO group in terms of demographic characteristics, comorbidities, operative times, perioperative complications, and excess body weight loss.

Results

A total of 121 patients (59 female and 62 male patients) with a mean body mass index of 48.17 ± 11.7 kg/m² underwent RSG. Of these patients, 47 were super obese and 74 were morbidly obese. The mean operative time was 90.2 ± 21.3 minutes, and the mean docking time was 3.5 ± 4.2 minutes. Mean blood loss was 18.4 ± 5.5 mL, and there were no leaks, bleeding, conversions, or perioperative mortality. When compared with the MO patients, the SO patients showed no significant difference in operative time, blood loss, and length of hospital stay. There was a steep decline in operating room times after 10 cases of RSG.

Conclusion

This study shows the feasibility and safety of RSG. Robotic assistance might help overcome the operative difficulties encountered in SO patients. It shows a rapid reduction in operative times with the growing experience of the entire operative team.

P.631

INITIAL EXPERIENCE WITH ROBOTIC REVISIONAL BARIATRIC SURGERY

Robotic bariatric surgery

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Background

Robotics in bariatric surgery is an interesting, novel and infrequent development in medical institutions in Chile. Revisional bariatric procedures have increased during the last years.

Introduction

There are no publications in our country related to the initial experience and results in robotic revisional bariatric surgery.

Objectives

The aim of this study is to describe the initial experience and short term outcomes with robotic revisional bariatric surgery.

Methods

We conducted a retrospective study of all consecutive robotic revisional bariatric surgeries performed by a single surgeon in Clínica Santa María in Santiago, Chile. We analysed demographic characteristics and surgical outcomes by evaluating operation and surgical time, morbidity, mortality and length of hospital stay.

Results

56 revisional bariatric surgeries were performed, 11 calibrations of sleeve gastrectomy, 32 Roux-en-Y gastric bypass, 1 pouch reshaping of Roux-en-Y gastric bypass, 3 extractions of laparoscopic adjustable gastric banding, 1 of them with simultaneous sleeve gastrectomy, 5 laparoscopic adjustable gastric banding procedures to patients with previous Roux-en-Y gastric bypass, 3 total gastrectomy and 1 gastro enteral anastomosis. Mean age was 48,23 years. Average preoperative body mass index was 33,37 kg/m². Mean operative time was 114,98 minutes. Mean surgical time was 102,73 minutes. Postoperative complications were observed in 3 patients (5,36%). In 2 (3,57%) of this patient, reoperation was required. There were no deaths in this group. Average length of hospital stay was 3,55 days.

Conclusion

As an initial experience, we conclude that robotic revisional bariatric surgery is a safe technique, without increased morbidity, mortality, or length of hospital stay.

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ROBOTIC ASSISTED GASTRIC BYPASS REVERSAL FOR SEVERE HIPOCALCEMIA AFTER THYROIDECTOMY AND PARATHYROIDECTOMY.

Robotic bariatric surgery

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Background

The present case report is from a 56-year-old female where a gastric bypass surgery was performed in 2015 as the treatment of insulin dependant diabetes mellitus and obesity (BMI 36 kg/m²). The patient comes with generalized paresthesias, facial rigidity, positive Chvostek's sign and an EKG with a prolonged QT interval. A past surgical history of total thyroidectomy (T3N0Mx), treated with oral levothyroxin 300 mcg per day. Initial work up exams confirms a primary hypoparathyroidism with severe hypocalcemia and vitamin D deficiency. Corrected serum calcium was 5.8 mg/dL, parathyroid hormone 7.8 pg/mL, vitamin D <8 ng/mL, TSH 8.26 UI/mL and free T4 17.9 nmol/L. Patient was dismissed with oral calcium and vitamin replacement therapy.

Introduction

On February 2017, the patient comes once more to our institution with a left ventricle low ejection fraction heart failure and mixedema, related with levels of TSH >100 UI/mL, free T4 1.17 pg/mL and low levels of vitamin D 16.5; ischemic compromise was discarded with myocardial perfusion tests.

Objectives

Usefulness of robot-assisted surgery for reversal of gastric bypass in severe malabsorbent syndromes

Methods

The case was presented in a multidisciplinary committee for discussion and it was decided to perform a robot assisted gastric bypass reversal.

Results

The patient underwent a 150 minute long surgery with no complications. Oral intake was tolerated on postoperative day 1 and was dismissed on postoperative day 4 with serum calcium levels of 9.4 mg/dL, vitamin D replacement therapy and oral calcium.

Conclusion

Reversal of gastric bypass is a good option for management of malabsorbent syndromes

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THE SAFETY AND EFFICACY OF THE ROBOTIC STAPLER IN ROBOTIC BARIATRIC SURGERY

Robotic bariatric surgery

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Introduction

Prior to the advent of the robotic stapler, robotic bariatric operations required stapling through a laparoscopic assistant port. With integration of the robotic stapler, the surgeon regains control over stapling while potentially improving precision and dexterity.

Objectives

This study aims to determine the safety and efficacy of the robotic stapler in bariatric operations.

Methods

This study evaluates the experience of a single surgeon in a single institution from March 2015 to March 2017. A prospectively collected, retrospectively analyzed database of all robotic-assisted bariatric operations was analyzed. Demographics, stapler usage and misfire rate, and complications were evaluated for all patients undergoing robot-assisted bariatric surgery.

Results

One hundred and three robotic bariatric operations were performed during the study period. The surgeon used the robotic stapler in 72 cases and a standard endoscopic stapler in 31 cases. There were no differences in demographics or comorbidities between these groups. Total complications between the robotic (six) and standard endoscopic stapler groups (four) were not significantly different ($p=0.72$). There were two staple-load misfires in the robotic stapler group versus no staple-load misfires in the standard endoscopic stapler group ($p=>0.99$).

Conclusion

Although there were two stapler load misfires in the robotic stapler group, this was not statistically significant when compared to the standard endoscopic stapler group. Additionally, there were no differences in complications between these groups. Therefore, this study shows that the robotic stapler is a safe and effective tool in robotic bariatric surgery. Further studies need to be done to validate the role of the robotic stapler in bariatric surgery.

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LEVELING THE PLAYING FIELD: DOES THE ROBOTIC PLATFORM OFFER AN ADVANTAGE IN SUPER-OBESE PATIENTS UNDERGOING BARIATRIC SURGERY?

Robotic bariatric surgery

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Introduction

The obesity epidemic is burgeoning with an increasing proportion of super-obese patients. This subpopulation generally is at a higher surgical risk due to the technical challenges associated with their body habitus and torque at trocar sites.

Objectives

This study aims to evaluate if the robotic platform overcomes the challenges of operating on super-obese patients undergoing bariatric surgery.

Methods

A retrospective, prospectively managed database of obese patients that underwent bariatric surgery from 3/2015-3/2017 was analyzed. Super obesity is defined as BMI >50.

Results

One hundred and three patients underwent robotic bariatric surgery without the need for additional trocars or conversion to laparoscopic or open in any patient. Twenty-one patients were super-obese (6 males, 15 females) with a preoperative mean BMI of 58. Eighty-two patients were not super-obese (9 males, 73 females) with a preoperative mean BMI of 40.7. There was no difference in the male to female ratio ($p=0.076$). There was one complication in the super obese cohort and nine complications in the non-super-obese cohort ($p=0.468$). There was no difference between hospital length of stay between the two groups ($p=0.78$). The average operative time was longer in the super obese group (203 minutes) when compared to the non-super obese population (237 minutes), however, this didn't meet statistical significance ($p=0.19$).

Conclusion

In this series, robotic bariatric surgery in super-obese patients had no difference in complications, hospital length of stay or operative time when compared to non-super-obese patients. Thus, the robotic platform may mitigate some of the technical challenges encountered with the super-obese population undergoing bariatric surgery.

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ROBOTIC TOTALLY HAND SEWN GASTRIC BYPASS: INITIAL EXPERIENCE IN A CHILEAN INSTITUTION

Robotic bariatric surgery

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Background

Robotics in bariatric surgery is an interesting, novel and infrequent development in medical institutions in Chile.

Introduction

To the date, there are no publications in our country related to the initial experience and results in robotics roux-en-y gastric bypass.

Objectives

The aim of this study is to describe the initial experience and short term outcomes with robotic totally hand sewn gastric bypasses.

Methods

We conducted a retrospective study of all consecutive robotic totally hand sewn gastric bypasses performed by a single surgeon in Clínica Santa María in Santiago, Chile. We analysed demographic characteristics and surgical outcomes by evaluating operation and surgical time, morbidity, mortality and length of hospital stay.

Results

117 robotic gastric bypasses were performed, 85 as the primary procedure, 32 as revisional surgeries. Mean age was 47.03 years. Average preoperative body mass index was 36,49 kg/m². Mean operative time was 110,43 minutes. Mean surgical time was 99.57 minutes. Postoperative complications were observed in 14 patients (11.97%). In 5 (4.27%) of this patient reoperation was required. There were no deaths in these group of patients. Average length of hospital stay was 3.69 days.

Conclusion

As an initial experience, we conclude that robotic gastric bypass is a safe technique, without increased morbidity, mortality, or length of hospital stay.

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COMPARISON OF OUTCOME AFTER ROBOTIC VS. LAPAROSCOPIC MINI-GASTRIC BYPASS WITH THREE YEARS FOLLOW UP

Robotic bariatric surgery

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Background

Comparison of outcome after robotic VS. Laparoscopic Mini-gastric bypass with three years follow up

Introduction

Robotic bariatric surgery was introduced at Mohak Bariatric and Robotic Surgery in 2013. We did mostly laparoscopic Mini-gastric bypass (MGB) operations but some cases were done robotically.

Objectives

We looked at the outcome comparing the laparoscopic to the robotic MGB with a one to three year follow up

Methods

Patients that had MGB at Mohak were reviewed for the year 2013 through 2015 from a database that was kept prospectively looking at the patient profile, the complications and the weight loss outcome to see if there was a difference between robotic MGB VS. Laparoscopic MGB

Results

801 patients had laparoscopic MGB and 185 had robotic MGB. In Robotic group 122 were males and rest females, 545 males and rest females. The average BMI in robotic group was 45.5 and lap group was 45.3.

The co-morbidities were type 2 diabetes of 35% in laparoscopic group and 36% in robotic group. The av. surgical time was 75 minutes in robotic group and 40 minutes in laparoscopic group ($p < .001$). There were no perioperative complications, early or late mortality in either group. The percentage follow up was 95%.

The % excess weight loss was 86.3% in laparoscopic group and 86.6% in robotic group.

Conclusion

There was no difference in the complication rate, and weight loss outcome comparing robotic VS. Lap MGB.

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REVISIONAL ROBOTIC GASTRIC BYPASS IN PATIENTS WHO GAIN WEIGHT AFTER SLEEVE GASTRECTOMY; RESULTS OF 17 PATIENTS

Robotic bariatric surgery

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Introduction

Surgery is the most effective treatment for patients have health problems due to obesity. However, a patient may have weight after bariatric surgery. In particular, weight gain can occur after sleeve gastrectomy(SG) and have two reasons. More stomach than usual may be left or stomach may expand over time.

Objectives

The aim of this study was to share findings from patients admitted for robotic Roux-en-Y gastric bypass (RYGB) after weight gain following SG.

Methods

Seventeen patients were included the study. Radiography, endoscopy were performed preoperatively. Intraoperative; stomach was mobilized and the first stapler was placed transverse and two staplers were placed vertical. Jejunojejunostomy anastomosis was made using linear staplers, a hand-sewn double layer gastrojejunostomy anastomosis was also performed. The demographics, intraoperative, postoperative outcomes of the patients were recorded.

Results

The mean age of the patients was 34,8 and M/F sex distribution was 4/13. The mean BMI of the patients before primary SG was 44,8 (36,2-48,1), the mean BMI before revisional surgery was 38,6 (33,4-43,7). The mean operation time was 245 minutes. Intraoperative leakage in methylene-blue test, intraoperative complication, postoperative leakage in scopic examination was not observed in any patients. The mean hospitalization time was 4.7 days.

Conclusion

There are two options for the patients that regain weight following SG. First is to reperform SG, secondly is to perform an alternative surgery such as gastric bypass or duodenal switch. Revisional surgery is more difficult than primary surgery, the use of robotics in patients undergoing RYGB due to the revision is effective and safe alternative approach.

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ROBOT-ASSISTED BILIOPANCREATIC DIVERSION WITH DUODENAL SWITCH IN A MORBIDLY OBESE PATIENT

Robotic bariatric surgery

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Introduction

56 year-old female patient with current BMI of 56 with history of morbid obesity, sleep apnea, and hypertension. The patient had tried multiple methods of weight loss without sustainable results.

Objectives

To demonstrate the technique of robot-assisted laparoscopic duodenal switch.

Methods

After the da Vinci robot is brought in and docked, the gastro-colic ligament is dissected away from the greater curvature of the stomach starting 4-5cm from the pylorus and continuing proximally to the angle of His taking down the short gastric vessels. A 34 French Edlich tube is advanced toward pylorus as a bougie dilator and stomach transection is started with a 45mm linear stapler followed by series of 60mm stapler loads. After complete transection, the staple line is reinforced with a 2-0 Vicryl. Then the dissection is carried toward the duodenum to the first portion of the duodenum. The ileum, which was marked at about 2cm from the terminal ileum, is brought up to the duodenum. The duodenal ileal anastomosis is done in 2 layers. The first posterior layer is running seromuscular stitch with 2-0 Polysorb. Then the enterotomies are created in the duodenum and ileum, and second layer is done through and through with a running stitch of 2-0 Polysorb. The anastomosis is tested with methylene blue.

Results

Postoperatively patient did well. Upper gastrointestinal studies demonstrated no leak on POD #2, patient was discharged home on POD #3.

Conclusion

Robotic duodenal switch seems feasible for morbidly obese patients.

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ROBOTIC BARIATRIC SURGERY AND PATIENT SATISFACTION

Robotic bariatric surgery

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Background

Robotics in bariatric surgery in Chile is still a novel and infrequent development.

Introduction

There are no studies that evaluate the impact of robotic surgery assistance in bariatric procedures, on patient's subjective perception on health status and satisfaction with surgical results.

Objectives

We present a comparative study that evaluates patient's satisfaction after bariatric surgery with and without robotic assistance, measured using a validated scaling method.

Methods

This is a prospective cohort study. From December 2012 to November 2014 we asked all patients who underwent bariatric surgery, operated by a single surgical team in our center, to respond to the EQ-5D-5L health status questionnaire, before surgery and on their first post-operative control.

Results

Of a total of 626 patients operated, 157 answered and completed both pre and post-operative questionnaire, 58 from the robotic group and 89 from the laparoscopic group. In both groups, patients reported a significant improvement in their overall health status after surgery as well as in all 5 items evaluated. The overall improvement was significantly higher in the robotic group, but not when evaluating all items separately. After adjusting using a multiple linear regression, this difference did only persist in patients with insulin resistance syndrome.

Conclusion

Patient's perception of health status improves early after bariatric surgery. This improvement seems to be more important after robotic bariatric surgery, but a larger volume of patients is necessary to confirm this tendency.



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BENEFITS OF ROBOTICS IN BARIATRIC SURGERY (GASTRIC BYPASS)

Robotic bariatric surgery

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Introduction

Since Wittgrove et al. reported the first gastric bypass performed via a laparoscopic approach in 1994 , the laparoscopic approach has been adopted widely. But in the other hand, unfortunately the laparoscopic approach also introduced significant postural stresses on the surgeon due to the body habitus of the patient.

Objectives

The role of robotics in bariatric surgery.

Methods

Studies comparing the complication rates of the robotic approach against the standard laparoscopic techniques shows lower morbidity and mortality rates for robotic procedures. Also the surgeon's learning curve during the first 100 robotic gastric bypasses has been reviewed and no anastomotic leaks or mortality were found.

Results

Standard laparoscopic gastrointestinal leak rates are up to 6.3 % and mortality up to 2 % . A series of studies between 2002 and 2008 presented data on operative times and complications after robotic gastric bypass . An average operative time of 201 min was long; however, the leak rate was significantly low at 0.3 % (2 fistulas or leaks). The safety of the robotic operation was supported with a 0 % 30 day mortality.

Although the operative time tend to be longer with the robotic approach, there are reports of reduced operative times once the learning curve is overcome.

And the experience of few cases at our centre also relates the same.

Conclusion

The main advantages of the robotic system applied to the gastric bypass is better control of stoma size, avoidance of stapler costs, potential decrease in wound infection and eliminate the stresses of surgeon.

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CHANGES IN GLUCOSE METABOLISM IN VERTICAL SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Introduction

We evaluated metabolic changes after vertical sleeve gastrectomy (VSG) surgery in a rat model using proteomics and metabolomic profiling in liver and serum.

Objectives

VSG provides an effective therapy for substantial and sustained weight loss as well as substantial improvement of T2DM in obese patients. The mechanism by which VSG results in improved glycemic control is not completely understood. Therefore, understanding the underlying mechanism of bariatric surgery in the resolution of T2DM is of great importance for the development of more effective and less-invasive T2DM therapeutic strategies.

Methods

Rats were randomly divided into two groups: sham (n = 10) and VSG (n = 12). Food intake, body weight, blood glucose, insulin, and thyroid hormone levels were measured. Two-dimensional electrophoresis, nuclear resonance spectroscopy, mass spectroscopy, immunofluorescence, and immunoblot analyses were used to determine and validate changes in metabolites and proteins in liver tissue and serum samples.

Results

Food intake and body weight decreased after VSG group ($p < 0.05$ and $p < 0.05$, respectively). Random blood glucose (sham; 183.3 ± 5.6 mg/dL, VSG; 138.5 ± 3.7 mg/dL) decreased while random insulin (sham; 0.45 ± 0.16 μ g/L, VSG; 1.05 ± 0.18 μ g/L) increased after VSG ($p < 0.05$ and $p < 0.01$, respectively). We found that expressions of gluconeogenic enzymes (phosphoenolpyruvate carboxykinase-1 and glucose-6-phosphatase) and concentrations of pyruvate and malate decreased while lactate, NADH, NADPH, glucose and AMP/ATP ratio increased after VSG. Thyroid hormones, triiodothyronine (T3) and free thyroxine (fT4), decreased after VSG.

Conclusion

This study proves that VSG suppresses hepatic glucose production.

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INTRAOPERATIVE PATTERNS OF GASTRIC MICROPERFUSION DURING LAPAROSCOPIC SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Background

Intraoperative assessment of intestinal capillary microperfusion based on observational findings (e.g. color, bleeding from cut margin) is unreliable to predict leakage. One possibility to assess intestinal microperfusion is the Visible-Light-Spectroscopy (VLS).

Introduction

Laparoscopic sleeve gastrectomy (LSG) has become a very popular surgical treatment for the treatment of morbidly obese patients. Staple line leaks are the major cause of severe morbidity. Reasons for leaks might be hyper pressure (mechanical theory) or hypoperfusion (vascular theory) of the narrow gastric tube.

Objectives

This study assessed microperfusion patterns of the stomach during LSG using VLS, a method to measure tissue oxygenation (saturated O₂ (StO₂)).

Methods

The study population comprised patients eligible for LSG according to the Swiss national guidelines for the surgical treatment of morbid obesity. Real time intraoperative microperfusion measurements were performed at 9 different ventral stomach localizations in the antrum, body and fundus at the beginning of the operation, after mobilization of the greater curve and after sleeve resection.

Results

This study included 20 patients (mean age 42.9, 17 females and 3 males, mean BMI 45.6). StO₂% values showed a significant drop in the fundal area at the greater curve and staple line after mobilization (56% versus 49%) and resection (60% versus 49.5%).

Conclusion

Assessment of microperfusion patterns of the stomach during LSG using VLS is safe and efficacious to use allowing an accurate measurement of StO₂%. The upper third of the stomach is the zone of reduced microperfusion with a significant drop of tissue oxygenation after sleeve resection of the stomach.

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WEIGHT LOSS, REOPERATIONS AND REFLUX – 10 YEARS OF LAP. SLEEVE GASTRECTOMY. OUR FIRST 100 PATIENTS.

Sleeve gastrectomy

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Introduction

Laparoscopic Sleeve gastrectomy (LSG) is currently the most frequently performed procedure for obesity and its comorbidities worldwide. Aspects of interest in this context are de-novo reflux and its possible effects, such as esophagitis and Barrett's esophagus, as well as adequate weight loss in a long-term follow-up.

Objectives

This cross-sectional study of the first 100 LSG patients was conducted in a multi-center setting. The mean follow-up was between 10 and 14 years.

Methods

Data on weight loss success, complications and reoperations was collected from all participating patients. Non-converted patients were also asked to complete questionnaires about their quality of life. Patients also received gastroscopies, manometries and 24h pH-metries.

Results

A third of them was converted to a Roux-en-Y gastric bypass within the follow-up period. Today, half of the patients who were not converted suffer from active gastritis and ulcers; Barrett's metaplasia at the gastroesophageal junction was found in 15%. The 24-h pH-metry and manometry's results were pathological for 50% of the non-converted patients. Primary Sleeve patients as well as those who were converted in the follow-up period managed an Excess Weight Loss (%EWL) of 50% at 10 years or more. Data on patients' quality of life will be presented at the congress as well.

Conclusion

The results of this longterm study reveal that 10 years after LSG a number of patients has had to deal with conversions and/or postoperative reflux and weight regain. This suggests that a careful selection of patients is necessary when considering LSG.

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LAPAROSCOPIC SLEEVE GASTRECTOMY- 7 YEAR OUTCOMES FROM AN INDIAN CENTER

Sleeve gastrectomy

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Background

Laparoscopic sleeve gastrectomy (LSG) is one of the most common bariatric procedures being performed in India.

Introduction

In this study we evaluate the long term results spanned over 7 years for weight loss outcomes, comorbidity remission and GERD.

Objectives

To retrospectively analyze the 5 year outcomes of LSG in terms of total weight loss, remission of co-morbidities, complications, GERD and weight regain

Methods

500 patients who underwent LSG from Jan 2007 to Dec 2014 were retrospectively analyzed. M:F was 1: 1.14, mean age- 45 ± 12.4 years, mean BMI- 46 ± 24.2 Kg/m². All patients underwent pre-operative UGI endoscopy and patients with GERD were excluded. 35% were diabetic, 24% hypertensive and 15% had dyslipidemia. OSA was seen in 23%.

Results

Mean EWL% at 1, 3, 5 and 7 years was 68%, 65%, 58% and 52% respectively. Diabetes remission was seen in 88% patients, hypertension in 75%, dyslipidemia in 68%. OSA resolved in almost 90%. New onset GERD was documented on UGI endoscopy in 32% patients at the end of 5 years. Weight regain upto 30% of EWL% was seen in 28% of patients in the long term. Leak rate was 0.4%. There was no mortality.

Conclusion

LSG is simple and easy to perform. It has a good weight loss outcome but one must be wary of weight regain and significant gastro-esophageal reflux in the long term.

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INCIDENCE AND REASONS OF SLEEVE GASTRECTOMY CONVERSION

Sleeve gastrectomy

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Introduction

During the last 10 years, the number of performed Laparoscopic sleeve gastrectomy procedures increased significantly.

It can also be noticed that the conversion rate is also increasing throughout the last years . Reasons include dissatisfaction of patients and complications.

Objectives

The aim of this study is to observe and record the reasons for conversion following sleeve gastrectomies, that were performed at our centres

Methods

In the time period 2002-2016, we have performed 1220 operations. 990(81%) patients were available for follow up. We collected our data prospectively. Preoperatively recorded data included age, sex, comorbidity, body mass index (BMI). Postoperatively recorded data included, intra-and post operative morbidity and mortality, percentage of excess weight loss (%EWL), re-interventions and conversion to other procedure. Patients who had their primary sleeve operation by other surgeons and came for a second procedure were included in the converted group.

Results

We performed 122 redo or conversion operations. 24 of them from my clinic and 98 from other clinics. Indications for conversion or redo were severe reflux disease in 48(39%),insufficient weight loss in 47(38.5%), gastric stricture in 23(18.8%), fistula and leakage 4(0.3%). Procedures performed laparoscopically were re-sleeving in 18 cases, omega bypass in 89 cases, Roux en Y gastric bypass in 14 cases and biliopancreatic diversion in 2 cases. Satisfaction was achieved in 90% of the re-operated cases, with longer than one year follow up.

Conclusion

Insufficient weight loss and gastroesophageal reflux disease are the common indications for sleeve gastrectomy conversion. The majority of the patients were satisfied with the conversion results.

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COMPARISON BETWEEN LAPAROSCOPIC SLEEVE GASTRECTOMY (LSG) AND LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (LRYGB) IN OBESE SINGAPOREAN PATIENTS.

Sleeve gastrectomy

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Introduction

Laparoscopic sleeve gastrectomy(LSG) and Roux -en-Y gastric bypass(LRYGB) are the most common surgeries performed for morbid obesity in Singapore.

Objectives

This study aims to compare the effectiveness of weight loss as well as postoperative outcomes between LSG and LRYGB in obese Singaporean patients.

Methods

Retrospective review of patients undergoing LRYGB or LSG between January 2009 to December 2016 was conducted. Excess weight loss at 3,6,9,12 months and 2 years were analyzed. Postoperative leaks and re-admissions were compared.

Results

There were 283 eligible subjects, 154 (54.4%) underwent LSG while 129 (45.6%) underwent LRYGB. Mean age was 41.7 years (41.7 ± 11.1) and 60.1% were females. Mean preoperative weight and BMI was 112 kg (113 ± 24.3) and 41.5kg/m^2 (41.5 ± 7.4) respectively. Mean excess weight loss for LSG was 30.6 kg (IQR 22.1-26.1) versus 26.9 kg (IQR 16.7-36.8) for LRYGB at 2 years ($p=0.408$). Mean operative times and length of stay were significantly shorter for LSG as compared to LRYGB, 140 minutes (140 ± 45.3) and 4.1 days (4.1 ± 1.1) for LSG as compared to 204 minutes (204 ± 65.2) and 5.3 days (5.28 ± 3.7) for LRYGB ($p=0.001$). Amongst 7 subjects with postoperative leaks, 4 underwent LSG while 3 underwent LRYGB, ($p=0.605$). Among subjects who underwent LRYGB, 17.1% were readmitted within a month as compared to 3.2% from the LSG group ($p=0.001$).

Conclusion

LSG and LRYGB result in comparable weight loss at 2 years. Advantages of LSG include shorter operative times, shorter length of hospital stay and fewer readmissions for minor complications.

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SLEEVE GASTRECTOMY FOR SAFE AND EFFECTIVE WEIGHT LOSS IN PATIENTS WITH HIV AND MORBID OBESITY

Sleeve gastrectomy

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Background

The efficacy of antiretroviral therapy has made HIV a chronic condition. The prevalence of obesity in HIV positive patients has subsequently risen, and is present in 6-34% of men and 21-30% of women.

Introduction

Sleeve gastrectomy is a safe and effective procedure for weight loss in the general population; but having HIV may bring hesitation to performing bariatric surgery for some practitioners.

Objectives

The aim of this study is to evaluate the safety and efficacy of laparoscopic sleeve gastrectomy (LSG) in patients with HIV.

Methods

A retrospective analysis of prospectively collected data of patients with HIV who underwent LSG at a community hospital by a single surgeon was performed. Nine patients with HIV underwent LSG. Primary outcomes include weight loss at 6 and 12 months, and postoperative CD4 count and viral load. Secondary outcomes include alteration to antiretroviral therapy (ART).

Results

Our patients had a mean BMI of 46 (range 35-66) and were all well controlled on ART preoperatively. Mean weight loss at 12 months was 40 kg (range 21-55), with mean excess body weight loss 69% (range 42-112). There were no significant changes in CD4 counts and all patients continued to have undetectable viral loads at one year postoperatively. One patient had a change in ART, which was unrelated to bariatric surgery. There were no complications in our patient group.

Conclusion

This is the largest series to date evaluating sleeve gastrectomy in HIV positive patients, and further supports the safety and efficacy of sleeve gastrectomy in this patient population.

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EVALUATION THE EFFECT OF BARIATRIC SURGERY FOR NON-ALCOHOLIC FATTY LIVER DISEASE WITH TRANSIENT ELASTOGRAPHY

Sleeve gastrectomy

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Introduction

Obesity is an increasing worldwide problem and it is suggested that non-alcoholic fatty liver disease prevalence is almost 100% in morbidly obese patients. FibroScan is a newly developed and non-invasive method to detect liver stiffness and steatosis accurately even in obese patients.

Objectives

Our objective in this study was to evaluate the effect of bariatric surgery for non-alcoholic fatty liver disease in obese population with transient elastography measurement.

Methods

From May 2016 to December 2016, 52 patients who undergone laparoscopic sleeve gastrectomy (LSG) were evaluated. Liver fibrosis and steatosis was estimated by FibroScan before the operation and after 3 months.

Results

Forty-three patients had valid results according to the accepted criteria. There were 31 women and 12 men. Mean age was 38.09 and mean body mass index was 41.32 kg/m². The mean stiffness scores were 7.01 kPa preoperatively and 5.75 kPa at 3 months. The difference was statistically significant ($p < 0.01$). The mean Controlled Attenuation Scores that detect steatosis were 315.42 dB/m preoperatively and 201.00 dB/m at 3 months ($p < 0.01$). Mean ALT levels were 31.93 and 21.76 before the surgery and after 3 months ($p < 0.01$).

Conclusion

Fibroscan is a reliable method to assess liver fibrosis and steatosis. Prevalence of steatosis and fibrosis is high in morbidly obese population. LSG has a profound effect on liver fibrosis and steatosis.

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GERD IN BARIATRIC SURGERY - GERD REALLY A CONTRAINDICATION FOR SLEEVE GASTRECTOMY?

Sleeve gastrectomy

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Introduction

Almost half of bariatric patients suffer from gastro-esophageal reflux disease (GERD). Various bariatric operations result in different relief of symptoms. The collected data for the LSG to obese patients with GERD is inconsistent.

Objectives

Thus, we analyzed retrospectively our bariatric patients regarding to GERD before and after bariatric operations and its clinical relevance, follow-up and treatment.

Methods

This was a retrospective study of our own obese patients in the period before operation and postoperative follow-up up to 24 months.

Results

A total of four hundred ninety-eight obese patient have been observed. The rate of initially postoperative GERD after SG raised up nearly double (16 % to 30 %). However, based on the total number of SG patients only 11 % of patients left with therapy resistant reflux symptoms after 12 months of follow up with proton pump inhibitors (PPI) treatment. Regarding to various GB operation in the post-RYGB-group only 3 of 124 patients (2 %) had reflux symptoms. Their reflux was solved under conservative therapy.

Conclusion

After conservative treatment with PPI the post-LSG-GERD can be reduced to a lower overall prevalence than in the preoperative stage under conservative treatment. That's why the GERD shouldn't be a contraindication for LSG-operation. Patients with GERD should be made accessible to LSG. Especially patients with BMI over 60 kg/m² can benefit from a previous LSG-surgery in a two-step-procedure due to the technical severity under extreme high BMI, before a RYGB is performed as a second step, if the patients are still complaining GERD symptoms after the LSG.

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LAPAROSCOPIC SLEEVE GASTRECTOMY - LONG TERM RESULTS

Sleeve gastrectomy

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Background

Over the last decade, laparoscopic sleeve gastrectomy (LSG) has established itself as a stand alone bariatric procedure despite the sparse long term follow up data.

Introduction

A tendency to regain weight after a 3year period is reported due to dilatation of the sleeve.The aim is to present long term results of LSG on weight loss.

Objectives

Analyze data of LSG performed in the Department who have completed 6 years follow up.

Methods

A retrospective analysis was performed on 46 patients who underwent LSG in our department between July 2009 to June 2010.Two patients underwent revision procedure for weight regain and were not included in our study.A standardized LSG was performed over a 36 Fr bougie.Analyzed data included demographics, BMI and percentage excess weight loss (%EWL) with respect to ideal body weight calculated at BMI of 25 kg/m².

Results

Forty six patients underwent LSG with mean age of 47.3 years and male:female ratio of 1:2.The preoperative mean BMI was 47 kg/m² (35.4-67.1),with 9 patients being superobese.Perioperative mortality (<30 days) was zero.The overall follow-up period was 72 months.The mean %EWL was 56.80% (26.6%–78.3%) at 1 year, 71.10% (35–92.3%) at 2 years and 60.70% (32–88.3%) at 6 years.Weight regain (%EWL <50%) was seen in 7 patients.Long-term quality of life of patient was good after 6years with symptomatic gastro-esophageal reflux observed in 8% of patients.

Conclusion

This study supports the efficacy of laparoscopic sleeve gastrectomy as a definitive bariatric procedure with significant and sustained weight loss along with good long term quality of life.

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THE EFFECT OF SLEEVE GASTRECTOMY ON URIC ACID LEVELS AT 6 WEEKS AND 6 MONTHS POSTOPERATIVELY.

Sleeve gastrectomy

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Introduction

Bariatric surgery can result in long-term weight loss and decreased serum uric acid (SUA) levels. However, acute gouty attacks are common during the first months after bariatric surgery and limited data is available regarding SUA levels during this period.

Objectives

To investigate the changes in SUA levels at 6 weeks and 6 months after sleeve gastrectomy (SG).

Methods

Forty-one morbidly obese patients (9 males, 32 females, mean BMI 45.24 ± 5.59 kg/m²) underwent SG. Anthropometrics, SUA levels and other relevant metabolic markers were measured in all the patients preoperatively and at 6 weeks postoperatively. Thirty-one patients assessed also at 6 months postoperatively. No one of the patients had an established diagnosis of gout preoperatively or was on uric acid lowering medications. Hyperuricemia was defined as SUA levels >6mg/dl.

Results

Weight, BMI and waist circumference decreased significantly postoperatively. Fourteen patients (14/41, 34.1%) were hyperuricaemic at baseline. At 6 weeks after SG, SUA levels were increased significantly by 15.8% ($p < 0.001$) compared to preoperatively and 54% (22/41) of the patients had SUA levels >6mg/dl. At 6 months after SG, SUA levels decreased significantly ($p < 0.001$) compared to preoperatively. Only two patients (2/31, 6.5%) were hyperuricaemic at 6 months postoperatively ($p = 0.02$, compared to preoperatively).

Conclusion

In a morbidly obese population seeking bariatric surgery, SUA levels were increased compared to preoperatively at six weeks after SG, but were decreased below the preoperative levels at 6 months postoperatively. A significant lower proportion of patients were hyperuricaemic at 6 months after SG compared to preoperatively.

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P.652

DOES HELICOBACTER PYLORI POSITIVITY AFFECT THE OUTCOMES OF LAPAROSCOPIC SLEEVE GASTRECTOMY?

Sleeve gastrectomy

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Introduction

Laparoscopic sleeve gastrectomy (LSG) has become popular recent years and one of the most effective technique for surgical management of morbid obesity. The influence of helicobacter pylori (Hp) colonization on outcomes of LSG has not been clear yet.

Objectives

To investigate the preoperative Hp colonization on outcomes of LSG.

Methods

Between May 2014 and June 2015, medical records of the patients who underwent LSG were analyzed. Inclusion criteria were body-mass index (BMI) >40 kg/m² and age between 18 and 65 years old. Patients with comorbid diseases (diabetes mellitus, physical inability to exercise, psychiatric problems, and previous bariatric operations) were excluded. A total of 154 patients were separated into two groups according to Hp positivity based on histopathological analysis of specimen. The demographic features (age, gender, BMI), length of hospital stay, postoperative complications, readmissions and weight loss were evaluated.

Results

Group 1 (Hp+) has 57 patients (9 male, 48 female) and Group 2 (Hp-) has 97 patients (17 male, 80 female). Mean ages are 37.24±11.56 and 38.58±10.5 years respectively. Mean BMI is 47.71±7.83 and 47.19±7.69 kg/m² respectively (p=0.687). Mean length of hospital stay is 4.1 and 4 days respectively. There is no significant difference for demographics, readmissions and postoperative complications (bleeding, intra-abdominal abscess and surgical site infection). None of the patients suffered from anastomotic leakage. Mean BMI changes at postoperative 12 months are 15.95±4.69 and 16.18±5.36 kg/m² respectively which has not a statistically significant difference (p=0.788).

Conclusion

Hp positivity has not an obvious effect on postoperative outcomes of LSG in treatment of morbid obesity.



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SLEEVE GASTRECTOMY FOR DIABETICS – FIVE YEAR OUTCOMES

Sleeve gastrectomy

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Introduction

Today, bariatric surgery is embraced as the most powerful option to ameliorate type II diabetes (T2DM) in morbidly obese patients. The quest for the “best” surgery in terms of surgical efficacy, i.e. the least complications with the most significant and sustainable weight loss and comorbidity resolution is still on its way.

Objectives

To evaluate our long-term outcomes of laparoscopic sleeve gastrectomy (LSG) with special emphasis on its effects on glycemic control and T2DM remission.

Methods

We reviewed our database and identified all the diabetic patients who underwent LSG with at least 3 years of follow-up. Outcomes assessed included complications, weight loss and resolution/improvement in co-morbidities with an emphasis on diabetes including pre-and post op hemoglobin A1C and medication status.

Results

Fifty diabetic patients underwent Sleeve gastrectomy (35 females, mean age and BMI of 49 years and 43.2 kg/m² respectively) between 2009-2011. On average, patients suffered from diabetes for 5.5 years before surgery, and had HbA1C of 7.95% with fasting glucose level of 167mg%. Eleven patients (22%) were on insulin treatment at surgery. Average BMI at a mean follow up of 5 years was 33.4 kg/m² with %EWL of 55.5±30%, both statistically significant, and with an average HbA1C of 6.62% and fasting glucose of 113 mg%. Only 3 patients were still on insulin at this time.

Conclusion

Sleeve gastrectomy offers good and durable weight loss in the diabetic population, with long standing resolution or improvement in their diabetes. future guidelines and indications for bariatric surgery probably will widen with more emphasis to be given to metabolic comorbidities even for lower BMI patients.

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P.654

LONG-TERM WEIGHT LOSS IN LAPAROSCOPIC SLEEVE GASTRECTOMY (7 YEARS)

Sleeve gastrectomy

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Introduction

Laparoscopic sleeve gastrectomy (LSG) has become an alternative as a bariatric surgical technique. There is lack of long term results in the literature.

Objectives

The aim of this study is to present weight loss results of LSG up to 7 years of follow-up.

Methods

Retrospective series of patients who underwent LSG between 2008 and 2011. Primary endpoint was weight loss: percentage of excess weight loss (%EWL), total weight loss (TWL), and body mass index (BMI) were reported. Failure was defined as %EWL <50%. Factors related to weight regain were determined with multivariate analysis. Other endpoints were complications rate

Results

148 patients met the inclusion criteria. 76.3% were female. Mean preoperative BMI was 36±4 kg/m². Mean operative time was 89.3±3.2 minutes. Follow-up at 5, 6 and 7 years was 77.7%, 83.3% and 82.2% respectively. Mean %EWL and TWL at 1, 3, 5 and 7 years was 93.2%, 80.7%, 70.6% and 51.7%, and 27.2%, 23.3%, 20.4% and 16.3% respectively. Failure rate was 30.4% at the fifth year and a 51.4% at the seventh year. High preoperative BMI was related to worse %EWL (P<0.001) but not %TWL. Preoperative BMI <35 kg/m² was associated with better %EWL but not %TWL (P=0.003). Four leaks (2.7%) and no mortality.

Conclusion

LSG is an acceptable surgical technique for weight loss, but in this series, up to a third of the patients show some failure in the long term. %EWL is better in patients with lower BMI, but this difference disappears when we express outcomes with %TWL.

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P.655

GASTROPEXY SIGNIFICANTLY REDUCES GASTRO-OESOPHAGEAL REFLUX SYMPTOMS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY: A NON-RANDOMISED CONTROLLED STUDY.

Sleeve gastrectomy

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Introduction

Laparoscopic sleeve gastrectomy (LSG) may induce gastro-oesophageal reflux disease (GORD).

Objectives

Surgical techniques should be sought to reduce GORD after LSG.

Methods

In group A (n = 216) LSG was performed by resecting along a 32 Fr tube from two cm proximal to the pylorus to the cardia. In group B (n = 99) gastropexy performed by suturing the gastrocolic ligament (including the gastroepiploic arcade) to the staple line was added to the procedure. Within group B, crural repair was added in selected cases. GORD was evaluated by whether the patient was using a proton-pump inhibitor (PPI) or not.

Results

Preoperatively the mean age was 41.0 ± 11.7 years, 71.7% were females, mean BMI was 44.9 ± 6.2 and 23.2% were smokers with no difference between the two groups. The follow-up rate was 85.6%. In group A the number of patients using proton-pump inhibitors (PPI) preoperatively was 21 (9.7 %) and at two years 66 (30.6 %). In group B the number using PPI preoperatively was 14 (14.1 %) and at two years 16 (16.2 %). The adjusted odds ratio for postoperative reflux in group A compared to group B was 0.35 (95% CI, 0.14 to 0.72) $p = 0.004$. No additional effect was seen from adding crural repair. Adding gastropexy or crural repair did not increase the morbidity rate.

Conclusion

Gastropexy reduces the prevalence of reflux symptoms after LSG. Whether adding crural repair or cardiopexy have additional effect should be further explored.

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LONG-TERM OUTCOMES OF LAPAROSCOPIC SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Introduction

We present our long-term results of sleeve gastrectomy (LSG).

Objectives

To evaluate long-term outcomes of LSG regarding weight loss, comorbidities and gastroesophageal reflux disease (GERD).

Methods

We identified patients who underwent LSG between 2006-2009. We revised the data and ones with outdated details were tracked with social media. An online survey was sent. We calculated the percent Total Weight Loss (%TWL) and percent Excess Weight Loss (%EWL), changes in body mass index (Δ BMI). We evaluated therapy for type 2 diabetes (T2DM) and arterial hypertension (AHT). GERD presence was evaluated by the typical symptoms and / or proton pump inhibitor (PPI) therapy.

Results

120 patients were qualified. Follow-up was available for 100 participants (47 female, 53 male), our follow-up rate was 83%. Median follow-up period reached 8.0 years (from 7.1 to 10.7). 16% of patients required revisional surgery over the years (RS group), mainly because of insufficient weight loss. For the LSG (LSG group n=84) the mean %EWL was 51.1% (\pm 22.3), median %TWL was 23.5% (IQR 17.7% - 33.3%). 50% (n=42) of patients achieved the satisfactory 50%EWL. 59% of patients reported improvement in AHT therapy, 58% in T2DM. 60% of patients reported recurring GERD symptoms. In 93% of these cases GERD has developed de novo.

Conclusion

LSG provides good weight loss effects. 16% of patients require additional surgery to maintain it. More than half of the subjects observe improvement in AHT and T2DM. Over half of the patients complain about GERD symptoms, which in most of the cases is a de novo pathology.

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PREOPERATIVE PREDICTORS OF WEIGHT LOSS AFTER SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Introduction

Preoperative predictors of poor outcome after laparoscopic sleeve gastrectomy (LSG) are not well understood.

Objectives

The aim of the study was to analyse the time-trend of weight loss and to identify the preoperative predictors of weight loss after LSG at 5 years follow-up.

Methods

We performed a retrospective study of all patients undergone LSG between October 1st 2008 and March 31st 2015 with a minimum follow-up of six months.

Primary outcomes was BMI trend over time and its potential modifications by ten different preoperative factors: age (<43 vs ≥43), gender, dyslipidaemia, arterial hypertension (AH), OSAS, prepuberal onset, previous bariatric procedure, smoke and BMI at surgery (≤50 vs >50). BMI was measured at seven time points (T0, 6, 12, 24, 36, 48, 60 months) and its repeated measure were analysed using a mixed effect linear model.

Results

Globally 508 entered in the study. Median BMI at single time point were: 44.4kg/m²; 35kg/m²; 31.5kg/m²; 31.3kg/m²; 32.0kg/m²; 33.2kg/m² at 48; 33.6kg/m². BMI trend over time was statistically significant (p<0.001).

At univariate analyses, BMI trend was influenced by AH (p=0.002) and BMI>50 at T0 (p>0.001), a slight association with diabetes was observed (p=0.075); at the multivariate analyses, it was influenced only by AH (p=0.001) and BMI>50 at T0 (p<0.001).

Conclusion

Preoperative BMI>50 at T0 is a strong preoperative predictor of poor outcome, even if results at five years of follow-up are similar to those of RYGBP; analysis of comorbidities revealed only a positive association with AH. Early referral to bariatric surgery should be recommended.

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P.658

THE EFFECT OF EATING ATTITUDE ON THE SUCCESS OF LAPAROSCOPIC SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Introduction

Bariatric surgery is gaining popularity in the world and it cause successful weight loss and improved quality of life. But, there is a potential of weight regain.

Objectives

Our objective in this study was to examine the effect of preoperative eating attitude on the success of bariatric surgery.

Methods

During the 3.5-year period, 814 patients underwent laparoscopic sleeve gastrectomy(LSG) and filled Eating Attitude Test-26(EAT-26) questionnaire before the surgery at our center. The patients were divided into two groups(Group 1 with EAT-26 score 20 or above, Group 2 with EAT-26 score lower than 20). There were 584 women(71.4%) and 230 men(28.3%). Questionnaires were completed before LSG. The questions relate to attitudes, beliefs and behaviors concerning food, body shape and weight. A score of 20 or above donates the existence of disturbed eating attitudes and behavior.

Results

There were 152 patients in group 1 and 662 patients in group 2. Preoperative mean BMI for group 1 was 40.7 kg/m² and for group 2 was 42.9 kg/m² and the difference was statistically insignificant (p=0.581). Mean EWL was 31.7, 57.2, 77.9 and 94.3 in group 1 at 1 month, 3 months, 6 months and 1 year, respectively. Mean EWL was 29.1, 54.8, 76.6 and 93.5 in group 2 respectively. There was no statistically significant difference between two groups except in EWL at 1 month(p=0.022).

Conclusion

Eating disorder may affect the success of bariatric surgery. It may cause insufficient weight loss after surgery. Our study showed that EAT-26 score of patients did not affect the success of bariatric surgery.

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CHANGES IN THYROID HORMONE LEVELS IN EUTHYROID PATIENTS AT 6 WEEKS AND 6 MONTHS AFTER SLEEVE GASTRECTOMY.

Sleeve gastrectomy

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Introduction

Changes in thyroid hormone levels have been described after weight loss through bariatric surgery. However, limited data is available on the changes of thyroid hormones after sleeve gastrectomy (SG).

Objectives

To evaluate the changes in the thyroid hormone levels in euthyroid patients at 6 weeks and 6 months after SG.

Methods

Twenty five euthyroid morbidly obese patients (19 females/ 6 males, mean BMI $46.58 \pm 5.56\text{kg/m}^2$) were recruited. All the patients underwent SG and had assessment of anthropometrics, albumin, thyroid stimulating hormone (TSH), total triiodothyronine (T_3) and free thyroxine (fT_4) levels preoperatively, 6 weeks and 6 months postoperatively.

Results

T_3 levels were lower at 6 weeks and 6 months postoperatively (both $p < 0.001$) compared to baseline, when fT_4 levels remained unchanged postoperatively. TSH levels decreased at 6 months postoperatively compared to baseline ($p < 0.01$) and 6 weeks postoperatively ($p < 0.017$). The T_3/fT_4 ratio was also lower at 6 weeks and 6 months postoperatively compared to baseline (both $p < 0.01$). However, the vast majority of the patients had thyroid function tests in the normal range at all the postoperative time points (23/25, 92%).

There was a trend for positive correlation between the change in BMI and the change in T_3 levels at 6 weeks postoperatively ($r = 0.35$, $p = 0.06$). A positive correlation was also found between fT_4 and BMI preoperatively ($r = 0.49$, $p = 0.01$).

Conclusion

In morbidly obese euthyroid patients, SG results in decreased T_3 levels from the sixth postoperative week onwards, when TSH is decreased at 6 months postoperatively. No change was observed in fT_4 levels postoperatively.

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P.660

WHY SLEEVE GASTRECTOMY IS MY BARIATRIC PROCEDURE OF CHOICE

Sleeve gastrectomy

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Introduction

Obesity is a public health problem and the only effective treatment for this pathology is bariatric surgery. Sleeve gastrectomy (SG) has increased space in the bariatric scenario over the years, by being a therapy with good results regarding weight loss and control of comorbidities, and also for having a low rate of complications. In the USA, the incidence of SG increased from 18% in 2011 to 50% in 2015, which shows that this technique has become preferable for most surgeons nowadays.

Objectives

To study the results obtained with sleeve gastrectomy that make this technique preferable.

Methods

This study was designed in a historical cohort study with retrospective data of patients treated by the same surgeon of CITOM from 2007 to 2016.

Results

SG was performed in the beginning as a first-step bariatric procedure, and then with the good results obtained, it became the most indicated bariatric technique. There were 2190 cases performed. Regarding gender, 20% of the patients were male, and 80% were female. The mean BMI of patients submitted to SG was 43 kg/m². The most common complications after surgery were bleeding, atelectasis, subfrenic abscess and fistula. The mortality rate is 0.04% (1/2190).

Conclusion

SG has been proved to be the most effective surgical treatment for morbid obesity regarding weight loss and comorbidities resolution that require less anatomical changes. These advantages associated with a low rate of complication and mortality is the reason why SG has become our bariatric procedure of choice for most cases.

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P.661

BASELINE EROSIIVE ESOPHAGITIS IS COMMON IN OBESE PATIENTS AND IS HIGHLY PREDICTIVE OF THE NEED FOR CONTINUED PPI THERAPY POST- LAPAROSCOPIC SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Introduction

Gastroesophageal reflux disease (GERD) is common in obese individuals and following laparoscopic sleeve gastrectomy (LSG). There is limited information on the true prevalence and risk factors for GERD post-LSG.

Objectives

To prospectively investigate the prevalence of GERD in obese patients and identify risk factors for continued PPI therapy post-LSG.

Methods

Consecutive patients evaluated for bariatric surgery were enrolled after informed consent. Patients completed the GERDQ and Nocturnal GERD Symptom Severity and Impact Questionnaires (N-GSSIQ). Demographic data included gender, age, BMI, waist circumference, and use of PPI or H₂-antagonists. Endoscopic data included presence of erosive esophagitis (EE), hiatal hernia (HH), and gastroesophageal flap valve endoscopic grading (Hill grade). Patients were assessed 6 months post-LSG for BMI, GERD symptoms, and need for PPI.

Results

176 patients have been recruited to date, 39 had LSG and completed the 6-month follow-up period assessment. Mean age was 37.9 ± 10.5 and mean BMI was 40.9 ± 4.7 . EE was documented in 14 of 39 (35.9%) and HH in 11 patients (28%). PPI use was common both at baseline (33.3%) and 6 months post-LSG (35.9%). EE on baseline EGD was the only factor associated with need for continued PPI use (64.2% in EE patients vs. 20% without EE; $p= 0.006$). Change in BMI, HH repair, baseline PPI use and GERDQ score³ 8 were not predictive of continued post-operative PPI use.

Conclusion

Baseline erosive esophagitis is common in obese patients and is highly predictive of GERD and the need for continued PPI therapy post-laparoscopic sleeve gastrectomy.

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P.662

IMPACT OF SLEEVE GASTRECTOMY ON GASTROESOPHAGEAL REFLUX DISEASE IN SEVERELY OBESE KOREAN PATIENTS.

Sleeve gastrectomy

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Introduction

Laparoscopic sleeve gastrectomy (LSG) has established popularity as a weight loss and resolution of co-morbidities. However, the incidence of gastroesophageal reflux disease (GERD) following LSG is controversial.

Objectives

To investigate the incidence of GERD following LSG

Methods

From January 2013 to December 2015, 68 patients underwent regular endoscopic surveillance. Esophagitis under gastroscopy was determined by the Los Angeles (LA) classification system by 2 gastroenterologist.

Results

A total of 68 patients underwent gastroscopy. Diagnosis of GERD was determined by symptoms, history of proton pump inhibitor (PPI) treatment and gastroscopy. The percentage of excess BMI loss in the postoperative first and third year was 94.2 ± 19.2 and 90.0 ± 25.6 %. GERD was present in 43 (63.2%) of 68 patients: symptoms or history of PPI treatment = 37 (54.4%) and gastroscopy = 28 (41.2%). GERD consisted of 27 (62.8%) patients with de novo GERD, and 16 (37.2%) with pre-existing GERD. Out of 28 patients with endoscopic lesions, LA grade A was 6 (21.4%), B = 14 (50.0%), C = 4(14.3%), and D = 4(14.3%). LA grade C or D patients treated with high-dose PPI. There is no conversion to Roux-en-Y gastric bypass due to GERD.

Conclusion

In this study, the short- or mid-term weight loss following LSG was very excellent. 39.7% of total patients developed de novo GERD. 11.8% of patients had LA grade C or D esophagitis, but most responded to either low- or high-dose PPI. Further studies are indicated to evaluate the technical factors that may minimize the risks of persist or de novo GERD after LSG.

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P.663

SLEEVE GASTRECTOMY VERSUS PLICATION. A MATCHED COHORT STUDY COMPARING OUTCOMES AFTER ONE YEAR OF FOLLOW UP

Sleeve gastrectomy

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Background

Controversies exist regarding this emerging surgery that successfully reduces the gastric volume by plicating the gastric greater curvature. The aim of this study was to compare short-term outcomes in terms of weight loss, associated complications and comorbidity improvement comparing LGCP and (LSG).

Introduction

Objectives

The primary objective of this retrospective non randomized study was to compare the early outcome in term of weight loss, associated complications and comorbidities resolution between LGCP and LSG.

Methods

Our study was performed between January 2012 to March 2013, an equal number of patients underwent either LGCP (n = 30) or LSG (n = 30). Patients matched for sex and BMI. Data on the operative time, perioperative complications, hospital stay, overall cost of LSG and LGCP, weight loss (WL), percentage of excess weight loss (%EWL) and improvement of comorbidities were collected

Results

The total cost of LSG was (\$4,500 ± 200) compared to LGCP (\$2,200 ± 100) (P<0.001). One year after surgery, the mean %EWL was (28.38) in the LGCP group and (43.5) in the LSG group (P=0.011). The comorbidities, including diabetes, sleep apnea and hypertension, were markedly improved in both groups at 6 months after surgery.

Conclusion

This study demonstrates that the EWL pattern at one year of follow up was superior in the LSG group. The resolution of comorbidities was remarkable in both groups. Prospective trials with longer follow up are needed to confirm the long-term outcomes of this procedure.

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P.664

INTRAVENOUS ACETAMINOPHEN AND INTRAVENOUS KETOROLAC: AN EFFECTIVE NON-OPIATE ANALGESIA REGIMEN IN POSTOPERATIVE LAPAROSCOPIC SLEEVE GASTRECTOMY PATIENTS?

Sleeve gastrectomy

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Introduction

Laparoscopic sleeve gastrectomy (LSG) is the most common bariatric procedure performed today. Postoperative care, including pain control, varies widely. Current literature is divided on the effectiveness of non-opiates to manage postoperative pain in morbidly obese patients.

Objectives

The aim of this study is to evaluate the effectiveness of a non-opiate postoperative pain regimen. Primary outcome is to evaluate postoperative opioid consumption in those patients who received intravenous acetaminophen and ketorolac. Secondary outcomes include postoperative length of stay (LOS), nausea, and 30-day readmissions.

Methods

This is a retrospective analysis of prospectively collected data from patients undergoing LSG by a single surgeon at a community teaching hospital. Data analyzed includes opiate use, intravenous acetaminophen and ketorolac use, LOS, operative time, postoperative nausea, and 30-day readmissions. We compared the opiate group and the non-opiate group, and also compared those in the non-opiate group who did not request opiates to those who did.

Results

There were 82 patients in the opiate group and 408 patients in the non-opiate group. Within the non-opiate group, 27.9% received adjuvant opiates. LOS was shorter in the non-opiate group (2.1 days vs 2.3 days, $P=0.0232$). LOS was also shorter for patients on the non-opiate regimen who did not receive opiates vs those who requested opiates (2.07 vs 2.34, $P = 0.0001$). Anti-emetic requirement was lower in the non-opiate group (67.9% vs 80.5%, $P=0.0038$). 30 day readmission was lower in the non-opiate group (8.5% vs 4.7%, $P=0.0372$).

Conclusion

Patients with morbid obesity undergoing LSG can be successfully managed postoperatively with non-opiate pain regimens.



P.665

THE EFFECT OF SLEEVE GASTRECTOMY IN DAYTIME SLEEPINESS AT 6 MONTHS FOR MORBIDLY OBESE PATIENTS

Sleeve gastrectomy

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Introduction

Obstructive sleep apnea is one of the most important comorbid condition in morbid obese patients. It affects quality of life for patients with morbid obesity.

Objectives

Our objective in this study was to detect the effect of laparoscopic sleeve gastrectomy (LSG) on daily sleepiness in patients undergoing obesity surgery.

Methods

We used the Epworth Sleepiness Scale (ESS) questionnaire to measure daytime sleepiness. Preoperative and postoperative (at 6 months) ESS scores were recorded. Eighty-six patients were prospectively enrolled into this study.

Results

There were 65 women (75.6%) and 21 men (24.4%). The mean age of the patients was 36.4 ± 10.8 and mean body mass index 43.1 ± 7.2 kg/m². Mean percentage of excess weight loss was 77.4 ± 22.5 at 6 months. Mean ESS score was 4.9 ± 4.1 and 2.7 ± 2.4 preoperatively and at 6 months, respectively. This difference in ESS score was statistically significant ($p < 0.01$).

Conclusion

LSG is associated with improvement in daytime sleepiness and with rapid weight loss during 6 months' period postoperatively.



P.666

SLEEVE STENOSIS- DIAGNOSIS AND MANAGEMENT

Sleeve gastrectomy

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Introduction

This study aimed to determine the incidence, etiology, and management options for Complication -Stenosis after Laparoscopic sleeve gastrectomy (LSG).

Objectives

To identify and manage postop sleeve gastrectomy complications.

Methods

A retrospective study reviewed morbidly obese patients who underwent LSG between January 2011 and December 2014 to identify patients treated for Stenosis after LSG.

Results

In this study, 224 patients with a mean age of 48. years and a mean body mass index (BMI) of 42 underwent LSG. In 2 of these patients Stenosis developed. The LSG procedure was performed using a 36-Fr. bougie . Both patients underwent contrast study, demonstrating a fixed narrowing .In one patient Endoscopy confirmed short-segment stenoses: near the gastroesophageal junction. This patient require two sittings of dilatation(15 mm ballon). The time from surgery to initial endoscopic intervention was 45 days, and the time from the first dilation to toleration of a solid diet was 48 days .In another patient Contrast studies demonstrated minimal passage of contrast through a long-segment stenosis. This patient also underwent multiple endoscopic dilation procedures and endoluminal stenting, ultimately requiring laparoscopic conversion to Roux-en-Y gastric bypass. Time from the initial surgery to the surgical revision was 72 days, and time after the first intervention to tolerance of a solid diet was 85 days.

Conclusion

Symptomatic short-segment stenoses after LSG may be treated successfully with endoscopic balloon dilation. Long-segment stenoses that do not respond to endoscopic techniques may ultimately require conversion to Roux-en-Y gastric bypass.

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THE EFFECT OF LAPAROSCOPIC SLEEVE GASTRECTOMY ON BIOCHEMICAL PARAMETERS: 2-YEAR'S EXPERIENCE AT A BARIATRIC CENTER OF EXCELLENCE

Sleeve gastrectomy

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Introduction

The prevalence of obesity has been increasing worldwide during recent years. Obesity is associated with different type of comorbidities. Bariatric surgery has been shown to be effective in achieving and maintaining weight change and reducing obesity-related comorbidities.

Objectives

Our objective in this study was to assess the influence of laparoscopic sleeve gastrectomy(LSG) on the plasma levels of insulin, lipid fractions, glucose, BMI levels in obese patients after 1 year.

Methods

The prospectively maintained medical records of our Bariatric Center of Excellence were reviewed retrospectively to identify all consecutive patients with morbid obesity who underwent LSG between July 2013 and April 2016. Two hundred twenty-seven patients who have available medical records were included into this study.

Results

The mean age was 37 ± 10.1 and 165 (72.7%) patients were female. The mean weight and body mass index were 124.2 ± 26.6 kg and 43.7 ± 7.7 kg/m², preoperatively. Excess weight loss was 43.5 ± 11.8 after 3 months and significantly increased at 6th (61.6 ± 14.3 , $p < 0.001$) and 12th (71.7 ± 16.5 , $p < 0.001$) month. When compared with preoperative levels, the mean fasting glucose, insulin and HOMA-IR levels have decreased dramatically after surgery. Total cholesterol and LDL levels were not changed significantly during the follow up. But, HDL levels were increased and triglyceride were decreased during follow up.

Conclusion

LSG decreases insulin resistance with improvement in glucose metabolism after surgery. This study also demonstrates that sleeve gastrectomy produces, in association with weight loss, sustained improvement in lipid profile. It decreases fasting triglycerides, increases HDL levels, but there is no change in blood levels of total cholesterol and LDL levels.

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P.668

ROLE FOR HELICOBACTER PYLORI SCREEING IN SLEEVE GASTRECTOMY PATIENTS

Sleeve gastrectomy

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Introduction

Vertical sleeve gastrectomy (VSG) is currently the most common bariatric surgery performed for morbid obesity across the United States. Helicobacter pylori with its associated gastritis is infrequently identified in VSG specimens.

Objectives

It is unclear if this finding has any negative impact on post-operative outcomes, and if preoperative screening for H.pylori might be useful. We now present the largest such series in VSG patients yet reported.

Methods

A prospective database of all patients undergoing VSG, including revisional surgery, at our institution between January 2014 and October 2016, was reviewed. No surgeons routinely screened for or treated H.pylori preoperatively. Rates of 30 day readmissions and postoperative complications were the primary outcomes.

Results

2037 patients underwent VSG during the review period. 255 patients (12.52%) were found to be H.pylori positive. In this H.pylori positive group the mean age was 42.45 years, the mean BMI was 44.06, 25 (9.80%) were smokers, 14 (5.49%) diagnosed preoperatively with GERD and 30 day readmission rate was 5.49% and 2 (0.78%) requiring reoperative intervention. In the H.pylori negative group the mean age was 44.53 years, the mean BMI was 44.87, 248 (13.92%) were smokers, 280 (15.71%) were diagnosed preoperatively with GERD and 14 (0.78%) required reoperative intervention and 30 day readmission rate was 5.16%. No statistical differences exist between two groups.

Conclusion

We have determined that there is no association between specimen H.pylori status and readmission rate or postoperative complications. We conclude that there is no clear benefit to preoperative H.pylori screening as it has no significant effect on post-operative outcomes.

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P.669

ANTI-REFLUX SURGERY WITH LIGAMENT TERES (POST SLEEVE)

Sleeve gastrectomy

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Background

22 patients with a history of sleeve gastrectomy three years ago or more, presented reflux grade III. documented by endoscopy and esophagogram. treatment with medication diets and postural measures were not successful was performed antireflux surgery terete ligament. follow-up 12 months with improvement of symptoms of reflux, endoscopy and esophagogram 30 days and 12 months after surgery, no evidences of reflux.

Introduction

the technique of rotation of the ligament terete maintains the cardias intra abdominal and helps the rehabilitation of the same to improve the symptoms of reflux. 22 patients was selected and improved their symptoms with results equal to those achieved with conventional nissen.

Objectives

patients with post-sleeve - reflux, the rotation of the terete ligament is preferable to performing gastric bypass in patients without regain weight.

Methods

selection of 22 patients with antecedents of gastric sleeve three years ago or more. with severe gastroesophageal reflux disease and studies endoscopy and esophagogram showing grade III reflux. 12 women and 10 men. age: between 18 and 65 years old. and without regain weight.

Results

follow-up 12 months with improvement of symptoms of reflux (international parameters of reflux), endoscopy and esophagogram 30 days and 12 months after surgery, no evidences of reflux.

Conclusion

the rotation of the terete ligament for reflux management associated with the history of sleeve gastrectomy results in clinical and paraclinic results similar to those evidenced with nissen surgery. this way we avoid doing gastric bypass in patients without regain weight after three years or more of realized the sleeve surgery.



P.670

OPTIMIZING RE-SLEEVE GASTRECTOMY FOR WEIGHT REGAIN

Sleeve gastrectomy

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Introduction

Laparoscopic sleeve gastrectomy has increased in popularity and is now one of the most common bariatric procedure worldwide. Revision surgery for different reasons is sometimes necessary and various options are available. Laparoscopic sleeve gastrectomy has increased in popularity and is now one of the most common bariatric procedure worldwide. Revision surgery for different reasons is sometimes necessary and various options are available.

Objectives

To show the technical aspects of re-sleeve gastrectomy in a patient with weight regain.

Methods

We present a case of a male patient who underwent a sleeve gastrectomy in 2013. His preoperative weight was 145 kgs. Initially he lost weight to a nadir of 108 kgs at 18 months but started regaining weight afterwards. He reported increase in his portion size. A preoperative barium swallow showed a slightly dilated sleeve. His weight at this stage was 119 kgs. A re-sleeve gastrectomy was indicated.

Results

This video shows the technical aspects of the dissection and freeing of the sleeve. Full crural dissection was performed to expose the landmarks for the re-sleeve gastrectomy. Then a re-sleeve gastrectomy was performed using a 34 Fr orogastric tube. The patient recovered well and was discharged home on 2nd postoperative day. The patient's weight is 102 kgs at 4 months postoperatively.

Conclusion

Re-sleeve gastrectomy is a feasible option in carefully selected patients with a sleeve gastrectomy and weight regain.

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P.671

LAPAROSCOPIC SLEEVE GASTRECTOMY IN TWO PATIENTS WITH SITUS INVERSUS TOTALIS

Sleeve gastrectomy

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Background

Situs inversus totalis (SIT) is a rare autosomal recessive entity with an incidence varying 1/5.000 to 1/50.000. The mirror image of anatomy presents a challenge for the surgeons.

Introduction

There is sixteen cases of SIT undergone to a bariatric procedure in literature. They were mostly followed for a short period.

Objectives

It was aimed to report mid-term results of LSG in two patients with SIT.

Methods

The medical records of two morbidly obese patients with SIT who had undergone to LSG were analyzed.

Results

Case 1# A 28-years-old female who had SIT with 42.5 BMI underwent to LSG and laparoscopic cholecystectomy because of concomitant cholelithiasis. Five trocars were used and operation time was 98 minutes. There was no perioperative or postoperative complication. Excess BMI loss rate was 105.1 % at the end of 32 months follow-up.

Case2# A 31-years-old female who had SIT with 41.1 BMI underwent to LSG. Four trocars were used and operation time was 72 minutes. There was no perioperative or postoperative complication. Excess BMI loss rate was 114.9 % at the end of 13 months follow-up.

Conclusion

LSG can be performed safely in the patients with SIT. While the presented cases yielded good results at the mid-term, other similar cases and longer follow-up are needed to establish the long-term efficacy of procedure.

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P.672

OUTCOMES OF LAPAROSCOPIC SLEEVE GASTRECTOMY IN SUPER OBESE PATIENTS

Sleeve gastrectomy

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Introduction

Super obese patients remain a challenge for management because of large liver size resulting in decreased work space and associated comorbidities. This is among the first few studies in asian population in super obese patients.

Objectives

To study outcomes in super obese patients undergoing Laparoscopic sleeve gastrectomy (LSG)

Methods

Retrospective Data of 123 patients undergoing LSG from January 2008 to March 2015 was analyzed prospectively.

Results

Mean age and BMI of 123 patients was (\pm 2SD) was 40.0 ± 22.32 years and 56.11 ± 11.98 kg/m² respectively. Percentage follow-up at 1 yr, 3 yr, 5 yr and 7 yr was 101(82.1%), 62(50.4%), 20(16.2%) and 7(5.69%) respectively.

Mean percentage Excess weight Loss (%EWL) (\pm 2SD) at 1 year, 3 years, 5 years, and 7 years was 63.0 (\pm 36.6%), 62.3 % (\pm 33.9%), 56.5% (\pm 35.8%) and 58.6% (\pm 40.3%) respectively. The preoperative BMI significantly correlated with %EWL at 1 year ($r^2= 0.192$, $p=0.05$).

Staple line leak, bleeding, deep venous thrombosis, 30 day mortality occurred in 1.6%, 0%, 0.8%, 0% of the patients respectively. Stricture formation and new onset GERD occurred in 0.8% patients each.

76.4% of the diabetic patients showed remission at 5 years. Hypertension, OSA, GERD improved in 63%, 100%, and 25% of the patients respectively. However 25% of patients had worsening in GERD symptoms.

Conclusion

Super obese patients undergoing LSG as the primary procedure have reasonable weight loss of 62% and 56% at 3 and 5 years respectively with significant resolution of comorbidities.

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P.673

ROUTINE HISTOLOGICAL EXAMINATION OF LAPAROSCOPIC SLEEVE GASTRECTOMY SPECIMENS- A WORTHWHILE EXERCISE?

Sleeve gastrectomy

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Background

Laparoscopic Sleeve Gastrectomy (LSG) is the second most common bariatric procedure in the UK. At present, Bariatric Surgery departments differ in protocols for pre/post-operative investigation of gastric pathology: pre-operative Gastroscopy is not universally routine and histopathological examination of LSG specimens are performed routinely or selectively.

Introduction

Our practice is to perform selective gastroscopy in patients with gastric symptoms and routine histopathology of LSG specimens.

Objectives

Here we present 10-year data on histopathology of SG specimens.

Methods

In this single-centre retrospective study, 866 consecutive LSG histopathology results were obtained by electronic medical records over 10-years (May 2006-November 2015)

Results

866 patients underwent LSG procedures, of which histopathology results were available in 801 (92%): 281 (35%) specimens were normal, gastritis was found in 518 (64%) and 15% (79/518) of these were associated with Helicobacter Pylori infection. Incidental gastric tumours were found in 4 specimens only (0.5%): 2 Neuroendocrine tumours and 2 GastroIntestinal Stromal Tumours. Pre-operative OGD was performed in 18 patients (2%).

Conclusion

Gastritis was the most common pathological abnormality identified however the rate of tumour identification was only 0.5%. Whilst concerns may remain for missed pathology, this study did not reveal any tumours in the residual specimen that would have been missed on visual inspection. This compelling data will change our practice to selective histological assessment of LSG specimens and has already changed one surgeon's practice.

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P.674

COMORBIDITY RESOLUTION AFTER SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Background

The effects of bariatric surgery and weight loss in patients with metabolic syndrome are well documented, with the most notable health improvements in patients with diabetes mellitus.

Introduction

With increased awareness of the benefits of bariatric surgery, patients with other obesity-related comorbidities seek referral for surgery to improve overall health and quality of life. Whilst most studies have focussed on roux en y gastric bypass and the effects on diabetes resolution, few have exclusively studied sleeve gastrectomy outcomes outside those associated with the metabolic syndrome.

Objectives

To investigate the improvement in obstructive sleep apnoea (OSA), hyperlipidaemia and osteoarthritis (OA) symptoms following sleeve gastrectomy.

Methods

Three hundred consecutive patients were studied at a regional referral centre performing exclusively sleeve gastrectomy for morbid obesity. Patient data was obtained from a prospectively maintained database. Case notes were reviewed for the presence or absence of OSA, hyperlipidaemia and OA before surgery. The presence of the same comorbidities was noted at one year following surgery.

Results

262 patients with complete data were studied. Before surgery 100 (38.2%) had OSA, 82 (31.3%) had dyslipidaemia and 116 (44.3%) had OA. At 1 year following surgery, there was 29.0% resolution in OSA, 36.6% resolution in dyslipidaemia and 23.3% resolution in OA symptoms.

Conclusion

Not all obese patients are suitable for all types of weight loss surgery. Whilst greater comorbidity resolution may be observed with some other bariatric procedures, the sleeve gastrectomy remains an effective weight loss operation that provides resolution of a range of obesity-related comorbidities within a year of surgery.

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P.675

WEIGHT REGAIN AFTER LSG STARTS AFTER THE SECOND YEAR AND INCREASES YEARLY WITH 30% OF THE WEIGHT LOST REGAINED AFTER SIX YEARS.

Sleeve gastrectomy

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Background

There is weight regain after LSG operation necessitating a second stage operation. The question is what percentage of LSG patients are going to gain weight and need a second stage operation?

Introduction

sleeve gastrectomy is dependent on pylorus for the success of the procedure. The antrum cannot evacuate the stomach effectively after sleeve gastrectomy which causes weight loss. But the sleeve dilates with time causing weight regain.

Objectives

The objective of this study is to assess the percentage of patients who would regain weight after sleeve gastrectomy and would require revision surgery.

Methods

Data of all patients who had sleeve gastrectomy at our institution with up to six years follow up was reviewed from a prospectively kept database. The follow up rate, the PEWL and the number that had revision operations were determined.

Results

The follow up rate was 95%, 88%, 80%, 64%, 57% and 45% for 1 to six years respectively. The av. PEWL was 73.29%, 73.18%, 68.48%, 58.43%, 52.89% and 41.64%, for one to six years follow up respectively. There was average regain of 30% of the initial weight loss by the end of the sixth year. The revision rate was 33.3%, 12.8% and 9.7% for patients with follow up of six, five and four years, respectively.

Conclusion

The weight loss after the LSG peaks at about two years and by the sixth year about 30% of the weight lost is regained. This trend of weight regain after the LSG correlates with the revision rate which gets up to 33.3% at six years of follow up.

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P.676

SYNTHETIC BIOABSORBABLE STAPLE LINE REINFORCEMENT MATERIAL V/S NON REINFORCEMENT IN SLEEVE GASTRECTOMY. A CONTROL CASE STUDY

Sleeve gastrectomy

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Background

The main complications of Laparoscopic Sleeve Gastrectomy are bleeding, portal trombosis and gastric leakage. Many reinforcement methods are performed in order to reduce these complications

Introduction

In this retrospective study we compared two groups of different techniques of handling the staple line, synthetic bioabsorbable staple line reinforcement material versus non reinforcement in Laparoscopic Sleeve Gastrectomy.

Objectives

Demonstrates difference in morbimortality between the patients with synthetic bioabsorbable staple line reinforcement material versus non reinforcement in Laparoscopic Sleeve Gastrectomy.

Methods

This is a single-institution, retrospectively reviewed study of 400 patient case files. In 200 patients we use synthetic bioabsorbable staple line reinforcement material, and in 200 non reinforcement. Data from all patients undergoing LSG between December 2013 and May 2016 was collected and matched by sex, age, BMI, comorbidities.

Results

Case control were matched on gender, age, comorbidities, BMI. There was 11 bleeding, 2 portal trombosis and 0 leaks in total. There was no difference in rate of complications between the two groups. Bleeding ($p=0.001$), portal trombosis ($p=0.001$), leak ($p=0.001$).

Conclusion

In this study we demonstrate that there is not difference between the use of synthetic bioabsorbable staple line reinforcement material versus non reinforcement in LSG in terms of complications.

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P.677

THE IMPORTANCE OF PLASMA PRESEPSIN IN DETERMINING LEAKS AFTER MORBID OBESITY SURGERY: A PILOT STUDY

Sleeve gastrectomy

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Introduction

Laparoscopic sleeve gastrectomy (LSG) is among the most effective surgical interventions in the long-term prevention of morbid obesity. Stapler line leaks and stapler line bleedings are important complications, which affect morbidity and mortality.

Objectives

The aim of this study is to determine the role of plasma presepsin levels for detection of stapler leaks.

Methods

Sixty patients with LSG due to morbid obesity and 40 controls were included in this prospective study, which was carried out between January 2016 and March 2016 in our clinic. Patients were evaluated by a multidisciplinary team before surgery, in accordance with the protocol of our hospital. Blood samples were obtained from patients without any medical treatment 12 hours before operation and 1st, 3rd, and 5th days postoperatively. Plasma presepsin levels, along with WBC, CRP and Neutrophil-Lymphocyte ratio (NLR), were evaluated in patients who had sleeve gastrectomy line leakage.

Results

In cases with complications, postoperative leukocyte count, CRP, NLR and presepsin measurements on the 1.day, 3.day and 5.day were found higher than the group without complications. The predictive level of presepsin ($p = 0.006$), CRP ($p = 0.023$) and NLR ($p = 0.035$) was found significantly higher than leukocyte ($p < 0.05$).

Conclusion

Our study indicates a role of presepsin levels in the detection and follow up of anastomosis leakage following LSG. Increased levels of presepsin, especially on the first day of surgery, may play an important role for early detection of possible postoperative complications without clinical reflection.

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P.678

BUTRESSING OF THE ENDO-GIA STAPLER DURING SLEEVE GASTRECTOMY DECREASES RATE OF BLEEDING-RELATED COMPLICATIONS

Sleeve gastrectomy

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Background

Bariatric surgery represents the only effective treatment for severe obesity.

Introduction

Newer innovations in surgical equipment have improved safety standards surrounding bariatric surgery. Buttressing of the staple line in sleeve gastrectomy is still controversial in terms of decreasing postoperative complications.

Objectives

The present study investigates the effectiveness of buttressing the staple line in sleeve gastrectomy regarding postoperative bleeding.

Methods

A total of 213 patients undergoing sleeve gastrectomy at a single academic institution were included in this retrospective study between 2014 and 2015. Buttressing material was used in 134 of these cases. Demographic information was collected from both groups preoperatively. Surgical characteristics were also obtained analyzed using unpaired t or χ^2 tests.

Results

Patients in both buttressing and nonbuttressing groups were on average 43 years old and predominantly female (69.7% versus 70.5% female, respectively), with a median body mass index of 44.5 kg/m² (36-58). Postoperative weight loss did not significantly differ between groups at any time point (buttressing versus nonbuttressing percentage of excess weight loss: 39.5% versus 41.5% at 3 mo, P = .3860; 56.4% versus 56.7% at 6 mo, P = .9341). There were no significant differences for operating time, length of stay, readmissions, or reoperations. Specific rates of bleeding-related complications were significantly lower for the group in which buttressing was used (1.5% buttressing versus 5.1% nonbuttressing, P = .0463).

Conclusion

Buttressing of the staple line during sleeve gastrectomy significantly reduces bleeding-related complications and increases tolerability of the sleeve gastrectomy.

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P.679

BLEEDING IN STAPLING

Sleeve gastrectomy

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Background

Per operative bleeding from neo greater curvature is not uncommon in sleeve gastrectomy, suturing and hemostatic clips are employed to control the bleeding from newly created greater curvature.

Introduction

Differing stapling devices are used for creating Neo greater curvature for cutting and stapling. Two main devices used by surgeons are I Drive from Medtronic and Echelon by Ethicon. Both devices claim superiority over other.

Objectives

Objectives of study was to see if there is any difference between two devices as far bleeding from neo greater curvature was concerned and controlled with hemostatic clips only.

Methods

From 1st Jan 2016 to 31st Dec period , 44 operating weeks 207 patients were operated for sleeve gastrectomy. Beginning of week was randomised by picking slips from box that had 20 slips of each device for wait list patients for week ,nearly matched for BMI. Two operating surgeons operated on all cases, both had same technique for procedure.Any bleeding from neo greater curve was controlled by hemostatic clips only. At end of procedure number of clips and firing site was recorded in proforma.

Results

Total patients in Echelon group were 102, 59 patients (57%) required use of clips, As compared to I-Drive where out of 105 patients 37,(35.23%) patient required the clips .In Echelon group 59 patients utilised 286 clips,average 4.89 clips per patient as compared I Drive 37 patients required total 137 clips average 3.7 clips per patient.

Conclusion

It seems from data I-Drive is more hemostatic, as secondary outcome there was no leak in either group.

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P.680

EFFECTIVENESS OF OVERSEWING AS REINFORCEMENT OPTION IN PREVENTING POST-OPERATIVE LEAKS DURING LAPAROSCOPIC SLEEVE GASTRECTOMY: A META-ANALYSIS

Sleeve gastrectomy

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Introduction

Common complications after laparoscopic sleeve gastrectomy (LSG) are staple line leaks, bleeding, and strictures. The leak rate can vary between 1% and 3% for primary procedure and more than 10% in revision procedures. Staple line reinforcement was suggested to decrease leak rate.

Objectives

To determine whether reinforcing the staple line with oversewing decreases the incidence and risk of post-operative leakage in patients undergoing LSG.

Methods

This study used systematic reviews of observational studies and randomized controlled trials that investigated the rate of leakage with oversewing and the effectiveness of oversewing compared to non-reinforcement in preventing post-operative leakage during LSG. Sources include Medline, EBSCOhost Research Database, ProQuest, ScienceDirect, and Cochrane. Bibliographies and citations of identified articles were also inspected for further relevant studies. Meta-analysis was done using RevMan.

Results

There were 9 studies included in the meta-analysis documenting the incidence of leakage among 1,860 patients. The overall estimate of the intervention and non-intervention groups showed no statistical difference in the proportion of post-operative leakage between the two. Proportion of leakage is 2% (95%CI = 0.01-0.03) in oversewn group and 3% (95%CI = 0.02-0.04) in non-reinforcement group. Pooled estimate of risk ratio from the nine studies also showed no statistical difference in the risk of leakage between oversewing and non-reinforcement (RR= 0.69, 95%CI =0.44-1.10, P-value = 0.12). I^2 statistics showed homogeneity of the studies (10%) and funnel plot indicate low probability of bias.

Conclusion

There is no sufficient evidence that reinforcing the staple line with oversewing during LSG decreases the incidence and risk of post-operative leakage.

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P.681

OUTCOMES OF SPIDER® SLEEVE GASTRECTOMY IN PATIENTS WITH MORBID OBESITY: 5 YEARS FOLLOW UP

Sleeve gastrectomy

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Introduction

The single port instrument delivery extended reach SPIDER Surgical System is advanced minimally invasive surgery, used worldwide as a revolutionary technology in bariatric surgery.

Objectives

Primary outcome: change in BMI and Excess weight loss % at six time points between 1 month up to 5 years postoperatively.

Secondary outcome: complication rate, effect of the surgery on diabetes mellitus, length of the procedure and hospital stay.

Methods

retrospective review of a prospectively collected database of all patients who underwent spider sleeve gastrectomy in our centre (2012-2013).

Results

180 patients; mean age 33 years, 76.1% females. Mean preoperative BMI was 44 ± 5.7 kg/m², which decreased to 30.6 ± 4.6 and 33.5 ± 6.1 kg/m² at 2 and 5 years respectively. EWL% at 6, 12, 24 months were 53.8% (SD 14.7%), 64.9% (SD 18.3%) and 66.75% (SD 20.4%) and decreased 53.2% (SD 25.5%) at mean follow up of 52 months. Mean duration of the procedure was 74.49 ± 26 minutes. Eight patients (4.4%) had postoperative complications. Five cases (2.8%) were converted to conventional LSG. 107 patients (59.4 %) had obesity associated comorbidities. 44 patients had DMII with pre-op HbA1c 8.6 ± 2.33 SD mg/dl decreased to 6.8 ± 2.03 SD mg/dl over 2 years. At a later stage > 2years, 11 (7.9 %) patients underwent a second procedure due to non-satisfactory results.

Conclusion

SPIDER SG is an effective operative procedure with acceptable long term results. High complication rate probably due to the learning curve of the surgeons. Further comparative studies are needed.

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P.682

A NATIONAL SURVEY: ROUTINE OR SELECTIVE HISTOLOGY EXAMINATION OF SLEEVE GASTRECTOMY SPECIMENS?

Sleeve gastrectomy

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Background

There is a wide range of practice regarding routine or selective histopathology testing of LSG specimens within UK bariatric surgical departments.

Introduction

A previous audit of 866 specimens within our department revealed low yield of significant pathology with routine histology examination.

Objectives

We conducted a short survey to ascertain approaches to practice within the wider Bariatric Community.

Methods

A digital questionnaire designed using SurveyMonkey was sent out to 116 surgeons through the UK Bariatric Surgeons Group. Reminder emails were sent weekly over a 1 month period (March-April 2017).

Results

The response rate was 22% (26/116).

Routine histology examination was performed in both NHS and private-sectors by 38%, NHS-sector only by 30%, and selectively by 27% of respondents. Of those who routinely examine, 73% ensure histology is reviewed by the surgical team. Of those who do not, the main reason is low clinical pickup of useful pathology in 50%, cost-effectiveness in 20%, departmental policy in 10%, and other reasons in 20%.

85% (22/26) of responders do not routinely perform pre-operative Gastroscopy. Of these, 65% highlight low clinical pickup of useful pathology, 43% highlight capacity issues within the department, and 26% note costly investigations.

Conclusion

Protocols for LSG histology examination within UK bariatric departments appears to vary with comparable numbers in each group. Although the surgical team reviews the majority of examined specimens, 27% are not. The primary reason for not performing routine histology testing was low detection of useful pathology. The small sample of responders limits conclusions and may not accurately represent practice throughout the country.

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EFFECT OF SLEEVE GASTRECTOMY IN MORBIDLY OBESE PATIENTS FROM UNITED ARAB EMIRATES: A SINGLE CENTER STUDY.

Sleeve gastrectomy

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Background

Laparoscopic sleeve gastrectomy (LSG) has emerged as a popular weight loss surgery procedure in gulf countries. We present our experience of sleeve gastrectomy for morbid obese patients of United Arab Emirates at Dubai Hospital.

Introduction

Obesity is a major health problem of all gulf countries including united arab emirates. Sleeve gastrectomy has emerged as a popular effective weigh loss surgery procedure in this region with promising result.

Objectives

To know the weightloss pattern and resolution of co-morbidities in morbidly obese patients of United Arab Emirates following sleeve gasatrectomy.

Methods

Retrospectively collected data of 400 patients (257 female :143 male) who underwent sleeve gastrectomy between October 2012 till January 2016 were analyzed

Results

The mean age was 32.72 years (range 13-68 years) and mean pre-operative BMI was 48.76 kg/m² (range 33.04 - 96.28 kg/m²). Mean operative time was 58.23 mins(40 -122 mins). The mean BMI declined to 32.82 kg/m² at 1 year and 29.25 kg/m² at 3 years. No leak (0%) experienced in our first 400 cases . Complete diabetes, hypertension, dyslipidemia resolution achieved in 73.52%, 67% and 48%patients respectively within one year of surgery. Five cases (1.25%) had bleeding post operatively, managed conservatively. Four (1%) patients readmitted within 30 days post operatively for dehydration and vomiting, managed conservatively. Patients expressed satisfaction with results even after 3 years of surgery.

Conclusion

LSG as a single stage bariatric procedure is safe, achieving satisfactory weight loss and resolution of comorbidities with patient satisfaction. It is now the most popular bariatric surgery procedure in gulf region including United Arab Emirates.

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INCIDENCE OF CHOLELITHIASIS AFTER BARIATRIC SURGERY IN CHILEAN OBESE PATIENTS

Sleeve gastrectomy

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Introduction

Obesity and rapid weight loss are independent risk factors for the development of gallstones in the gallbladder and has been related to bariatric surgery. Cholelithiasis is a prevalent disease in Chilean obese population.

Objectives

The aim of this study is to determinate the incidence of cholelithiasis in Chilean patients at 12 months after surgery

Methods

Retrospective study of records of all patients who underwent bariatric surgery during 2014. Patients with negative abdominal ultrasound (US) and complete follow-up at 12 months after surgery were included. We analyzed gender, age, comorbidities, body mass index (BMI) and incidence of cholelithiasis (gallstones or sludge) at 12 months after surgery, and multivariate analysis (logistic regression) to detect independent variables related to postop gallstones, and Chi-square to compare surgical techniques.

Results

Of 279 patients that underwent bariatric surgery on 2014, 66 patients had previous gallbladder disease and 176 met the inclusion criteria. The mean age was 37.8 (range 16-67) years, 96 females (54.6%), median BMI was 37.5 kg/m². At one year, 65 patients (36.9%) developed cholelithiasis and 7 (2.3%) developed polyps within the first year after surgery. High blood pressure (HBP) was positively related with the presence of cholelithiasis. No differences between surgical techniques was found.

Conclusion

The incidence of cholelithiasis at 12 months after bariatric surgery is high. A thorough follow-up with US is very important, especially during the first year when the weight loss is maximum. In this study, presence of HBP is related with a higher chance of developing cholelithiasis. Further studies must be done.

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GASTRO-SPLENIC FISTULA WITH GASTRO-INTESTINAL BLEEDING: A RARE AND POTENTIALLY FATAL COMPLICATION AFTER SLEEVE GASTRECTOMY.

Sleeve gastrectomy

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Introduction

Hemorrhagic complications after sleeve gastrectomy (SG) are reported with 0-4% incidence. In almost cases, the early bleeding originated by the stapler line and late hemorrhages are associated with gastric ulcerations. The gastro-splenic fistula (GSF) could be related with postoperative bleeding after SG, presenting with an unstable hemodynamic status.

Objectives

We describe our experience and suggest an optimal treatment.

Methods

Between September 2014 and May 2016 three patients presented with a hematemesis after SG in three referenced centers for obesity cares.

Two patients were readmitted in the early post-operative period, the other five years after SG. The imaging showed an arterial bleeding from the superior spleen pole in the gastric tube.

Results

The first patient was treated by hemostatic splenectomy after unsuccessful endoscopic treatment. The second patient, after a first tentative of spleen preserving, was reoperated with splenectomy and died after intervention for hemorrhagic shock. The third patients was treated by embolisation.

Conclusion

Between 2010 and 2016 we performed 1281 SG for morbid obesity and we identified only three cases of GSF.

GSF was never described after SG. GSF is a rare complication after SG that could be appeared in early and late post-operative periods.

The physiopathologic hypothesis is a stapler line ulcers penetration in the superior pole of the spleen. Ours experiences showed that tentative of splenic preservation was responsible of a second look for hemostatic splenectomy with postoperative death.

Embolisation seems to be the treatment of choice of GSF after SG, when it is impossible to realize hemostatic splenectomy is a good option.

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VITAMIN D DEFICIENCY BEFORE AND AFTER SLEEVE GASTRECTOMY IN A TROPICAL POPULATION.

Sleeve gastrectomy

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Introduction

Vitamin D deficiency is a major public health problem worldwide and is associated with multiple serious adverse health outcomes. It is shown that obese patients are at a higher risk of vitamin D deficiency than the general population. Our bariatric surgical centre is located in a tropical climate which is deemed a protective factor

Objectives

The aim of this study was to determine the incidence of pre- and post-operative vitamin D deficiency in patients undergoing sleeve gastrectomy in a tropical location.

Methods

Between 2014 and 2016, 387 patients undergoing sleeve gastrectomy routinely underwent pre- and post-operative serum vitamin D testing. Patients were excluded if no pre- or post-operative vitamin D data was available. Vitamin D deficiency was defined as a concentration <50 nmol/L.

Results

Of 387 patients, 36 were excluded from the pre-operative group. 86/351 (24.5%) of patients were vitamin D deficient pre-operatively. Only 159 patients had post-operative concentrations measured, of which 20 did not have pre-operative concentrations. 34/139 patients were deficient pre-operatively (24.46%). 19/139 (13.6%) patients were vitamin D deficient post-operatively. Thus 15/139 (10.8%) were no longer vitamin D deficient. Vitamin D testing was done on average at 13.85 months post-surgery (range 5-30 months).

Conclusion

Within a tropical population, 10.8% of patients are no longer vitamin D deficient on average 13.85 months after sleeve gastrectomy. Although of concern 13.6% were still deficient. We hypothesise this is multi-factorial and may be attributed to increased vitamin D bioavailability and increased outdoor activity after weight loss. Vitamin D supplementation may also be beneficial for select patients.

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WHAT IS A GOOD PREDICTOR OF 2-YEAR WEIGHT LOSS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY?

Sleeve gastrectomy

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Introduction

Many predictors of weight loss after bariatric surgery have been reported. Recently, postoperative sleeve transit time, resected gastric volume, serum uric acid and early weight loss after laparoscopic sleeve gastrectomy (LSG) were documented as the significant predictors.

Objectives

The aim of this study was to investigate what are significant predictors of 2-year weight loss after LSG.

Methods

This study enrolled 34 morbidly obese Japanese patients who underwent LSG in our institute between 2011 and 2014 and were followed for more than 2 years. Insufficient 2-year weight loss was defined by less than 50% excess weight loss (%EWL) compared to the first visit weight. Predictors included age, gender, BMI, comorbidities, serum uric acid, psychiatric illness, preoperative weight reduction (%EWL), resected gastric volume, postoperative sleeve transit time, postoperative 1-month %EWL, and office visit compliance.

Results

Mean 2-year weight loss and %EWL were 39kg and 60%, respectively. Seven of the 34 patients (21%) had insufficient 2-year weight loss, and the significant predictor was only postoperative 1-month %EWL ($p < 0.01$). The cut-off value of 1-month %EWL determined by ROC curve was 15.4%. Five of 9 patients (56%) with less than 15.4% of 1-month %EWL had the insufficient weight loss, but 2 of 25 (8%) with 15.4% or more had it with significant differences ($p < 0.01$).

Conclusion

Early postoperative weight loss may be a useful predictor of insufficient weight loss after LSG.

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IS THERE A DIFFERENCE IN REFLUX OUTCOMES BETWEEN GASTRIC SLEEVE RESECTION ALONE AND THAT WITH SIMULTANEOUS HIATUS HIATUS REPAIRS?

Sleeve gastrectomy

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Introduction

Reflux remains a prevalent pre and post-operative consideration associated with patients undergoing laparoscopic sleeve gastrectomy (LSG). Whether simultaneous Hiatus hernia repair HHR is protective against reflux, and if so, which is the most effective type of repair, remains controversial.

Objectives

To evaluate the reflux outcomes of LSG alone and with either suture or mesh HHR

Methods

A Prospective study of (2211) patients that underwent (LSG) with or without Hiatus hernia repair (HHR) between (2012 to 2016) at one institution. Patients demographics, operative details, pre-operative physical measurements and symptoms were collected. LSG with HHR patients were further sub classified to those underwent suture HHR or those with mesh HHR. Reflux outcomes were assessed by pharmacological parameters and patient self-reporting scale. Follow up Total Body Weight Loss (TBWL), BMI and Excess Weight Loss (EWL) % were examined and stratified accordingly. Comparison analysis between (LSG) alone and (LSG- HHR) subgroups was conducted.

Results

There were 1969 patients that underwent LSG alone and 242 underwent HHR, of which 141 and 101 had suture and mesh repair respectively. 76.6% were females. Preoperatively, mean BMI was 42.75 and (38.4%) described GORD symptoms.

Postoperatively, BMI , EWL% and TBWL% will be presented. Reflux outcomes will be stratified according to LSG alone LSG-HHR suture and mesh and presented.

Conclusion

LSG and HHR is safe and should be considered in patients with obesity, hiatus hernia and reflux.

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LAPAROSCOPIC SLEEVE GASTRECTOMY PLUS SIDE-TO-SIDE JEJUNOILEAL ANASTOMOSIS .

Sleeve gastrectomy

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Introduction

Laparoscopic sleeve gastrectomy is the most widely accepted type of weight loss surgery at present. Some people consider it has less weight loss and metabolic improvement results compared with gastric bypass.

Objectives

Laparoscopic sleeve gastrectomy plus side-to-side jejunoileal anastomoses were performed in order to improve weight loss and metabolic improvements effect.

Methods

15 patients underwent JI-SG from March 2014 to April 2016. 9 patients among them were followed more than 6 months (range 6-29 m). Another 9 patients who underwent LSG over the same period was used as the control group. Weight loss, EWL and obesity related comorbidities were compared.

Results

All the patients underwent surgery successfully. The average operating time in the JI-SG group was significantly longer than that in the LSG group [(134.4±66.4)min vs (88.9±45.4)min, P=0.020]. The intraoperative blood loss was same in the two groups. The mean body mass index (BMI) was (45.16±6.85) kg/m² before surgery, and (31.79±7.42) kg/m² in the JI-SG group six months postoperatively. The mean BMI was (44.52±6.70) kg/m² before surgery, (34.84±7.02) kg/m² after surgery in the LSG group. In the JI-SG group, a 75.9% excess weight loss was obtained at 6 months postoperatively, which was significantly better (P=0.003) than the 54.3 % observed in the control group. The obesity related comorbidity outcomes were satisfied in the two groups.

Conclusion

The efficacy of JI-SG is superior to LSG in treating obesity and its metabolic comorbidities.

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BANDING THE SLEEVE - SHORT-TERM RESULTS OF THE MISO (MINIMIZER FOR SLEEVE OPTIMIZATION) TRIAL

Sleeve gastrectomy

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Introduction

There is increasing evidence of weight regain in a relevant number of patients after laparoscopic sleeve gastrectomy (LSG) despite excellent initial weight loss.

Objectives

With the objective if added restriction could improve weight loss and prevent weight regain after LSG, a single-centre prospective randomized trial was performed.

Methods

94 patients were selected to undergo a banded LSG (BLSG) using a MiniMizer® ring, or a conventional LSG. Performing an interim-analysis one year after surgery, we examined safety, weight loss, reflux and postoperative regurgitation.

Results

Mean preoperative BMI was 50.55 ± 6.2 kg/m² for BLSG and 52.77 ± 16.0 kg/m² for LSG (Mann-Whitney $P=0.998$). Mean operative time was equal in both groups (BLSG $37.26\% \pm 7.86$; $n = 27$ vs. LSG 35.63 ± 11.21 ; $n = 32$; $P = 0.246$). There was no postoperative complication in either group. Total weight loss (%TWL) was nearly equal in both groups (BLSG $37.26\% \pm 7.86$; $n = 27$ vs. LSG 35.63 ± 11.21 ; $n = 32$; $P = 0.246$). Ring placement had no impact on presence of reflux symptoms (Fisher´s exact test $P=0.991$). As a relevant side-effect, the rate of postoperative regurgitation was increased in BLSG patients (BLSG 17% vs. LSG 3%; Fisher´s exact test $P=0.169$, Odds ratio 5.4).

Conclusion

BLSG is a safe procedure that does not prolong operative time. Ring placement had no impact on reflux or weight loss in short-term follow-up and only mildly promoted regurgitation in this series. Long-term data on prevention of weight regain will be of great interest.

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HISTOLOGY FOR SLEEVE GASTRECTOMIES - THE GIST OF IT

Sleeve gastrectomy

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Introduction

Laparoscopic sleeve gastrectomy is one of the most commonly utilized techniques in the management of morbid obesity. There is controversy surrounding histological examination of the removed stomach following the gastrectomy and currently there is no consensus on the matter. Even within the same department, individual surgeons differ in their approach.

Objectives

To present data of histology examination of gastric specimens following sleeve gastrectomy from our centre.

Methods

A retrospectively maintained database of continuous patients undergoing laparoscopic sleeve gastrectomy during the period March 2016 to March 2017 and subsequently followed-up in our centre. The outcomes measured were histological findings of the specimens evaluated.

Results

111 patients (86 female) that underwent laparoscopic sleeve gastrectomy were examined. The mean age was 47.40 years. 67 individual specimens were evaluated by the pathology department. Out of those 47 (70.1%) reveal no histological abnormalities. 15 (20.89%) showed gastritis – one case was related to H. pylori infection and one was related with focal paneth cell metaplasia. Three (4.4%) cases showed gastrointestinal stromal tumour (GIST) and two (2.2%) fundal polyps. GISTS tumours were associated with older age (mean age 68.88 years).

Conclusion

Although the definitive management of the small GISTs tumours identified was provided during the sleeve gastrectomy, we feel that the specimens resected should be sent routinely for histological evaluation, as the results can be pathological and warrant further investigations and treatment.

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COMPARISON OF SLEEVE GASTRECTOMY (SG) AND MAGENSTRASSE AND MILL GASTROPLASTY (MMG)

Sleeve gastrectomy

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Introduction

Sleeve gastrectomy has become an accepted treatment of morbid obesity. MMG is long tubular gastroplasty but preserves the greater stomach.

Objectives

This study compares the two techniques in terms of weight loss, side effects and resolution of associated comorbidities. Incidence of diabetes before

Methods

This retrospective study compared 135 patients (56M, 79 F) operated of sleeve gastrectomy and 55 patients (23M, 32 F) who underwent MMG. Both procedures were calibrated on a 40 Fr tube. Mean age was respectively 38,4 (18-65) for SG and 48,4 (22- 72)($p<0.001$)for MMG. Mean pre-operative BMI was respectively 42,46 (35-64) and 42,35 (35-53)($p=NS$). Incidence of diabetes was 22% for SG and 25% for M&MG.

Results

All the procedures, except one, were performed under laparoscopy by two different surgeons. One patient was excluded of the study, due to a conversion from SG in gastric bypass after 8 months for hiatal hernia.

The mean percentage of excess body weight loss at one year was 83% for SG and 63,8% for M&MG ($p<0,01$) with a mean BMI respectively of 28,42 and 31,11 ($p< 0,01$).

Incidence of GERD symptoms at one year was 47,3% for SG and 12,2% for M&MG. Vitamin deficiencies were significantly higher after SG than M&MG.

The two procedures were associated with improvement of comorbidities.

Conclusion

The two procedures were safe, with an efficacy in weight loss and improvement in comorbidities. With the bias of older age for M&MG, SG led to higher weight loss at the price of a higher incidence of reflux and vitamin deficiencies.

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IMPACT OF BARIATRIC SURGERY ON OBSTRUCTIVE SLEEP APNEA-HYPOAPNEA SYNDROME IN MORBIDLY OBESE PATIENTS.

Sleeve gastrectomy

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Introduction

Obstructive sleep apnea-hypopnea syndrome (OSA) is commonly associated with morbid obesity. Weight loss following bariatric surgery results in resolution or improvement of OSA. However few studies have done objective assessment of impact of bariatric surgery on OSA.

Objectives

The aim of this study was to assess the outcome of bariatric surgery on OSA.

Methods

27 morbidly obese patients seeking bariatric surgery were administered Epworth Sleepiness Scale (ESS) questionnaire and subjected to overnight polysomnography. Repeat assessment using ESS and polysomnography was done at 3–6 months after surgery

Results

The mean pre-operative weight and body mass index (BMI) were 126.4 ± 24.9 kg and 48.4 ± 8.2 kg/m², respectively. Nearly 29.6% patients had symptoms of excessive daytime somnolence based on ESS score and overnight polysomnography detected the presence of OSA in 96.3% patients, of which 51.9% had severe OSA. At mean follow-up of 5.2 ± 2.5 months after surgery, mean weight and BMI decreased to 107.4 ± 24.5 kg and 41.2 ± 8.2 kg/m², respectively. Mean ESS score and mean apnoea–hypopnea index declined from 8.9 ± 3.2 to 4.03 ± 2.15 ($P < 0.001$) and from 31.8 ± 20.4 to 20.2 ± 23.1 ($P = 0.007$), respectively. Number of patients requiring continuous positive airway pressure (CPAP) therapy declined from 15 to 3 and average CPAP requirement came down from 11.3 cm to 6 cm of H₂O.

Conclusion

OSA was present in a significant proportion of patients undergoing bariatric surgery. Bariatric surgery resulted in significant improvement in both subjective and objective parameters of OSA.

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MORBIMORTALITY OF GASTRIC SLEEVE BY BARIATRIC GROUP IN MEXICO

Sleeve gastrectomy

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Background

Gastric sleeve is a safe and effective procedure for the control and treatment of obesity. Involving reduced anesthetic and surgical time compared to other techniques offering a short hospital stay

Introduction

The global prevalence of obesity has doubled; 39% of adults are overweight and 13% are obese. In Mexico, 70% of adults are overweight or obese. Gastric sleeve is the surgery that is performed worldwide and has shown excellent results in the management of obesity

Objectives

Show the effectiveness and low risk of the gastric sleeve for the treatment of obesity.

Methods

carried out in Mexico from 2012 to 2016. We included patients with BMI between 30-90.56 kg / m², without diabetes mellitus, who were submitted to gastric sleeve by 3 surgeons under the same technique; We excluded patients who were not approved by multidisciplinary team.

Results

a total of 1040 gastric sleeves were performed, 822 (79.04%) were female and 218 (20.96%) were male; The means were: age 34.99 (12-69) years; BMI 40.21kg / m² (30-90.56kg / m²); Hospital stay 1.11 (1-5) days. Surgical time 20.01 (15-35) minutes, anesthetic time 37.07 (30-50) minutes. The mortality rate was 0%. The percentage of complications was 3.3% (33): 20 (0.66%) patients had bleeding, 7 (0.23%) required transfusion of a globular package (1-3 units); 10 (0.33%) infection in surgical wound; 2 (0.066%) had gastropleural fistula and 1 (0.033%) gastric leakage

Conclusion

Gastric sleeve offers excellent results in weight loss, with low morbidity and mortality

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EXCELLENT OUTCOMES FOR CLASS II TYPE II DIABETES PATIENTS WITH SUCCESSFUL PREOPERATIVE WEIGHT LOSS AFTER SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Introduction

Weight loss before bariatric surgery is common to improve postoperative results. However, the benefits of preoperative weight loss merit a larger study, as there is not yet enough available literature.

Objectives

To compare the T2DM remission rates between class II (BMI 35 -39.9) patients with successful preoperative weight loss and class II patients with unsuccessful preoperative weight loss.

Methods

A retrospective analysis of outcomes of a prospectively maintained database was done on 48 class II obese patients with a diagnosis of T2DM at the time of initial visit who had undergone a sleeve gastrectomy (SG) at a tertiary center between 2011 and 2015. Subsequent to a supervised weight loss regimen and immediately before undergoing surgery, patients were reassessed and classified into either class I (BMI 30 -34.9) or class II. There were 9 class I and 39 class II patients at the time of surgery. The 6-month and 1-year T2DM remission rates for both groups were evaluated postoperatively.

Results

The overall 6-month T2DM remission rates for class I and class II patients who underwent bariatric surgery were 71.4% and 34.2%, respectively. The overall 1-year T2DM remission rates were 83.3% and 47.3%, respectively.

Conclusion

Preoperative weight loss is highly effective for class II T2DM patients to achieve long-term postoperative remission rates.

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THREE-PORT LAPAROSCOPIC SLEEVE GASTRECTOMY FOR MORBID OBESITY

Sleeve gastrectomy

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Background

Sleeve gastrectomy is traditionally performed with the aid of 5 to 7 abdominal trocars. We aim to present our experience concerning laparoscopic sleeve gastrectomy for morbid obesity, with a more minimal invasive approach, using three ports- trocars.

Introduction

Laparoscopic Sleeve Gastrectomy (LSG) is traditionally performed using 5 to 7 abdominal trocars. By reducing the number of trocars, parietal trauma, pain and hernia risks can be minimized.

Objectives

We present our 3-year experience concerning LSG for morbid obesity using three trocars, with emphasis on a simple suture-based trocar-free liver retractor.

Methods

We retrospectively analyzed 65 patients who underwent LSG for morbid obesity, from May 2014 to December 2016. Three trocars are typically used: one 10-mm periumbilical optical trocar and two 12-mm trocars on the midclavicular lines. A suture is percutaneously inserted and fixed to the right crus of the diaphragm. Careful traction lifts the left hepatic lobe offering better surgical field and access to the gastroesophageal junction. A gauze is used to protect liver parenchyma from possible injury. Furthermore, sectioning and stapling of the stomach is performed before the gastroepiploic division, reducing the need of another left sided trocar.

Results

All the patients had an uncomplicated recovery. No liver injury or wound problem was mentioned.

Conclusion

The placement of a suture at the right crus of the diaphragm can reduce the number of trocars, leading to less postoperative pain, risk of hernia and better cosmetic outcome without compromising the safety of the operation or the rate of postoperative complications.



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BODY FAT MASS MEASUREMENT TO FOLLOW-UP EARLY WEIGHT LOSS AFTER BARIATRIC SURGERY

Sleeve gastrectomy

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Introduction

The most essential outcome after bariatric surgery is weight loss and is the first out point of the intervention.

Objectives

This study was designed to compare the body mass index (BMI) and Body Fat Mass (BFM) measurements in order to follow-up weight loss in patients after bariatric surgery in adults.

Methods

This study was carried out on 67 patients undergoing sleeve gastrectomy in surgery department of a tertiary-care research hospital, and data of 44 patients were analyzed. We followed the patients during 6 months and recorded the BMI and BFM findings on the first, third and the 6th month after the surgery and compared the data with the initial weight scores. Pearson Correlation analyses were performed.

Results

We found a significant ($p < 0.05$) reduce in BMI and BFM on the third month after the surgery with mean 17.94 reduction rate in BMI and mean 26.94 reduction rate in BFM. We also recorded strong positive correlation between BMI and BFM on moth the 3rd after intervention ($r = 0.56$).

Conclusion

Our study suggest that measurement of body fat mass is also an effective procedure in order to follow-up weight loss after bariatric surgery in compare with BMI measurements.

Keywords: Bariatric surgery, body fat mass, body mass index, obesity

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THE EFFECT OF SLEEVE GASTRECTOMY AS A TREATMENT FOR MORBID OBESITY ON THE JEWISH AND ARAB POPULATION IN ISRAEL: A RETROSPECTIVE COMPARATIVE STUDY

Sleeve gastrectomy

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Background

Cross sectional studies which have been conducted in the USA, have demonstrated that people of a certain ethnic origin have a higher probability to maintain the bariatric surgery results in comparison to people of a different ethnic origin

Introduction

Till this day, no study comparing the results of a bariatric surgery between the jewish and the arab population in Israel has been conducted

Objectives

Finding a central predicting factor to determine the success of a sleeve gastrectomy, and exploring the source of the differences between the population

Methods

A comparative retrospective study, following 200 patients, out of which 96 are arabs and 104 are jewish, , which have undergone a sleeve gastrectomy in Rambam medical center through 2007-2011

Results

In a long term surveillance, BMI values of the two groups showed no statistically significant difference. In addition, no bond was found between the ethnic origin of the patient to the presence of the different comorbidities. We found that committing to an exercise program had contributed in a statistically significant manner to lowering the BMI and comorbidities. Maintaining a healthy diet, also leads to reduction of the BMI values.

Conclusion

We've found no statistically significant difference in weight loss and maintaining the weight reduction gained, and neither in the presence of the different obesity comorbidities between Jews and Arabs after Sleeve Gastrectomy. However, while we found that the ethnic origin had no influence on the weight loss, the lifestyle of the patient has the ability to influence the outcome of the surgery and the comorbidities.



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NEW APPROACH FOR THE TREATMENT OF SLEEVE GASTRECTOMY LEAK WITH LAPAROSCOPIC ROUX EN Y BYPASS DISTAL TO THE LEAK

Sleeve gastrectomy

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Background

Leak is one of the common complication of laparoscopic sleeve gastrectomy that entail prolongation of hospital stay, morbidity and even mortality.

Methods

I report new approach for the treatment of 4 leaks presented to me post laparoscopic sleeve gastrectomy with laparoscopic Roux EN Y Bypass distal to the leak at the level of gastric angulasis with drainage of the leaks at the level gastroesophageal the commonest location of leaks. This shift the leak of sleeve from high pressure due to the pylorus to low pressure gastrojejunostomy using 60mm Endo GIA blue cartilage. This new approach in comparison from the Roux EN Y at the level of leaks at gastroesophageal is much easier and feasible and also reduced the prolonged hospital stay and avoid stenting due to high failure rate.

Results

All leaks healed with 4 weeks from surgery due to shift from high pressure pylorus to low pressure gastrojejunostomy



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IMPACT OF THE RESECTED GASTRIC VOLUME ON THE WEIGHT LOSS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Introduction

Laparoscopic Sleeve Gastrectomy (LSG) has established itself as a definitive weight loss procedure across the globe. The impact of the size of the sleeve continues to be controversial.

Objectives

The aim of this prospective study was to investigate outcomes after LSG according to resected stomach volume (RSV).

Methods

Seventy three consecutive laparoscopic sleeve gastrectomy (32 Fr bougie calibrated) were prospectively collected between 2014 and 2015 in a reference center in Porto Alegre / Brazil. The correlation between the RSV and the percentage of excess weight loss (%EWL) was statistically evaluated 12 months postoperatively.

Results

The mean initial body mass index (BMI) was $44,3 \pm 6,5$ kg/m² and the mean RSV was 786 ± 253 ml. RSV was greater in patients with higher preoperative BMI ($p < 0.001$). The mean %EBWL was $79,6 \pm 20\%$ and no significant correlation was observed between the RSV and %EWL at 1 year ($p = 0.56$).

Conclusion

Our study suggests that the RSV cannot be used as an indicator of excess weight loss 1 year after LSG.



P.701

GASTRO-OESOPHAGEAL REFLUX DISEASE IN SLEEVE GASTRECTOMY PATIENTS

Sleeve gastrectomy

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Background

Obesity is a disease increasing worldwide especially in the Arabian Gulf region.

Introduction

Gastro-oesophageal reflux disease is at many occasions obesity related.

Objectives

The current concept regarding patients with gastro-oesophageal reflux disease is usually to undergo gastric bypass procedures to prevent biliary reflux. However, at our institution, a study on forty patients that underwent a novel procedure which is a sleeve gastrectomy accompanied by cardioplasty has changed the concept mentioned above.

Methods

These patients had symptoms of gastro-oesophageal reflux disease along with either a gastrographin study or oesophago-gastro-duodenoscopy before the surgical procedure documenting pre-operative gastro-oesophageal reflux disease. Unfortunately, pH monitoring and manometry are not available at our institution to record the lower oesophageal sphincter pressure and pH before surgery.

Results

Thirty-eight patients had resolved symptoms of gastro-oesophageal reflux disease (95% success rate).

One patient had no improvement.

One patient had worse symptoms of gastro-oesophageal reflux disease and needed conversion to gastric bypass.

Conclusion

Cardioplasty is a novel procedure performed for patients suffering from gastro-oesophageal reflux disease symptoms and had an excellent success rate. It can be a replacement to the gastric bypass procedure in regards to the symptoms of gastro-oesophageal reflux disease with obesity.

□
P.702

PHYTOBEZOAR: A RARE LATE COMPLICATION FOLLOWING LAPAROSCOPIC SLEEVE GASTRECTOMY SURGERY

Sleeve gastrectomy

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Introduction

Specific case reports of bezoar complications are available to date only following Laparoscopic Roux-en-Y gastric bypass (LRYGB) and Laparoscopic Adjustable Gastric Banding (LAGB) operations, but not following LSG.

Objectives

We present the first cases, to the authors' knowledge, of phytobezoars occurrence post LSG.

Methods

Two case reports of phytobezoars occurrence post LSG are presented. The mechanisms involved and the therapeutic implications are discussed.

Results

Case 1: A 41-year-old woman with a body mass index (BMI) of 45 kg/m² underwent LSG surgery. Seven months postoperatively, she developed significant vomiting and an upper GI Gastrografin swallow study revealed a gastric bezoar at the gastric sleeve, confirmed by an esophagogastroduodenoscopy (EGD). The bezoar was broken up and removed easily with the endoscope. Case 2: A 34-year-old woman with initial BMI of 42.7 kg/m² was readmitted 5 years post LSG due to complaints of reflux accompanied with epigastric pain, nausea, vomiting, dysphagia and constipation. An upper GI Gastrografin swallow study revealed esophagus dilatation and an EGD showed a gastric phytobezoar 3*4 cm size, removed by the endoscope.

Conclusion

LSG is a relatively new bariatric procedure, while bezoar is a rare late post-operative complication and the interval between surgery and bezoars detection can be many years. Thus, even being a rare late complication, bezoars should be suspected in LSG patients presenting with obstructive symptoms during the late period post-surgery. We recommend prompt endoscopic intervention to relieve the obstruction before parts of the bezoar may migrate to the small bowel, necessitating operative intervention.

□
P.703

SMALL BOWEL INFARCTION DUE TO MESENTERIC VENOUS THROMBOSIS A RARE BUT CATASTROPHIC COMPLICATION AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY - A CASE REPORT.

Sleeve gastrectomy

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Introduction

Portomesenteric Venous Thrombosis (PMVT) is a rare but potentially catastrophic complication after laparoscopic bariatric surgery. Reported incidence is 0.3 to 0.4% and a vast majority of cases occur after laparoscopic sleeve gastrectomy (LSG) as compared to other types of bariatric surgery. The aetiology of PMVT after LSG is multifactorial.

Objectives

We aim to report a case of mesenteric venous thrombosis leading to small bowel infarction after LSG and to discuss current evidence for its management.

Methods

Medical records reviewed and literature search performed. Clinical presentation, radiological images and management of the case is presented.

Results

A 37 year old male patient presented with 48 hrs of abdominal pain and nausea two weeks post LSG for morbid obesity. Computed Tomography (CT) scan revealed superior and inferior mesenteric venous thrombosis with a resultant small bowel venous infarction. Patient was managed by an immediate "damage control" laparotomy with small bowel resection followed by post op anticoagulation, a second look laparotomy and anastomosis. Apart from a low anti-thrombin level of 66% (reference 80-130%) other thromophilia screen were all normal at presentation. The significance of low anti-thrombin level in this case remained unexplained. The patient made good recovery and was discharged with oral anticoagulation for 6 months.

Conclusion

This case highlights importance of high index of suspicion for diagnosis of this rare complication post bariatric surgery to prevent mortality. Earlier diagnosis of PMVT before development of bowel infarction can be managed non-operatively by systemic full anticoagulation with or without thrombolysis.

□
P.704

SINGLE PORT SLEEVE GASTRECTOMY – PRACTICAL ASPECTS

Sleeve gastrectomy

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Background

There has been an increasing demand for single port bariatric surgery in the middle east area for reasons of privacy and desirable cosmetic outcome especially in the lower BMI group of patients. Our statistics show that the demand by males is more than females due to the cultural acceptance of upper body exposure by men. Most of female patients demanding discreet procedures are those who are in pre marriage stage of life.

Introduction

The demand by patients plus the urge to minimize invasiveness has led to the development of single port laparoscopy. Described in this study are practical steps and feasibility and safety of single port sleeve gastrectomy for selected patients.

Objectives

- 1- Practical steps for performing the procedure.
- 2- Safety and feasibility of single port SG for selected patients with BMI up to 40

Methods

A total of 96 patients undergoing elective Single Port SG were compared with a demographically similar 250 patients who underwent standard multiple port SG between May 2007 and February 2017. The data collected included the operative time, subjective pain scores, length of stay, operative complications, and satisfaction rate.

Results

No statistically significant difference was found in post operative pain, length of stay and operative complications. The average operative time for Single Port SG was 87 minutes versus 65 minutes for multiple port surgery ($P = .5$). Satisfaction rate with the scar appearance was 100% in the single port group compared to 91% in the multiple ports group.

Conclusion

Single port SG is feasible and safe for selected patients.



P.705

SAVING THE GRAFT - A SLEEVE GASTRECTOMY AFTER A LIVER TRANSPLANT

Sleeve gastrectomy

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Background

morbid obesity is one of the fastest growing epidemics, its range of devastating consequences are well proven. In regards to obesity's effect on the liver, steatohepatitis leading to NASH cirrhosis, continues to rise as a leading cause of the need for a liver transplantation. There have been no studies showing the relationship between obesity and graft outcome in liver transplant patients. Cases have been reported in which certain patients were recommended to undergo bariatric surgery before a liver transplant due to potential surgical difficulties that could be encountered due to such habitus.

Introduction

As life-expectancy of liver transplant patients continues to increase, the epidemic of obesity does not evade this population. Potentially putting the graft at risk just as a recurrence of viral hepatitis is known to damage (and demand treatment) the transplanted liver, in rare cases these patients are referred to bariatric surgery, here we present a case of a sleeve gastrectomy performed in a patient with an excess weight gain after an orthotopic liver transplant.

Objectives

Sleeve gastrectomy performed in a patient with an excess weight gain after an orthotopic liver transplant jeopardizing graft functionality.

Methods

Results

Improved LFT's and 10 kg weight loss upon early post-op follow-up

Conclusion

With obesity projected to be the leading cause of hepatic cirrhosis, the role of bariatric surgery for both transplant candidates and recipients will have an increasing and vital role in the overall health of the graft.



P.706

STAPLER GUN MISFIRE

Sleeve gastrectomy

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Background

Relying too much on the mechanical technology can at times lead to disasters in the expert hands too.

Introduction

Stapler gun misfire is a known entity.

Objectives

To discuss the reasons for staple gun misfire in the patient.

Methods

Sleeve gastrectomy was planned for a 45 BMI male patient having comorbidities like hypertension and OSA. Standard steps of the procedure were done. Omentectomy was done along the greater curvature starting 2-3 cm proximal to pylorus upto the OG junction. Green load was used to fire the first staple at the antrum followed by gold load. On firing the second cartridge the gun misfired and part of the stomach was left unstapled. we continued the procedure further and then used barbed sutures to oversee the staple line completely. Omentum was used to further reinforce the site of staple misfire. Air leak test was done at the end of the procedure which was negative. Penrose drain was kept.

Results

Post operative recovery of the patient was uneventful and was discharged on third postoperative day.

Conclusion

The reasons for the misfire to our knowledge can be due to 1) migratory staples of the previous fire 2) Too thick stomach wall 3) going too close to the bougie 4) Manufactural defect of the gun or cartridge itself.

□
P.707

"RADIOLOGICAL FINDINGS IN PATIENTS OPERATED DUE TO GERD AFTER SLEEVE GASTRECTOMY"

Sleeve gastrectomy

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Introduction

Nowadays, Sleeve Gastrectomy (SG) is the most common bariatric procedure worldwide. This can be explained because weight loss outcomes are better than those observed after other restrictive procedures. SG is perceived as a technical simple procedure with few side effects and low associated complications. In spite of this, after more than ten years of SG implementation, it has been reported that SG is also associated with complications such as suboptimal weight loss and gastroesophageal reflux (GERD), being GERD one of the most frequent SG complications requiring revisional surgery.

Objectives

To analyze patients with GERD after SG that necessitated a second surgical intervention.

Methods

Retrospective single-institution study.

Results

Patients undergoing revisional surgery (n=40) between 2007 and 2016 secondary to GERD after SG were analyzed. 16 patients of the study cohort presented GERD as the main symptom, whereas 23 also referred insufficient weight loss. Only one subject had a stenosis with associated food intolerance. Of the 40 patients, 30 showed pathologic radiological findings in the barium swallow test. Among these radiologic abnormalities; fundus enlargement, gastric sleeve torsion and stenosis were the commonest documented.

Conclusion

"De novo GERD" after SG is a frequent complication that can lead to poor quality of life and even require a surgical intervention. Technical errors during the SG procedure and misdiagnosed GERD in the preoperative workup are the main contributors of GERD after SG.

THE GASTRIC TWIST AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY**Sleeve gastrectomy****A.K. Coskun****Isparta YSSH - Isparta (Turkey)****Background**

The sleeve gastrectomy is one of common procedures of bariatric surgery with excellent outcomes and low complication rates. The common complications are hemorrhage, leakage, splenic injury, gastroesophageal reflux and stenosis.

Introduction

Twist is a very rare complication which can be defined as gastric volvulus also. It can be organo-axial or mesenteric-axial.

Objectives

In this review we would like to evaluate the gastric twist after laparoscopic sleeve gastrectomy.

Methods

PubMed®/MEDLINE®resources search was undertaken using terms "gastric twist, gastric volvulus, sleeve gasterctomy, bariatrics " between 2000 and 2017 in English language . Totally 3 articles and 12 case series were included due to the criteria.

Results

The total nb of the patients who were faced with gastric twist following laparoscopic sleeve gastrectomy were 86. The common symptoms were dysphagia, nausea and vomiting. The presentation time after the surgery was 1-24 months. All of them was diagnosed by UG Endoscopy. The stenosis is the common diagnosis causing twist. 95% of them were managed with endoscopy either with dilatation or stent. The others underwent to surgical procedure.

Conclusion

Gastric twist is rare complication of laparoscopic sleeve gastrectomy, effects the quality life after sleeve gastrectomy. However it is unwanted complication, surgeon should be taken into account as a functional obstruction rather than a stricture.

□
P.709

OUTCOME AND QUALITY OF LIFE AFTER SLEEVE GASTRECTOMY FOR SEVERE OBESITY- A SINGLE CENTER ANALYSIS

Sleeve gastrectomy

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Introduction

The sleeve-gastrectomy is a widely spread technique in the treatment of severe obesity.

Objectives

In this study we present our data of 281 patients who underwent laparoscopic sleeve gastrectomy for severe obesity. Focus is set on excess weight loss (EWL), obesity-related diseases, complications and the quality of life (QoL).

Methods

We included 281 who underwent sleeve-gastrectomy. Patients were seen 1, 3 and 6 months as well as 1, 2, 3, and 5 years after surgery. Body weight, comorbidities and complications were documented. 184 of the patients also had an evaluation regarding the QoL.

Results

The patients showed a good EWL over time. Maximum EWL was 54% after 2 years, 51% after 3 years and 46% after 5 years. This also correlates with the over all QoL. 1 -3 years after surgery 68% of the patients stated a good or very good QoL compared to 57% after 3-5 years and 44,3% after 5-9 years.

Conclusion

The sleeve-gastrectomy is a good instrument in the treatment of severe obesity. However it might not be as sufficient in long term.

□
P.710

GERD IN BARIATRIC SURGERY - GERD REALLY A CONTRAINDICATION FOR SLEEVE GASTRECTOMY?

Sleeve gastrectomy

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Introduction

Almost half of bariatric patients suffer from gastro-esophageal reflux disease (GERD). Various bariatric operations result in different relief of symptoms. The collected data for the LSG to obese patients with GERD is inconsistent.

Objectives

Thus, we analyzed retrospectively our bariatric patients regarding to GERD before and after bariatric operations and its clinical relevance, follow-up and treatment.

Methods

This was a retrospective study of our own obese patients in the period before operation and postoperative follow-up up to 24 months.

Results

A total of four hundred ninety-eight obese patient have been observed. The rate of initially postoperative GERD after SG raised up nearly double (16 % to 30 %). However, based on the total number of SG patients only 11 % of patients left with therapy resistant reflux symptoms after 12 months of follow up with proton pump inhibitors (PPI) treatment. Regarding to various GB operation in the post-RYGB-group only 3 of 124 patients (2 %) had reflux symptoms. Their reflux was solved under conservative therapy.

Conclusion

After conservative treatment with PPI the post-LSG-GERD can be reduced to a lower overall prevalence than in the preoperative stage under conservative treatment. That's why the GERD shouldn't be a contraindication for LSG-operation. Patients with GERD should be made accessible to LSG. Especially patients with BMI over 60 kg/m² can benefit from a previous LSG-surgery in a two-step-procedure due to the technical severity under extreme high BMI, before a RYGB is performed as a second step, if the patients are still complaining GERD symptoms after the LSG.

□
P.711

LAPAROSCOPIC SLEEVE GASTRECTOMY OUTCOMES OF 1001 PATIENTS: A 3-YEAR EXPERIENCE AT A BARIATRIC CENTER OF EXCELLENCE

Sleeve gastrectomy

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Introduction

Laparoscopic sleeve gastrectomy (LSG) is gaining in popularity worldwide. This retrospective cohort study evaluated the outcomes of a large cohort of patients with obesity who underwent LSG in a Bariatric Center of Excellence.

Objectives

The objective of this study was to evaluate the outcomes for LSG in morbidly obese patients at a bariatric center of excellence.

Methods

All consecutive 1001 obese patients who underwent LSG between July 2013 and March 2017 were identified retrospectively. Preoperative and postoperative variables and comorbidities were recorded.

Results

Their mean age was 38.2 years, 70.7% were women, and the mean body mass index was 42.5 kg/m². The most common preoperative comorbidities were hyperlipidemia (23.4%), diabetes (18.8%), hypertension (21.8%), and obstructive sleep apnea (20.1%). The rates of comorbidities resolution during follow-up were 73.1%, 80.2%, 82.1%, and 92.5%, respectively. The percent average excess weight loss 3, 6 months and 1, 2 and 3 years, after surgery was 54.68±18.1%, 77.35±28.5%, 93.34±24.6%, 92.12±47.6%, and 89.59±21.7%, respectively. There were 3 leakages from gastroesophageal junction (%0.3). There was no mortality.

Conclusion

LSG is an effective and safe procedure that induce weight loss and comorbidity resolution.

□
P.712

SHOULD WE AVOID SLEEVE GASTRECTOMY IN OBESE PATIENTS WITH GASTROESOPHAGEAL REFLUX DISEASE?

Sleeve gastrectomy

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Introduction

There is a complex relationship between gastroesophageal reflux disease (GORD), obesity and obesity surgery. Obesity is culpable in the pathophysiology of GORD, with weight loss being associated with symptomatic improvement. However, obesity surgery has a variable effect on GORD. Roux en y gastric bypass is considered to be an effective treatment for GORD and may be the procedure of choice in symptomatic obese patients. There is conflicting evidence for the effect of sleeve gastrectomy in obese patients with GORD.

Objectives

To investigate the effect of sleeve gastrectomy on GORD symptoms in obese patients.

Methods

A retrospective review of 300 consecutive patients undergoing bariatric surgery for morbid obesity was undertaken in a centre where only sleeve gastrectomy was performed, regardless of preoperative GORD symptoms (except in the presence of Barrett's Oesophagus). Data was collected on pre- and post-operative GORD symptoms, and the development of *de novo* symptoms.

Results

262 cases with complete outcome data were studied. 210 (80.1%) of patients reported preoperative GORD symptoms. During the 24 month follow up period, 151 (59.0%) patients reported reflux symptoms, of which 143 had pre-existing symptoms and 8 (3.1%) had developed *de novo* symptoms.

Conclusion

GORD is common in obese patients. Following sleeve gastrectomy, we have observed a resolution of symptoms in 28% of the patients studied, suggesting that obesity may be a significant causative factor. Only a small proportion of patients developed *de novo* GORD symptoms following sleeve gastrectomy. Sleeve gastrectomy may therefore improve GORD symptoms where sustained weight loss can be achieved.

□
P.713

THE EARLY OUTCOMES OF MODIFIED TECHNIQUE OF SLEEVE GASTRECTOMY IN SUPER OBESE PATIENTS

Sleeve gastrectomy

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Background

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Introduction

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Objectives

To analyze the early outcomes of modified technique of sleeve gastrectomy

Methods

37 patients (18 males and 19 females) with super obesity (BMI > 50) have undergone a sleeve gastrectomy surgery in the I Department of Surgical Diseases of Azerbaijan Medical University and Modern Hospital in 2012–2016. The body mass of patients varied from 130 to 220 kg, and BMI from 50 to 80.5 kg/m². 15 of the patients had type 2 diabetes, 27 – arterial hypertension, 29 – fatty liver syndrome and hyperlipidemia, 22 – sleep apnea, 12 female patients had a hormonal dysfunction because of polycystic ovary syndrome, and 5 male patients had an erectile dysfunction. All patients were prepared to surgery according to the standard protocol. The surgery was conducted with the use of 32 Fr calibration bougie and beginning of resection 2-3 cm proximally the pyloric sphincter, completed with omentopexy starting from the fundal part.

Results

The postoperative stay was 1 to 3 days. The follow-up period for most of patients was 36 months. The weight loss after first 6 months was 31-57 kg, and after 1 year 44-78 kg. 27 of 29 patients suffering arterial hypertension, fatty liver syndrome and hyperlipidemia got rid of these conditions during first 3 months. 14 of 15 patients with type 2 diabetes stopped their anti-diabetic medicines after 1 month, and 1 patient significantly reduced the dosage of medicine.

Conclusion

The new modification of technique of sleeve gastrectomy provides an effective and fast weight loss and normalization of metabolic indicators during first 6 months postoperatively.

□
P.714

FIBRIN GLUE APPLICATION DETRIMENTAL TO STAPLE LINE INTEGRITY IN LAPAROSCOPIC SLEEVE GASTRECTOMY – EXPERIENCE IN A SINGLE CENTRE

Sleeve gastrectomy

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Background

Laparoscopic sleeve gastrectomy (LSG) is one of the most common bariatric procedures. The most commonly feared complication is staple line dehiscence. A lot of methods have been suggested in order to reinforce the staple line, in an attempt to prevent leakage.

Introduction

The aim of this study is to present our experience with the use of fibrin glue as an adjunct to staple line reinforcement.

Objectives

We compare the rate of gastric leaks in LSG with and without application of fibrin glue.

Methods

All patients in our centre were operated by the same surgeon. It is standard practice in LSG to reinforce the staple line with absorbable running suture and suture the omentum over the staple line. Between September and December, 2012, in twenty-four patients that underwent LSG, fibrin glue was applied as an additional measure to staple line reinforcement following the standard placement of an absorbable running suture.

Results

Four postoperative leaks occurred after the use of fibrin glue. Two of these patients were treated conservatively, whereas the other two needed reoperation. The leak rate during the period of fibrin glue usage was statistically and clinically more significant than the general leak percentage of our centre without the use of fibrin glue (16.6% vs. 1.2%, OR 13.8, $p < 0.0001$). Related literature is analysed and discussed.

Conclusion

The use of fibrin glue led to significantly increased morbidity in our series and was subsequently abandoned as an adjunct to staple line reinforcement in LSG.



P.715

VERTICAL BANDED AND NON BANDED GASTROPLASTY AND SLEEVE GASTRECTOMY – IS THE GASTRECTOMY ESSENTIAL –MID TERM CLINICAL FOLLOW-UP.

Sleeve gastrectomy

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Background

Vertical banded gastropasty (VBG) is one of the oldest gastric restrictive operations since the mid 1980s. it is still performed during the last years although largely replaced by adjustable banding and the sleeve gastrectomy.

Introduction

But, with the long term disappointing results of the last mentioned procedures we reevaluate the modified laparoscopic VBG describing our clinical experience.

Objectives

. We compare three groups of morbidly obese patients who had different gastric restrictive operations, magenstrasse and mill, vertical banded gastroplasty , and sleeve gastrectomy 100 patients in each group.

Methods

All operations performed by laparoscopic approach and followed for 24 months by their weight loss peri operative and late complications. Their mean age was 38 ± 12 years , original BMI 42 ± 5 ,and 65 to 75% were females.

Results

In all three groups patients drop their BMI to the nadir on the average at the end of six months. There was no significant difference in the incidence of leakage or staple line bleeding between the groups but the clinical course of complications after gastrectomy was significantly more severe with regard to hospital stay and intensive care unit admission and complicated treatment. In addition, gastrectomy patients suffer significantly more from micronutrient deficiency than the gastroplasty groups.

Conclusion

. Although sleeve gastrectomy is technically easier to perform its mutilating nature seems to affect the severity of complications and the difficulties of their treatment. While results with regard to weight loss after gastroplasty and gastrectomy are similar, late nutritional deficiency is significantly more prominent after the gastrectomy.

□
P.716

BACK TO REALITY: 10 YEARS EXPERIENCE WITH SLEEVE GASTRECTOMY FROM A SINGLE CENTER

Sleeve gastrectomy

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Background

Sleeve gastrectomy (SG) has become the most popular bariatric operation worldwide although the rarely available long-term results are rather discouraging.

Introduction

Whereas SG shows excellent short time weight loss and metabolic effects there is increasing evidence for major weight regain and severe gastroesophageal reflux from about the third postoperative year onwards.

Objectives

Evaluation of 10 years experience with SG as a primary bariatric procedure.

Methods

Prospectively collected data were evaluated from all primary SG which had been performed from 8 / 2007 to 3 / 2017 in our center.

Results

150 patients (93 F, 57 M) with age 43.32 years (18-64), weight 160.1kg (99.0-260.0) and BMI 54.26 kg/sqm (35.12-79.36) had an average operation time of 99.85 minutes (40-210). 30d-mortality was 0.67% (1). Major early complications occurred in 6.67% (leak rate 4.67%, postoperative hemorrhage 1.34%, mesenteric vein thrombosis 0.67%). Late postoperative complications encountered 4 stenoses, 2 gastric ulcers and first of all insufficient weight regain/insufficient weight loss (24.24%) and severe reflux symptoms (19.70%). Excess weight loss was between 57.41% (at 12 months) and 63.8% (at 60 months). Redo-procedures (gastric bypass procedures) had been performed in 31.8% (42) of 132 sleeves where the initial procedure had been performed at least 24 months before.

Conclusion

An early leak rate of 4.67% and a rather high Redo-rate of 31.8% for weight and reflux issues let our enthusiasm vapourize for Sleeve Gastrectomy. In our opinion this procedure should be avoided wherever better operations like gastric bypass are not contra-indicated.

□
P.717

SPECTRUM OF GASTRIC HISTOPATHOLOGIES IN MORBIDLY OBESE TURKISH PATIENTS UNDERGOING SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Introduction

Obesity is a complex endocrine and metabolism disorder with increasing mortality and morbidity. Gastric pathologies in obese patients can differ from the overall population. Many studies have shown that obesity leads to reflux esophagitis, Barrett's esophagus, reflux gastritis, and hiatal hernia.

Objectives

In this study, we aimed to describe the findings associated with gastric pathology and to identify the prevalence of *Helicobacter pylori* (*H. pylori*) in patients undergoing laparoscopic sleeve gastrectomy (LSG).

Methods

Gastric specimens of a total of 291 patients (225 females, 66 males; mean age: 42 years; range: 18 to 60 years). who underwent LSG for the treatment of morbid obesity at Antalya Training and Research Hospital between December 2014 and December 2016 were prospectively analyzed and histopathological findings were evaluated.

Results

In the histopathological examination of sleeve specimens, 58 patients (19,93%) had chronic gastritis, 102 patients (35,05%) had chronic active gastritis, 27 patients (9,27%) had follicular gastritis, 47 patients (16.15%) active follicular gastritis, one patient (0,34%) had a glomus tumor, and one patient (0,34%) had a gastrointestinal stromal tumor. The gastric mucosa was normal in 55 patients (18,90%). Intestinal metaplasia was detected in eight patients (2,74%). The *H. pylori* test result was positive in 126 patients (43,29%).

Conclusion

Our study results suggest that the prevalence of follicular gastritis and *H. pylori* positivity is high in morbidly obese Turkish patient population. Preoperative routine upper gastrointestinal endoscopy enables the diagnosis of rarely observed gastric pathologies. Preoperative treatment of these patients is an important factor which affects the success of bariatric surgery.

□
P.718

A PROSPECTIVE STUDY OF GORD AND QUALITY OF LIFE AT ONE YEAR POST LAPAROSCOPIC SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Introduction

Laparoscopic Sleeve Gastrectomy (LSG) is an accepted treatment for morbid obesity. There are concerns that LSG can provoke severe gastro-oesophageal reflux disease (GORD).

Objectives

To assess patient reported outcomes of GORD and quality of life following LSG.

Methods

A prospective study of patients undergoing LSG between 2014-2015 was performed. Patients were followed up clinically and completed the modified DeMeester Reflux/Regurgitation Score, the Bariatric Quality of Life Index (BQLI) Score and the Bariatric Analysis and Reporting Outcome System (BAROS) Score pre-operatively, at 6 months and 1 year post-operatively.

Results

16 patients (14 female: 2 male) were studied. Mean excess weight loss was 49.2% at 6 months and 53% at 1 year. The mean modified DeMeester Reflux/Regurgitation Score pre-operatively was 2.25 (\pm 0.67) and 2.38 (\pm 0.59) ($p=$ 0.09) at 6 months post-operatively. This significantly decreased to 0.81 (\pm 0.25) at 12 months post-operatively ($p=$ 0.04).

No patients had uncontrollable reflux pre-operatively or at 6 months. One (1/16) patient had uncontrollable reflux at 12 months.

Mean BQLI Score improved from 41.03 (\pm 2.53) pre-operatively to 45.6 (\pm 1.95) ($p=$ 0.04) 6 months and 49.62 (\pm 2.46) ($p=$ 0.03) at 12 months post operatively. The BAROS Score showed all patients to have an excellent($n=9$) or very good result($n=7$) at 12 months.

Conclusion

LSG does not cause significant GORD symptoms for most patients by one year following the operation. LSG can lead to significant improvements in quality of life and weight loss. A small proportion of patients will develop troublesome GORD post-operatively.

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P.719

THE LEFT-HANDED SLEEVE GASTRECTOMY : THE TECHNIQUE TO AVOID POSTOPERATIVE GASTRIC STENOSIS OR GASTRIC TWIST

Sleeve gastrectomy

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Background

Laparoscopic sleeve gastrectomy (LSG) is an effective bariatric procedure.

Introduction

Laparoscopic sleeve gastrectomy (LSG) in morbid obesity has proved to be a safe and reproducible technique. The occurrence of gastric stenosis (GS) or gastric twist (GT) has been rarely published [4].

Objectives

The purpose of the present study is to describe our technique and the tips and tricks to decrease the risk of these complications.

Methods

From January 2011 to October 2015, 200 patients with morbid obesity underwent LSG in our institution. Out of 200 patients, 160 (80%) were women. The mean age was 44 years with a BMI of 40,4 kg/m² (35 to 70).

Results

The mean age was 44 years (range 20-67), with a mean initial BMI of 40,4 kg/m² (range 35-70). From the 200 patients who underwent LSG, 160 (80%) were women. There were two fistulas at the upper part of the sleeve that required endoscopic treatment, two haemorrhages with one that required a surgical treatment. No GS or GT was found. No mortality was reported during the follow-up (range 1month-2 years). Average weight loss at 2 year was 35 Kg (30 to 80).

Conclusion

To avoid gastric stenosis or gastric twist during sleeve gastrectomy, the technique must be meticulously standardised. To avoid these rare complications, the fundus should be well mobilised and the stomach should be divided with the stapler inserted through a trocar placed on the midline (the left-handed technique), directed toward the angle of His, so no angulation of the stapler would be required.

□
P.720

PSAMMOMA BODIES IN GASTRIC MUCOSA AFTER A SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Background

Introduction: The psammoma bodies (PB) are extremely rare findings in the gastric mucosa (GM) following a gastrectomy. **Objective:** case report of a patient undergoing SG whose biopsy reported PB in the GM. **Methods:** Case report. **Results:** 37-year-old female patient was submitted to SG, biopsy reported PB in GM. **Conclusion:** There are no publications of these findings after a SG. The patient constitutes a challenge for the follow-up about possible future lesions on GM

Introduction

The PB are dystrophic calcifications, well circumscribed, rounded. They are described in a series of neoplasms, such as: meningiomas, papillary thyroid carcinoma and ovarian tumors. They have also been described in cases of gastric carcinomas, however, they are an uncommon finding in gastrectomy pathologies

Objectives

case report of a biopsy posterior to a SG in which there are presence of PB

Methods

Case report

Results

37-year-old female patient with mild obesity is submitted to SG at our institution. The patient was previously evaluated by a multidisciplinary team. Post-surgery biopsy reports PB in the GM. The patient had a normal evolution, with remote controls with satisfactory weight loss and normal upper endoscopy after 6 months of surgery

Conclusion

The PB are extremely rare in cases of gastric carcinoma, with few publications in the literature. There are no published cases in the world after a SG. We believe that this case constitutes a challenge for its follow-up, especially from the endoscopic point of view, to anticipate the appearance of any lesion in the GM or other organs where these findings have been described

□
P.721

LAPAROSCOPIC SLEEVE GASTRECTOMY; A 7-YEARS RETROSPECTIVE REVIEW

Sleeve gastrectomy

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Background

Laparoscopic sleeve gastrectomy has become the most popular procedure worldwide for management of the obese patient. Just recently it has been gaining popularity amongst bariatric surgeon in our country. The aim of this study is to assess our technique and experience with Laparoscopic Sleeve Gastrectomy (LSG).

Introduction

According the last data from 2016, Mexico has the highest prevalence in obesity amongst Latin American Countries and become the number one in the last years. LSG has been added as a surgical treatment for obesity, we report our 7 year results with LSG.

Objectives

The purpose is to assess the impact of the changes in laparoscopic sleeve gastrectomy on 6 months, 1 year, 2 years, and to evaluate the impact of those changes in the excess weight loss, complications, and resolution of comorbidities.

Methods

A retrospective data collection of LSG from a single institution was performed and data analysis was conducted at 6 months, 1 and 2 years to assess the percentage of excess body weight loss and comorbidity status change.

Results

The percentage of resolved sleep apnea from baseline in 6 months and 1 year were 45.7% and 84.1%, for reflux disease 33.1% and 48.2%, hyperlipidemia 45% and 57%, hypertension 38.9% and 42.2%, diabetes 57% and 75% respectively. The percentage of excess body weight loss at the 6 months, 1-and 2-years was 46%, 59% and 52% respectively.

Conclusion

The result of our technique demonstrated that the current procedure is an effective technique for improving the morbidity associated with LSG

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P.722

LAPAROSCOPIC CONCOMITANT GASTRIC SLEEVE AND REPAIR OF A MORGAGNI LARREY HERNIA - CASE REPORT

Sleeve gastrectomy

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Introduction

Anterior diaphragmatic hernias are very rare surgical entities, scarce in symptoms, that occur through the slots of the costal and sternal fascicule of the diaphragm. First described by Giovanni Battista Morgagni, in 1769, they are known under many names: hernias Morgagni, Morgagni-Larrey, or located to the left, right or bilateral; or named according to the nomina of the orifice (Morgagni, Marfan, Larrey). The preferred treatment is the laparoscopic cure of the hernia.

Objectives

We discuss the opportunity of concomitant treatment of sleeve gastrectomy and Larrey hernia.

Methods

Case report

Results

We present the case of a female patient, with obesity (BMI = 44.10 kg/m²), acute cholecystitis and Morgagni hernia. Other associated pathologies: high blood pressure, autoimmune thyroiditis, dyspnoea. The initial diagnosis of diaphragmatic hernia was made a year back by a CT investigation. Laparoscopic cholecystectomy was practiced, longitudinal gastrectomy and the cure of the diaphragmatic hernia by suturing the diaphragmatic margins, along with a drainage tube placed in the remaining cavity of the hernia, with conservation of the hernia sac. The patient had a simple post-operative evolution, with no complications.

Conclusion

The concurrent cure of the hernia and gastric sleeve does not represent a greater risk for the patient, recovery being rapid. The peculiarity of the case was represented by the triple surgical pathology and the features of the diaphragmatic hernia (the hernia sac with omentum, in the Morgagni foramen).

□
P.723

GASTRIC SLEEVE AS SURGICAL TREATMENT OF OBESITY BY BARIATRIC GROUP IN MEXICO

Sleeve gastrectomy

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Background

Weight reduction with gastric sleeve is achieved by several mechanisms: reduction of gastric volume and reduction in ghrelin secretion.

Introduction

Gastric Sleeve is a surgical procedure for the treatment of morbid obesity in people with BMI (body mass index) greater than 40 kg / m² or BMI of 35 to 39.9 kg/m² with comorbidities

Objectives

to demonstrate efficacy in the management of obesity by means of gastric sleeve.

Methods

performed in Mexico from 2012 and 2016. In patients with BMI between 35-90.56 kg/m², without diabetes mellitus, the procedures were performed by 3 surgeons under the same technique; We excluded patients who were not approved by multidisciplinary team

Results

1040 gastric sleeves were performed, 822 (79.04%) were female and 218 (20.96%) were male; The means were: age 34.99 (12-69) years; BMI 40.21kg / m² (30-90.56kg / m²); Hospital stay 1.11 (1-5) days. Mortality rate was 0%. The first trimester the percentage loss of excess weight was 22.8%; 2nd trimester of 32.8%; 3rd trimester of 41% and fourth trimester of 55.3%. 67 (6.44%) patients had difficulty for solid foods in the first trimester; 10 (0.96%) presented gastroesophageal reflux. 25 (2.4%) presented regain of 12% of weight two years later.

Conclusion

gastric sleeve is the most performed method worldwide. Adequate and sustained weight loss is achieved with a low percentage of weight regain when patients cooperate 100%



P.724

USING SIGNIA STAPLING SYSTEM FOR SLEEVE GASTRECTOMY :

Sleeve gastrectomy

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Introduction

Rate of complications after sleeve gastrectomy is around 5%. Leaks and hemmorrhage are the main encountered. Most of them can be avoided using an adequate technique. As powered stapling is still known, we report the experience with the Sgnia which afforded adaptive firing technology.

Objectives

Technical demonstration of sleeve gastrectomy using Signia stapling system.

Methods

This electronic stapplers was used during 83 procedures from december 2016 to January 2017. Out of them there were 48 sleeve gastrectomy.

Results

Mean duration time was 40 ± 15 mn. This video highlight the details of sleeve gastrectomy using an electronic stappler.

Conclusion

Using electronic stappler can enhanced the safety of sleeve gastrectomy.



P.725

OUR EXPERIENCE IN LAPAROSCOPIC SLEEVE GASTRECTOMY WITH OMENTOPEXY

Sleeve gastrectomy

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Introduction

Laparoscopic Sleeve gastrectomy(LSG) is the most performed bariatric surgery today. Although LSG is a very safe operation, it may cause some problems like leaks, staple line bleeding, strictures and severe reflux symptoms.

Objectives

Our objective in this study was to examine the effect of omentopexy on the complication of LSG.

Methods

A total of 2010 patients have undergone LSG with omentopexy in two centers between March 2014 and March 2017. Their mean age was 37.1 years, 71.2% were women. Mean BMI was 42.1 kg/m².

Results

There was no mortality. There were only three proximal leak after LSG (0.15%). One leak was detected before discharge (acute leak). One leak was detected on the 8th postoperative day (early leak) and the other one was detected after 7 months (chronic leak). Postoperative bleeding was detected in 7 patients (0.34%). One patients with bleeding required re-laparoscopy for pain. Blood transfusion was required in three patients. There patients were followed up. There was only one stricture and postoperative endoscopy with balloon dilatation was required for this patient.

Conclusion

LSG with omentopexy may contribute to reduction in morbidity. Omentopexy provides additional reinforcement of staple line to prevent leakage and bleeding. Also, it provides gentle traction to reduce the incidence of torsion and twist.



P.726

OUR BEGININGS IN THE SURGERY OF OBESITY- FIRST IMPRESSIONS

Sleeve gastrectomy

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Introduction

Obesity is a serious world wide health problem, with significant social and economic implications, and growing incidence in our country (prevalence of 1508.1/100.000 people, in 2016). Metabolic surgery has become a necessity in improving the health status of patients .

Objectives

We discuss the main elements we observed in our first 60 consecutive patients who underwent sleeve gastrectomy, in a period of 1 year.

Methods

We retrospectively analyzed the data of 60 consecutive patients operated in our clinic. Data were collected from the observation sheets.

Results

The group included 60 patients (39 women), with an average BMI of 43 kg / m². Average hospital stay was 8.8 days, with an average of 5 days of postop hospitalization. The main co morbidities were: hypertension (30 patients), diabetes (18 patients, 2 didn't need medication 3 months after surgery). We had a laparoscopic follow up for postoperative bleeding from the gastric margin. Other complications: one pneumoperitoneum and 4 wound hematoma.. The mean duration of surgery was 1 hour and 46 minutes, dropping when the team gathered experience. After 1 month the median weight loss was of 14.7 kg and at 3 months the median was of 28 kg.

Conclusion

We believe gastric sleeve to be a safe operation, with good management of the patient after surgery, and few complications. The data are comparable to those of large studies in the literature, the patient being monitored in dynamics by an interdisciplinary team. Patients will be interviewed to assess status at 12/24 months postoperatively.

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P.727

SINGLE PORT SLEEVE GASTRECTOMY – PRACTICAL ASPECTS

Sleeve gastrectomy

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Background

There has been an increasing demand for single port bariatric surgery in the middle east area for reasons of privacy and desirable cosmetic outcome especially in the lower BMI group of patients. Our statistics show that the demand by males is more than females due to the cultural acceptance of upper body exposure by men. Most of female patients demanding discreet procedures are those who are in pre marriage stage of life.

Introduction

The demand by patients plus the urge to minimize invasiveness has led to the development of single port laparoscopy. Described in this study are practical steps and feasibility and safety of single port sleeve gastrectomy for selected patients.

Objectives

- 1- Practical steps for performing the procedure.
- 2- Safety and feasibility of single port SG for selected patients with BMI up to 40

Methods

A total of 96 patients undergoing elective Single Port SG were compared with a demographically similar 250 patients who underwent standard multiple port SG between May 2007 and February 2017. The data collected included the operative time, subjective pain scores, length of stay, operative complications, and satisfaction rate.

Results

No statistically significant difference was found in post operative pain, length of stay and operative complications. The average operative time for Single Port SG was 87 minutes versus 65 minutes for multiple port surgery ($P = .5$). Satisfaction rate with the scar appearance was 100% in the single port group compared to 91% in the multiple ports group.

Conclusion

Single port SG is feasible and safe for selected patients.



P.728

CONCOMITANT LAPAROSCOPIC LEFT LATERAL LIVER SECTIONECTOMY WITH SLEEVE GASTRECTOMY IN A MORBIDLY OBESE PATIENT WITH HEPATOCARCINOMA

Sleeve gastrectomy

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Fuster

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Background

Pre-operative study of bariatric patients can diagnose silent tumors.

Introduction

In selected cases, a concomitant treatment is an alternative strategy.

Objectives

To illustrate the feasibility and safety of a simultaneous minimally invasive approach to treat a morbidly obese patient with an hepatocarcinoma.

Methods

A 56 years old morbidly obese patient (BMI 48 Kg/m², weight 158 Kg) with a history of high blood pressure, long lasting T2D (12 years evolution, treated with oral agents plus insulin, microvascular affection, HbA1c 8.4%), chronic renal failure, and dyslipidemia, was proposed for bariatric surgery. Pre-operative work-up including a MRI study diagnosed a 6 cm hepatocarcinoma in the context of fatty liver disease (Barcelona clinic liver cancer Stage A). Patient was scheduled for a concomitant strategy by the bariatric and hepatobiliopancreatic teams.

Results

A laparoscopic approach was planned. Reinforced cartridges were used for the sleeve gastrectomy procedure. II-III hepatic bi-segmentectomy was performed combining ultrasonic tissue ablation, bipolar sealer and mechanical staplers without intra-operative complications or conversion. Operative time was 180 minutes. Oral intake was started two days after surgery. Patient was discharged at the 4th postoperative day without drainage. No transfusion was required. Pathology report confirmed an R0 resection of a moderately differentiated hepatocarcinoma. One month after surgery patient has lost 19 Kg, and does not require any medication for T2D control (HbA1c 5,6%). Tumor marker alpha-fetoprotein dropped from 70 to 13 ng/mL.

Conclusion

Pre-operative study may diagnose unexpected disorders in bariatric patients. The benefits for a concomitant surgical treatment may be offered in the setting of a multidisciplinary approach

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P.729

SIMULTANEOUS TREATMENT OF GASTRIC GASTROINTESTINAL STROMAL TUMOR (GIST) BY LAPAROSCOPIC SLEEVE GASTRECTOMY IN A MORBIDLY OBESE PATIENT

Sleeve gastrectomy

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Introduction

Gastrointestinal stromal tumors represent the most frequently observed form of gastrointestinal tumors with a non-epithelial origin.

Objectives

In this case report, a morbidly obese male patient who underwent LSG due to preoperative diagnosis of GIST has been described.

Methods

A 57 years-old male patient was admitted to our clinics for a planned LSG due to morbid obesity. His body weight was 153 kg and height was 164 cm, his BMI was calculated as 56.6 kg/m². Gastrointestinal stromal tumor (GIST) was identified during preoperative examination of a patient scheduled for bariatric surgery due to the diagnosis of morbid obesity in our clinics. Gastric localization of the tumor was evaluated and a decision was given for excision of the tumor by laparoscopic sleeve gastrectomy (LSG). Safe surgical borders were established by LSG and simultaneous bariatric surgery and GIST excision were successfully performed. With a negative surgical border of almost 3 cm from the stapler line, the mass was removed by LSG.

Results

The patient's postoperative follow-up was normal and he was discharged with recovery. Histopathological examination of the gastric specimen indicated epithelial cell-type GIST involving gastric musculares propria and serosa. The patient was regularly monitored.

Conclusion

LSG is the best choice among all bariatric surgery methods for obese patients with GIST. Safe removal of tumoral mass simultaneously with stomach-size reduction can be achieved by LSG.



P.730

STAPLER MISFIRE DURING SLEEVE GASTRECTOMY- MANAGEMENT

Sleeve gastrectomy

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Introduction

Apart from complications like gastric leak, bleeding, stricture, one complication which tests the surgical expertise and patience of the surgeon is Stapler Misfire. While performing Laparoscopic Sleeve Gastrectomy (LSG) staplers play the major role but these staplers sometimes have mechanical problems and malfunctions which can lead to stapler misfire. The purpose of this presentation is to put forward a simple but very useful technique for dealing with stapler misfire intraoperatively

Objectives

How to manage stapler misfire intraoperatively.

Methods

This study was done at Max Super Speciality Hospital, Saket, New Delhi. We present a case of 43 year male who had a stapler misfire during Laparoscopic Sleeve Gastrectomy near to angle of HIS. Routinely we see for any wandering clip before firing every stapler, in this case also we had taken that precaution, but stapler misfired. This was dealt by intracorporeal suturing of the remaining part of the misfired segment with single layer Vicryl 2-0. Stapler could not be used as the misfired segment of stomach was very near to the angle of His

Results

Post operative recovery of the patient was uneventful. Post operative gastrografen study showed intact stapler and suture line and the patient was discharged on 2nd postoperative day.

Conclusion

Intracorporeal suturing is a good option for dealing with the misfired segment during sleeve gastrectomy. This can be used as an alternative to stapler when the space for firing is restricted.



P.731

STANDARD TECHNIQUE IN SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Background

Standardization is lacking is needed in sleeve gastrectomy.

Introduction

Sleevegastrectomy is the commonest bariatric surgery worldwide. Still the procedure has controversies in certain technical steps especially those related to leak prevention, hemostasis risk and successful standard weight loss.

Objectives

Describe certain technical point of the procedur.

Methods

Decribed in author own video of sleevegastrectomy.

Conclusion

Sleeve gastrectomy need to be standardized for better outcome.

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P.732

IT IS POSSIBLE TO BY-PASS THE LEARNING CURVE IN BARIATRIC SURGERY?

Sleeve gastrectomy

D. Timofte

University of Medicine and Pharmacy Grigore T. Popa To standardize the learning curve for sleeve gastrectomy according to the literature data. - Iasi (Romania)

Introduction

The Learning Curve (LC) represents a concept which refers to the acquisition of a new technique in any domain supposing to guide training and implementation at institutions not currently using the new procedure, in bariatric surgery being a complex process starting with selection of cases, perioperatively management and treatment of complications.

Objectives

To standardize the learning curve for sleeve gastrectomy according to the literature data.

Methods

There were included 280 patients operated in the 3rd Surgical Unit between June 2012 and March 2017 divided in 3 groups of 93 patients and the main parameters were analyzed.

Results

Univariate analysis revealed a significant decrease of the operative time in the 3rd lot (70 +/- 20 minutes) comparing with lot 1 (90 +/- 15 minutes) and a significant decrease of incidents and complications following the learning curve: lot 1 – 6.25% (5 /80), lot 2 – 1,25% (1/80) and lot 3 with 0 complications.

Conclusion

The results can be biased by retrospective design of the study with the lack of follow up for all the patients. On our cohort (230) the estimation of the breaking point for fulfilling the LC is to be after 80 patients in accordance with literature data. One of the most important methods to shorten the LC is to initiate and maintain a mentored communication with an experienced bariatric surgeon from a specialized center. The concept "once seen, once done, once teach" is not available in surgery, the LC in bariatric surgery being reported to be 100 cases.



P.733

RESULTS OF FIRST 5 YEARS OF SLEEVE GASTRECTOMY

Sleeve gastrectomy

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Introduction

The laparoscopic vertical sleeve gastrectomy is a minimal approach procedure that removes the fund and the greater curvature to reduce the volume of the stomach

Objectives

To describe the results of first 5 years of laparoscopic sleeve gastrectomy, the technique and PO evolution. It is analyzed the results of the first 112 consecutives cases at the Central Hospital of the Social Security of Asuncion, Paraguay.

Methods

The first 112 consecutive patients underwent sleeve gastrectomy in the Department of General Surgery of the Central Hospital, since May 7 of 2012 until March 31 of 2017.

It is described the pre operative studies, the operatory technique and the post operatory evolution.

The data are stored in the Electronic Medical Record.

Results

Were submitted to surgery 87 women and 25 men, with ages ranging 25 years and 58 years. The patient with the lowest weight was 83 kilos and the greatest weight 250 kilos; and with relation to the Body Mass Index the lowest was 33.7 kg/m² and the greater 82.6 kg/m²; there were 39 (34.9%) with obesity type II, 57/112 (50.8%) patients with obesity class III, 14/112 (12.5 %). We had 2/112 surgical complications (peritonitis), 1/112 death, and 9/112 clinical complications.

Conclusion

Laparoscopic sleeve gastrectomy is an effective method for the surgical treatment of obesity. The incidence of complications and mortality of the technique are low.

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P.734

CONCOMITANT SURGICAL TREATMENT OF OBESITY AND SURGICAL COMORBIDITIES.

Sleeve gastrectomy

D. Timofte

University of Medicine and Pharmacy Grigore T. Popa - Iasi (Romania)

Introduction

Metabolic surgery is performed now in many centers with convincing results. The bariatric patients could present both medical and surgical comorbidities.

Objectives

Concomitant surgical treatment of these should take into account the higher risk associated with two simultaneous procedures.

Methods

There were included patients operated at the 3rd Surgical Unit between June 2012 and March 2017 using at least one type of laparoscopic bariatric procedure. Data was retrospectively extracted from a prospective database.

Results

280 patients were operated. In 260 patients (LSG) Laparoscopic sleeve gastrectomy was performed, in 4 laparoscopic gastric plications, in 16 laparoscopic gastric by-pass (LGP). Out of 260 patients with LSG, in 21 patients another surgical procedure was performed: 11 hiatal hernia repair, 5 cholecystectomies, 3 adhesiolysis, 2 umbilical hernias, 1 postoperative hernia. Mean operation time for concomitant LSG was 80 min significantly longer the 45 min for only LSG. Length of stay was identical. To one patient with LGP also the resection of the remnant stomach has been performed. One patient developed a biliary drainage from gallbladder bed of the liver and was treated conservatively. There was no difference between complications rate, and length of stay between the two groups.

Conclusion

During learning curve, the successful procedure represents a motivation for next cases. In the studied cohort, there was a small number of concomitant interventions with no complications. So, the concomitant intervention is justified and feasible as long as it is performed safe and it doesn't prolong too much the total operation time jeopardizing the postoperative outcome.



P.735

EVALUATION OF DIABETIC AND NUTRITIONAL STATUS AFTER LONG LIMB ROUX EN Y RECONSTRUCTION IN THE PATIENTS WITH GASTRIC CANCER AND TYPE 2 DIABETES

Surgery and strategies for low BMI

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Background

Metabolic surgery (MS) is considered as one of treatment methods for type 2 diabetes (T2DM) with lack of data supporting for low BMI patients.

Introduction

There are some reports supporting that reconstruction methods after gastrectomy influence on the improvement of T2DM. Additionally, long limb roux en Y (LLRY) has been reported better effects on T2DM.

MS for low BMI patient has not been accepted because of lack of data for supporting effectiveness and nutritional concern to LLRY.

Objectives

We investigated the effectiveness for improvement of T2DM and nutritional status after radical subtotal gastrectomy with LLRY.

Methods

We did LLRY in 25 patients with early gastric cancer (EGC) and T2DM. HbA1c, oGTT etc. were tested for T2DM status. Albumin, change of BMI etc. were checked for nutritional status with matched 25 patients received Billroth I. These parameters were checked preoperatively and at 1 week, 6 months and 1 year.

Results

50 patients with EGC were enrolled in this study. 25 had T2DM and received LLRY. 25 patients with B-I were matched as control group for the comparison of nutritional status.

HbA1C decreased 7.38%, 6.26% and 6.24% and 16 patients (64.0%) got less than 6.0% at 1 year. The patterns of insulin and C-peptide, and glucose level in oGTT showed normal parabolic pattern having the peak on 30 min.

Parameters for nutritional status showed no differences between two groups statistically at any time period.

Conclusion

These results support that MS for low BMI patients deserve to study and could be accepted as one of the treatment methods for T2DM with lower BMI patients.

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P.736

THE EFFECT OF LAPAROSCOPIC GASTRIC BYPASS ON CHINESE TYPE 2 DIABETES MELLITUS PATIENTS WITH BMI

Surgery and strategies for low BMI

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Introduction

Reports of Gastric bypass (GBP) for type 2 diabetes mellitus (T2DM) patients with a BMI <27.5 kg/m² are lacking.

Objectives

To explore the safety and efficacy of GBP on Chinese T2DM patients with BMI <27.5 Kg/m².

Methods

Retrospectively analyzed patients undergoing GBP for T2DM from 2012.4 to 2015.12 in General Surgery Department in Beijing Tiantan Hospital, Capital Medical University, all patients are followed-up for more than 1 year and with a completed data. Basic clinical data, postoperative plasma glucose level and surgical complications are compared among groups of patients with BMI <27.5, BMI between 27.5-32.5 and BMI ≥32.5 Kg/m².

Results

Before surgery, 33 patients had BMI <27.5 Kg/m², 46 between 27.5-32.5 Kg/m², and 22 had BMI >32.5 Kg/m², and mean BMI in each group are 25.9±1.2、29.6±1.3、38.2±5.2 Kg/m²(P <0.01). No statistical difference in gender, age, T2DM duration, and preoperative GHb, FPG, fasting insulin (P>0.05). 1 year after surgery, with the absence of all hypoglycemic medications, 51.5%, 58.7% and 77.3% patients in the 3 groups reached GHb ≤6.0%, 66.7、71.7%、81.8% patients had GHb ≤6.5%, and GHb ≤7.0% was reached in 78.8%、84.8%、95.5% patients in 3 groups (P>0.05) . BMI 18 Kg/m² appeared in 2 patients in BMI <27.5 Kg/m² group, who had recovered after nutritional support.

Conclusion

Apart from risk of underweight, GBP is effective for T2DM patients with BMI <27.5 kg/m² in China.

□
P.737

THE GROWING INTEREST FOR METABOLIC SURGERY IN THE NON-SURGICAL SCIENTIFIC COMMUNITY

Type 2 diabetes and metabolic surgery

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Introduction

One of the aims of the Diabetes Surgery Summit (DSS) is to increase awareness and acceptance of metabolic surgery outside the surgical community. In June 2016, clinical guidelines from the 2nd DSS (DSS-II) were published in Diabetes Care, a leading diabetes/endocrinology journal.

Objectives

To measure the interest for DSS-II guidelines and metabolic surgery in the medical community.

Methods

The number of downloads and citations over the first 5-month after publication was measured for all articles published in Diabetes Care between June 2014 and June 2016. We also measured the number of articles related to bariatric/metabolic surgery published in the same journal between January 2000 and December 2016. Diabetes Care website and Web of Science database were used as source of bibliometric data.

Results

With 48165 downloads, the DSS-II guidelines report was the fourth most downloaded paper in the Journal and also received the highest number of early citations (5-month post publication). The number of articles related to metabolic surgery increased from 0/year in 2000 to 25/year in 2016.. Interestingly, the average numbers of downloads and early citations for articles related to metabolic surgery were higher than those for all other types of articles ($p < 0.0001$)...

Conclusion

Diabetes Care readers manifested an evident attention for the DSS-II guidelines and a growing interest for metabolic surgery in recent years, suggesting increasing awareness of surgical treatment of diabetes among the medical community.

□ **P.738**

CHANGES IN THE GLUCOSE UPTAKE BY THE INTESTINE AFTER BARIATRIC SURGERY: THE INTESTINE, MUCH MORE THAN INCRETINS.

Type 2 diabetes and metabolic surgery

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Background

The hyperglycemia causes the exhaustion of pancreatic cells and over time produces a generalized metabolic decline.

Introduction

New theories says that the intestine has the key for the control of glucose homoestasis. For a long time, attention was focused on the incretin effect. Now there are other explanations.

Objectives

To evaluate the effects of the intestinal anatomic rearrangement in the intestinal glucose uptake.

Methods

Using Wistar and GK rats, we performance a surgery without restrictive elements and with a short bypass. Plasmatic samples and functional imaging tests were evaluated. Serial PET-CT (Positron Emission Tomographies) through fluorine-labeled glucose (2-FDG) were done for the qualitatively and quantitatively analysis of the images.

Results

The rats with bypass showed an decrease in glycemic levels ($p < 0,002$) and a regularization of insulin levels ($p < 0,001$) while GLP-1 and GIP levels showed no significant changes. The PET-CT showed different changes in the dynamics of glucose in the gut from the rats with bypass: a significant increase in glucose uptake from the blood ($p = 0,002$) whereas, we observed an attenuation of glucose uptake from the intestinal lumen ($p < 0,05$).

Conclusion

In the dynamic of glucose uptake by the intestine two effects are added: increment of glucose uptake from the circulation and reduction from the intestinal lumen. All this seems to indicate, a new bioenergetic disposition in the new intestinal anatomy. This mechanism also contributes to the amelioration of glycemia after surgery independent of weight loss, β -cell insulin secretion or incretin effect.

□
P.739

CHANGES IN INCRETIN HORMONES 5 YEARS AFTER BARIATRIC SURGERY

Type 2 diabetes and metabolic surgery

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Introduction

There is limited literature available on the long-term effect (≥ 5 years) of bariatric surgery on the incretin hormone responses.

Objectives

We sought to investigate changes in the incretin hormone responses in participants with impaired glucose regulation 5 years after bariatric surgery.

Methods

A non-randomized prospective study comprising of 19 participants (13 females, mean age 50.4 \pm 6.2 years, mean BMI 54 \pm 14 kg/m², 17 T2DM) undergoing bariatric surgery (Ten patients underwent LSG, 6 had BPD, 2 RYGB and 1 LAGB). Serial measurements of glucagon like peptide-1 (GLP-1) and glucose-dependent insulinotropic hormone (GIP) were performed during the oral glucose tolerance testing pre-operatively and 1 month, 6 months and 5 years post-operatively. Areas under the curve (AUC) were examined at 30, 60 and 120 minutes.

Results

Compared with preoperative levels, significant improvements in GLP-1 secretion during the OGTT were observed at 1 and 6 months, but these improvements were not maintained at 5 years [baseline vs 5 years: (GLP-1 AUC₀₋₁₂₀ 6.1 \pm 4.6 vs 6.8 \pm 4.9 pmol/L/hr, $p=0.61$)]. On the other hand, no changes in GIP secretion at 1 and 6 months, but significant improvements at 5 years were observed [baseline vs 5 years: (GIP AUC₀₋₁₂₀ 547 \pm 312 vs 824 \pm 518 pg/mL/hr, $p=0.03$)]. Fasting GIP level was also increased at 5 years. Significant reductions in weight, BMI and HbA1c were noted at 5 years.

Conclusion

An increase in postprandial GLP-1 response was not preserved at 5 years, but a significant increase in fasting GIP and postprandial GIP response was observed along with an improvement in glucose control and weight.

□
P.740

MIXED MEAL STUDY A COMPARISON BETWEEN SINGLE ANASTOMOSIS DUODENAL-JEJUNAL BYPASS WITH SLEEVE GASTRECTOMY AND R-Y GASTRIC BYPASS

Type 2 diabetes and metabolic surgery

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Introduction

Laparoscopic single anastomosis duodenal-jejunal bypass with sleeve gastrectomy (SADJB-SG) is a new metabolic surgery specifically designed for the treatment of type 2 diabetes mellitus (T2DM).

Objectives

This study investigates the mechanism of SADJB-SG by comparing the mixed meal results between SADJB-SG and RYGB

Methods

A total of 35 consecutive patients (21 SADJB-SG and 14 RYGB) with mean age 40.9(9.7) years, BMI 34.7(5.2), HbA1c 9.0(1.8)% and duration of T2DM 4.9(3.8) years were followed up before and at 1 year after surgery. A standard 200ml mixed meal test with visual analogue scales in assessment of appetite sensations was performed before and after surgery.

Results

Both groups were compatible at pre-operative characters. One-year after surgery, the mean BMI decreased to 25.1(2.9) with mean weight loss of 25.1(6.3)%. Complete remission of T2DM was achieved in 21(60.0%) the patients and the mean HbA1c decreased to 6.1(0.8)% with no difference between groups. However, SADJB-SG group had a significant less hyperglycemic response at 15 minutes after mixed meal test than RYGB. In addition, SADJB-SG patients felt less hunger and prospective consumption, earlier fullness and higher satiation than RYGB patients, but similar in nausea sensation.

Conclusion

Both SADJB-SG and RYGB is effective in T2DM treatment but SADJB-SG is superior in avoiding post-meal hyperglycemic surge and better satiation than RYGB.

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P.741

HISTOPATHOLOGICAL ANALYSIS OF LIVER BIOPSIES IN METABOLICALLY HEALTHY OBESE PATIENTS

Type 2 diabetes and metabolic surgery

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Introduction

Metabolically healthy obese (MHO) is a new concept in which an individual may exhibit an obese phenotype in the absence of any metabolic abnormalities. Despite a lower risk of cardiovascular disease, this phenotype has a higher association with hepatic steatosis and nonalcoholic steatohepatitis (NASH).

Objectives

The purpose of this study was to investigate the level of histopathological alterations in the liver biopsies of metabolically healthy obese patients submitted to bariatric surgery.

Methods

Analysis of liver biopsies of 55 MHO patients, according to NCEP ATP III (National Cholesterol Education Program - Adult Treatment Panel III), undergoing bariatric surgery in a reference center in Porto Alegre / Brazil between 2016 and 2017.

Results

The mean age was 31,4 years old composed of 87,2% of female patients. Only 5 (9%) individuals had no alterations in the liver biopsy. Nine patients (16,3%) had steatosis without signs of inflammation and five patients (9%) presented with steatohepatitis, but no fibrosis. Thirty-six MHO (65,7%) had signs of inflammation associated with some degree of fibrosis: stage 1A, mild perisinusoidal fibrosis (n= 15); stage 1B, moderate perisinusoidal fibrosis (n=5); stage 1C, only portal/periportal fibrosis (n=3) and stage 2, portal / sinusoidal fibrosis (n=13).

Conclusion

Our results suggest that a healthy metabolic profile does not protect obese adults from hepatic steatosis or fibrosis, indicating that obesity itself might contribute to liver fibrosis.

□
P.742

LONG TERM EFFECTS OF LAPAROSCOPIC SLEEVE GASTRECTOMY VERSUS GASTRIC BYPASS FOR THE TREATMENT OF METABOLIC SYNDROME: A SIX-YEAR STUDY

Type 2 diabetes and metabolic surgery

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Background

Metabolic Syndrome (MetS) is a prevalent consequence of morbid obesity. It translates into a clear increase of the risk of type 2 diabetes mellitus (T2D) and cardiovascular disease.

Introduction

It is well known bariatric surgery result in a significant weight loss with improvement of the MetS. Currently, laparoscopic gastric bypass (RYGB) and sleeve gastrectomy (SG) are the most common bariatric procedures performed worldwide, due to a better risk-benefit balance.

Objectives

To compare long-term results on MetS for laparoscopic sleeve gastrectomy (SG) and gastric bypass (RYGB)

Methods

This is a single-institution retrospective cohort study of 137 morbid obese patients undergoing bariatric surgery (61 RYGB, 76 SG). MetS was defined based on ATP-III criteria. Primary study outcome was MetS improvement and weight loss reduction.

Results

The overall cohort had a mean age of 45.3 ± 10.9 years, and mean BMI of 45.5 ± 5.1 kg/m² at the time of surgery. Six years after bariatric surgery, overall MetS prevalence significantly decreased from 62.7% to 16.7% ($p=0.01$), showing a remission rate of 73%. At last follow-up period, the prevalence of MetS, mean BMI, TGS, HDL, and glucose levels were 3.7%, 30.9 kg/m², 82.3 mg/dl, 66.1 mg/dl (females), 45 mg/dl (males), and 94 mg/dl for RYGB; 23%, 34.2 kg/m², 106.8 mg/dl, 59.5 mg/dl (females), 56.3 mg/dl (males), and 98.3 mg/dl for SG, respectively. (RYGB versus SG $p=0.01$ for MetS prevalence, $p>0.05$ for the other analyzed variables).

Conclusion

The results of this study show that RYGB is superior to SG in the long term (six years) MetS control.

□
P.743

BARIATRIC SURGERY VERSUS MEDICAL THERAPY FOR TYPE 2 DIABETES REMISSION: A SYSTEMATIC REVIEW AND META-ANALYSIS

Type 2 diabetes and metabolic surgery

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Introduction

Clinical trials have been using different outcomes in reporting bariatric surgery results among diabetic patients. A pooled analysis of recent bariatric surgery trials using the definition of diabetes remission established by the American Diabetes Association in 2009 would be helpful to provide a clearer picture of the role of bariatric surgery in the treatment of diabetes.

Objectives

This study aims to assess the efficacy of bariatric surgery in achieving diabetes remission, glycemic control, and adverse events.

Methods

A systematic literature search was conducted until April 2016 using PubMed, MEDLINE, The Cochrane Library and Clinicaltrials databases to identify randomized controlled trials that compared bariatric surgery with medical and non-surgical therapies among obese diabetic patients.

Results

Fourteen studies with 1,056 patients met the inclusion criteria. Bariatric surgery was associated with higher complete diabetes remission (RR 13.38, 95% CI 4.68, 38.27), partial diabetes remission (RR 9.54, 95% CI 4.93, 18.47), and glycemic control (RR 2.09, 95% CI 1.28, 3.41). Roux-en-Y gastric bypass (RYGB) was the most efficacious in achieving complete remission (RR 13.32, 95% CI 4.25, 41.79) and glycemic control (RR 2.54, 95% CI 1.35, 4.76). Adverse events were reported in 44.6% of RYGB patients, 15.6% in Laparoscopic Adjustable Gastric Banding patients, and 34.9% in medical or non-surgical patients. Sub-group analysis of long term results still showed an association of bariatric surgery with complete diabetes remission (RR 18.79, 95% CI 3.80, 92.95).

Conclusion

Bariatric surgery is efficacious in treating diabetes mellitus however, long term clinical trials are still warranted to provide stronger evidence of its long-term effects.

□
P.744

WEIGHT LOSS AND DIABETES OUTCOMES IN THE ELDERLY SUPER-OBESE COMPARED TO OTHER DEMOGRAPHIC GROUPS

Type 2 diabetes and metabolic surgery

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Introduction

Bariatric surgery is increasingly utilised in the super-obese elderly population despite limited evidence to support this practice.

Objectives

The aim of this study was to assess and to compare weight-loss and diabetic outcomes after roux-en-y gastric bypass (RYGB) and sleeve gastrectomy (SG) in groups with different age and weight characteristics.

Methods

Retrospective analysis was performed on all patients undergoing primary RYGB or SG over a 3 year period. Patients were divided into four groups: Group A (BMI<50, age<60); Group B (BMI>50, age<60); Group C (BMI<50, age>60); Group D (BMI>50, age>60). Percentage excess weight-loss (%EWL) was monitored postoperatively.

Results

507 patients were included in the study. 70.8% were female and the mean BMI at referral was 48.6. RYGB was performed in 80.3%. Follow up at 1 year was 68.2% and the mean %EWL was 65.9% (67.6% for RYGB and 57.0% for SG, p=0.009). There were 282 patients in Group A, 159 in Group B, 41 in Group C and 25 in Group D. The mean %EWL in Groups A-D was 71.2%, 58.7%, 64.4% and 53.7% respectively (p<0.001). Diabetes incidence was 37.6%, 25.8%, 53.7% and 56.0% (p=0.0005) in Groups A-D respectively. Mean reduction in HBA1C was 18.9, 17.3, 11.2 and 14.4 (p=0.3096) in Groups A-D respectively.

Conclusion

Younger (<60) and lighter (BMI <50) patients have improved weight-loss and diabetic outcomes than older (>60) and heavier (BMI >50) patients. However, even the super-obese elderly patients (Group D) achieve significant reductions in weight and improvements in HBA1C justifying surgery in this group of patients.

□
P.745

THE STATUS OF TYPE 2 DIABETES MELLITUS AFTER GASTRECTOMY ACCORDING TO TYPE OF RECONSTRUCTION FOR GASTRIC CANCER PATIENTS WITH TYPE 2 DIABETES MELLITUS

Type 2 diabetes and metabolic surgery

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Introduction

Distal and total gastrectomies are the most effective treatments for gastric cancer, and gastric restrictive and bypass surgeries have been showed to be effective for type 2 diabetes mellitus. .

Objectives

This study was conducted to investigate diabetes mellitus (DM) resolution after gastrectomy according to reconstruction type in gastric cancer patients with type 2 diabetes mellitus.

Methods

We retrospectively collected data from 303 patients with type 2 diabetes mellitus who underwent gastrectomy for gastric cancer between January 2002 and December 2016. The clinical characteristics were compared according to reconstruction type. The status and improvement of diabetes mellitus after gastrectomy for gastric cancer were compared according to reconstruction type. Their diabetes status was assessed 1 and 3 years postoperatively.

Results

Of the 303 patients, 111 underwent distal gastrectomy with Billroth I reconstruction, 104 underwent distal gastrectomy with Billroth II reconstruction, 50 underwent distal gastrectomy with Roux-en-Y, 38 underwent total gastrectomy with Roux-en-Y. The rate of remission or improvement was no significantly different among the reconstruction type in postoperatively 1 year ($p=0.665$). However there was significantly more higher rate of remission or improvement in total gastrectomy with Roux-en-Y esophagojejunostomy in postoperatively 3 years (Billroth I: 42.5 %, Billroth II: 42.4 %, Roux-en-Y gastrojejunostomy: 53.3 %, Roux-en-Y esophagojejunostomy: 79.4 %, $p=0.001$).

Conclusion

Many patients with type 2 diabetes mellitus after gastrectomy for gastric cancer showed remission or improvement of diabetes mellitus. Total gastrectomy with Roux-en-Y reconstruction was associated with the highest remission or improvement rate in 3 years postoperatively

□
P.746

GLYCEMIC CONTROL AND WEIGHT LOSS FOLLOWING METABOLIC SURGERY IN DIABETICS WITH BMI<30

Type 2 diabetes and metabolic surgery

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Introduction

Even after 60 years of Bariatric surgery, we still don't have any permanent or perfect solutions for long-term control of diabetes and obesity. The dilemma still remains, whether to use the least invasive or non-invasive procedures and accept lesser gains, or use complex procedures giving greater benefits, along with its accompanying disadvantages.

Objectives

To study the effects of metabolic surgery on glycemic control and weight loss in poorly controlled type-2 diabetics with BMI less than 30kg/m².

Methods

Laparoscopic Ileal Interposition with a BMI-adjusted sleeve gastrectomy(IISG) was performed after informed consent and ethics committee clearance, in type-2 diabetics with BMI from 20--30. 76 patients with BMI <30kg/m² (M=64; F= 12) were evaluated at 1 year post-surgery. Pre-operatively, mean weight was 73.84 kgs (range 45.1-102.5 kgs), with mean BMI of 26kg/m²(range 19.3—29.9) and mean HbA1c of 9.47%(range 6.4—12.8).

Results

At 12 months, the mean weight was 59.01kgs (40—74kgs), giving a mean weightloss of 15.79 kgs(range 5—29 kgs) and a 21.4% mean Total Body weight Loss. Mean BMI was 20.9 (15.7—26.3), with a 5.1kg/m² change in the BMI (24.4%BMIL); 3 patients lost more weight with BMI going below 18.5kg/m² at 12 months, but did recover with BMI settling at 19.4 and 22.5kg/m² at 2 and 5 years respectively. Mean HbA1c was 6.7% (4.7—9.5%) and 48.7% patients had remission with HbA1c less than 6%.

Conclusion

This metabolic procedure shows promising results even in such low BMI patients, where nearly 50% remission was obtained with good body weight stabilization, suggesting an important role for better nutritional support.

□
P.747

METABOLIC DUODENAL SWITCH

Type 2 diabetes and metabolic surgery

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Background

Duodenal Switch as Metabolic Surgery.

Introduction

Duodenal switch (BPD/DS) is the most effective bariatric surgery in long-term follow-up, regarding weight loss and comorbidities remission. Since 2003, we have been operated over 500 patients using this technique. Protein malnutrition was the main concern as potential complications. Our hypothesis was that Metabolic DS could be performed in bariatric patients with lower BMI to achieve good results.

Objectives

Our objective was to demonstrate that Metabolic DS is feasible and safe in lower bariatric BMI patients.

Methods

This was retrospective study. From January 2009 to December 2016, 30 patients were submitted to metabolic DS with 5 years of follow-up. Bariatric patients with BMI 35-40 were selected. The Modified Duodenal Switch technique was performed in all patients. In this technique, the alimentary limb is 50% of the whole small bowel (WSB) and the common channel is 25% of the WSB. Weight loss (WL) and nutritional status were verified. Laboratory measures to monitor protein, vitamin and mineral deficiencies were accessed. The duodenoileum anastomosis was evaluated by endoscopy.

Results

60% of patients were men (18-60 y/o). Mean BMI was 37+2,3; Mean excess WL% was 36%+2,10. Dyslipidemia was corrected in 100%. Diabetes remission occurred in 90%.

Hypertension was resolved in 70%. Sleep apnea were cured in 100%.

There were no nutritional or vitamin deficiencies. No stenosis or anastomotic ulcer were present.

There was no mortality.

Conclusion

Our study has suggested that metabolic DS is an effective and safe operation for lower BMI with lower rates of complications, good long-term WL and comorbidities remission with high patient satisfaction.

□ **P.748**

METABOLIC SURGERY IMPROVES DIABETIC NEPHROPATHY INDEPENDENT OF WEIGHT LOSS: A SYSTEMATIC REVIEW WITH META-ANALYSIS

Type 2 diabetes and metabolic surgery

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Introduction

Metabolic surgery has been proven to be the most effective therapy for patients with type 2 diabetes mellitus (T2DM), achieving superior weight loss and glycemic control. Furthermore, a lower incidence and postoperative remission of preexisting diabetic nephropathy (DN) can be achieved.

Objectives

The aim was to investigate the effect of metabolic surgery on DN and its association to weight loss and improved glycemic control. Moreover, the role of adiponectin and its effects on DN were evaluated.

Methods

A systematic literature search was carried out in January 2017, using MEDLINE, EMBASE, Web of Science and Cochrane. Studies giving information on nephropathy in patients with T2DM undergoing metabolic surgery were included. To evaluate the association between weight loss, renal function and glycemic control, a correlation analysis (meta-regression) was performed.

Results

Out of 1677 potentially eligible hits 22 studies were included. A significant postoperative decrease of the urinary albumin-creatinine-ratio (uACR) was found, showing no correlation between improved renal function (change in uACR) and weight loss (change in BMI; $r=-0.06$; $p=0.91$). There was no correlation between renal function and improved glycemic control (change in HbA1c; 0.25 , $p=0.59$) as well as glycemic control and weight loss ($r=0.42$; $p=0.3$). Increasing adiponectin levels after surgery may mediate its effects on DN.

Conclusion

Metabolic surgery improves DN in patients with T2DM independent of weight loss and glycemic control. These results suggest that other, thus far unclear mechanisms induced by metabolic surgery improve renal function. Increasing postoperative adiponectin levels may improve renal function through direct effects on podocytes.



P.749

LAPAROSCOPIC SLEEVE GASTRECTOMY CAN EFFECTIVELY RELIEVE POLYCYSTIC OVARY SYNDROME.

Type 2 diabetes and metabolic surgery

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Introduction

Polycystic ovary syndrome (PCOS) is a most complicated and common endocrinopathy of women in reproductive age. Half of the patients were accompanied by obesity.

Objectives

The purpose of the study it to explore the effect of laparoscopic sleeve gastrectomy (LSG) in the treatment of polycystic ovary syndrome (PCOS) .

Methods

33 cases of PCOS with obesity were evaluated by 3-36 months follow-up after bariatric surgery.

Results

All patients recovered menstruation without any other treatment, 23 (23/33) patients obtained normal menstruation, 12 (12/14) patients with LH/FSH>2 preoperatively recovered to the normal levels, 23 (23/24) cases with hirsute-syndrome or other clinical feature of increased androgen preoperatively were improved or disappeared, 20 (20/26) patients with preoperative hyperandrogenism recovered to the normal levels, 9 (9/22) patients with polycystic ovary in ultrasound examination preoperatively were disappeared. According to the Rotterdam EA-SPCWG, 24 (24/33) patients with PCOS got effective treatment after LSG.

Conclusion

Laparoscopic sleeve gastrectomy can effectively improve anovulation and hyperandrogenism of obese patients with polycystic ovary syndrome. Long term follow-up is necessary to further evaluate the effect of bariatric surgery on PCOS patients.

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P.750

BETA CELLS IN REMISSION OF TYPE 2 DIABETES MELLITUS (T2DM) AFTER ROUX-EN-Y GASTRIC BYPASS (RYGB) SURGERY

Type 2 diabetes and metabolic surgery

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Introduction

Diabetes remission occurs in >60% of the T2DM patients undergoing gastric bypass surgery. Possibly, beta cell activity (BCA) and/or mass (BCM) plays a role in the remission. BCM can be measured in vivo using the radiolabeled glucagon-like peptide-1 analogue, exendin, which specifically accumulates in the beta cells.

Objectives

Compare BCA and BCM in patients with complete (responders) and incomplete (non-responders) T2DM remission after RYGB.

Methods

BCM and BCA was compared between responders and non-responders. The BCM is measured as the pancreatic uptake of ⁶⁸Ga-exendin determined from a ⁶⁸Ga-exendin positron emission tomography (PET) scan. The BCA is measured by an arginine stimulation and oral glucose tolerance test.

Results

In total, 12 responders and 12 non-responders will be included, at this moment in both groups five patients were included. Preoperative patient characteristics and postoperative weight loss were comparable between the groups. The BCM was 37% lower in the non-responders (131±78 kBq) as compared to the responders (206 ± 90 kBq), although not statistically significant (p = 0.25). The BCA was significantly lower in the non-responders compared to the responders, with an arginine stimulated acute c-peptide response of 0.4±0.2 and 0.9±0.3 nmol/l, respectively (p = 0.02).

Conclusion

These preliminary results suggest that BCM is lower in patients with incomplete T2DM remission compared to those with complete remission. Furthermore, BCA is lower in patients with incomplete remission. This may suggest a role for the BCA and BCM in T2DM remission after RYGB surgery.

□
P.751

ROUX-EN-Y GASTRIC BYPASS VS BEST MEDICAL TREATMENT FOR NOT SO OBESE TYPE TWO DIABETICS. A RANDOMIZED CONTROL TRIA

Type 2 diabetes and metabolic surgery

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Introduction

Metabolic Surgery for obese type 2 Diabetics is well established. IDF and ADA, etc, all recommend surgery as a treatment option for obese type 2 diabetics. For the less obese, data is less robust

Objectives

This is the second preliminary report of RCT (02041234). We aim to show that RYGB is superior to best medical treatment in Asian type 2 Diabetics (DM2) of BMI 27-32.

Methods

We aim to recruit 40 Singapore residents age 21-65 with DM2 and HBA1C of 8% or more, with a BMI of 27-32; and with one or more co-morbidities. Radomisation is by blind envelope in blocks of 4. To date we have randomized 12 subjects in the medical arm and 11 in the surgical arm. Two dropped out. In addition to the usual data, we include continuous glucose monitoring study (CGMS), before and 3 months post intervention, and recently also on all who reaching 1 year.

Results

The longest follow up is now three years. The RYGB group recorded significantly bigger drop in Weight and HBA1c. These changes are sustained over 2 ½ years.

CGMS for the RYGB group showed dramatic improved glycemic profile and decrease variability, and improved percentage duration within target BG range of 4-10 mM. For the medical group: CGMS also showed similar trends, though not as dramatic a change as in the RYGB Group.

Conclusion

Preliminary result showed that RYGB is better than Medical treatment for DM in this BMI group. These changes in treatment endpoints are sustained.

□ **P.752**

IMPACT OF SLEEVE GASTRECTOMY WITH DUODENAL-JEJUNAL BYPASS FOR THE TREATMENT OF T2DM WITH LOW MABCD SCORE PATIENTS IN JAPAN.

Type 2 diabetes and metabolic surgery

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Introduction

Morbid obese patients with type2 diabetes mellitus (T2DM) are increasing rapidly in Japan as well. The main procedures of bariatric surgery in Japan are sleeve gastrectomy (LSG) and LSG with duodenal-jejunal bypass (LSG/DJB) because of the high incidence of gastric cancer and difficulty of exploration of remnant stomach after RYGB. However, LSG/DJB has not been approved by the national insurance system yet in Japan.

Objectives

The aim of this study is to compare the anti-diabetic effect of LSG and LSG/DJB in Japanese obese patients.

Methods

This is a retrospective multicenter study including 298 patients; 177 cases of LSG and 121 of LSG/DJB. We investigated the anti-diabetic effect of these two procedures at one year after surgery. Univariate and multivariate analysis were done to evaluate the predictive factors of T2DM remission.

Results

The diabetes remission rate at one year after surgery was 80.8% in LSG and 85.1% in LSG/DJB. The predictive factors of T2DM remission in overall patients were age, baseline BMI, duration of diabetes, HbA1C, C-peptide level and insulin usage. According to the ROC curve, threshold of mABCD score in terms of DM remission was 6 or more (AUC=0.79). In cases of mABCD \geq 6 patients, only duration and insulin usage were significant factors both in uni- and multivariate analysis. However, in mABCD \leq 5 cases, procedure was the most significant predictor of DM remission (OR: 4.58, 95%CI: 1.89-11.08).

Conclusion

Although both LSG and LSG/DJB have good anti-diabetic effect in Japanese obese patients, LSG/DJB is more effective for cases with low mABCD patients.

P.753

A COMPARISON BETWEEN DIA REM AND ABCD SCORING SYSTEM IN PREDICTING T2DM REMISSION AFTER SLEEVE GASTRECTOMY

Type 2 diabetes and metabolic surgery

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Introduction

Laparoscopic sleeve gastrectomy (LSG) is becoming a novel treatment for type 2 diabetes mellitus (T2DM). DiaRem and ABCD scoring systems have been developed from gastric bypass surgery for the selection of T2DM patients who are eligible for metabolic surgery.

Objectives

This study compares these 2 scoring systems with regards of remission of T2DM after LSG

Methods

Outcomes of 100 (51 women and 49 male) patients who underwent LSG for the treatment of T2DM with one year follow-up were assessed. The DiaRem score is composed of age, HbA1c, medication and insulin usage. The ABCD score is composed of the age, BMI, C-peptide levels and duration of T2DM (years). The remission of T2DM after gastric bypass surgery was evaluated using both scoring system.

Results

At one year after surgery, the weight loss was 26.5% and the mean BMI decreased from 38.7 to 28.8 Kg/m². The mean HbA1c decreased from 8.2 to 6.1%. 53(53.0%) patients had complete remission (HbA1c < 6.0%), 23(23.0%) patients had partial remission (HbA1c < 6.5%) and 11(11.0%) patients improved (HbA1c < 7%). Both groups can predict the success of metabolic surgery but ABCD score has a better differentiating prediction than DiaRem score at all categories (Table 1&2).

Table 1:

DiaRem Score

SCORE	N	Remission N	Complete Remission Rate
0-2	10	8	80%
3-7	50	32	64%
8-12	29	8	27.6%
13-17	5	3	60%
18-22	6	2	33.3%
Total	100	53	53%

Table 2:

ABCD Score

SCORE	N	Remission N	Complete Remission Rate
10-9	16	15	93.8%
8-7	36	23	63.9%
6-5	28	13	46.4%
4-3	15	3	20%
2-0	5	0	0%
Total	100	53	53%



Conclusion

Both DiaRem and ABCD score grading system can predict the success of T2DM remission after LSG but ABCD score has a better differentiating power.

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P.754

EFFECTS OF LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS ON CHINESE TYPE 2 DIABETES MELLITUS PATIENTS WITH DIFFERENT LEVELS OF OBESITY: OUTCOMES AFTER 3 YEARS' FOLLOW-UP

Type 2 diabetes and metabolic surgery

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Introduction

Laparoscopic Roux-en-Y gastric bypass (LRYGB) has been proven to be effective on treating type 2 diabetes mellitus (T2DM) in severely obese patients, but whether LRYGB surgery should be performed in obese class I patients is controversial.

Objectives

To compare the effectiveness of LRYGB in obese class I patients with that in obese class II/III patients in a Chinese T2DM population.

Methods

A retrospective study of 3-year bariatric and metabolic outcomes in different obese class T2DM patients who underwent LRYGB.

Results

At 1 year and 3 years after surgery, the remission rates of T2DM were statistically comparable between the two groups; however, the mean values of plasma glucose at 2 hours of oral glucose tolerance test (OGTT) at 12, 24, and 36 months; fasting C-peptide (FCP) at 24 and 36 months; glycated hemoglobin at 36 months; and homeostatic model assessment of insulin resistance at 36 months, were significantly higher in obese class I patients. Logistic regression analysis showed that higher waist circumference, lower fasting plasma glucose, and higher FCP at 2 hours of OGTT were independently associated with diabetes remission at 1 year after surgery. At the end of 1 year, both groups showed satisfactory and comparable remission rates of hypertension, dyslipidemia, and hyperuricemia; however, at 3 years the obese class I patients had high recurrence rates of hypertension and hyperuricemia.

Conclusion

LRYGB surgery is feasible, safe, and effective in Chinese obese class I patients with T2DM. Studies with larger samples, longer follow-up in this specified population are needed to confirm the findings of this study.

□
P.755

GASTRIC BYPASS IS MORE EFFECTIVE THAN SLEEVE GASTRECTOMY AT REDUCING CHRONIC INFLAMMATION AT ONE YEAR FOLLOW UP

Type 2 diabetes and metabolic surgery

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Introduction

Morbid obesity is associated with a chronic inflammatory state. Chronic inflammatory markers such as highly sensitive CRP (CRP) are associated with elevated risk of cardiovascular disease. Chronic inflammation is a potential link to metabolic syndrome in morbid obesity.

Objectives

To prospectively compare the effect of Gastric Bypass (GB) and Sleeve Gastrectomy (SG) on CRP levels.

Methods

A total of 149 bariatric surgical patients (pts) were followed prospectively for a year, with 79 GB pts and 70 SG pts. Weights, BMI, and CRP levels were measured pre-op, and at 6 and 12 months. Student t-test, and Chi square were used for statistics. $P < 0.05$ was considered significant.

Results

The average age of GB pts was 42.3 vs 46.9 for SG pts. The initial BMI for the GB (47.6) and SG (49.5) were similar. At one yr, GB pts showed greater weight loss (33% vs 27%, $p < 0.001$). Pre-op CRP levels were similar between GB and SG (8.04 vs 9.46). Elevated CRP level pre-op was seen in 70% of pts. At one yr, CRP levels decreased significantly in both GB and SG groups. CRP levels were lower in the GB group vs SG at one yr (1.59 vs 3.54). In the GB group, 90% of pts experienced remission to normal levels compared to 67% in the SG group.

Conclusion

CRP elevation was seen in 70% of pts pre-op. At one yr follow up, CRP levels decreased significantly after both GB and SG procedures. Higher remission of CRP elevation was seen in GB patients compared to SG patients.

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P.756

OBESITY AND METABOLIC SYNDROME RETROSPECTIVE COHORT STUDIES OF LAPAROSCOPIC ADJUSTABLE BANDING VS MEDICAL TREATMENT –TEN YEARS AFTER SURGERY .

Type 2 diabetes and metabolic surgery

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Background

Most of the studies have shown the effectiveness of bariatric surgery on diabetes for less than three years after surgery, while few studies shows its long term benefit.

Introduction

we present three observational long term studies, comparing metabolic effect of gastric banding with non surgical diabetic patients.

Objectives

We analyzed three groups of diabetic patients. All groups are morbidly obese patients with type-2 DM after laparoscopic gastric banding differed by follow up length.

Methods

The first group includes 79 patients followed for 3 ± 2 years after surgery , second group 70 patients followed for 5.13 ± 0.85 years after surgery and the third group 97 were followed for 6.78 ± 0.97 years after surgery . The last group was compared with a control group (101 patients) who had diabetes without surgery for ten years.

Results

Mean BMI reached 33.0 ± 5.7 in the first group and 31.16 ± 4.8 in both the second and third group. HB A1C declined to $6.2\pm 1.4\%$, 6.6 ± 1.1 and 6.5 ± 1.2 in all groups respectively. There was 44% and 78% reduction in oral antidiabetic and insulin treatment respectively. While the diabetes has been aggravated during ten years of follow up in the non surgical group , more than 40% had still total remission following 7-10 years after surgery.

Conclusion

Gastric banding is an effective treatment for Type 2 diabetes mellitus enabling very efficient long term remission. The remission is proportionate to BMI decline showing that obesity and metabolic syndrome are different phases of the same process

□
P.757

OBESITY IS ASSOCIATED TO SYSTEMIC INFLAMMATION IN SEVERE OBESE PATIENTS AND IT DOES IMPROVE AFTER BARIATRIC SURGERY.

Type 2 diabetes and metabolic surgery

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Introduction

Obesity is a major public health problem all over the world. There is a strong correlation between obesity and mild chronic inflammation. Sometimes, the individual is not morbid obese patient but is a very "inflamed" person.

Objectives

Our objective is to evaluate whether the systemic and adipose markers of inflammation alters after bariatric surgery through biochemical indexes in fasting blood samples, including tumor necrosis factor α (TNF α), adiponectin, leptin, resistin, IGF 1 and also interleukines 1 β , 6, 8, 17 and 23.

Methods

We analyzed fasting blood systemic and adipose markers of inflammation of fifty five patients (5 men and 50 women) undergoing of bariatric surgery and a control group (no surgery) of 14 patients (3 men and 11 women) that were on the "waiting list". Patients were assessed before and 180 days after bariatric surgery and spearman test was used for statistical analysis. Control group had 2 blood samples with the interval of 6 months and no surgery was performed. We excluded patients with BMI > 65 kg/m². Patients age ranged from 18 to 63, BMI ranged from 35.7 to 63 kg/m².

Results

Adiponectin, leptin, TNF α and IL 23 had a $p > 0,05$ in both groups. Besides, IL 1 β , IL 6, IL 8, IL 17 and IGF 1 showed a $p < 0,05$ in the surgery group. These mediators showed no difference in the control group.

Conclusion

Systemic markers of inflammation - IL 1 β , IL 6, IL 8, IL 17 and IGF 1 improves after bariatric surgery.

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P.758

NEW ROLE OF THE INTESTINE IN THE GLUCOSE METABOLISM. BYPASS VERSUS METFORMIN.

Type 2 diabetes and metabolic surgery

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Background

For a long time, the principal effect of the metformin was focussed in the liver and in the peripheral tissue.

Introduction

Now there is a new paradigm that explains an important effect of metformin in the intestine. Casually, these roles described in the drug are the same as those attributed to bypass surgery.

Objectives

To evaluate the effects of the bypass surgery in the intestinal glucose metabolism compared to the effect of the metformin.

Methods

We performed a bypass surgery in 2 different cohorts of rats: Wistar and GK. At the same time we treated a similar group of rats with metformin (acute and chronic). Plasmatic samples, functional imaging with PET-scan technology and analysis of intestinal tissue were done.

Results

The rats with bypass and acute metformin showed a decrease in postprandial glycemic levels ($p < 0,005$) in the OGTT. Though, in the intraperitoneal glucose test, the results were more significative for the rats with bypass ($p = 0,002$). The PET-CT showed similar glucose uptake curves from the rats with bypass and metformin, but the activity with the 2-FDG seems more intense in the bypassed rats. The main difference in the tissue analysis was the disposition of the glucotransporters GLUT1, increased in the bypassed rats.

Conclusion

The intestine takes on a new role in the theories of the glycemia control. This new focus is important for the medical and surgical treatment of T2D. The surgical effects seem more stable because they mean changes in the intestine structure, sustained over time.

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P.759

EFFECTIVENESS OF SADI-S COMPARED TO GASTRIC BYPASS IN OBESITY CONTROL AND DIABETES MELLITUS 2

Type 2 diabetes and metabolic surgery

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Background

Gastric bypass, duodenal Switch and SADI-S, have demonstrated impact in the control and management of obesity and associated type 2 diabetes mellitus.

Introduction

Bariatric surgery is the most effective weight management and metabolic disease; Currently the gastric bypass and SADI-S are the most important.

Objectives

Compare the effectiveness of SADI-S in weight control and diabetes 2 compared with Gastric Bypasses.

Methods

In the study of 23 SADI-S patients, 11 were women and 12 men; 23 had DM 2. 50 patients of Gastric Bypass 38 were women and 12 men, all with DM 2. Carried out the years 2012 to 2016 with quarterly follow-up for 24 months; Mean initial BMI in SADI / S of 41.78 kg / m² and Bypass of 41.98.

Results

Mean surgical time in bypass was 90 min and 105 for SADI-S, mean weight loss the first year for bypass was 39.85%, in SADI-S 41.22%, in 96% (48) of patients An optimal control of glucose levels was achieved with bypass; In SADI-S it was 100%, with a HgA1 <6 after the first 6 months; Between 35 and 42% of Bypass patients had dumped at least 5 occasions in the first year and only 4.8% of SADI-S patients presented it.

Conclusion

Both are effective for weight control and diabetes mellitus 2; however, SADIS-S offers better results in glycemic control and low percentage of dumping.



P.760

DIABETIC CONTROL AFTER BARIATRIC SURGERY, A PROSPECTIVE ONE YR COMPARISON BETWEEN GASTRIC BYPASS AND SLEEVE GASTRECTOMY

Type 2 diabetes and metabolic surgery

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Introduction

Diabetes is common in the morbid obese population, and is associated with poor long term outcomes. The ideal bariatric procedure for diabetic remission has not been established.

Objectives

To prospectively compare glycemic control one year post surgery between gastric bypass (GB) and sleeve gastrectomy (SG).

Methods

A total of 65 pts with type II diabetes and morbid obesity were followed prospectively for one yr post GB (30pts) and SG (35 pts). In addition to weight outcomes, A1c levels and medication requirements were recorded. A p value less than 0.05 was considered significant.

Results

BMI levels for GB and SG pre-op were 45 and 50 respectively. Pre-op A1c levels for GB (7.9) were similar to SG (7.5). Insulin dependent pts comprised 60% of GB pts and 40% SG pts. At one yr, greater weight loss was seen in GB pts (30% total weight loss) compared to 23% for SG pts. A1c levels at one yr post op were similar between GB (6.5) and SG (6.2) groups. Total remission of diabetes was similar in both groups (62%). For insulin dependent pts, there was similar remission, with no difference in number of insulin units required daily.

Conclusion

At one yr follow up, there is no difference in glycemic control between gastric bypass and sleeve gastrectomy.

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P.761

A META-ANALYSIS ASSESSING THE IMPACT OF BARIATRIC SURGERY ON DIABETES REMISSION AND METABOLIC PROFILE OF MORBID OBESE PATIENTS.

Type 2 diabetes and metabolic surgery

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Introduction

Obesity is associated with insulin resistance (IR), glucose intolerance and alterations in various metabolic factors. Bariatric surgery contributes to improved glycemic control as a result of weight loss, calorie restriction, along with increased insulin sensitivity and secretion.

Objectives

We aim to review the available literature on obese patients treated with different bariatric procedures, in order to assess their effect on metabolic profile and diabetes remission.

Methods

A systematic literature search was performed in PubMed, Cochrane library and Scopus databases, in accordance with the PRISMA guidelines. Random-effects or Fixed-effects statistical model was used appropriately. Between-study heterogeneity was assessed through Cochran Q statistic and by estimating I^2 . A p value of less than 0.05 was set as the threshold indicating a statistically significant result.

Results

Fifteen studies (323 patients) met the inclusion criteria. This study points to significant amelioration of postoperative levels of glucose ($p < 0.00001$), insulin ($p < 0.00001$), triglycerides ($p < 0.00001$), total cholesterol ($p < 0.00001$), LDL ($p < 0.0001$), HDL ($p < 0.00001$], HOMA-IR ($p < 0.00001$) and food intake ($p < 0.00001$). The rate of diabetes remission was low. Branched chain amino acids (BCAAs) decreased, while trimethylamine-n-oxide (TMAO), glucagon-like peptide 1, 2 (GLP-1, GLP-2) and peptide YY (PYY) increased postoperatively. Metabolic variables were similar between sleeve gastrectomy (SG) and roux-en-y gastric bypass (RYGB), except from insulin which was increased in patients treated with SG ($p = 0.002$).

Conclusion

Bariatric surgery has a direct impact on metabolic profile and diabetes remission. However, more well-designed, randomized trials are necessary to further assess the host metabolic-microbial cross-talk after bariatric procedures.



P.762

LONG TERM RESOLUTION OF DIABETES MELLITUS FOLLOWING SLEEVE GASTRECTOMY

Type 2 diabetes and metabolic surgery

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Background

Bariatric procedures can provide relief from diabetes mellitus type 2. Sleeve gastrectomy has relatively recently joined family of metabolic operations.

Introduction

Many studies have proved the efficiency of sleeve gastrectomy in the treatment of diabetes mellitus that surpasses medical treatment. Still, long term results are lacking in the literature.

Objectives

To ascertain the efficacy of sleeve gastrectomy on diabetes mellitus at 1 year and 5 years follow up. The criteria used was dependence on medication for glucemic control at those endpoints.

Methods

212 patients underwent LSG in the years 2009-2012 by a single surgeon. 49 were diabetics. At 1 year and 5 years follow up, we examined whether they stopped or deescalated their medication.

Results

Short term results were excellent. 35 (71%) patients stopped their treatment and 14 (29%) had their medication reduced. At 5 years 26 (53%) retained glucemic control without medication, 20 (40%) received less medication than preoperatively and 3 (7%) had returned to their preoperative status.

Conclusion

While larger series are necessary, it seems that LSG can achieve a long term control of diabetes mellitus without medical treatment or with less medication than preoperatively in the majority of patients. Whether that will affect the complications of diabetes mellitus (angiopathy, neuropathy, nephropathy etc) remains to be studied.

□
P.763

GLUCOSE AND INSULIN HOMEOSTASIS 5 YEARS AFTER BARIATRIC SURGERY

Type 2 diabetes and metabolic surgery

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Introduction

Literature suggests that whole glucose excursion, rather than plasma glucose concentration at a point, provides more information about glucose tolerance. The glucose area under the curve (AUC) is an index of whole glucose excursion after glucose load.

Objectives

We sought to investigate changes in insulin and glucose homeostasis, including the glucose AUC, 5 years after bariatric surgery.

Methods

A non-randomised prospective study of 18 participants with T2DM undergoing bariatric surgery [12 females, mean age 50.4 ±6.4 years, mean body mass index 55.3 ±14.1kg/m², median duration of diabetes 29 months]. Serial measurements of glucose, insulin and C-peptide were performed during the 75-g oral glucose tolerance test pre-operatively and 5 years post-operatively. The glucose AUC were examined at 30, 60 and 120 minutes.

Results

Significant reduction (baseline vs 5years) in 2-hr plasma glucose (2hr-PG) [13.4 (10.1-16.4) vs 8.4 (6.0-12.1) mmol/L, p=0.007]; HbA1c [7.5 ±1.7 vs 6.4 ±1.4%, p=0.001]; fasting C-peptide [1.3 ±0.5 vs 0.7 ±0.5 nmol/L, p=0.004]; 2-hr C-peptide [3.2 ±1.6 vs 1.9 ±1.4 nmol/L, p=0.033]; and improvement in HOMA%S [log transformed (1.5 ±0.2 vs 1.8 ±0.4, p=0.02)] were observed. Fasting plasma glucose (FPG) showed non-significant reduction at 5 years [7.6 (5.8-9.4) vs 6.5 (5.6-9.1) mmol/L, p=0.136]. There were no changes in the median glucose AUC0-30 4.5 (3.9-6.1) vs 4.5 (3.4-6.5), AUC0-60 10.9 (9.4-15.0) vs 10.4 (8.5-15.2) and AUC0-120 18.4 (14.2-22.9) vs 18.7 (11.7-21.5), baseline vs 5 years, respectively.

Conclusion

The traditional glycaemic markers (2hr-PG and HbA1c) suggest improvement in glucose homeostasis 5 years after bariatric surgery. However, the glucose AUC measures suggest otherwise.

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P.764

COMPARATIVE ANALYSIS OF SINGLE ANASTOMOSIS DUODENAL SWITCH TO SLEEVE GASTRECTOMY AND RYGBP: AN ASSESSMENT OF 18 MONTHS POSTOPERATIVE DATA ILLUSTRATING DIABETES IMPROVEMENT AND RESOLUTION

Type 2 diabetes and metabolic surgery

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Background

A modification of the duodenal switch utilizing a single anastomosis with a 300cm common channel has been gaining popularity since first described by Dr. Torres in 2007. However, there are few studies illustrating results of these procedures and how they compare to established bariatric procedures in regards to improvement and resolution of diabetes.

Methods

Internal practice data was obtained for 150 SADS patients who underwent a primary procedure between 6/2014 and 7/2015. These results were compared with our internal data of SG and RYGBP. Outcomes evaluated at 18 months included EWL and TWL, percentage of patients off diabetic medications, and Hgb A1C, glucose, and insulin levels. These procedures were also compared in their overall nutritional profile.

Results

The EWL and TWL in SADS patients at 18 months is 86.5% and 39.8% respectively. SADS also demonstrated a 96.3% resolution of diabetes. All these results were greater than either SG or RYGBP. There have been no appreciable nutritional deficiencies in SADS compared to RYGBP.

Conclusion

Malabsorptive procedures have been increasing on a national level. Compared with our other bariatric procedures, SADS is associated with increased weight loss and greater rate of diabetes resolution with minimal nutritional deficiencies. Further studies will help to define the role of this promising new procedure.

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P.765

RESOLUTION OF DIABETIC NEPHROPATHY FOLLOWING LAPAROSCOPIC ILEAL INTERPOSITION WITH BMI-ADJUSTED SLEEVE GASTRECTOMY IN TYPE-2 DIABETES – MULTI- CENTER STUDY

Type 2 diabetes and metabolic surgery

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Introduction

Diabetic nephropathy is the leading cause of chronic kidney disease, and associated with increased cardiovascular mortality. 30-40% of diabetics develop nephropathy.

Objectives

This study aimed to evaluate the regression of nephropathy in poorly controlled type-2 diabetics (T2DM), by laparoscopic ileal interposition with BMI-adjusted sleeve gastrectomy (IISG), through better glycemic control, even in non-obese patients.

Methods

This was a retrospective, 2-center study in 64 patients (34 men; 30 women). Mean age was 46.3 years (22--66), mean BMI 33.1 kg/m² (22.8-51.1), mean duration of T2DM 11.54 years (1-32) and mean HbA1c was 9.77 % (6.8—15.8). Insulin was used by 53 % of the patients. Microalbuminuria (30-299µg/min) was diagnosed in 95.3 % of these patients and macroalbuminuria (>300 µg/min) in 4.7%. The mean creatinine clearance was 62 mL/min (33-128). 48 % of the patients had creatinine clearance ≤60 mL/min and 66% had arterial hypertension.

Results

Mean follow-up was 18 months (3—72M), mean postoperative BMI was 25.34 kg/m²(20.1 – 34.8) and mean HbA1c was 6.7 % (4.4—9.6). 57.8 % patients achieved remission of T2DM. Microalbuminuria normalized in 87% and macro-albuminuria in all 3 patients; 1 patient worsened from micro to macro-albuminuria. Mean creatinine clearance was 98mL/min (48 - 120). Arterial hypertension was controlled in 90% of patients.

Conclusion

Laparoscopic IISG seems to be a promising procedure to control diabetic nephropathy, possibly through better control of micro-albuminuria and T2DM, with reduction of gluco-toxicity, and increased GLP-1 levels leading to a protective effect on the glomeruli, with improved glomerular endothelial function.

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P.766

GASTRIC BYPASS RESULTS IN LONG TERM RESOLUTION OF DIABETES IN TERMS OF HBA1C LEVELS AND REDUCED DEPENDENCE ON PHARMACOTHERAPY

Type 2 diabetes and metabolic surgery

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Introduction

Roux-en-Y gastric bypass (RYGB) is known to improve diabetic control in patients with diabetes in terms of complete remission or reduced reliance on insulin and other anti diabetic agents at long term follow up.

Objectives

The aim of this study is to assess the impact of RYGB on resolution of T2DM (as defined by HbA1c levels of <48mmol/L) and reduced anti diabetic medications in patients who develop relapse on long term follow up .

Methods

Patients undergoing RYGB over a 3 year period were analysed and those with confirmed T2DM were included along with their treatment status (No treatment/diet control, Oral hypoglycaemics, GLP-1 analogue and/or insulin requirement). Resolution was determined by stopping treatment and/or fall of HbA1c below 48mmol/l. A relapse was defined as rise of HbA1c above 48mmol/l on follow up and/or requirement for recommencement of medication. Statistical analysis was performed using SPSS 24.0.

Results

79 patients with confirmed T2DM were identified with a median follow up of 22 months. Mean pre-operative HbA1c was 61.4 mmol/l (SEM±2.05) which reduced significantly to 44.1mmol/l (SEM±1.21) (Paired t-test, p<0.0001). 56% patients attained complete resolution as per our criteria, 35% showed improvement but required medication, 5% relapsed and 4% showed no change. Insulin requirement fell from 28% pre-operatively to 9% at last follow up; none of 13% patients required GLP-1 analogues and use of oral hypoglycaemic agents fell from 47% to 32%.

Conclusion

RYGB results in remission of diabetes as reflected by HbA1C levels and reduced use of medications after surgery in diabetic patients.

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P.767

NON-ALCOHOLIC STEATOHEPATITIS (NASH) INCIDENCE IN OBESE MORBIDLY NON ALCOHOLIC FATTY PATIENTS AT A SPANISH TERTIARY CARE HOSPITAL

Type 2 diabetes and metabolic surgery

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Introduction

Patients undergoing bariatric surgery have a high incidence of non-alcoholic steatohepatitis (NASH). NASH is the progressive variant of non-alcoholic fatty liver disease (NAFLD) and can advance to fibrosis, cirrhosis, and liver cancer.

Objectives

The aim of this study is to assess the prevalence of NASH and liver fibrosis in morbidly obese patients.

Methods

Preoperative clinical and laboratory data were obtained from morbidly obese patients with body mass index (BMI) above 40 kg/m² or co-morbidly obese patients with 35 Kg/ m² BMI attending our hospital between the years 2006-2014. A Biliopancreatic diversion was performed in all the patients. Patients with serum hepatitis B surface antigen or anti-hepatitis C virus antibodies, autoimmune disease, or high alcohol intake were excluded. NASH and fibrosis were evaluated by liver biopsy. Scoring was done according to Kleiner scale.

Results

Results: One hundred consecutive patients were included (66% female, 34% male, mean age 43.3±11.4 years, mean body mass index 48.29±7.02Kg/m²). The following risk factors were present: Low levels of high-density lipoprotein cholesterol (HDL) in 83 patients (83%); hypertriglyceridemia in 47(47%); and arterial hypertension was found in 65 (65%). Steatosis was present in 94 patients (94%), ballooning degeneration in 86%. Definite steatohepatitis (SH) was diagnosed in 37 patients (37%) and "not SH" in 31(31%). Six percent had significant fibrosis (F2) and 8% had advanced or severe fibrosis (F3 or F4). Mean AST level was 29,03±19,17 UI/L,ALT: 38,25±23,87UI/L,GGT: 79,78±77,90UI/L.

Conclusion

NASH is a common and important co-morbidity of obesity and requires systemized grading to develop accurate knowledge of its incidence and severity.

□
P.768

IS THE MINI GASTRIC BYPASS THE BEST SURGERY FOR PATIENTS WITH TYPE 2 DIABETES MELLITUS?

Type 2 diabetes and metabolic surgery

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Introduction

Glycemic control is an important treatment goal in bariatric patients with type 2 diabetes mellitus (T2DM). The mini gastric bypass (MGB) has potential metabolic benefits over the gold standard, the Roux-en-Y Gastric Bypass (RYGB).

Objectives

To examine whether RYGB or MGB grants better glycemic control at six and twelve months post surgery.

Methods

All patients with T2DM who had RYGB or MGB between 2009 and 2016 were analysed retrospectively and matched in a 3:1 ratio on gender, age and BMI. The HbA1c was measured baseline, six and twelve months post-surgery. Antidiabetic use was scored with the *T2DM medication and regulation score*. Data is depicted as mean±standard deviation.

Results

Forty-five of 165 patients (M/F: 65/100, BMI 42,9±5,8 kg/m², age 53,0±7,2 years) had a MGB. Baseline BMI, age, HbA1c and duration of diabetes did not differ between groups. Total weight loss (TWL) at six months after RYGB and MGB was 24,0±7,5% versus 26,3±5,7% (p>0,05). After RYGB, HbA1c dropped from 7,6±1,4% to 6,1±0,7%(six months) and from 7,6±1,6% to 5,8±0,8% after MGB(p = 0,028), with no difference in antidiabetic use. After 12 months, TWL was 29,2±8,9%(RYGB) and 30,2±7,1%(MGB)(p>0,05); HbA1c was 6,0±0,8% and 5,7±0,8% respectively(p=0,030).

Conclusion

Glycemic control in a matched retrospective cohort, treated conform 'best clinical practice', is significantly better after MGB than after RYGB within twelve months of surgery. This is important data, as it provides insight in the optimal treatment for patients with T2DM and should be weighed against the possible disadvantages of the MGB. More insight in the remission of T2DM after longer follow-up is necessary.

□
P.769

THE IMPACT OF PREOPERATIVE BMI (OBESITY GRADE I, II AND III) ON THE 12-MONTH EVOLUTION OF PATIENTS UNDERGOING LAPAROSCOPIC GASTRIC BYPASS.

Type 2 diabetes and metabolic surgery

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Introduction

Whether or not the initial BMI influences weight loss and improvement of comorbidities continues to be a matter of debate. There is a lack of studies including obesity class I.

Objectives

Analyze if preoperative BMI has an impact during the first year on patients undergoing gastric bypass.

Methods

Patients submitted to LGBP between January 2013 and October 2015. They were classified based on BMI (Obesity Grade I, II and III) and comparative analyses were performed preoperatively and at 12 months. A metabolic, lipid, clinical and weight loss analysis was performed. The DM2 remission rates were obtained.

Results

Two-hundred and twenty patients were included (23 in group 1, 113 in group 2 and 84 in group 3). As expected, initial weight, BMI and the number of patients with T2DM were different in Group 1. The rest of the initial demographics, comorbidities, clinical, metabolic and non-metabolic parameters were homogenous. All patients showed significant improvement in the metabolic profile at one year, without differences excepting serum insulin. Complete T2DM remission was 57.9% for group 1, 61.1% and 60% for group 2 and 3. There was a significant weight loss over time (BMI and %EWL) with differences between groups; using %TWL, such loss was not significant. The lipid and clinic profile improved without differences, except for total cholesterol and LDL.

Conclusion

The majority of obesity-related comorbidities and metabolic profiles improve homogeneously regardless of the initial BMI, or obesity grade. Weight loss (%TWL) was also similar during the first 12 months.

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P.770

IMPROVEMENT OF TYPE 2 DIABETES CONTROL POST BARIATRIC PROCEDURE AMONG ASIAN POPULATION

Type 2 diabetes and metabolic surgery

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Background

Prevalance of obesity and type 2 diabetes mellitus (DM) are on the rise. Bariatric procedures are effective treatment for type 2 DM with either improvement of glycaemic control or remission of DM.

Objectives

Objective of this study is to look at resolution / improvement of DM control 12 months after Bariatric surgery.

Methods

Retrospective data collection on resolution / remission of DM among patients with at least class II obesity (BMI > 32.5) in Asian population underwent Bariatric surgery either laparoscopic sleeve gastrectomy / Roux-en-Y gastric bypass from year 2012 - 2014 were studied. The primary outcome was level of HbA1c at 12 months. Secondary end points included HbA1c at 6 months, weight lost and risk factors predicting resolution of diabetes. All the patients were diagnosed with diabetes mellitus according to WHO guidelines. HbA1c were measured before, 6 months and 12 months after surgery.

Results

There were total of 41 patients with mean BMI of $41.7\text{kg/m}^2 \pm 7.9$ before surgery. Mean HbA1c before surgery were measured at $8.3\% \pm 1.9$. Mean HbA1c measured at 6 months were $6.7\% \pm 1.4$ ($p < 0.05$) and at 12 months were $6.3\% \pm 1.2$ ($p < 0.05$).

Conclusion

This study showed that bariatric procedure had significantly improve patient's diabetes control after surgery evidence by marked HbA1c improvement. Many patients in this study have been discontinued diabetic medication until current date.

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P.771

EXPLORING THE IMPACT OF BARIATRIC SURGERY ON METABOLIC SYNDROME

Type 2 diabetes and metabolic surgery

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Introduction

Metabolic syndrome (MetS) is common in the obese population. Despite this the effects of bariatric surgery on MetS are relatively understudied.

Objectives

To assess the efficacy of bariatric surgery in the management of obese patients with MetS.

Methods

Patients undergoing primary roux-en-Y gastric bypass (RYGB) or sleeve gastrectomy (SG) over a two year period were retrospectively analysed. Patients were identified as having MetS based on the International Diabetes Federation criteria. All patients were assumed to meet the obesity component and were therefore included if they met two of the following criteria: preoperative diagnosis of hypertension; preoperative diagnosis of diabetes; raised triglyceride level >1.7 ; raised high density lipoprotein (HDL) level <1.03 (male) or <1.29 (female). Outcomes were measured at one year post surgery.

Results

244 of 507 (48.1%) patients met the criteria for a diagnosis of MetS. MetS patients were significantly more likely to be male (41.8% vs 17.5%, $p<0.0001$) but mean BMI was not different to those patients without MetS. RYGB was performed in 83.6%. Of the 244 patients, 154 (63.1%) no longer met the criteria for MS at one year post surgery. Resolution rates were similar after RYGB and SG (63.7% vs 60.0%, $p=0.3274$). Mean HBA1C in diabetic patients fell from 62.2 to 44.4 ($p<0.0001$). Mean triglycerides levels fell from 2.64 to 1.65 ($p<0.0001$). Mean HDL levels rose from 1.00 to 1.27 ($p<0.0001$).

Conclusion

Bariatric surgery is associated with significant improvements in the components of metabolic syndrome and results in remission in the majority.

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P.772

DIAREM SCORE IS A GOOD PREDICTOR OF DIABETES REMISSION AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY FOR JAPANESE OBESE PATIENTS.

Type 2 diabetes and metabolic surgery

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Introduction

DiaRem scoring system which Still et al. have developed to predict remission of type 2 diabetes (T2DM) after gastric bypass consists of age, HbA1c, insulin use and other diabetes medications (Lancet Diabetes Endocrinol 2014;2:38), but there have been few reports of the DiaRem score after sleeve gastrectomy (SG).

Objectives

The aim of this study was to investigate whether the DiaRem score is a good predictor of T2DM remission after SG.

Methods

Between 2006 and 2016, 111 Japanese obese patients underwent SG in our institute. This study enrolled 46 patients with T2DM who were followed for more than 12 months. Complete and partial remissions of T2DM were defined as HbA1c<6.0% and <6.5% without medication at 12 months after the operation. Statistical analyses were performed using Spearman's correlation coefficient and Fisher's exact probability test.

Results

The complete and partial T2DM remissions were achieved in 39 (85%) and 43 (93%) of the patients, respectively. The averaged DiaRem score was 6.1 and significantly correlated with the remissions ($r=-0.37$, $p<0.05$, $r=-0.40$, $p<0.01$). Thirty-six of 39 patients (92%) with less than 10 of DiaRem score achieved the complete remission, but 3 of 7 (43%) with 10 or more did ($p<0.01$). Also, all patients (100%) with less than 10 achieved the partial remission, but 4 of 7 (57%) with 10 or more did ($p<0.05$).

Conclusion

The DiaRem scoring system may also be a useful predictor of T2DM remission after SG for Japanese obese patients.



P.773

REMISSION OF DIABETES MELLITUS 2 IN OBESE PATIENTS TREATED WITH GASTRIC BYPASS VS SLEEVE GASTRECTOMY FROM 2014 TO 2015

Type 2 diabetes and metabolic surgery

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Background

Bariatric surgery is definitely an effective and sustained treatment for type 2 diabetes mellitus induced by obesity. The best results are achieved in decreasing order, pancreatic biliary bypass, gastric bypass, vertical gastroplasty and finally the self-adjusting gastric band.

Introduction

In the last decade the use of bariatric surgery with intent to treat type 2 diabetes mellitus has been popularized by clinical observations of the radical improvement of hyperglycemia in patients regardless of weight loss, shown in multiple randomized trials, with level 1 of evidence. However there is controversy in the type of surgery performed, since studies have shown 1 year similar efficacy for gastric bypass and gastric sleeve without nutritional supplements in the long-term for the patients of gastric sleeve.

Objectives

Determine the time of remission of diabetes mellitus 2 in obese patients taken to gastric bypass vs gastric sleeve in a hospital of third level Bogotá Colombia from 2014 to 2015.

Methods

A retrospective observational study from 2014 to 2015, 32 patients into two groups.

Results

The group of gastric bypass patients had a longer surgical time and intraoperative bleeding than the gastric sleeve group. The percentage remission of diabetes mellitus at one year was 80% successful for gastric bypass and 92.6% for gastric sleeve.

Conclusion

This confirms the effectiveness of metabolic surgery for the management of type 2 diabetes in obese patients, showing that gastric sleeve has a glycemic control similar to gastric bypass at 1 year followup.

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P.774

THE INFLUENCE OF BARIATRIC SURGERY ON OBESITY WITH SUBCLINICAL HYPOTHYROIDISM

Type 2 diabetes and metabolic surgery

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Introduction

Subclinical hypothyroidism is a common problem in obesity people, which may be one of the disorders in metabolic syndrome. The influence of bariatric surgery to the disease is not clear.

Objectives

The purpose of this study is to evaluate the occurrence rate of SCH in obese patients and the influence of bariatric surgery on the disease.

Methods

69 cases of obese patients were underwent laparoscopic sleeve gastrectomy from July 2014 and June 2015. The patients were divided into SCH (14 cases) and NSCH group (55 cases) according to whether they were accompanied with SCH. The thyroid hormones and related metabolic parameters were compared between the two groups. The effects of bariatric surgery on SCH were evaluated.

Results

Plasma TSH level was increased in 14 cases (14/69, 20.23%). The prevalence of metabolic syndrome in SCH group was 57.14% (8/14 cases) , however that in NSCH group was 29.09%(16 /55 cases). There was significant statistical difference between the two groups ($P<0.05$). The SCH group was followed up for 12 months after surgery. The average TSH level was decreased from 6.07 ± 1.68 IU/mL to 2.88 ± 0.56 IU/mL postoperatively ($P<0.05$) .

Conclusion

The prevalence of subclinical hypothyroidism in this group of obese patients is 20.3%. There is a higher MS occurrence rate in SCH patients. Subclinical hypothyroidism could be one of the types of metabolic syndrome. Bariatric surgery can decrease TSH level significantly and be an effective treatment for subclinical hypothyroidism in obese patients.

P.775

TIME TO GLYCEMIC CONTROL -- AN OBSERVATIONAL STUDY OF 3 DIFFERENT OPERATIONS

Type 2 diabetes and metabolic surgery

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Background

Medical treatment fails to provide adequate control for many obese patients with type 2 diabetes mellitus (T2DM). A comparative observational study of bariatric procedures was performed to investigate the time at which patients achieve glycemic control within the first 30 postoperative days following sleeve gastrectomy (SG), mini-gastric bypass (MGB), and diverted sleeve gastrectomy with ileal transposition (DSIT).

Methods

Included patients had a body mass index (BMI) ≥ 30 kg/m² T2DM for ≥ 3 years, HbA1C $> 7\%$ for ≥ 3 months, and no significant weight change ($> 3\%$) within the prior 3 months. Surgical procedures performed were SG (n=49), MGB (n=93), and DSIT (n=109). The primary endpoint was the day within the first postoperative month on which mean fasting capillary glucose levels reached < 126 mg/dL. Multivariate logistic regression analysis was used to identify predictors of glycemic control.

Results

The cohort included 251 patients with a mean BMI of 36.04 ± 5.76 kg/m²; age, 52.84 ± 8.52 years; T2DM duration, 13.09 ± 7.54 years; HbA1C, $8.82 \pm 1.58\%$. On the morning of surgery, mean fasting plasma glucose was 177.63 ± 51.3 mg/dL; on day 30, 131.35 ± 28.7 mg/dL ($p < 0.05$). Mean fasting plasma glucose of < 126 mg/dL was reached in the DSIT group (124.36 ± 20.21 mg/dL) on day 29, and in the MGB group (123.61 ± 22.51 mg/dL), on day 30. The SG group did not achieve the target mean capillary glucose level within postoperative 30 days.

Conclusion

During the first postoperative month, glycemic control (< 126 mg/dL) was achieved following DSIT and MGB, but not SG. Preoperative BMI and postprandial C-peptide levels were independent predictors of early glycemic control following DSIT.

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P.776

IMPACT OF ABDOMINAL SUBCUTANEOUS FAT LOSS ON GLYCEMIC CONTROL IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

Type 2 diabetes and metabolic surgery

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Introduction

The effect on type 2 diabetes when adipose tissue is removed by abdominoplasty has never been quantified. Reduction of adipose tissue through the indirect effects of bariatric surgery is however well known.

Objectives

This study aimed to evaluate and compare the effect of the abdominoplasty and bariatric surgery on glycemic control in patients with type 2 diabetes mellitus.

Methods

Between January 2013 and February 2016, 25 patients with type 2 diabetes underwent abdominoplasty and 15 matched control patients underwent bariatric surgery. The subjects were aged 36.5 ± 1 years (mean \pm SEM), with a preoperative BMI was 41.4 ± 0.5 kg/m², and HbA1c of $7.7 \pm 0.2\%$. Anthropometric measures (weight, BMI, and waist circumference), random blood glucose (RBG), and HbA1c were evaluated at baseline and again 3, 6, and 12 months after the surgery.

Results

BMI decreased to 38.5 ± 0.6 kg/m² in the abdominoplasty group and 26.6 ± 0.4 kg/m² in patients who underwent bariatric surgery. The HbA1c reduced to $6.8 \pm 0.3\%$ and $5.5 \pm 0.2\%$ in patients who underwent abdominoplasty and bariatric surgery, respectively. The HbA1c reduction was 3.4 folds higher in patients underwent bariatric surgery. The improvements in weight, BMI, RBG and HbA1c at 3, 6, and 12 months follow-up were significantly more in patients after bariatric surgery compared to abdominoplasty ($p < 0.01$).

Conclusion

Abdominoplasty is effective in improving body image, but only moderately improve glycemic control and body weight in comparison to bariatric surgery. Moreover, our data support the idea that deep subcutaneous adipose tissue removal may reduce insulin resistance and warrants a rethink about the role of subcutaneous fat.

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P.777

DOES PHENOTYPE PLAY A ROLE IN SELECTION OF BYPASS VS SLEEVE FOR THE MANAGEMENT OF T2DM: CHALLENGING A PARADIGM

Type 2 diabetes and metabolic surgery

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Background

Sleeve gastrectomy (SG) and Roux en Y gastric bypass (RYGB) are the most commonly performed bariatric procedures in India.

Objectives

To compare LRYGB and SG for remission of T2DM at 12 months in Indian population.

To assess ABCD alongwith insulin use as predictors of remission.

Methods

186 consecutive patients of Indian ethnicity (M:F 89:97) with T2DM (HbA1c>6.5) were assessed. Age, BMI, C-peptide and duration of diabetes, baseline HbA1c, % weight loss & insulin use were tested as modifiers. We present partial remission rates (HbA1c ≤ 6.0%) and between group remission OR and AOR after controlling for key modifiers.

Results

RYGB patients (n=89) vs SG (n=97) were older (56 vs 44.2 years), had a lower BMI (44.1 vs 46.6 kg/m²), lower C-peptide (3.5 vs 4.7 ng/ml), greater duration of diabetes (8 vs 3 years) and higher HbA1c (9.0% and 7.8%) p<0.05 for all (combined R²=0.38). Weight loss at 1year- 27% and 30% for RYGB and SG respectively (p=0.01). Remission at 1 year was achieved by 37% in RYGB and 74% in SG (OR = 0.21, 95% CI 0.11-0.41, p<0.001) group. After adjusting for ABCD the AOR still favoured the SG (AOR = 0.32, 0.14-0.74, p=0.01). Duration of T2DM and insulin use emerged as the significant predictors.

Conclusion

Racial and ethnic differences represent valid biological constructs and may be significant modifiers of the effect of any intervention. The significant superiority of SG in our population may be driven by ethnic variability of the Indian population. An RCT is needed to clarify the relative benefit.

P.778

BARIATRIC SURGERY IN PATIENTS WITH HEMOCHROMATOSIS: ADVANTAGE FOR PROXIMAL GASTRIC BYPASS OVER SLEEVE GASTRECTOMY?

Type 2 diabetes and metabolic surgery

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Background

Hemochromatosis is one of the most common hereditary metabolic disorders with an incidence of 1/200 in Caucasian populations in the United States and Western Europe. Therapy consists of regular phlebotomies to deplete the elevated iron deposits.

Introduction

Bariatric operations lead to reduced iron absorption and might be beneficial in patients with hemochromatosis.

Objectives

To study the effect of bariatric surgery in obese patients with hemochromatosis due to reduced iron absorption.

Methods

Comparing two cases with hereditary hemochromatosis, which were treated with laparoscopic proximal gastric bypass and laparoscopic sleeve gastrectomy, respectively. Retrospective comparison of frequency of phlebotomies, iron parameters and weight loss.

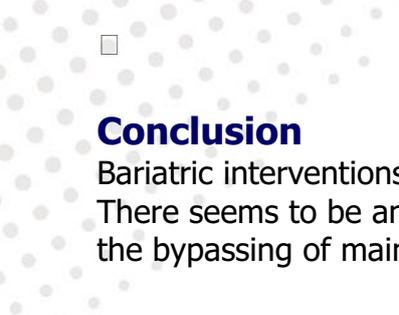
Results

Patient characteristics are shown in table 1. Phlebotomies were stopped in both cases and hemoglobin remained normal. Serum ferritin levels showed better control after gastric bypass compared to sleeve gastrectomy.

There are five reported cases of patients with hemochromatosis (homozygous HFE C282Y) who received a gastric bypass for weight-loss. In all cases phlebotomies could be stopped and ferritin values remained between 25 and 30 µg/ml after 2-5 years of follow-up.

Table 1

	patient 1	patient 2
age	48	49
gender	male	female
hemochromatosis type	HFE C282Y homozygous	HFE C282Y/H63D compound heterozygous
time from diagnosis to operation	6 years	4 years
type of operation	gastric bypass	sleeve gastrectomy
follow-up	37 months	30 months
BMI at operation	39.8 kg/m ²	37.1 kg/m ²
BMI at follow-up	29.4 kg/m ²	25.0 kg/m ²
serum ferritin at follow-up	20 µg/ml	204 µg/ml




Conclusion

Bariatric interventions are able to control the iron overload in patients with hemochromatosis. There seems to be an advantage for gastric bypass over sleeve gastrectomy, most likely due to the bypassing of main location of the iron uptake (duodenum and the proximal jejunum).

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P.779

PREVALENCE OF NON-ALCOHOLIC FATTY LIVER DISEASE IN MORBID OBESE PATIENTS UNDERGOING BARIATRIC SURGERY IN IRAN

Type 2 diabetes and metabolic surgery

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Introduction

Non-alcoholic fatty liver disease (NAFLD) is a common problem in morbidly obese patients. Its proper diagnosis and treatment, therefore, is of major importance.

Objectives

To determine NAFLD prevalence and its associated predictive factors in an Iranian morbid obese cohort.

Methods

We analyzed the data from our prospective cohort of bariatric patients who underwent liver biopsy at the time of surgery. Specimens were scored according to NAS criteria with a score ≥ 5 considered steatohepatitis (NASH). Patients underwent either sleeve gastrectomy (SG, N=34) or gastric bypass (GB, N=40) and were followed up for one year.

Results

Seventy-four patients with a mean BMI of 45.8 ± 5.6 kg/m², mean age of 40.3 years, and 54 (73%) females were included. Features of NAFLD were found in 68% of the participants, with 44 (59%) patients showing simple steatosis and 7 (9%), NASH. Only 14 (19%) patients had stage 1 fibrosis and three patients had stage 2, 3, or 4 fibrosis. The presence of NASH was found in logistic regression analysis to be associated with increasing age (B .039, 95%CI .002-.075), AST (B 0.075, 95%CI .038-.112), and ALT levels (B .067, 95%CI .038-.096).

Additionally, at one year, mean weight loss was similar between the two surgery groups (mean BMI 31 kg/m²). AST and ALT decreased significantly in SG but not in the GB patients at one year, whereas triglyceride levels dropped significantly in both groups.

Conclusion

NAFLD was found in two thirds of our bariatric cohort. High levels of ALT and AST especially in older patients should raise attention to this condition.



P.780

TACKLING THE BLAZE OF DIABETES – THE VIEW FROM THE ROYAL HOSPITAL IN MUSCAT

Type 2 diabetes and metabolic surgery

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Background

Oman stands high in the global rating for type II Diabetes with a prevalence of around 20%, according to the WHO.

Introduction

The disease carries a big burden on the health services in the country. Till recently and as in other countries the choice of surgery to ameliorate this problem has been a distant notion.

Objectives

To offer a glimpse at the influence of surgery done on Diabetes in Obese patients at the biggest centre in Oman and the challenges faced to establish this path as per International recommendations.

Methods

Retrospective analysis from a prospective data base of all patients operated for Obesity with or without Diabetes at the Royal hospital in Muscat, between January 2012 and December 2016

Results

A total of 237 patients had surgery for Obesity and/ or its complications. Of these, 84(35.4%) patients had either frank Diabetes 67(80 %) or Pre-Diabetes 17(20%). The majority, 76(90.4%) had a Sleeve Gastrectomy (SG) alone, while 8(9.5%) underwent SG with Duodeno-jejunal bypass. On follow up at two years, preoperative mean FBS dropped from 8.1mmol to 5.0 while HbA1c went from 9.5% to 5.7%. Alternatively, 84% and 70% stopped taking Oral hypoglycaemic and Insulin respectively.

Conclusion

The challenge to offer surgery to our Diabetic patients is gradually being tackled backed by the growing global evidence . These early results, which are the first from Oman, are encouraging as they serve as a homegrown proof for us to continue to expand this field of Metabolic surgery and Diabetes control in the face of a unrelenting epidemic.

P.781

DIAREM SCORE ASSOCIATION WITH REMISSION OF TYPE 2 DIABETES FOLLOWING MODIFIED DUODENAL SWITCH

Type 2 diabetes and metabolic surgery

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Introduction

Bariatric surgery is an established treatment of type 2 diabetes mellitus (T2DM). Meta-analysis suggests more positive outcomes following duodenal switch (DS) but DS modifications are largely unstudied. The DiaRem score uses a 4 variable (insulin and antidiabetic medication use, age, and HbA1c) algorithm to predict the probability of T2DM remission following Roux-en-Y gastric bypass (RYGB) based on well-defined probability ranges; lower scores correspond to greater probability of T2DM remission following RYGB.

Objectives

To evaluate diabetes remission rates after modified duodenal switch based on DiaRem scores.

Methods

Retrospective analysis of 25 patients who underwent single-anastomosis post-pyloric duodenal switch. One-year post-operative diabetes status was studied. Remission, based on DiaRem scores, was compared to those reported in the study performed by Still et al.

Results

Our study revealed complete remission in patients with DiaRem score categories 0-2, 3-7, and 8-12. In the 13-17 and 18-22 categories, remission rates were 71% and 60%, respectively. No pre-diabetic ranges (HbA1c 6.0-6.5) were represented.

Remission Rates Based on DiaRem Score

DiaRem Score	Complete Remission (HbA1c<6.0)	No Remission (HbA1C>6.5)	RYGB Probability Range (Still et al 2014)
0-2	1/1 (100%)		88%-99%
3-7	9/9 (100%)		64%-88%
8-12	3/3 (100%)		23%-48%
13-17	5/7 (71%)	2/7 (29%)	11%-33%
18-22	3/5 (60%)	2/5 (40%)	2%-16%

Conclusion

High DiaRem scores were inversely related to diabetes remission as the Still et al. study reported; however, our study revealed higher overall remission rates. Similar studies report positive diabetes outcomes following duodenal switch, but our results appear to extend these outcomes to the modified duodenal switch.

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P.782

BETA CELLS IN HYPERINSULINEMIC HYPOGLYCEMIA AFTER ROUX-EN-Y GASTRIC BYPASS (RYGB) SURGERY

Type 2 diabetes and metabolic surgery

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Introduction

A rare long-term complication after RYGB surgery is hyperinsulinemic hypoglycemia. The underlying mechanism of this effect is not completely understood. One hypothesis is that there is an increase in beta cell activity (BCA) and mass (BCM). BCM can be measured *in vivo* using radiolabeled exendin, a stable analogue of glucagon-like peptide-1, which specifically accumulates in the beta cells.

Objectives

Compare BCM in patients with post-RYGB hypoglycemia to post-RYGB patients with normal blood glucose regulation.

Methods

BCM is compared between patients with persisting post-RYGB hypoglycemia and controls. The controls will be BMI and age matched, had RYGB at least one year earlier and are without a history of hypoglycemia or diabetes. The BCM is measured as pancreatic uptake of ⁶⁸Ga-exendin determined from a positron emission tomography (PET) scan. Secondary, BCA is measured by an arginine stimulation and a mixed meal tolerance test.

Results

In total, 8 post-RYGB hypoglycemia patients and 8 controls will be included. Currently, three hypoglycemia patients (1 male, 2 female) have completed the study. Age was 37-48 years, BMI was 25-36 kg/m², total body weight loss was 27-40% and time since RYGB was 4-6 years. The mean ⁶⁸Ga-exendin uptake in the pancreas was 226±69 kBq. For a preliminary comparison, pancreatic uptake in five patients with complete T2DM remission (NCT02542059) was used: 206±90 kBq.

Conclusion

Measuring BCM *in vivo* in post-RYGB hypoglycemia is feasible. Preliminary results show no difference between patients with T2DM remission and hypoglycemia after RYGB surgery. Although, final conclusions can be drawn when the study is completed (expected July 2017).

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P.783

5 YRS OUTCOMES OF DIABETES MELLITUS RESOLUTION IN PATIENTS OF LRYGB IN AN INDIAN COHORT. CAN WE PREDICT FAILURES!

Type 2 diabetes and metabolic surgery

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Background

Laparoscopic Roux-en-Y Gastric Bypass is an established modality of treatment for T2DM with severe obesity. Long term results though emerging needs more attention in view of increasing incidence of the disease and paucity of data.: LRYGB is an established modality of treatment for T2DM with severe obesity. Long term results though emerging needs more attention in view of increasing incidence of the disease and paucity of data.

Objectives

To analyse retrospectively, remission of DM in patients who had LRYGB five years prior as well as looking at potential predictors of failures.

Methods

Data source was hospital information system (HIS) records of a high volume tertiary care centre. All patients who had RYGB for obesity & DM from January 2011 to December, 2011. Only the patients with BMI >32.5kg/m² with T2DM were included in the study. Remission was considered for patients on no medication with HBA1c levels of <7%, improved with HBA1c levels of <7% on medication and failures with HBA1c levels of >7% on medication.

Results

Resolution of T2DM at 5 years was seen in 6\$, improvement in 23% and 13% of patients were either failures or had resurgence of DM. In comparison to world literature, age was a surprise significant predictor with others being super obesity and insulin dependency.

Conclusion

LRYGB results in excel lent long term resolution of T2DM. The importance of prediction is to have patients understand the realistic goals of surgery and having maximum index of satisfaction. Delay in surgical intervention will result in poorer long term outcomes.

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P.784

BARIATRIC SURGERY – EXPANDING THE METABOLIC INDICATIONS

Type 2 diabetes and metabolic surgery

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Introduction

Although bariatric surgery was initially shown to be effective for weight loss, it is now well established that these procedures have significant metabolic effects. We present two unusual cases where bariatric surgery was used to treat recurrent pancreatitis secondary to hyperlipidaemia.

Objectives

To show the ever expanding nature of metabolic indications for bariatric surgery.

Methods

From a prospective database two cases were identified where bariatric surgery was used to treat pancreatitis secondary to hyperlipidemia.

Results

2 patients underwent bariatric surgery with the aim of treating hyperlipidaemia-induced pancreatitis:

Patient 1 was 39 at the time of surgery with a background of 30 episodes of pancreatitis secondary to hyperlipidaemia over a 15 year period. He underwent a Roux-en-Y gastric bypass that was uneventful. At one year follow up his BMI reduced from 41.2 to 21.8 and his triglyceride levels reduced from 28 mmol/l to 3.84 mmol/l .

Patient 2 was 21 at the time of surgery and had a background of 3 episodes of pancreatitis secondary to hyperlipidaemia over a 2 year period. He underwent an uneventful sleeve gastrectomy. At one year follow up his BMI reduced from 42.1 to 24.9 and his triglycerides reduced from 90 mmol/l to 4 mmol/l .

Neither patient had an episode of pancreatitis post-operatively.

Conclusion

Bariatric surgery can be used as a treatment for severe hyperlipidaemia-related complication. These cases illustrate the expanding metabolic indications for bariatric surgery.

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P.785

LAPAROSCOPIC HAND-SEWN SINGLE-ANASOTOMOSIS DUODENOJEJUNAL BYPASS WITH SLEEVE GASTRECTOMY: INITIAL RESULTS OF THE NOVEL PROCEDURE

Type 2 diabetes and metabolic surgery

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Background

Laparoscopic duodenojejunal bypass with sleeve gastrectomy (DJB-SG) was introduced by Kasama et al. as a novel type of bariatric and metabolic surgery . It provides excellent outcomes not only as a bariatric surgery, but also as diabetic surgery, with the benefit of avoiding any risk of remnant gastric cancer. Recently, a simpler procedure, "laparoscopic single anastomosis duodenal jejunal bypass with sleeve gastrectomy (SADJB-SG)" was introduced by Lee et al.

Introduction

This new procedure needs only one gastrointestinal anastomosis and no closure of any mesenteric defects. We performed this new procedure as a type of metabolic surgery in morbidly obese patients with type 2 diabetes. The surgical procedure and early outcomes of SADJB-SG are described herein.

Objectives

We performed SADJB-SG in three morbidly obese patients with type 2 diabetes (male/female ratio, 2:1; mean age \pm standard deviation, 48 ± 3.3 years; mean BMI \pm standard deviation, 44.6 ± 3.5 kg/m²).

Methods

The operating time, laparoscopy time, blood loss, peri-operative complications, and anti-diabetic effects were evaluated.

Results

In all three patients, the procedure was successfully performed without conversion to open surgery. The mean (range) operating time was 207.3 ± 10.3 (196-216) min. The mean (range) blood loss was 86.7 ± 98.7 (20-200) ml. The mean duration of hospital stay after surgery \pm standard deviation was 7 ± 2 days. There were no perioperative complications in any patients. In all of these patients, anti-diabetes drugs, including insulin, were no longer needed by two months after surgery.

Conclusion

Our initial results show that laparoscopic SADJB-SG is feasible, safe, and effective for performing both bariatric and metabolic surgery.

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PREDICTION REMISSION TYPE 2 DIABETES MELLITUS IN PATIENTS WITH MORBID OBESITY AFTER LAPAROSCOPIC GASTRIC BYPASS

Type 2 diabetes and metabolic surgery

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Introduction

Type 2 diabetes mellitus is common in obesity patients. According to the most recent WHO data, the rate of obesity in Ukraine among men is 17.6% and for women 22.1%. Type 2 diabetes mellitus has 1.3 million population of Ukraine.

Objectives

The aim was a comparative analysis of two methods - basal levels of C-peptide and DiaRem score for predicting complete remission of type 2 diabetes mellitus in patients with morbid obesity after the laparoscopic gastric bypass surgery.

Methods

The study included 46 patients with morbid obesity and type 2 diabetes mellitus, who underwent laparoscopic gastric bypass surgery by the method Fobi-Capella Roux-en-Y Gastric Bypass.

Results

According to ADA criteria 12 months after the laparoscopic gastric bypass surgery complete remission of type 2 diabetes mellitus was achieved in 52.2% of patients. There was no statistically significant difference in both methods of predicting complete remission of type 2 diabetes mellitus, $p = 0.8452$. When combining methods of analysis of basal levels of C-peptide and DiaRem score in patients with morbid obesity after the laparoscopic gastric bypass surgery, the efficiency of predicting complete remission of diabetes mellitus type 2 significantly increase, $AUC = 0,716$ (95% CI 0.564 - 0,839), $p=0.0206$.

Conclusion

Combined use of analysis of basal levels of C-peptide and DiaRem score in patients with morbid obesity after laparoscopic gastric bypass surgery is justified and preferred. It can significantly increase the efficiency of predicting complete remission of type 2 diabetes mellitus.

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MODIFIED MINIGASTRIC BYPASS FOR TREATMENT OF TYPE 2 DIABETES AND MORBID OBESITY

Type 2 diabetes and metabolic surgery

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Introduction

Laparoscopic sleeve gastrectomy and minigastric bypass are a popular methods for treatment morbid obesity, but significant amount of patients showed weight regain after operation.

Objectives

We proposed new modified method of minigastric bypass for treatment of morbid obesity and type 2 diabetes (T2D).

Methods

From January 2014 to December 2016, 29 patients underwent laparoscopic minigastric bypass. There were 17 females and 12 males. Age range was 34 - 62 years, 15 of them had T2D. Twelve patients underwent standard one anastomosis gastric bypass (I group), 17 patients were operated by new modified method (II group): first step was resection of fundus and great curvature of the stomach (like sleeve resection), second step – performing one anastomosis gastric bypass with limb length of 200-220 cm.

Results

There were no serious complications on both groups. Operative time was longer in the II group. After 18-32 months mean %EWL was 72.2 ± 12.3 in the patients of the I group and 84.5 ± 10.8 in the patients of the II group. Weight regain was detected in 3 patients of the I group and in none in the II group. Significant decrease in glucose and insulin levels was achieved in the both groups. Remission of T2D was in 5 from 7 patients in the I group, and in all 8 patients in the II group.

Conclusion

New modified method of laparoscopic minigastric bypass can be more promising for treatment of morbid obesity and T2D.

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PREDICTORS OF SHORT-TERM DIABETES REMISSION AFTER ROUX-EN-Y GASTRIC BYPASS

Type 2 diabetes and metabolic surgery

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Introduction

Surgery is the most effective treatment of morbid obesity and leads to dramatic improvements in type 2 diabetes mellitus (T2DM). Predicting the improvement in glycaemic control in those with T2DM after Roux-en Y gastric bypass (RYGB) may help in patient selection.

Objectives

Our purpose was to identify the rate of short-term remission of T2DM and determine the independent predictors of remission.

Methods

This was a retrospective clinical study. From January 2004 to June 2013, 109 consecutive patients with morbid obesity, who were enrolled into a surgically weight loss program, and who had T2DM before surgery with 1 year complete follow-up data were included. Diabetes remission 1 year after surgery was defined based on the American Diabetes Association criteria. Logistic discrimination analysis was undertaken to identify those variables with independent predictive value.

Results

At 1 year after surgery, the mean body mass index (BMI) decreased from 47.6 to 31.9 kg/m² and the total weight loss was 33%. A significant number of patients had improvement in their glycaemic control including 85 (78%) patients who had complete remission, 11 (10.1%) partial remission and 11 (10.1%) improved condition. In univariate analysis, T2DM remission was observed to be negatively correlated with dyslipidemia, diabetes duration, diabetes status (insulin use) and HbA1c and glucose levels. T2DM duration and glucose levels remained independent predictors of success after multivariate logistical regression analysis.

Conclusion

RYGB is a treatment option for patients with obesity and T2DM. Patients with short diabetes duration and better glucose control were more likely to achieve T2DM remission after RYGB.

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EFFECT OF LAPAROSCOPIC GASTRIC BYPASS ON GLYCEMIC CONTROL IN TYPE 2 DIABETES MELLITUS PATIENTS – OUTCOME FROM ONE YEAR FOLLOW UP

Type 2 diabetes and metabolic surgery

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Background

Study aims the success of RYGB in Indian Diabetics.

Introduction

Management of Diabetes in patients with obesity is one of the major healthcare challenges in India. The success of the bariatric procedure depends on the follow up data on the Glycemic control of the patients

Objectives

The aim of the study was to evaluate the long term glycemic control in diabetic patients after Gastric Bypass.

Methods

Study included patients with type 2 diabetes mellitus who have undergone Laparoscopic Gastric Bypass (RYGB) during 2014-15. Preoperative data on BMI, random blood sugar, HBA1C and associated co-morbidities were recorded. Patients' were followed at 3,6 months and 1 year for glycemic control by recording the HBA1C data. Pre and post operative HBA1C levels were compared to evaluate the effectiveness of the procedure

Results

A total of 51 patients undergone RYGB were included in the study and the age group ranged between 22 to 69 years. Mean BMI of the study group was 42.38 (range: 27.2 - 64.3). Preoperatively, 96% patients showed very high random blood sugar levels (155-400 mg/dl). The mean HBA1C level was 9.98% and ranged between 7.8-14.2% preoperatively. Three months follow up data on HBA1C levels showed a significant decrease in the mean value (8.36%; range: 6.2% -7.2%) and after 6 months and 1 year the mean level was 7.29% and 6.64% respectively. Further, in 51% patients the HBA1C levels were below 6% and 27.5% patients were in good glycemic control without dependency on medications.

Conclusion

Undergoing RYGB resulted in improvement in glycemic control in type 2 DM patients. The one year follow up indicated progressive improvement in the HBA1C levels in the study cohort.

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PREDICTORS OF LONG-TERM DIABETES REMISSION AFTER ROUX-EN-Y GASTRIC BYPASS

Type 2 diabetes and metabolic surgery

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Introduction

Surgery is the most effective treatment of morbid obesity and Roux -en Y gastric bypass (RYGB) have significant improvements in glycaemic control. However, prediction on successful long -term remission of type 2 diabetes mellitus (T2DM) after RYGB has not been clearly studied.

Objectives

Our purpose was to identify the rate of long -term remission of T2DM and the fa ctors associated with durable remission.

Methods

This was a retrospective cohort study of all severely obese type 2 diabetics who underwent RYGB for weight loss at our institution, from January 2004 to June 2013. A total of 56 patients who had complete 5 -year follow -up data were assessed. Diabetes remission 5 years after surgery was defined based on the American Diabetes Association criteria. Logistic discrimination analysis was undertaken to identify those variables with independent predictive value.

Results

At 5 years after surgery, the mean body mass index (BMI) decreased from 47.6 to 34.8 kg/m² and the total weight loss was 26.4 %. A significant number of patients had improvement in their glycaemic control, including 35 (62.5%) patients who had complete remission, 5 (8.9%) partial remission and 8 (14.3%) improved condition. In univariate analysis, T2DM remission was observed to be negatively correlated with dyslipidemia, diabetes duration, diabetes status (insulin use), HbA1c and glucose levels. Weight loss were positively associated with the remission rate. T2DM duration, diabetes status, glucose levels and weight loss remained independent predictors of success after multivariate logistical regression analysis.

Conclusion

The glycaemic response to RYGB is related to duration of T2DM, diabetes status, glucose levels and weight loss.

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EFFICACY OF SLEEVE GASTRECTOMY AS AN ANTI-DIABETIC PROCEDURE IN OBESE INDIAN PATIENTS

Type 2 diabetes and metabolic surgery

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Introduction

We propose to analyze and attempt to understand the gut physiology and its metabolic alteration in Type 2 Diabetes Mellitus (T2DM) after Laparoscopic / Robotic Sleeve Gastrectomy (SG).

Objectives

1. To evaluate the gut metabolic alterations in Indian Diabetic patients undergoing SG
2. To correlate with the improvement in the anthropometric, diabetic indices and co-morbid conditions leading to betterment of quality of life indices.

Methods

This is a prospective study being conducted in Sir Ganga Ram Hospital, New Delhi, India after IRB approval. Prospectively enrolled patients having BMI > 32.5 Kg/m² with T2DM underwent Standardized SG. Baseline levels of Glucose, Insulin, C-Peptide were measured in Fasting (F) and Postprandial (PP) states. HbA1C levels are evaluated and HOMA-IR index calculated. Baseline fasting and PP levels of GHRELIN, GLP-1 & PYY are evaluated.

Results

A total of 32 patients have been enrolled in study thus far. The preliminary results show a significant decrease in BMI and a significant ($p > 0.001$) correlation is found between fasting blood glucose-, insulin-levels with HbA1c. Furthermore, C-peptide decreases significantly within 1 month but increases as expected by 1 year. Also, as levels of Ghrelin decrease, GLP1 was observed to increase and PYY1 was also observed to decrease over a period of 6 months. Further Gut hormone data analysis is under process.

Conclusion

Our preliminary data shows that SG even though traditionally believed to be a restrictive procedure, does lead to metabolic alterations by producing changes in the gut hormones and resetting the deranged Gut- Endocrine Axis.

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JEJUNAL BYPASS (JB+) IMPROVES THE POSTOPERATIVE OUTCOMES OF GASTRIC CLIPPING (GC) IN OBESE PATIENTS WITH TYPE 2 DIABETES MELLITUS (T2DM)

Type 2 diabetes and metabolic surgery

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Background

Gastric clipping(GC) is a restrictive type bariatric surgery.

Introduction

Jejunal bypass(JB) as a malabsorptive procedure improves remission of T2DM when combined with sleeve gastrectomy.

Objectives

We evaluate the outcomes of GC with or without JB for obese patients with T2DM.

Methods

Seventy-four obese T2DM patients (Jan. 2013 to 2015) were randomly divided in two groups (n=37 GC alone, and n=41 +JB). GC was performed by creating a transverse gastric partition using a metallic clip. JB consists of a jejuno-jejunostomy between 20 and 320 cm distal to the Angle of Treitz. Clinical characteristics including reduction of BMI, remission rate of diabetes and other comorbidities were compared between pre- and post-surgery and between groups.

Results

No preoperative deviation were noted in clinical characteristics between two groups. Median BMI reduction for GC group was 6.2, 9.4 and 9.8 kg/m² at 6, 12, and 24 months, and for JB+ group was 7.8, 12.4 and 12,9 kg/m², respectively. JB+ group showed an improved BW reduction (p<0.01) and better decline of Hba1c (from 7.5% to 5.7% in average, vs 7.4% to 6.2 % in GC group, p<0.05). 90.2% of patients in JB+ group and 57.6% in GC group achieved a normal HbA1c (p < 0.001). Other metabolic factors, including TG, TC, uric acid, HDL and LDL, were significantly improved postoperatively for both groups.

Conclusion

GC alone is a safe and effective restrictive bariatric procedure, when in conjunction with JB, a malabsorptive procedure, can facilitate the therapeutic efficacy for diabetic disorders.

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METABOLIC SURGRY IN TYPE II DIABETES MELLITUS WITH BODY MASS INDEX BETWEEN (30-35 KG/M2)- TWO YEAR RESULTS

Type 2 diabetes and metabolic surgery

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Background

Metabolic Surgery is used to describe surgical procedures to treat metabolic diseases, particularly type II diabetes mellitus (T2DM), by anatomical modification of gastrointestinal tract.

Introduction

To know the effectiveness of Metabolic surgery in low BMI patients without causing excessive weight loss.

Objectives

Our aim was to study the results of laparoscopic one anastomosis gastric bypass (OAGB) in the subset of Indian ethnic patients with T2DM and BMI between 30-35Kg/m².

Methods

A retrospective analysis was done on 36 patients who underwent OAGB with BMI 30-35 Kg/m² and T2DM between October 2012 to September 2014 in our department. A standardized procedure with a biliopancreatic limb of 120cms was performed. We analyzed our data for average age, BMI, fasting blood glucose (FBS) and glycosylated hemoglobin (HBA1C). Remission of diabetes was defined as FBS <110mg/dl and HBA1C < 7 % without any medications.

Results

There were 36 patients with BMI 30-35kg/m² and T2DM who underwent OAGB. Mean age, BMI, FBS and HBA1C of the patients preoperatively was 46.3 years, 32.6 Kg/m², 186.4mg/dl and 9.2% respectively. At 6 months, one and two years, the mean BMI was 31.1, 28.3 and 26.7Kg/m², mean FBS was 156.1, 124.6 and 118.3mg/dl and mean HBA1C was 8.6, 7.4 and 6.7 % respectively. Diabetic remission at the end of 6 months, 1 year and 2 years was 53.4, 76.2 and 78.6% respectively. There was no mortality. One patient had staple line bleed and four patients presented with increased bowel movements, all were managed conservatively.

Conclusion

OAGB is safe, effective and shows early promising results in patients with T2DM and BMI 30-35kg/m².

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THE IMPACT OF BARIATRIC SURGERY ON THE RESOLUTION OF TYPE II DIABETES MELLITUS: A SINGLE-CENTRE STUDY

Type 2 diabetes and metabolic surgery

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Introduction

Bariatric surgery has been proven to be an efficacious in the resolution of Type II diabetes mellitus (T2DM) in obese patients. Current data suggest diabetes resolution in up to 80% of patients 2 years post-operatively.

Objectives

In Worcestershire our Bariatric service was established in 2012. We aimed to review the outcomes of patients with T2DM who have had bariatric surgery in our unit.

Methods

Our prospectively maintained database was reviewed, and data was analysed on patients with T2DM who underwent bariatric procedures [laparoscopic Roux-en-Y gastric bypass (LRYGB), laparoscopic sleeve gastrectomy (LSG) and laparoscopic gastric banding (LGB)] in our unit between June 2012 and September 2016. Outcomes assessed included excess weight loss (EWL) and complete or partial resolution of T2DM.

Results

Of 176 patients, 71 (40.3%) had T2DM requiring treatment (insulin = 30, oral hypoglycaemic agents = 41). Mean age was 50.5 years, and 66.1% (47 patients) were female. Procedures were LRYGB (n=52), LSG (n=17) and LGB (n=3). Mean start BMI was 48.2+/-6.9 and end BMI was 36.4+/-5.7, with average EWL of 55.3%. Complete resolution of diabetes was observed in 50 patients (70.4%) and with a further 3 patients off insulin (total 74.6%).

Risk factors for poor resolution of T2DM included time since diagnosis and LGB, which is no longer performed in our unit.

Conclusion

Bariatric surgery is a safe and highly effective treatment for T2DM. We believe that it should be considered as first line treatment in obese patients with T2DM.

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BODY MASS INDEX VERSUS BODY COMPOSITION IN ASSOCIATION WITH METABOLIC DISEASES

Type 2 diabetes and metabolic surgery

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Introduction

Adiposity is directly linked to the development of metabolic diseases. Body mass index(BMI) is a clinical tool to determine nutritional status, but it does not predicts body fat mass. To determine body fat percentage (BFP) bioelectrical impedance analysis (BIA) can be applied.

Objectives

The aim of this study is to compare which parameter, BMI or BIA predicts better metabolic disorders.

Methods

Retrospective analysis of our BIA and obesity program database. Patients that were submitted to BIA between March 2013 and November 2014 were followed. Demographics, anthropometrics, body composition and comorbidities were registered. Statistical analysis was performed with SPSS software correlating BMI and BFP with metabolic diseases.

Results

441 patients were identified, median age 37(15-73) years, 313(71%) women, median weight 83,7(47,5-162,1), median BMI 30,6(20,3-51,5), median BFP 40,8(14,4-55,8). Comorbidities were: Type 2 diabetes mellitus(T2DM) 10,3%, insulin resistance (IR) 36%, hypertension (HT) 23,6%, dyslipidemia (DLP) 34,4% and obstructive sleep apnea syndrome (OSAS) 2,7%. P-values for associations between BMI and BFP with metabolic disorders were: T2DM (BMI $p=0,66$ BFP $p=0,001$), IR (BMI $p<0,001$ BFP $p<0,001$), HT (BMI $p=0,93$ BFP $p=0,04$), DLP (BMI $p=0,67$ BFP $p=0,32$), OSAS (BMI $p=0,6$ BFP $p=0,65$).

Conclusion

BFP correlated better than BMI with T2DM and HT. Both measurements strongly correlated with insulin resistance. Our data suggests that although BMI may be a good clinical parameter for assessing nutritional status, body composition should be considered as a more accurate measurement to determine the risk for developing cardiometabolic diseases.

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LAPAROSCOPIC SLEEVE GASTRECTOMY AND TRANSIT BIPARTITION TO TREAT TYPE 2 DIABETES IN PATIENTS WITH BMI 28-32KG/M2

Type 2 diabetes and metabolic surgery

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Background

The accelerating pandemic of diabetes is recognized as one of the greatest global public health threats of our time. In 1998, Hicky et al. showed that type 2 diabetes could be a disease of the foregut.

Introduction

In this study we aimed to evaluate the short term effects of laparoscopic sleeve gastrectomy (SG) with transit bipartition (TB) in T2DM patients with BMI 28-32 kg/m².

Objectives

Laparoscopic procedures were performed for 72 patients (11 women and 61 men) with a mean age of 51,9 years (range, 31-68 years) and mean BMI of 30,4 kg/m² (range, 28-32). All patients had a diagnosis of T2DM that was not well controlled with oral hypoglycemic agents, insulin, or both. The mean duration of T2DM was 10 years (range, 1-25 years).

Methods

From August 2015 to February 2017, 72 T2DM patients underwent surgery performed by Muzaffer Al in the Büyük Anadolu Hospital in Samsun, a city of Turkey. All patients underwent sleeve gastrectomy and transit bipartition with laparoscopically.

Results

The SG-TB procedure was performed in 72 patients with T2DM from August 2015 to February 2017. The mean postoperative follow-up period was 7,8 months (1-19 months). The average preoperative BMI was 30,4kg/m² (28-32,9) and Hba1c levels were 9,5%(7-15,2%). After surgery, the average BMI was reduced to 25,6 kg/m² and Hba1c levels were reduced to 7,1% (5,8-9%). Additionally, 83,3% of patients (n:60) stopped using oral antidiabetic agents and insuline.

Conclusion

The SG-TB procedure seems to be a promising procedure for controlling T2DM with BMI 28-32kg/m². A longer follow-up period and higher sample size are needed.

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REMISSION OF TYPE 2 DIABETES MELLITUS AFTER GASTRIC BYPASS SURGERY, CAN IT BE PREDICTED? CLINICAL VALIDATION OF THE DIAREM SCORE.

Type 2 diabetes and metabolic surgery

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Introduction

Approximately 25% of patients who undergo Gastric Bypass (RYGB) surgery have type 2 Diabetes Mellitus (T2DM). While for many patients hypoglycemic drugs can be reduced or stopped after a RYGB, not every patient reaches remission. The DiaRem score, published in 2014 by Still et al. is a predictive tool, that estimates the probability of achieving remission.

Objectives

This study aimed to validate the DiaRem score in an European (Belgium) population undergoing RYGB surgery.

Methods

Medical records of 214 patients with T2DM, operated upon between 2008 and early 2016 and with at least one year of follow-up were retrospectively reviewed. Patients undergoing revision surgery or those with incomplete diabetes follow-up data were excluded. Complete and partial remission were defined in accordance to the ADA guidelines.

Results

The mean age of our population was 52 years. On average patients were diagnosed with T2DM for 5 years [range 0-40] before undergoing surgery. Patients were treated with metformin (n=165), sulphonylurea (n=48), GLP-1 analogs (n=10) and/or insulin (n=73) in mono- or combinational therapy. One year postoperative 125 (58.4%) patients reached partial or complete remission. Corresponding to the DiaRem score, complete remission was achieved in: 92.5% (0-2); 70% (3-7); 41.2% (8-12); 16.0% (13-17); 5.9% (18-22). Remission occurred significantly more frequent when patients underwent a RYGB within 2 years after the diagnosis of T2DM [OR 11.86 95% CI 5.99-23.48; p<0.0001].

Conclusion

Our study demonstrates similar remission rates compared to earlier reports. The DiaRem score seems to be a valid and relevant tool for predicting T2DM remission prior to RYGB surgery.

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ONE YEAR AFTER METABOLIC GASTRIC BYPASS IN PATIENTS WITH DIABETES MELLITUS TYPE 2 AND BMI < 35 KG/M2.

Type 2 diabetes and metabolic surgery

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Introduction

Roux-en Y gastric bypass (RYGB) achieve rapid remission of type 2 diabetes mellitus (T2DM).

Objectives

This trial prospectively assessed the effect of the glycemic control one year after surgery in T2DM patients with inadequate control and BMI < 35 kg/m².

Methods

From January 2012 to march 2016 total of 19 patients with T2DM and a BMI of <35 kg/m². underwent metabolic RYGB. Data were prospectively collected 1, 3, 6 months and one year after surgery. The inclusion criteria were: BMI < 35 kg/m², HbA1c > 7,5 %, C-peptide \geq .1.0 ng/ml, ICA;GAD 65K, IA-2 negative. Remission of type 2 diabetes was defined as HbA1c <6.5% without any glycemic therapy.

Results

The BMI decreased postoperatively from 30,9 to 24, 9 kg/m² one year after. The mean HbA1c decreased from 8.4% to 7.3 % at the first month, to 6.4% at 3 months, 6.9 % , at 6 months and 6.8 %. at one year. The control of T2DM was achieved in 94,7 % of them, were well controlled 36,8 % with oral medical therapy, 5,2 %, were not controlled and required insulin therapy . Remission was achieve in 26,3 %.

Conclusion

Metabolic gastric bypass improve the glucose metabolism in T2DM patients with BMI <35 kg/m². The benefit begins to be evident one moth after surgery and maintain one year after surgery. Longer follow-up is necessary Ours study is collecting data.

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P.799

EARLY OUTCOME OF METABOLIC SURGERY FOR THE TREATMENT OF TYPE 2 DIABETES MELLITUS IN SUPEROBESE MALAYSIAN POPULATION

Type 2 diabetes and metabolic surgery

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Introduction

Despite the many challenges, the benefit of bariatric surgery in super-obese population remains irrefutable with significant improvement in metabolic syndrome and quality of life.

Objectives

To determine early outcome of bariatric surgery on super-obese Malaysians with Type 2 Diabetes Mellitus (T2DM).

Methods

Super-obese Malaysians with Type 2 Diabetes Mellitus (T2DM) with a minimum of one year follow up post bariatric surgery were recruited. Historical data on anthropometry, glycemic control and weight loss parameters at specific time intervals were retrieved and analysed.

Results

Of the 33 patients included in this study, 55% were women and 45% men. Mean age was 40 ± 11.5 years with mean BMI of 59.3 ± 9.0 Kg/m². Malays made up for 79% of the study population while Malaysians of Chinese and Indian ethnicity accounted for 9% and 12%. Approximately 82% underwent laparoscopic sleeve gastrectomy (LSG), 9% Laparoscopic Roux-en-Y gastric bypass (LRYGB), and 9% had mini gastric bypass (MGB). Mean operative time for LSG, LRYGB and MGB was 103.5 ± 31.1 , 135.8 ± 32.6 and 116.2 ± 32.3 minutes respectively. Mean percentage total body weight loss (%TBWL) was 33.11 ± 9.44 at 12 months following surgery. Mean BMI reduced from 59.37 ± 9.01 kg/m² pre-operatively to 38.87 ± 4.53 kg/m² at 12 months post-surgery ($p < 0.05$). HbA1c and FBS decreased from pre-operative values of 6.78 ± 1.09 % and 6.54 ± 1.07 mmol/L to 5.61 ± 0.47 % and 5.03 ± 0.68 mmol/L at 12 months ($p < 0.05$). T2DM remission was 68.31%.

Conclusion

Our study confirms significant improvement in BMI, %TBWL, HBA1C and FBS at 12 months post-laparoscopic bariatric surgery among super-obese Malaysians irrespective of type of surgery ($P < 0.05$).

P.800

A PROBABILITY SCORE FOR PREOPERATIVE PREDICTION OF LONG-TERM TYPE 2 DIABETES REMISSION FOLLOWING ROUX-EN Y GASTRIC BYPASS SURGERY

Type 2 diabetes and metabolic surgery

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Introduction

Surgery is the most effective treatment of inadequately controlled type 2 diabetes mellitus (T2DM) in obese patients. However, there's no accurate method for predicting preoperatively the probability for T2DM remission.

Objectives

Our purpose was to develop a grading system to categorize and predict remission of T2DM after Roux-en Y gastric bypass (RYGB).

Methods

This was a retrospective cohort study of all severely obese T2DM who underwent RYGB for weight loss at our institution, from January -2004 to June-2013. A total of 56 patients who had complete 5-year follow-up data were assessed. We identified 3 variables with independent predictive value of T2DM remission after RYGB: glucose level, T2DM duration and diabetes status. Using those variables, we created a composite scoring system (6 -18-point scale) that provides a separation of patients (based on the relative risk associated) into three risk groups of T2DM remission over 5 years (table).

Results

A total of 35(62.5%) patients had complete remission T2DM, 5(8.9%) partial remission and 8(14.3%) improved condition at 5 years after surgery. Patients with T2DM remission after surgery had a lesser score than those without ($p<0.001$). The score spans from 6 to 18 and was divided into 3 groups corresponding to 3 probability -ranges for T2DM remission: 6 -10(83%-100%), 11 -14(40%-66%), 15-18(0%).

Diabetes Surgery Score

PREDICTIVE FACTOS		POINTS
T2DM duration (years)	<5	1
	5-10	2
	>10	3
Glucose level (mg/dL)	<150	3
	150-249,9	6
	≥250	9
Diabetes status	Dieta/Metformin Sulfonilurea Insulina	
Score		6-18



Conclusion

The diabetes surgery score is a simple grading system that can predict the probability (from 0% to 100%) for T2DM remission following RYGB.

P.802

IMPACT OF AGE ON EARLY POSTOPERATIVE OUTCOMES IN BARIATRIC SURGERY – POLISH MULTICENTER STUDY

Young IFSO Session

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Introduction

Available data show that age increases perioperative morbidity and reoperation rates, however age limit seems cease to exist in bariatric surgery.

Objectives

We aimed to evaluate the influence of age on postoperative outcomes after two most commonly performed procedures.

Methods

Prospective, observational study included patients meeting the eligibility criteria for primary LSG or LRYGB in two academic, teaching hospitals. Patients were divided into two groups: patients under and over 50 year old. Endpoints were to determine influence of age group in perioperative period and in one-year postoperative period. Study included 212 patients aged ≥ 50 and 576 (73.1%) patients < 50 yo.

Results

Operative time was longer in ≥ 50 yo, but only for LRYGB. Incidence of intraoperative adverse events was not influenced by age (≥ 50 vs. < 50 OR: 1.80, CI: 0.83-3.91). Early postoperative morbidity and reoperation rates did not differ between groups ($p=0.894$ and 0.709). Median LOS was similar ($p=0.974$). Risk of late postoperative morbidity was comparable (OR: 2.14, CI: 0.92-4.97), although risk of late postoperative complications classified as III-V Clavien-Dindo grade was higher in patients ≥ 50 -year-old (OR: 2.52, CI: 1.01-6.30). Age increased risk of port site hernia (OR: 4.23, CI: 1.49-12.06). Age did not influence risk of late reoperations (OR: 2.47, CI: 0.94-6.50) and hospital readmission (OR: 1.39, CI: 0.79-2.44). The mean %WL was comparable ($p=0.054$), but %EWL and %EBMIL were worse in ≥ 50 yo ($p=0.033$ and 0.032).

Conclusion

Bariatric surgery is safe and feasible in elderly patients. LOS and readmissions are not associated with age. Bariatric effect is slightly worse in elderly patients.

P.803

SAFETY OF BARIATRIC SURGERIES FOR SUPER-SUPER OBESE PATIENTS – CASE-CONTROL STUDY.

Young IFSO Session

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Introduction

Super-super obese (BMI \geq 60) patients are considered as high risk for bariatric surgery, but we still have limited experience in this population. We aimed to enhance data on perioperative management and postoperative outcomes with comparison to general bariatric population.

Objectives

To compare postoperative outcomes of super-super obese patients to <60 kg/m² population.

Methods

Prospective, observational study included patients undergoing LSG or LRYGB in two referral centers for general surgery. Patients were divided into two groups: BMI \geq 60kg/m² and <60kg/m². We analyzed postoperative outcomes of both groups. Patients' care was standardized (ERAS), as well as surgical techniques. From 2013 to 2016, 573 patients met inclusion criteria [360 females, 213 males, median age of 42 (35-51)].

Results

Peri- and postoperative outcomes of 41 super-super obese patients compared to 532 patients with BMI<60kg/m² are presented in Table 1.

Table 1.

	\geq 60kg/m ²	<60kg/m ²	P
LRYGB	17 (41%)	339 (64%)	0.507
LSG	24 (59%)	193 (36%)	
LRYGB time	130 (110-200)	140 (110-180)	0.861
LSG time	100 (80-130)	90 (35-120)	0.791
Intraoperative adverse events	3 (7%)	21 (4%)	0.307
Fever	6 (15%)	82 (15%)	0.809
PONV	0	33 (6%)	-
Postoperative morbidity	8 (20%)	36 (7%)	0.008
Mortality	2 (5%)	0	-
Clavien-Dindo 3-5	4 (10%)	13 (2%)	0.029
Clavien-Dindo 1-2	4 (10%)	23 (5%)	0.230
Prolonged LOS (>3 days)	17 (41%)	159 (30%)	0.121
Readmissions	8 (20%)	29 (5%)	0.001

Conclusion

Despite operative outcomes are comparable with other morbidly obese patients, super-super obese individuals are at significantly higher risk of postoperative morbidity and mortality, and readmissions.

□
P.804

DEFINITION DETERMINES WEIGHT REGAIN OUTCOMES FOLLOWING SLEEVE GASTRECTOMY

Young IFSO Session

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Introduction

Sleeve gastrectomy (SG) is one of the most commonly undertaken bariatric procedures. Weight regain following bariatric surgery is associated with recurrence of diabetes and deterioration in quality of life. Furthermore, it may be more common after SG than bypass procedures. Yet the understanding of the significance of weight regain is hampered by poor reporting and no consensus statements or guidelines.

Objectives

The aim of this study was to illustrate how the lack of a standard definition significantly alters reported SG outcomes and to contribute to the discussion of how weight regain should be defined.

Methods

A retrospective cohort of SG patients followed up at five years was used to illustrate how the presence of multiple definitions in the literature significantly affects outcome reporting for weight regain. Post hoc analyses were used to explore the relationship between weight change and clinical outcomes.

Results

Applying six definitions of weight regain to a retrospective cohort of SG patients resulted in six different rates ranging from 9-91%. Post hoc analyses revealed significant associations between weight change and the Bariatric Analysis Reporting Outcome System (BAROS) score as well as patient opinion.

Conclusion

The non-uniform reporting of weight regain appears to significantly affect SG outcome reporting. Development of consensus statements and guidelines would ameliorate this problem. Ideally, research groups with access to large robust databases would aid in the development of any proposed weight regain definitions. In the interim, bariatric literature would benefit from published series clearly reporting how weight regain is defined in the study population.

□
P.805

SLEEVE GASTRECTOMY AS A SAFE BARIATRIC PROCEDURE AMONG ELDERLY

Young IFSO Session

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Introduction

Bariatric surgery is nowadays approved and effective method of treatment for morbid obesity. In spite of this, the procedures performed in the elderly are controversial and often subjected to discussion.

Objectives

The aim of the study is retrospective analysis of 17 patients who underwent sleeve gastrectomy in Department of General and Minimally Invasive Surgery in Olsztyn, Poland from October 2013 to April 2016.

Methods

17 patients underwent laparoscopic sleeve resection because of morbid obesity. Only patients above the age of 60 were analyzed (% of all bariatric patients). Data was collected on the basis of medical history and telephone as well as personal surveys in the Clinic.

Results

The mean age of patients was 65.4 years (60-71), the mean starting BMI 44.5 kg per m², the number of patients with diabetes mellitus n=11 (64.7%), the number of patients with hypertension n=15 (88.2%). The mean follow-up time was 32.3 months (24-40). The mean %EWL after 6 months was 53.6 %, 12 months- 58% 24 months - 97.4 %. In all patients, the improvement in comorbidities was observed - withdrawal or reduction of medication intake. In the whole group, there were no perioperative complications (till 30 days after the discharge).

Conclusion

Sleeve gastrectomy seems to be a safe and approved bariatric method for elderly. The low complication rate and acceptable outcomes are encouraging further research into the propriety of qualification of patients above the age of 60 for surgical treatment.

□
P.806

ANTHROPOMETRIC VARIABLES IN RELATION TO THE RISK OF BREAST CANCER IN PRE-MENOPAUSAL WOMEN IN CAPE COAST, GHANA.

Young IFSO Session

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Introduction

Breast cancer is the most frequently diagnosed cancer in women worldwide. In Ghana, breast cancer is the leading malignancy, which accounts for 15.4% of all malignancies and reports show an increase from 11.8% to 20.4% from 1974 to 1991. Risk factors such as delayed childbearing, lower parity, and reduced breastfeeding are becoming more prevalent in Ghana.

Objectives

This study is aimed at linking anthropometric indices of pre- and post-menopausal women to breast cancer risk. We will also determine the role of aetiological factors such as age, menarche and parity as risk factors of breast cancer in women.

Methods

A prospective cross sectional study based on simple random sampling involving 207 women was carried out. Weight, height, body fat, visceral fat, muscle and waist and hip measurements were taken and BMI computed. Breasts were examined by the use of BreastLight for any sign of lumps and abnormality.

Results

Twenty-six (12.6%) of the participants had suspicious lumps with 21(80.8%) being premenopausal. Among the premenopausal women with lumps 19.1% were obese, 28.6 were overweight and 47.6 normal. For postmenopausal women with lumps 80% were obese by BMI criteria whiles 85.7% had high percentage body fat. 12.9% were overweight and 47.2% were normal.

Conclusion

The study was able to provide strong support for a positive association between body fat, visceral fat and breast cancer risk in pre and postmenopausal obese women.

□
P.807

EARLY EXPERIENCE IN BARIATRIC SURGERY: ANALYSIS OF MY FIRST 50 PATIENTS

Young IFSO Session

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Introduction

Bariatric surgery is a challenging field, due to the complexity of the interventions, requiring high technical skills.

Once the learning curve is completed, the results may be rewarding, but they need constant analysis in order to get better.

Objectives

To assess the efficiency and the safety of bariatric surgery in a cohort of 50 patients.

Methods

From January 2012 to March 2015, 50 patients underwent bariatric surgery by the same surgeon (SP) for severe or morbid obesity. The percentages of excess weight loss (% EWL), the obesity-related conditions and the surgical complications were evaluated retrospectively.

Results

Full information was obtained for 43 patients (86%), including 31 who had a sleeve gastrectomy (SG) as unique surgery and 10 patients who had a Roux en Y gastric bypass (GBP). Two patients needed a second bariatric intervention due to insufficient weight loss.

The mean excess weight loss was 71.2% after 2 years.

The diabetes rate decreased by 75%, the arterial hypertension by 88.8%, the hyperlipidemia by 50% and the sleep apnea syndrome completely disappeared two years after the intervention.

Three patients (6%) presented an early postoperative complication: one portal thrombosis (2%), one twist of the sleeve (2%) and one incisional hernia (2%). One patient developed a stenosis of the jejuno-jejunal anastomosis of the GBP (2%).

Conclusion

Two years after bariatric surgery performed on the first 50 patients by a non expert surgeon, the weight loss is satisfactory, with few postoperative complications and fair resolution of obesity-related conditions.



V.001

BIKINI LINE PORT ACCESS SLEEVE GASTRECTOMY: A NOVEL APPROACH

Sleeve gastrectomy

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Introduction

Bariatric surgery is in a state of continuous evolution. Several reports have discussed the potential for reducing port access in laparoscopic sleeve gastrectomy (LSG),

Objectives

We here in describe a novel approach where we place the access ports below the bikini line in what we described as Bikini Line Sleeve Gastrectomy (BLSG).

Methods

A prospective, pilot study on the use of BLSG in patients enrolled for Sleeve Gastrectomy, during the period between May and July 2016. We used a four trocar approach: one at the umbilicus and three at the bikini line. All laparoscopic graspers were bariatric length instruments (43 cm). However, camera telescope, endoscopic stapler and bipolar dissectors were standard length. Closed pneumo-peritoneum was established through the umbilicus by using an optical trocar. Three further trocars were inserted at the bikini line while respecting Langers's lines. The BLSG procedure is then subdivided into three phases, Gastric mobilization phase, Stapling phase, and Suturing phase.

Results

Operative time was comparable to the standard technique, patients experienced less post operative pain, shorter hospital stay, significant amount of weight loss at 6 months and a higher level of satisfaction.

Conclusion

In selected patients, BLSG could be a feasible and safe procedure that can provide a favorable aesthetic outcome. However, a longer term study with a larger number of patients is still needed to evaluate the long term outcome.

□
V.002

BARIATRIC SURGERY AFTER NISSEN´S FUNDOPLICATION

Revisional surgery

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Introduction

Nissen´s fundoplication is considered the standard surgical treatment of gastroesophageal reflux disease (GERD). In normal weight individuals, this is a very effective option in controlling reflux symptoms. On the other hand, morbidly obese patients are four times more likely to experience recurrence of acid reflux symptoms after a fundoplication or might seek bariatric surgery due to weight gain.

Objectives

To show the technical aspects of bariatric surgery after Nissen´s fundoplication with take down of the wrap.

Methods

We report 2 different cases of patients with previous Nissen´s fundoplication for GERD who underwent a sleeve gastrectomy and a Roux-en-Y gastric bypass (RYGB). The first case is 62 year-old gentleman with a BMI of 36 kg/m² and type II diabetes mellitus, who suffered from recurrent GERD after Nissen´s and subsequently had a RYGB. The second case is a female with BMI 42 with previous GERD related to a hiatus hernia and sought a sleeve gastrectomy to control her obesity.

Results

This video shows the technical aspects of the takedown of the previous plication and freeing it completely from its retroesophageal pathway. Once the anatomy is restored, full crural dissection was performed and hiatus repaired, and then the RYGB or the sleeve gastrectomy were achieved.

Conclusion

Bariatric surgery is feasible and safe after previous Nissen´s fundoplication. RYGB should be considered as an excellent option after fundoplication surgery in obese patients with recurrent GERD symptoms.



V.003

THE 15CM ROUX LIMB: A TECHNICAL MISADVENTURE

Revisional surgery

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Background

Despite effectively treating obesity and its comorbidities, only a fraction of the growing obese population is evaluated for bariatric surgery. Aside from barriers including resources and social support, patients report personal experience with poor outcomes following bariatric surgery. Rates of mortality, leaks, and strictures have decreased over the past 20 years, but few instances of gross surgeon error have been reported in the literature.

Introduction

In this revision case, we encountered a patient who had undergone laparoscopic Roux-en-Y gastric bypass 7 years prior who presented with chronic nausea and dysphagia. Upper endoscopy revealed significant bile reflux and esophagitis, and upon surgical revision, she was found to have a 15cm Roux limb.

Objectives

Our objective is to report and demonstrate the revision of an abnormally short Roux limb after Roux en Y gastric bypass.

Methods

We performed a successful laparoscopic revision of this patient's previous Roux-en-Y gastric bypass, with creation of a 125cm Roux limb.

Results

Total operative time was 87 minutes, there were no major intra-operative complications, and the post-operative course was unremarkable. At one month follow-up, the patient reported complete resolution of all prior symptoms. At three month follow-up, BMI decreased from 37 prior to revision, to 31.

Conclusion

Reducing complications and improving quality of care will support the necessary growth of bariatric surgery. Standards set forth by accreditation bodies such as the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) assist in this endeavor, and technical errors, though difficult to evaluate, will need to be monitored as the patient population grows.

V.004

CONVERSION OF PRIOR NISSEN FUNDOPLICATION TO ROUX-EN-Y GASTRIC BYPASS: A SAFE TECHNIQUE

Revisional surgery

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Introduction

Medical literature suggest a conversion of Nissen Fundoplication (NF) to a Roux-en-Y gastric bypass (RYGB) is not advised due to increased scarring and tissue thickening surrounding the fundus, thereby increasing the risk of anastomotic leakage. Due to the nature and confined region of dissection in the enveloped fundal region, a laparoscopic conversion of NF to RYGB may pose as a difficult task. Surgeons are bound to experience obstacles when attempting to convert said procedures, yet with adequate technique and conscious record of tissue planes, a laparoscopic approach is a viable option.

Objectives

The following video presents a laparoscopic conversion of a prior nissen fundoplication (NF) to a Roux-en-Y gastric bypass (RYGB).

Methods

The patient is a six-four (64) year old female with a prior history of gastro-esophageal reflux disease (GERD), hypertension, and hyperlipidemia, and type II diabetes mellitus (T2DM). Upon questioning, the patient states she is still symptomatic of GERD, even after receiving a NF five years prior. Moreover, the patient presents with a BMI of 36.3 despite several attempts at dieting and low impact exercise.

Results

	1 month Postoperatively	3 month Postoperatively	6 Month Postoperatively	1 Year Postoperatively
Excess Weight Loss (%)	20.3%	37,9%	61.0%	58.2%
Presence of GERD (Self Report)	Mild Reflux	No Reflux	No Reflux	No Reflux
Hba1c Level	6.3%	6.0%	5.7% (Normalized)	5.0% (Normalized)

Conclusion

Although laparoscopic NF conversion to RYGB is an arduous endeavor, which generally carries higher morbidity, certain techniques such as stapling towards the body of the stomach can be used to decrease risks while ensuring the effectiveness of the conversion.



V.005

TAMING THE ANACONDA: LAPAROSCOPIC STRATEGIES FOR THE TREATMENT OF AN INCARCERATED ANASTOMOTIC RETROGRADE INTUSSUSCEPTION AFTER RNY GASTRIC BYPASS

Post-operative complications

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Introduction

In this case, we report on a young female patient who was admitted with acute abdominal pain since a few hours. She had a Roux-en-Y gastric bypass nine years ago with an excess weight loss of 100%. An emergency CT scan showed a target sign, pathognomonic for intussusception. The clinical presentation demanded immediate exploration

Objectives

Despite the acute setting, laparoscopic exploration was initiated.

Methods

In the video we describe the laparoscopic approach for an incarcerated retrograde intussusception at the level of the jejuno-jejunostomy. Laborious laparoscopic reduction of intussusception resulted in a good reperfusion of the ischemic jejunal limb. To prevent recurrence we opted for a laparoscopic resection of the wide jejuno-jejunal anastomosis.

Results

Intermediate follow up at six weeks showed a good functional outcome with no recurrence of abdominal pain.

Conclusion

Intussusception after Roux-en-Y gastric bypass is often retrograde, without lead point and can be the cause of intermittent chronic pain. An incarcerated intussusception at the level of the jejuno-jejunostomy is rare and life threatening. Laparoscopic reduction is feasible. Different strategies are possible after reduction. Despite good revascularization after the reduction we opted for a laparoscopic resection of the anastomosis to prevent recurrency.

□
V.006

REVERSAL OF OMEGA LOOP BYPASS - PRACTICAL STEPS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Gastric bypass procedures can potentially lead to complications like anastomotic complications or functional disorders such as bile reflux or malnutrition. The present work describes reversal of omega loop bypass into normal anatomy.

Introduction

The demand for bariatric surgical procedures is increasing with raising obesity rates worldwide. Although most procedures are safe and feasible, however the associated short and long term complications can be disruptive to normal daily lifestyle. The options of reversibility must be possible, safe and feasible too.

Objectives

To provide a step by step practical tips for safe reversal of omega loop bypass surgery.

Methods

We present the video report of a 40-year-old woman who suffered hair loss, dry pale skin and did not like her appearance after weight lose (weight of 56 kg, body mass index of 22.4). She had undergone laparoscopic omega-loop gastric bypass 2 years ago (initial weight of 98 kg and initial body mass index of 40.2).

Results

Presented is a step-by-step laparoscopic reversal of the omega-loop gastric bypass. The procedure began with a careful release of adhesions from the left lobe of the liver, gastric pouch, and omega-loop. Then, the gastro-jejunostomy was transected with Endo GIA stapler. Gastro-gastric anastomosis was created between the gastric pouch and the excluded stomach. Omega-loop jejunum was resected and the anastomosis performed. The operative time was 122 min. Postoperative course was uneventful and the patient discharged after 2 days. Three month later, she has gained 8 kg without needing any nutritional support.

Conclusion

Reversal of omega loop is feasible and safe procedure.



V.007

LAPAROSCOPIC CONVERSION OF ONE ANASTOMOSIS GASTRIC BYPASS TO A STANDARD ROUX-EN-Y GASTRIC BYPASS.

Revisional surgery

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Introduction

One anastomosis gastric bypass (OAGB) demonstrated results similar to traditional Roux-en-Y procedures, in terms of weight loss and resolution of obesity-related comorbidities. The main controversy regarding OAGB is the concern for an association between biliary alkaline gastritis and esophageal or gastric cancer raised by some studies.

Objectives

To present our surgical technique of conversion of one anastomosis gastric bypass to Roux-en-Y gastric bypass.

Methods

We present the case of a 51-year-old woman with a BMI of 41 kg/m² who underwent a laparoscopic OAGB in 2014. One year later, she consulted for recurrent heartburns. An upper GI endoscopy showed pouchitis and bile reflux in the esophagus. Medical treatment of gastroesophageal reflux disease was ineffective. We decided to convert the OAGB to a Roux-en-Y gastric bypass (RYGB).

Results

In this video, we show how to revise an OAGB to treat chronic bile reflux, by converting the procedure to a standard RYGB. The intervention starts by restoring the normal anatomy of the small bowel, with the resection of the gastrojejunal anastomosis, which was located at 250-cm du Treitz's ligament. Then, the gastric pouch is created. A standard Roux-en-Y gastric bypass is performed. Postoperative course was uneventful.

Conclusion

The resection of the gastrojejunal anastomosis allows fashioning the Roux-en-Y limb with the classical measures. This technique allows a conversion to a standard RYGB and is effective in treating the biliary reflux.

□
V.008

DUODENAL SWITCH REVERSAL FOR HYPERINSULINEMIC HYPOGLYCEMIA

Revisional surgery

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Introduction

Hyperinsulinemic hypoglycemia is an uncommon complication after bariatric surgery. It has been mostly described after Roux-n-Y Gastric Bypass. Treatment begins with dietary modifications, then some drugs like acarbose or somatostatin analogues have been recommended. If symptoms continue reversal surgery has been recommended. This syndrome has not been previously described after duodenal switch. Moreover, duodenal switch reversal may be a challenging procedure.

Objectives

Show a complete reconstruction after duodenal switch

Methods

A 38 years old man with and initial BMI of 53kg/m² plus hypertension, obstructive sleep apnea and hyperuricemia had a Sleeve Gastrectomy 4 years ago. 18 months later a second stage duodenal switch was performed. Good weight loss and comorbidities resolution was achieved. 6 months ago, the patient began with hypoglycemic episodes, with increased frequency as time went by. Medical treatment was initiated with no result. Hyperinsulinemic hypoglycemia was diagnosed. Pancreatic malignancies were excluded by CT Scan, so duodenal switch reversal was indicated.

Results

A complete reconstruction of the digestive tract was done by laparoscopy. Firstly, both duodenal endings were dissected and anastomosed in a hand sewn fashion. Next, the alimentary tract was restored with no bowel resection. To do so, the Roux-n-Y was sectioned at the biliopancreatic ending and anastomosed to the proximal stump of the alimentary limb.

The patient was discharged at POD 5 after an uneventful postoperative.

8 months after surgery, patient keeps asymptomatic with no weight regain.

Conclusion

This is a complex procedure that showed to be effective to deal with this rare complication.

□
V.009

PROBLEMATIC OPEN VBG AND GASTRIC BAND TO LAPAROSCOPIC GASTRIC BYPASS AFTER 20YRS -TECHNICAL ASPECTS AND OUTCOME

Revisional surgery

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Background

we have been used to the band to bypass and VBG. these themselves are technically demanding with a supposed high compliation rate. We have no knowledge about how VBG and gastric band both converted to gastric bypass and how this could be effected, especially if these were done a long time ago.

Introduction

A 60 year old lady who had Open VBG 23 years ago and then gastric band 20 years ago in Australia. she has been continuously vomiting, though she had a good weight loss of 60kg, following which she had a tummy tuck. Her potassium level had come down to 3mmol/L and dehydrated.she was assessed with barium swallow which showed some hold up at the gastric band level though it is deflated. Added to that she is a heavy smoker.

Objectives

The video shows the technical challellenges faced, the low intraabdominal pressure needed to keep the Endotracheal end CO2 pressure down, the difficulties faced in removing the gastric band, and the final satisfactory result.

Methods

the video showing the difficult technical aspects can be done safely.

Results

CRP kept rising and went upto 279 but came down slowly, though she was looking remarkably well and was able to drink fluids well and mobilised well without any problem. She had a oral contrast CT which showed postoperative atelectasis of both bases of the lunngs. She is eating well without being sick about 3 months following surgery.

Conclusion

With adequate preparation, technically challenging surgery could be undertaken to achieve the desired result to help patient.

V.010

DUODENAL ILEAL INTERPOSITION WITH SLEEVE GASTRECTOMY AND SELECTIVE INTRA ABDOMINAL DENERVATION FOR TYPE 2 DIABETES MELLITUS

Type 2 diabetes and metabolic surgery

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Background

No single medication can approach all of the pathophysiologic disturbances that characterize type 2 diabetes. With this concept in mind, the laparoscopic selective intra-abdominal denervation with duodenum ileal interposition and sleeve gastrectomy (DIISG) is an operation that intends to address different components of the pathophysiology of T2D.

Introduction

It was demonstrated that duodenal ileal interposition with sleeve gastrectomy effectively improved glucose tolerance by augmenting both beta cell function and insulin sensitivity. Moreover, it was demonstrated a reluctant abnormal endogenous glucose production by the liver and altered hepatic insulin sensitivity. Recent evidence demonstrated that an increased sympathetic hyperactivity is part of the pathophysiology of T2D and hepatic glucose metabolism is likely to be derived from an unbalanced autonomic input to the liver. Activation of the sympathetic nervous system may constitute a putative mechanism of obesity-induced insulin resistance.

Objectives

The objective of this study was to prospectively evaluate the results of adding a selective intra abdominal denervation to DIISG in 30 patients, in one surgery, to improve diabetes remission rates after surgery.

Methods

The DIISG was performed in 30 patients for the treatment of T2D in patients with a BMI <35 kg/m².

Results

T2D remission was observed in nearly 90% of the patients during 5 y follow up

Conclusion

A pathophysiological justification of the operation and an endocrine-based understanding of diabetes might be expanded with integration of neural inputs into the concept of the pathophysiological processes.

V.011

SUCCESSFUL DELAYED SURGICAL TREATMENT OF STAPLE LINE LEAK AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

Post-operative complications

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Background

Staple line leak is a catastrophic complication following Laparoscopic Sleeve Gastrectomy (LSG).

Introduction

It is unlikely to repair the site of leakage surgically especially after 48 hours. The mainstay of treatment is drainage, control of sepsis and nutritional support.

Objectives

We present a case of gastric leak following LSG that was successfully treated surgically by gastric re-stapling almost one week post LSG.

Methods

A 28 year old morbidly obese female patient underwent LSG. Review of the primary operation showed thermal injury during dissection to the cardia which was not excised. The patient developed peritonitis three days post LSG and was re-explored laparoscopically. The site of gastric leak just distal to the esophago-gastric junction was identified and repaired with sutures and omental patch. The patient failed to improve and was transferred to our center three days later in early septic shock. She had peritonitis.

She underwent laparoscopic exploration and drainage of multiple fluid collections. The site of gastric leak was identified and because of the presence of redundant and ischemic fundic tissue at the site successful re-stapling was accomplished.

Results

The patient did well and recovered without evidence of re-leak. A pelvic abscess was drained percutaneously under CT scan guidance. She was kept on anti-microbials for three weeks. A CT scan was done a month later showed complete resolution of all abscesses and collections.

Conclusion

Surgical treatment of a leak after LSG by re-stapling can be attempted under certain conditions particularly if there is redundancy in the tissues at the leak site.

V.012

LAPAROSCOPIC CONVERSION OF SINGLE ANASTOMOSIS DUODENAL SWITCH TO MINI GASTRIC BYPASS FOR DUODENO-ILEOSTOMY LEAK

Post-operative complications

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Introduction

31-year-old female with morbid obesity BMI 51 and multiple comorbidities including arthritis and GERD. The patient underwent conversion of single anastomosis DS to a mini bypass procedure due to duodeno-ileal anastomotic leak.

Objectives

Demonstrating the techniques of duodenal switch conversion to mini-gastric bypass in the setting of tenuous bowel and early anastomotic leak.

Methods

The drain was noted to have copious purulent drainage which was removed and the abdomen was entered through this port. Upon further inspection, the duodeno-ileal anastomosis was noted to have leakage and the distal bowel was twisted causing obstruction and blockage. Unraveling of the tenuous bowel was attempted without success. Therefore the duodeno-ileal anastomosis was resected. A side-to-side handsewn 2 layers anastomosis was done to connect the two ileal limbs and restore continuity. The mesenteric defect was closed. The duodenal stump was macerated so decision was made to do a mini gastric bypass by resecting the distal portion of stomach which was removed. Next, a jejunal loop was brought up creating a hand sewn 2 layer anastomosis to the proximal stomach. Anastomosis were tested with methylene blue and showed no leak. Two drains were placed both in the left upper quadrant and left pelvic gutter.

Results

Postoperatively the patient did well, UGI test was negative on POD 3, and she was discharged on POD 4.

Conclusion

Laparoscopic conversion of duodenal switch to mini gastric bypass for duodeno-ileal anastomotic leak is a reasonable management alternative in a patient with complications following duodenal switch procedure.



V.013

LAPAROSCOPIC TOTAL GASTRECTOMY WITH ROUX EN-Y ESOPHAGO-JEJUNOSTOMY FOR A CHRONIC GASTRO-COLIC FISTULA AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY

Revisional surgery

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Background

Leaks after sleeve gastrectomy are the most dreaded complication.

Introduction

Chronic leaks after sleeve gastrectomy can manifest as gastro-colic, gastro-pleural and gastro-bronchial fistulae.

Objectives

To discuss the technical aspects of laparoscopic total gastrectomy with Roux en-y esophago-jejunosomy for a chronic gastro-colic fistula after LSG

Methods

Here we report a case of a gastro-colic fistula after a post-LSG leak. This video depicts the technique of a laparoscopic total gastrectomy with Roux en-y esophago-jejunosomy for a chronic gastro-colic fistula after LSG

Results

The patient did well post procedure and recovered well post surgery.

Conclusion

While re-performing laparoscopy and/or stenting remain the mainstay of early leak management, chronic complications such as a gastro-colic fistula are rare and require a tailor-made approach.

V.014

SMALL BOWEL OBSTRUCTION CAUSED BY MIGRATED INTRAGASTRIC BALLOON. LAPAROSCOPIC RESOLUTION.

Post-operative complications

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Introduction

Intra-gastric balloon has shown to be useful for treating overweight and obese patients. But complications have been reported, like valve leaks, migration, gastric outlet obstruction or bowel obstruction. Patient and physicians should be aware about these complications to easily diagnose and treat them.

Objectives

Show a clinical case of a bowel occlusion caused by migrated Intra-gastric balloon and its resolution.

Methods

43-year-old woman who presents bowel obstruction and was admitted thru the emergency room. An abdomen/pelvic CT scan showed a complete stop at terminal ileum, caused by a foreign body. Patient did not inform any surgical or endoscopic procedure before. We decided to make a diagnostic laparoscopy.

Results

During laparoscopy inspection we found bowel dilation and a solid intraluminal mass close to terminal ileum with normal ileum loops distal to the obstruction. We performed an enterotomy and we found rests of food and an intragastric deflated balloon, it was retrieved with a specimen bag. Enterotomy was closed with a linear stapler. She had an uneventful recovery after surgery and was discharged the 5th day.

Conclusion

Small bowel obstruction after intragastric balloon has been reported. However, it's not a very common cause of bowel obstruction, diagnosis becomes easy when patient gives information and image studies are done. Patients who underwent intragastric balloon should receive dietary guidelines and should be aware about these complications.



V.015

RNY GASTRIC BYPASS TO SADI-S WITH REPAIR OF HIATUS HERNIA AND CHOLECYSTECTOMY FOR WEIGHT GAIN & SYMPTOMATIC GALLSTONES

Revisional surgery

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Background

there is a some percentage of people who put on weight with time following gastric bypass

Introduction

To show by video the conversion of RNY Gastric bypass RYGB to SADI-S to give a good result

Objectives

To show that this conversion of RYGB to SADI-S is fairly feasible without much morbidity; this could reverse weight gain.

Methods

Video presentation of this. Also simultaneous repair of hiatus hernia as we have to do Sleeve Gastrectomy and also cholecystectomy for symptomatic gallstones. the gastro-gastric anastomosis is done widely to prevent anastomotic stricture which can be bugbear of the operation

Results

the patient stayed for 2 nights only inspite of the long length of the procedure and complicated nature. she was able to drink fluids and mobilised well by 2nd day. she could walk 5 k by the end of 1 week. she lost 5kg at 2 week follow up and now she has lost about 15 kg at 2 months follow up.

Conclusion

Conversion of RYGB to DS or SADI-S is one of the fool-proof options compared to conversion to banded gastric bypass or lengthening/distalisation of the BP limb. It should be also in the bariatric surgical armamentarium and should be performed by surgeons with a lot of experience in the Upper GI surgery and DS/SADI-S procedures.



V.016

ROBOTIC ASSISTED BARIATRIC SURGERY: SINGLE ANASTOMOSIS DUODENAL SWITCH

Robotic bariatric surgery

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Introduction

Surgeons are facing more complex surgical situations given the growth of the super-obese patient population as well as complications that arise following bariatric surgery. These two particular situations demonstrate the need for robotic platforms as they can facilitate the related operations.

Objectives

To demonstrate the effectiveness of robotic assisted surgery in the single anastomosis duodenal switch, as it obviates surgical positioning dilemmas in regards to the limited perspective and physical reach of laparoscopic instruments, as well as the improved manipulation of robotic instruments due to their inherent flexibility.

Methods

A 27-year-old female patient with morbid obesity (BMI 42), diabetes mellitus, asthma, and obstructive sleep apnea presents for an elective robotic assisted single anastomosis duodenal switch.

Results

The operation begins with a dissection of the greater curvature with preservation of the gastroepiploic vessels prior to transection of the short gastric arteries. Proximal dissection terminates at the hiatus, and distal dissection continues beyond the pylorus to the duodenal bulb where the dissection is completed circumferentially to allow for transection of the duodenum. Next, the gastric sleeve is created, and the omentum is re-approximated to the greater curvature. The duodenum is then transected, and the distal bowel site for anastomosis is obtained after identifying the ileocecal junction and traveling 300cm proximal to that point. The anastomosis is then created after formation of the enterotomies, using a hand-sewn, double-layer technique.

Conclusion

The single anastomosis duodenal switch serves as the ideal robotic bariatric operation given the superior visualization and articulation when compared to the dimensional constraints of laparoscopy.

V.017

INTRAOPERATIVE COMPLICATIONS OF LAPAROSCOPIC DUODENAL SWITCH

Malabsorptive bariatric operations

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Introduction

Biliopancreatic diversion with Duodenal Switch is considered one of the most effective, yet challenging procedures for the treatment of morbid obesity. Even though it is being increasingly performed in the last few years, still represents <1% of all bariatric surgeries performed in North America, likely due to its very steep learning curve and higher complication rate compared to other bariatric procedures.

Objectives

To demonstrate intraoperative complications of Duodenal Switch.

Methods

Three patients with morbid obesity were considered for laparoscopic Duodenal Switch:

CASE 1: 42 yo F, BMI: 62.8 kg/m²; intraoperative complication: positive air -leak test at duodeno-ileal anastomosis. The superior corner of the anastomosis was reinforced and subsequent test was negative.

CASE 2: 46 yo F, BMI: 40.6 kg/m²; the enlarged and macronodular appearance of the liver found unexpectedly during the procedure raised concerns for possible cirrhosis, making necessary to stop at a Sleeve Gastrectomy.

CASE 3: 58 yo M, BMI: 44.4 kg/m²; intraoperative complication: while creating the duodeno -ileal anastomosis a defect on duodenal perfusion was noted, the anastomosis was aborted, therefore changing the original plan to a subtotal gastrectomy plus Roux-en-Y reconstruction.

Results

All cases were completed laparoscopically.

CASE 1: operation time 3h31 m, EBL: 20 mL, discharged on POD 5.

CASE 2: operation time 2h27m, EBL: 30 mL, discharged on POD 1 with hepatology referral.

CASE 3: operation time: 5h14, EBL: <50 mL, discharged on POD 4.

Conclusion

Duodenal switch is a complex procedure. Changes in the surgical plans due to unexpected findings or intraoperative complications should be considered on behalf of patient safety.



V.018

LAPAROSCOPIC MANAGEMENT OF EARLY PERFORATION AFTER INTRAGASTRIC BALLOON INSERTION CAUSING GASTRIC ISCHAEMIA

Post-operative complications

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Background

Insertion of intragastric balloon can induce modest short-term weight loss in morbidly obese patients either as a standalone procedure or as a bridge to definitive bariatric procedure. I

Introduction

It is a safe procedure frequently associated with minor symptoms such as nausea and vomiting, however, serious complications, such as balloon migration and perforation, have been described and can result in significant morbidity and even mortality. The appropriate treatment for perforation can be conservative, endoscopic or surgical.

Objectives

We present the case of a 48-year-old female presenting with generalized peritonitis 2 days after insertion of intragastric balloon.

Methods

CT scan showed a leak near the gastro-oesophageal junction. The patient was transferred to theatre for urgent laparoscopic management.

Results

Laparoscopy revealed four-quadrant peritonitis and a necrotic gastric fundus with perforation at the supero-lateral aspect. The intragastric balloon was removed and a fundectomy was performed removing non-viable tissue. This resulted in a staple line extending from the middle of the greater curvature to a point close to the gastro-oesophageal junction.

The patient was discharged after a prolonged hospital stay. She was readmitted 3 weeks postoperatively with a leak from the proximal part of the staple line resulting in a localized perforation. This was managed conservatively and she made a full recovery.

Conclusion

Intragastric balloon is a useful management tool for bariatric patients. Serious complications such as perforation is rare but can be devastating. A high index of suspicion for perforation in patients exhibiting significant abdominal pain after insertion of intragastric balloon is paramount for successful management.



V.019

SYMPTOMATIC HIATAL HERNIA IN ELDERLY OBESE PATIENT: LAPAROSCOPIC REPAIR, HIATOPLASTY AND ROUX-EN-Y GASTRIC BY- PASS

Hernia surgery in the bariatric patient

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Introduction

Morbid obesity is often associated with hiatal hernia and gastroesophageal reflux disease (GERD). Weight loss after bariatric surgery can improve GERD, but some interventions (i.e. sleeve gastrectomy, band) may worsen the reflux. In addition, when present, a large hiatal hernia could represent a technical issue for restrictive procedures.

Objectives

We present a case of a 70-year-old obese female (BMI 52 Kg/m²) affected by severe GERD with biliary reflux, voluminous symptomatic hiatal hernia containing the gastric fundus, type 2 diabetes, hypertension, OSAS, previous open cholecystectomy. Although the age could represent a contraindication, we decided to associate a bariatric procedure to the hiatal hernia treatment.

Methods

A laparoscopic approach was performed. After the isolation of the diaphragm pillars, a voluminous hiatal hernia was reduced, with complete mobilization of the sac and intrathoracic esophagus. Hiato-plasty was performed with interrupted non-absorbable stitches. An antecolic antegastric Roux-en-Y gastric by-pass completed the procedure.

Results

Postoperative course was regular and the patient was discharged on the sixth postoperative day. At 1 month follow-up the patient lost 12 kg and was asymptomatic for GERD.

Conclusion

In case of concomitant morbid obesity, RYGBP can be safely associated to hiatal hernia surgical treatment and optimize the effects on GERD symptoms.

□
V.020

GASTRO-GASTRIC FISTULA AFTER ENDOSCOPIC DILATATION OF A GASTRO-JEJUNOSTOMY STRICTURE

Post-operative complications

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Introduction

Gastro-gastric fistula (GGF) is a rare complication following gastric bypass surgery and usually presents late. Typical symptoms are weight recidivism, abdominal pain, nausea and vomiting, marginal ulcer and reflux.

Objectives

To manage a patient with GGF who had endoscopic treatment of a stricture at the gastro-jejunosomy

Methods

Forty-six year old female non-smoker presented to our clinic eight years post laparoscopic RY gastric bypass under another surgeon. She underwent four previous balloon dilatations for a GJ anastomotic stricture. Her last dilatation was four years ago after which there was a suggestion of a GGF. Further investigations at the time were negative. At clinic her symptoms were epigastric pain, vomiting and weight regain with a BMI of 52.3kg/m². OGD showed a GGF with ulceration at the anastomosis, the former confirmed by CT abdomen . She was treated with triple therapy followed by PPI before surgical revision .

Results

At surgery, extensive adhesions were noted. After adhesiolysis, laparoscopic revision was performed with resection of the original gastro-jejunosomy and the formation of a new anastomosis between the roux limb and the short pouch. She had an uneventful post-operative recovery and was discharged on day four. She started to lose weight after resolution of her symptoms. Her BMI one month post revision was 49.2 kg/m².

Conclusion

Weight gain is not always a feature of patient noncompliance and an index of suspicion must exist when patient presents with late symptoms of weight regain. GGF may have resulted from the endoscopic treatment of strictured gastro- jejunosomy and surgical revision is warranted.

□
V.021

AN UNUSUAL CAUSE OF INTERNAL HERNIA FOLLOWING GASTRIC BYPASS

Post-operative complications

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Background

Internal hernias occur following laparoscopic gastric bypass(LGB) surgery through either the jejunal mesenteric defect or the Peterson's defect. A patient presenting with features of small bowel obstruction following gastric bypass and weight loss should raise a high suspicion of internal hernia. This may also occur following surgical closure of mesenteric defects at the time of primary surgery as we do. We maintain a low threshold for a diagnostic laparoscopy in such patients due to the possibility of compromise of bowel viability.

Introduction

A 49 year old lady with history of 25 Kgs weight loss following LGB 6 months ago, presented with severe colicky pain right upper abdomen and retching x 2 days. History of similar but milder episodes in the past one month post prandial, relieved on vomiting were present.

O/e the patient was dehydrated, had a pulse rate of 110/min, abdominal fullness with marked tenderness in the central abdomen and TLC of 11800/cumm. The patient was posted for a diagnostic laparoscopy based on above findings.

Objectives

The video shows an unusual cause of internal hernia with reversible vascular compromise indicating an early intervention to be the key treatment step.

Methods

Diagnostic laparoscopy showed internal bowel herniation through a band between the terminal end of biliopancreatic limb(BPL) and the common channel. The band was divided and the redundant end of the BPL excised.

Results

The patient made an uneventful recovery.

Conclusion

Small bowel obstruction following LGB occurs commonly due to internal herniation. A low threshold for a diagnostic laparoscopy can prevent adverse outcomes.

□
V.022

JEJUNAL DIVERTICULA COMPLICATING LAPAROSCOPIC RYGB

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Background

Jejunal diverticula, relative contraindication for laparoscopic Roux-en-Y gastric bypass.

Introduction

We present a case of a 62-year-old female with a BMI of 37 kg/m² who underwent an uneventful, elective laparoscopic Roux-en-Y gastric bypass. Incidentally patient was found to have very small (< 8 mm) jejunal diverticula along mesenteric border.

Since she did not present with any symptoms related to the diverticula, decision was made to proceed with laparoscopic Roux-en-Y gastric bypass. Six months after surgery she developed difficulty with PO intake, frequent nausea, vomiting and post-prandial upper abdominal pain.

Objectives

To demonstrate presentation, diagnosis and technique for treatment of symptomatic peri anastomotic jejunal diverticulum.

Methods

EGD and UGI series demonstrated the presence of a moderate diverticulum at the gastrojejunostomy, stemming from the small intestine containing undigested food. The diverticulum filled with food, angulated the anastomosis and caused patient to have symptoms. The patient then underwent an uncomplicated laparoscopic diverticulectomy.

Results

Post-operatively, the patient ultimately tolerated solid diet well without further difficulties. The video demonstrates the technique employed for this procedure.

Conclusion

In conclusion, we recommend that the jejunum to be used for the Roux limb of gastric bypass be carefully evaluated for the presence of diverticula. If they are seen, an area that is normal should be identified to avoid this potential complication if it is within a reasonable distance. If a normal area is not seen, consideration should be given to not proceeding with a Roux-en-Y gastric bypass.

V.023

PERFORATION OF MARGINAL ULCER POST LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS

Post-operative complications

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Background

Marginal Ulceration (MU) at the gastrojejunostomy anastomosis is a well known complication of Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) with a reported rate of 1-8%. Up to 20% of patients with MU may suffer from perforation, calling for an emergency operation.

Introduction

A 52 years old female patient, smoker but otherwise healthy underwent removal of Lap-Band and conversion to LRYGB one year prior to current admission. The patient presented to the Emergency Department due to sudden onset of severe epigastric pain. CT scan showed free air in the upper abdomen and she was taken to laparoscopy.

Objectives

This video shows a case of MU perforation in which the site of perforation was not easy to locate and the simple treatment of the perforation there after.

Methods

At laparoscopy, only after thorough dissection and mobilization could the perforation site be located at the posterior aspect of the upper anastomosis. All fluid collections were drained and a simple suture closed the hole.

Results

The post operative course was uneventful and the patient was discharged 2 days after the operation. Five years after the operation she ceased smoking, takes a Proton Pump Inhibitor and keeps her BMI round 23 kg/m².

Conclusion

Do not be lazy !!! The hole in the bucket may hide in a place you do not suspect it to be. Look carefully at all possible sites. With good tissues primary closure can be all that is needed

□
V.024

ALIMENTARY LIMB ISCHEMIA AND BOUGIE PERFORATION DURING RYGB

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Ischemia of the tip of the alimentary limb also involving the Gastrojejunostomy (GJ) is an unusual complication during Roux en Y Gastric Bypass (RYGB). Revision of the GJ may be needed to manage this complication

Objectives

We present a case of inadvertent perforation of the jejunum by a gastric calibration tube, that was recognised on table and appropriate measures taken. Repair of this enterotomy however then lead to ischemia of the tip of alimentary limb also involving the GJ anastomosis. We present its subsequent management.

Methods

Our patient is a morbidly obese female patient with BMI 44.6 kg/msq undergoing RYGB. We did an antecolic antegastric linear stapled gastrojejunostomy of 2.5 cm. After hand sewn closure of the common enterotomy, we tried passing a 38F Bougie through the anastomosis into the Roux limb. During this manoeuvre the Bougie inadvertently perforated the Roux limb at the mesenteric border. Following repair of this jejunal rent, we saw distal part of the Roux limb had gotten dusky and also involved part of the gastrojejunostomy anastomosis. The gastrojejunostomy was immediately revised. Intraoperatively methylene blue dye test was done which showed no leak.

Results

Post operative gastrograffin study revealed no leak and liquids were started on POD1

Conclusion

Inadvertent injury by a Bougie is a known complication in Laparoscopic RYGB. Intraoperative recognition of the complication is important to do the necessary repair. Revision of the gastrojejunostomy needs to be done if the Roux limb or the anastomosis itself is ischemic and can be done with good results.

□

V.025

LAPAROSCOPIC ADJUSTABLE GASTRIC BAND EROSION AND GASTROJEJUNAL FISTULA

Adjustable gastric banding

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Introduction

Laparoscopic adjustable gastric banding is a commonly employed means for surgical treatment of obesity and obesity related comorbidities. Unique complications can arise at any time following this operation.

Objectives

To demonstrate the repair of a severe complication, gastric band erosion and fistula formation, resulting from laparoscopic gastric banding.

Methods

An obese 43 year old patient (BMI 53) presented with complaints of vague, but persistent abdominal pain in the setting of a previous laparoscopic gastric banding. She reported having multiple port site infections with eventual removal of the port, but not the band or connective tubing. She underwent an upper GI demonstrating an abnormal anatomy suggestive of a gastrojejunal fistula. An upper endoscopy revealed an eroded gastric band, but no evidence of fistulae.

Results

The patient was taken to the OR where a laparoscopic repair was performed. Extensive lysis of adhesions revealed an eroded gastric band with intra-gastric and intra-jejunal components thus confirming the presence of a gastro-jejunal fistula. The band was removed and the small bowel defect was closed with a stapling device. The gastrotomy was closed in two layers, with an omentopexy included in the second layer. The patient did well post-operatively, was discharged tolerating a diet, and will return at a later date to discuss further bariatric interventions.

Conclusion

Gastric banding has the potential for a wide range of complications, and one must have a high suspicion for such when patients present with even mild, vague symptoms.

□
V.026

REDUCING SURPRISES AFTER BARIATRIC MEDICAL TOURISM: THE IMPORTANCE OF CAREFUL PREOPERATIVE INVESTIGATION

Revisional surgery

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Background

The increase in medical tourism has meant that revisional bariatric surgery often reveals unusual surgical techniques and procedures.

Introduction

A 63-year-old female presented for revisional bariatric surgery following two operations performed privately in Europe. She had previously had LAGB 10 years previously when her maximum weight was 146kg(BMI 54.3). Her weight reduced to 63kg(BMI 23.4) but increased to 88kg(BMI 32.7) necessitating combined gastric band removal and conversion to sleeve gastrectomy 6 months ago. Subsequent to this surgery she had never experienced any restriction and her weight increased to 101kg(BMI 38.0).

Objectives

To demonstrate an unusual case of revisional bariatric surgery.

Methods

Video presentation of pre-operative investigations and diagnostic laparoscopy.

Results

Preoperative barium swallow revealed a markedly dilated fundus with little evidence of previous sleeve gastrectomy.

Diagnostic laparoscopy revealed a previous full devascularisation of the greater curve of the stomach from antrum to angle of His. It was evident that only the distal greater curve had been stapled and the entirety of the fundus was left in situ. The sleeve gastrectomy was converted to a Roux-en-Y gastric bypass with removal of fundus and body of stomach. The jejunojejunostomy and the gastrojejunostomy were constructed in a standardised manner. The patient was discharged on day 2 with no complications.

Conclusion

As we have demonstrated in this case careful investigation with imaging will help elucidate the anatomy and prevent surprises at revision surgery. By adhering to the principle of cautious investigations in revisional cases, combined with standardised surgical technique maximal patient outcomes can be achieved.



V.027

STAGED MANAGEMENT OF AN EARLY SLEEVE GASTRECTOMY LEAK: LAPAROSCOPIC USE OF A ROUX LIMB AS REMEDIAL SURGERY FOR A SLEEVE GASTRECTOMY FISTULA.

Sleeve gastrectomy

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Introduction

Sleeve gastrectomy leaks are a challenging management problem.

Objectives

This edited video highlights the essential management steps in managing an early leak (day 32) following a sleeve gastrectomy.

Methods

Staged management involved treating the sepsis, establishing enteral nutrition, defining the anatomy and then laparoscopically anastomosing a roux limb onto the fistula. All steps are covered in this edited video.

Results

The patient made an uncomplicated recovery.

Conclusion

Staged management of an early sleeve gastrectomy leak by eventual formation of a roux loop onto the fistula is possible laparoscopically.

V.028

THORACIC ESOPHAGEAL INJURY DURING LSG, LESSON LEARNT & HOW I MANAGED IT

Sleeve gastrectomy

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Background

During bariatric surgery, esophageal perforation reported with gastric band insertion. So during the operative procedure, care must be taken to precisely identify the esophageal wall.

Introduction

*Esophageal perforation is a full-thickness injury to the esophagus that can occur during a number of situations. Here we are presenting a case of thoracic esophageal injury during LSG (laparoscopic sleeve gastrectomy) and lessons learnt & how we managed it

Objectives

- We are presenting this video to show that although the safe technique in doing LSG, still calibration of the esophagus need special care.
- Also the difficulty in dealing with intraoperative thoracic esophageal perforation and the possible fatal complications gave us lessons to be learnt.

Methods

A 36-year-old adolescent female with past medical history of hyperlipidemia and arthritis was admitted to our hospital due to morbid obesity. Her Body Mass Index (BMI) was calculated to 42.1 kg/m² (weight: 115 kg, height: 1.65 m).

Results

the mobilization of the intra-abdominal part of the esophagus was easy and done as usual with blunt technique away from any thermal exposure and mobilization of about 5 cm to be intra-abdominal. After completion of the procedure which was in 35 minutes and after injection of methylene blue and result was no apparent leak.

Conclusion

* Use of endoscopy in calibration of stomach during Laparoscopic sleeve gastrectomy is safe associated with lower postoperative complications.

* The use of esophageal tubes during morbid obesity surgery should be done with extreme caution.

□
V.029

PARTIAL SPLENECTOMY DURING LAPAROSCOPIC REVISIONAL VERTICAL BANDED GASTROPLASTY

Revisional surgery

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Introduction

Up to 8% of primary bariatric surgeries will require a revisional intervention. Restrictive techniques are associated with increased risk of failure. Vertical Banded Gastrostomy (VBG) was the most commonly primary bariatric surgery in the 80s, however, nearly a third of the patients will regain weight back and will seek for new surgical treatment.

Revisional bariatric surgery is associated with higher intraoperative morbidity and mortality rates compared with primary bariatric surgery.

Objectives

To demonstrate an intraoperative complication of revisional bariatric surgery.

Methods

58 year-old female with HTN, DM II, OA, HLP, OSA; weight: 493 lb, height: 165 cm, BMI: 82.2 kg/m².

Surgical Hx: open VBG thirty years ago followed by revisional bariatric surgery one year later.

The patient was considered for laparoscopic revisional surgery due to failed primary bariatric surgery to attempt conversion of VBG to Roux-en-Y Gastric Bypass (RYGB).

Using 5 ports, general exploration revealed the proximal stomach densely adhered to the left lateral segment of the liver and spleen. Inadvertent bleeding from the spleen capsule occurred during adhesiolysis. Efforts to stop the bleeding were ineffective hence splenectomy was performed. Moderate inter-loop adhesions and difficulty with dissection were encountered. The operation was aborted due to significant patient risk.

Results

Operation time: 2h52m.

Intraoperative complications: Injury of the spleen capsule and bleeding difficult to control.

Completed procedures: partial splenectomy

Aborted procedures: RYGB

EBL: 500 ml

Conclusion

Revisional bariatric surgery is challenging.

Increased adhesions and distorted anatomy raises the technical complexity of the procedure resulting in potential life-threatening perioperative complications.

V.030

POST SLEEVE GASTRECTOMY CHRONIC FISTULA COMPLICATED WITH MID-SLEEVE PERFORATION DUE TO STENTING: SUBTOTAL GASTRECTOMY & ROUX-EN-Y ESOPHAGO-JEJUNOSTOMY

Post-operative complications

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Background

Leak post Laparoscopic Sleeve Gastrectomy (LSG) is a dreaded complication. The reported incidence in the literature is 0.7% - 4% . 90% of the leaks appear at or very close to the EG junction. Non operative measures like clips or stents are varying in their success rate carrying their own complication rate (migration, perforation etc). Eventually some 30% of the patients suffering a leak and a chronic fistula have to undergo surgery which is never a simple procedure.

Introduction

A 34 years old female with a BMI of 43 kg/m² but otherwise healthy, underwent LSG. On the 16th post-operative day she presented with a leak at the EG junction and was taken to laparoscopic exploration for washout and a suturing attempt. Because of continuous leakage we tried an OVESCO clip and a stent placed endoscopically. After stent removal the fistula reopened and a new short stent was placed. The fistula did not heal and the stent eroded the stomach wall to the pancreas and retroperitoneum. The patient was taken to laparoscopy.

Objectives

This video presents the surgical treatment for the above mentioned problem.

Methods

Thorough dissection of the GE junction and mobilizing the esophagus in the chest into the abdomen.

Sharp dissection to free the open mid sleeve from the pancreas.

Transection of the distal esophagus.

Transection of the antrum.

Roux-en-Y esophago-jejunostomy.

Results

Post-operative course was uneventful.

BMI round 27 kg/m² for the last 4 years.

Conclusion

1. short stents have their price.

2. Subtotal gastrectomy with esophago-jejunostomy is a valid option.



V.031

LAPAROSCOPIC ROUX-EN-Y FISTULO-JEJENOSTOMY FOR LEAK FROM SLEEVE GASTRECTOMY

Post-operative complications

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Introduction

Laparoscopic sleeve gastrectomy (SG) is the most frequent bariatric procedure performed nowadays. One of the most feared complications after SG is a leak. Management includes clinical detection, endoscopic and surgical options. Risk of complications also increases with revision bariatric surgery.

Objectives

This video shows the difficult dissection and lots of adhesions in this patient's abdomen, and how conversion of SG leak to roux-en-y gastric bypass (RYGB).with fistula-jejenostomy is done.

Methods

This video is a about a lady who initially had a sleeve gastrectomy but subsequently had weight regain and converted to a RYGB. She then experienced severe dumping syndrome and was converted back to a sleeve gastrectomy. This sleeve gastrectomy then leaked at the top of the staple line near the hiatus. A laparoscopic decompression naso-gastric (NG) tube was placed in the distal antrum through the abdominal wall as well as feeding jejenostomy to establish enteral feeding. The video then shows the conversion back to a RYGB with fistula-jejenostomy over the leak site 2 weeks later.

Results

The patient resumed feeds on post-operative day (POD) 4, and is discharged well on POD11.

Conclusion

Laparoscopic RYGB with fistula-jejenostomy is a safe and viable option in the treatment of sleeve gastrectomy leak.

□
V.032

PROXIMAL GASTRECTOMY & ROUX-EN-Y ESOPHGO-JEJUNOSTOMY FOR A COMPLICATED GASTRO-GASTRIC FISTULA POST ROUX-EN-Y GASTRIC BYPASS

Post-operative complications

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Background

Gastrogastric fistula (GGF) is a well known complication of Roux-en-Y gastric bypass (RYGB) surgery. The reported incidence in the literature is 1%-6%. Endoscopic therapy has a low success rate and surgery is often undicated.

Introduction

We present a 62 years old female, smoker with a BMI of 34 and uncontrolled diabetes (HBA1C of 10% despite 300 units of Insulin per day). Other comorbidities include: Hypertension, hypercholesterolemia, chronic renal failure and peripheral vascular disease. Past surgical history: Aorto-iliac bypass and Rt above knee amputation. Two and a half years after a successful RYGB with dramatic improvement of her diabetes, she presented with weight regain, relapse of diabetes and epigastric pain. Endoscopy and CT scan confirmed the diagnosis of GGF.

Objectives

This video present a complicated case of GGF with erosion of the ulcer\fistula complex to the pancreas and retroperitoneum.

Methods

On laparoscopy the fistula/ulcer complex has eroded to the pancreas retroperitoneum and Lt crus close to the EG junction. The gastric pouch gastric remnant and anastomosis were resected and a Roux-en-Y Esophago-jejunostomy performed.

Results

The immediate post operative course was uneventful. Two months later the patients suffered from a minor stroke without serious permanent neurological sequela. Diabetes is well controlled with metformin alone and her BMI is 26.7 kg/m².

Conclusion

In difficult cases of GGF where the ulcer eroded into adjacent tissues or the fistula is very close to the EG junction, en-block resection of the pouch, remnant and gastro-jejunal anastomosis should be considered. After resection we prefer to reconstruct in a Roux-en-Y Esophago-jejunostomy fashion.

V.033

IATROGENIC LOW LEAK POST-LAPAROSCOPIC SLEEVE GASTRECTOMY SUCCESSFULLY REPAIRED WITH LAPAROSCOPIC INTERNAL DRAINAGE AND ROUX-EN-Y RECONSTRUCTION

Post-operative complications

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Introduction

A 49-year old female, with a BMI of 47 and unremarkable past medical history, presented to our Bariatric Unit after multiple unsuccessful attempts for weight loss.

Objectives

The patient underwent standard preoperative evaluation, i.e. chest x-ray; lower extremity triplex ultrasound; complete blood count; biochemistry, coagulation and virology panels; and upper gastrointestinal endoscopy. All of them were normal.

Methods

The index operation was laparoscopic sleeve gastrectomy (LSG). A narrowing at the lower third of the gastric remnant was identified and a standard staple line reinforcement with uninterrupted 2/0 PDS was performed. The patient was discharged on post-operative day (POD) 4. On POD 15 the patient underwent standard re-examination, which revealed drain amylase levels of >4,000 IU/L. She was readmitted and low leak was established by upper gastrointestinal fluoroscopy (UGIF). She was put on total parenteral nutrition and for the next three months various conservative techniques were tried (stenting, sealant application), with unfavorable outcomes. Exploratory laparoscopy revealed a gastro-cutaneous fistula corresponding to the postulated leak region. We proceeded with dissection of the fistulous tract, identification of the leak and internal drainage to a Roux-en-Y jejuno-ileal anastomosis.

Results

Post-operative course was uneventful. UGIF on POD 7 revealed no leaks and the patient was discharged. Three months later the patient had lost 30 kilograms and was doing well.

Conclusion

Leaks after LSG are usually located in the upper third of the gastric remnant. The peculiarity of this case owes to the lower location of the leak, which was attributed to stenosis following erroneous initial staple firing.



V.034

LAPAROSCOPIC CONVERSION OF SADI-S TO BANDED ROUX EN Y GASTRIC BYPASS

Revisional surgery

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Background

Weight regain after sleeve gastrectomy has emerged as a significant issue in the long term.

Introduction

There are multiple options for revision after sleeve gastrectomy. SADI-S is gaining popularity as a revision procedure for weight regain after sleeve gastrectomy.

Objectives

The video depicts the technical steps of conversion of a SADI to a banded Roux en Y gastric bypass in a case where already two redo surgeries have been performed.

Methods

37 year old female patient underwent gastric banding in 2005 at a weight of 150 kg. She failed to achieve adequate weight loss and 2 years later the band was removed and converted to a laparoscopic sleeve gastrectomy. Post that she lost 50 kg and came down to 100 kg. She desired for further weight loss and a laparoscopic SADI-S was performed. Post SADI -S her weight dropped to 53 kg. Patient then defaulted on her nutritional supplementation and developed severe protein energy malnutrition as well as other micronutrient deficiencies. She was counselled and after multiple sessions it was decided to convert the SADI to a Banded Roux en y gastric bypass in an attempt to reduce the malabsorption and yet maintain an acceptable weight.

Results

This patient had the entire gamut of bariatric surgery from an only restrictive procedure to completely mal-absorptive procedure like SADI-S.

Conclusion

In Indian population fully malabsorptive procedures must be performed with a pinch of salt as the population is largely vegetarian and most patients are not able to cope up with the intensive nutritional requirements of a SADI-S.



V.035

LAPAROSCOPIC CONVERSION OF MINI GASTRIC BYPASS TO ROUX-EN-Y GASTRIC BYPASS

Revisional surgery

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Introduction

Laparoscopic Mini-Gastric Bypass (MGB) is an alternative to the laparoscopic Roux-en-y gastric bypass (RYGB). Very rarely complications can occur following this procedure that require conversion to RYGB.

Objectives

We present the case of a 50 year old man who previously had a gastric band. He subsequently had a revision to MGB.

Methods

He had significant weight loss after this procedure but suffered from intractable diarrhea that was impairing his quality of life. A further revision of MGB to RYGB was decided.

Results

A laparoscopic approach was used for this revision. In the MGB, the BP limb was 275cm. The previous GJ was transected. A stricture in the jejunal side was observed after transection so this was resected and a new JJ was fashioned. A smaller gastric pouch was fashioned (around 3cm from GOJ and 15ml in size) and then an RYGB was performed with a 30cm BP limb and 75cm Roux limb.

Conclusion

Laparoscopic conversion is a viable method to revise MGB to RYGB in patients that suffer from complications of the primary procedure.



V.036

MGB TO SLEEVE GASTRECTOMY FOR MGB COMPLICATION

Revisional surgery

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Introduction

MGB is becoming quite popular bariatric procedure, more so in Asian continent. However since it has been adopted in last few years, the complications are under reported.

Objectives

41 year female patient with 82kg weight & BMI 30kg/m² had undergone MGB at other centre. She was a pure vegetarian and a known case of Thalassemia minor. She presented to us with severe progressive weakness despite receiving four blood transfusions her report showed significantly reduced levels of protein, haemoglobin, iron and calcium. She had occasional hypoglycemic attacks with BSL of 40-45mg/dl. She also had 4kg weight gain post operatively over a period of 3 years. She wanted reversal of the procedure however wanted to maintain the benefit of weight loss.

Methods

We chose the option of converting MGB to SG over standard GBP considering her above nutritional status.

Results

The hospital stay was 3 days without any morbidity. At the end of 1 year her weight loss was by 11 kg which she has maintained over last 2 years without any major deterioration in her nutritional status.

Conclusion

Conversion of MGB to SG is a feasible & satisfactory option to combat the complications caused by MGB.

□
V.037

LAPAROSCOPIC CONVERSION OF GASTRIC BYPASS TO SINGLE ANASTOMOSIS DUODENAL SWITCH IN 2 STAGES FOR WEIGHT RECIDIVISM

New (Non Standard) Surgical Techniques

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Introduction

63 year-old female with body mass index(BMI) 44 kg/m² complaining of weight regain after Roux-en-Y gastric bypass(RYGB) 24 years ago. Patient had lost 110 pounds and had gained back 60 pounds. Patient was able to eat large portions and was getting hungry every 1-2 hours. Preoperative UGI had normal findings but did show some dilation of pouch/anastomosis.

Objectives

Demonstrating the techniques of laparoscopic conversion of RYGB to single anastomosis duodenal switch in a two stage procedure.

Methods

Stage 1: A gastrotomy was made in the stomach remnant and pouch. A linear stapler was used to create the anastomosis. The opening was closed with a running 2-0 Polysorb in 2 layers. The Roux limb was transected from the jejunojejunostomy along with its mesentery using linear stapler. The stomach was transected vertically, with 34F Edlich tube in place. The staple line was imbricated and oversewn with a running 2-0 Polysorb.

Stage 2: Patient was brought back to the operating room 5 months later. A tunnel was created underneath the duodenum 4cm below pylorus and duodenum was transected using a linear stapler. At the 250cm point, the ileum was sutured to the proximal duodenum. Enterotomies are done in both the duodenum and the ileum, and the through-and-through layer is anastomosed.

Results

Postoperatively the patient did well, UGI test was checked and negative on POD 2, home on POD 3 on phase 1 diet.

Conclusion

Conversion of RYGB to two-stage duodenal switch may be feasible in RYGB patients.

□
V.038

DETECTIVE BARIATRIC SURGEON: REVISIONAL SURGERY OF UNCOMMON BARIATRIC PROCEDURES

Revisional surgery

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Introduction

With the increase of obesity worldwide, there is an increase in the number of bariatric procedures. Sometimes, uncommon procedures are done by surgeons in other parts of the world and are associated with morbidity. Revisional surgery of these procedures is challenging as usually data is lacking and the anatomy might be hard to identify pre and intraoperatively.

Objectives

To show the technical aspects of revisional surgery of 3 uncommon bariatric operations done outside the United Kingdom.

Methods

The first case is 59-year-old gentleman who underwent a laparoscopic "Butterfly gastroplasty" in Egypt. The patient presented with postprandial vomiting and weight regain and sought revisional surgery. The second patient had a bariatric procedure in the Middle East consisting in a horizontal stapling of the antrum narrowing the gastric outlet at that point. She sought revisional surgery due to food intolerance and vomiting. The third patient had a mesh-banded gastric bypass in Egypt and sought revisional surgery due to mesh erosion in the gastric pouch which presented with hematemesis and a gastrogastic fistula.

Results

All patients were revised to Roux-en-Y gastric bypass which is an excellent option for these uncommon previous procedures and also for salvage surgery for complications. The patients tolerated the procedures well and were discharged home without complications.

Conclusion

Extensive preoperative studies are necessary in these patients to identify the anatomy as these procedures are not standardized. RYGB is a good option for revisional surgery for these uncommon operations.

□
V.039

ONE-ANASTOMOSIS JEJUNAL INTERPOSITION WITH GASTRIC REMNANT RESECTION (BRANCO-ZORRON SWITCH): SUCCESSFUL MANAGEMENT OF SEVERE CHRONIC HYPOGLYCEMIA POST GASTRIC BYPASS

Revisional surgery

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Background

Postprandial chronic hypoglycaemia following gastric bypass for obesity is considered a late manifestation of the dumping syndrome. The anatomic and physiologic changes of the operation may lead to uncommon but difficult to treat complication as hyperinsulinemic hypoglycemia with neuroglycopenia.

Introduction

For patients non-responders for conservative treatment, extreme therapy with distal pancreatectomy or revision to normal anatomy were reported.

Objectives

We propose a new procedure to effectively treat this complication after bariatric surgery and applied in a pilot clinical series.

Methods

One-Anastomosis jejunal interposition and gastric remnant and alimentary limb jejunal resection (Branco-Zorron Procedure) was performed in 8 patients with chronic symptomatic hypoglycemia from 2 to 11 years after RYGB. Technical steps included: 1. Fully adhesiolysis and recognition of anatomy; 2. Remnant gastrectomy with stapling ca 3cm from pylorus. 3. Section of the jejunal limb 20cm from GE. 4. Handsewn anastomosis between jejunal interposition and remnant antrum. 5. Resection of alimentary limb.

Results

There were no postoperative complications. BMI evolved from a mean of 42.0 to 26.5kg/m² after 20 months follow-up. Mean operative time for revisions was 188 min. Postoperative stay was 6 days. Follow-up showed normalization of insulin levels from a mean of 8.2 to 3.2microUI/ml and Hba1c.

Conclusion

Jejunal interposition is safe and effective therapy for hyperinsulinemic hypoglycemia post gastric bypass in selected patients.

□
V.040

LAPAROSCOPIC GASTRIC-BYPASS REVERSAL WITH CONCOMITANT SLEEVE GASTRECTOMY (SG), FOR REFRACTORY HYPOGLYCEMIA: AN UNUSUAL PROCEDURE .

New (Non Standard) Surgical Techniques

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Background

We describe an usual technique of laparoscopic bypass reversal with concomittant sleeve gastrectomy (SG) for a patient with severe hypoglycemia , that is refractory to medical treatment . the case was challenging , this this patient has undergone many surgeries (including laparotomies) prior her presentation to our institution.

Introduction

Post-bariatric surgery hypoglycemia is usually seen in patients with a history of Gastric Bypass (GBP) . Few are the patients that may suffer severe hypoglycemic symptoms following GBP . The pathophysiology of post-gastric bypass hypoglycemia is not well understood, and many theories have been proposed.

Objectives

-Laparoscopic GBP reversal with concomittant SG , is a feasible option in patient with post GBP hypoglycemia.

Methods

The technique we've adopted is unique , since we've fashioned a sleeve tube after performing a gastro-gastrostomy with intra-corporeal sutures.

Results

The post operative course was uneventful . the upper GI series , revealed no evidence for leak. Patient was free of symptoms 1 year following surgery.

Conclusion

Post-bariatric surgery hypoglycemia is challenging, for surgeons and endocrinologists . Our patient has suffered severe symptoms that were refractory to medical treatment and dietary modifications. Since she was still overweight (BMI =33kg/m2) with a history of weight regain following bariatric surgery failure, we offered her GBP reversal with concomitant sleeve gastrectomy . Few papers have discussed Laparoscopic GBP conversion to a SG for refractory hypoglycemia , but results from small series are showing promising results . Our case was challenging because of the patient's previous multiple open surgeries.

□
V.041

FLUORESCENCE ASSISTED LAPAROSCOPIC REVERSAL OF ROUX-EN-Y GASTRIC BYPASS

Revisional surgery

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Introduction

Roux-en-Y gastric bypass (RYGB) is the gold standard for the treatment of morbid obesity. Reoperations are not infrequent and include exploration for leaks, intractable ulcers, anastomotic strictures, inadequate weight loss and in rare occasion severe malabsorption.

Objectives

The patient was a 61-year old female who underwent RYGB in 2014. She presented with complaints of nausea, vomiting, dysphagia, abdominal pain and diarrhea. She underwent extensive work up that did not reveal any stricture or obstruction but severe malabsorption was noted. Gastrostomy tube was placed to improve her nutrition status. Due to persistent symptoms, the patient was started on TPN and laparoscopic reversal of gastric bypass was offered.

Methods

We performed a fluorescence assisted laparoscopic reversal of RYGB.

Results

The procedure took 180 min, without intraoperative complications. Blood loss 50 mL. Extensive lysis of adhesions was performed. The alimentary limb was retrogastric/retrocolic. The gastrojejunostomy was isolated and then transected proximally and distally. The jejuno-jejunosomy was taken down by disconnecting only the biliopancreatic limb.

Gastrogastrostomy was created with linear stapler. A side-to-side anastomosis was created between the proximal end of the alimentary limb and the distal end of the biliopancreatic limb. Intraoperative fluorescence was used during the case to identify areas of critical ischemia. Two areas were over sewn.

Intraoperative endoscopy showed patent gastro-gastrostomy and no evidence of leak.

Conclusion

The use of intraoperative Fluorescence identifies critical areas of ischemia. The application of fluorescence may decrease the risk of ischemia/perforation in revisional bariatric surgery.

V.042

CAN "SLEEVE" SOLVE THE PROBLEM OF AN INEFFECTIVE BILIOPANCREATIC DIVERSION?

Revisional surgery

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Introduction

It is widely known that a major cause of failure of gastric bypass is patient's dietary attitude regarding sugar consumption.

Objectives

This case report suggests a surgical approach for patients submitted to Gastric Bypass unable to conform to dietary recommendations and to achieve the ideal body weight.

Methods

A 58 year old woman, 8 years after Gastric Bypass for morbid obesity presents to our department with a BMI 58.7kg/m². The upper GI series reveal a dilation of the gastrointestinal anastomosis. We performed a laparoscopic measurement of the alimentary limb length (2.5m) and common small intestinal channel (1m). We decided to proceed with a gastric pouch reshaping via a lateral resection. The postoperative course was uneventful and the patient was discharged on the 3rd postoperative day. Three months postoperatively the patient has a BMI 49.8kg/m². Nine months later she presents with weight regain and BMI 56.9kg/m². A new operation is undertaken. The current operation consists of the gastrointestinal anastomosis being taken down and a gastrogastric anastomosis between the gastric pouch and the gastric remnant being performed. A sleeve-shaped gastric resection follows, while the alimentary limb is left intact.

Results

Patient started liquid diet on the 1st postoperative day and was discharged on the 3rd postoperative day. One month later, she had a weight loss of 11kg and the blood results revealed a normal nutritional status.

Conclusion

The reinforcement of the restrictive component of the bariatric operation can be a safe and effective alternative approach for patients failing to lose weight after a major malabsorptive procedure.

V.043

WHAT IS THE IDEAL THERAPY FOR INOPERABLE SUPEROBES UP TO BMI100? OUR EXPERIENCE WITH APOLLO ENDOSLEEVE FOR HIGH-RISK SUPEROBES PATIENTS

New (Non Standard) Surgical Techniques

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Background

Many patients with surgical contraindications for formal bariatric surgery (high-risk, impenetrable abdomen) have few alternative besides conservative management.

Introduction

New endoscopic procedures can be currently applied to these cases. This study describes the preliminary german clinical experience with Endoscopic Sleeve Gastroplasty- Endosleeve.

Objectives

The study aims to discuss indications, recognizes the technical issues, tips and tricks when dealing with endoscopic therapy (Apollo Endosleeve) for high risk and superobese population with BMI up to 100, as a primary procedure or as a 2-stage procedure.

Methods

The video presents primary endoscopic sleeve gastroplasty using the full-thickness suturing device Apollo Overstich for superobese patients, high risk and impenetrable abdomen patients. Technical steps included: 1. Diagnostic endoscopy. 2. Insertion of the Overtube. 3. Progressive full-thickness suturing of the greater curvature from antrum to fundic with Apollo Overstich. The patients were documented regarding complications, weight loss and co-morbidities.

Results

12 patients were submitted to the procedure without intraoperative complications. All selected patients were ASA III classified, due to cardiopulmonary high-risk, or liver/renal transplant candidates. Mean operative time was 87min. Mean preoperative BMI was 54kg/m², Highest BMI was 100, highest body weight was 310kg. Follow-up showed satisfactory weight loss with no weight regain after 6 months.

Conclusion

Endoscopic therapy with Apollo Overstich for inoperable high risk patients or as a 2-stage procedure is a new non-invasive procedure with satisfactory early results.



V.044

TWO CARTRIDGE SLEEVE GASTRECTOMY- IS IT FEASIBLE?

Sleeve gastrectomy

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Introduction

Laparoscopic Sleeve Gastrectomy(LSG) as a standalone procedure for the treatment of morbid obesity is becoming increasingly popular. In countries where bariatric surgery is self paid (not covered under insurance) non affording patients cannot avail this treatment only due to financial reasons.

Objectives

To determine the feasibility & outcome of Two Cartridge Sleeve Gastrectomy

Methods

Between January 2016 to June 2016, 7 patients with a mean body mass index of 38.2kg/m² were operated by laparoscopic 2 cartridge SG. Standard guidelines of LSG were followed, 36 F bougie was used and first firing was between 4-6 cm proximal to pylorus. Surgical time, morbidity, hospital stay and excess weight loss at the end of 6 months were prospectively reviewed.

Results

Mean operative time & hospital stay were 75 min and 2-3 days respectively as against 50 min & 1-2 days with standard LSG at our centre. There was no major morbidity seen. After a mean follow up of 6 months the mean excess weight loss was 73%.

Conclusion

The video presents our unique technique of sleeve gastrectomy, never described earlier in the literature. It can be a valid alternative for such patients. Large series with long term follow up are necessary to make a definitive conclusion.

□
V.045

INTRAABDOMINAL TROCAR-FREE VACUUM LIVER RETRACTOR FOR SLEEVE GASTRECTOMY AND RYGB: PRELIMINARY CLINICAL SERIES USING THE LIVAC® SYSTEM

Emergent technology

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Background

In laparoscopic upper gastrointestinal (GI) surgery, an adequate retraction of the liver is crucial. Especially in single-port surgery and obese patients problems may occur during liver retraction.

Introduction

The LiVac ® trocar free liver retractor is a potential evolution in the retraction concept for bariatric surgery, simplifying the current methods.

Objectives

The current study seeks to evaluate the efficacy and safety of the LiVac ® trocar free liver retractor in bariatric surgery.

Methods

The present study is a non-randomized clinical series describing our preliminary results using the LiVac® System for liver retraction for sleeve gastrectomy and Roux-en-Y Gastric Bypass. The LIVAC retractor is inserted besides an abdominal trocar and uses the vacuum system of the operating room without the need for specific devices. After placement between the liver and the diaphragm, the vacuum is started by -0.6 Bar. The liver is retracted without the need of assistant or extra trocars. After the procedure, the retractor is gently extracted through one trocar incision.

Results

The device was used for liver retraction for morbidly obese patients (BMI ranging from 35 to 52kg/m²). Sleeve gastrectomy, RYGB and gastric bypass revisions were successfully performed. There were no device related complications. Postoperative sonographic study of the liver on POD1 showed no liver haematoma in any case.

Conclusion

The LiVac liver retractor is easy to applicate and provides a good exposure of the operative field in upper gastrointestinal laparoscopic surgery, even in large fatty livers in patients with a high body mass index.



V.046

INDOCYANIN GREEN TEST IN BARIATRIC SURGERY

Emergent technology

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Introduction

Sleeve gastrectomy (SG) and Roux-y-gastric bypass (RYGB) are currently the commonest bariatric procedures performed worldwide. The leakage is a relevant complication in both the techniques and ranges from 1 to 16% in SG and from 2 to 7% in RYGB. This is most probably due to the hypoperfusion of the stapled line in SG, of the anastomosis in RYGB. Indocyanin green (ICG) test provides a real-time visualization of the blood flow.

Objectives

The aim of this study is to evaluate the ICG test as a mean to intraoperatively detect ischemic areas and prevent potential leakages.

Methods

From January 2016 to January 2017 we performed ICG test in 23 SG (5 males and 18 females; median BMI 42,79 Kg/cm²) and 46 RYGB (12 males and 34 females; median BMI 43,38 Kg/cm²). SG were performed with 36 Fr bougie, starting 6 cm from pylorus; whereas functional RYGB were performed with vertical gastric bypass and fundectomy. We injected 2,5 mg of ICG to evaluate the perfusion of the stapled line in SG and both anastomosis in RYGB.

Results

The ICG test was negative in all the procedures performed (no ischemic areas, no fluorescence delay). Accordingly, no complications occurred during the post-operative course.

Conclusion

The ICG test appears to be useful to prevent leakages secondary to ischemia. Whether ischemic area is detected, the surgeon might fix the problem over the same operation and avoid such a life-threatening complication and a potential redo surgery.

□
V.047

LAPAROSCOPIC ROBOTIC-ASSISTED REVISION OF GASTROJEJUNOSTOMY FOR A GIANT ANASTOMOTIC ULCER

Robotic bariatric surgery

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Introduction

Roux-en-Y gastric bypass (RYGB) remains one of the most commonly performed and studied bariatric procedures. Marginal ulcers and anastomotic strictures are common complications after RYGB.

In this video, we present Laparoscopic Robotic-Assisted Revision of Gastrojejunostomy for a giant anastomotic ulcer.

Objectives

The patient was a 49-year old female who underwent RYGB in 2008. She presented to our office with complaints of nausea, vomiting, sharp epigastric pain and regurgitation of undigested food. The patient underwent an esophagogram which showed large amount of fluid and food remaining in the gastric remnant. Esophagogastroduodenoscopy demonstrated a giant ulcer in the gastrojejunostomy anastomosis. The patient was offered revision of the gastrojejunostomy.

Methods

We performed a laparoscopic robotic-assisted revision of gastrojejunostomy in this patient.

Results

The procedure time was 180 min, without any intraoperative complications. Blood loss was 100 mL. Extensive lysis of adhesions was performed. The alimentary limb was found to be antegastric-antecolic. The ulcer was densely adhered to the gastric remnant and measured 3x3 cm. The previous gastrojejunostomy was resected.

Intraoperative endoscopy was performed that showed a healthy mucosa in the gastric pouch and no evidence of any stricture in the esophagus. A new gastrojejunostomy was constructed in 2 layers. Satisfied with the gastrojejunostomy, the da Vinci surgical robot was undocked. Intraoperative endoscopy showed a patent new gastrojejunostomy without evidence of any leak.

Conclusion

Laparoscopic robotic-assisted revision of gastrojejunostomy is safe and feasible in treating giant anastomotic ulcer and robotic assistance may facilitate difficult dissections and possibly decrease complications such as anastomotic leaks.

V.048

BEST TRIO: SLEEVE GASTRECTOMY WITH SIDE TO SIDE JEJUNOILEAL ANASTOMOSIS AND CONCOMITANT GIANT HIATAL HERNIA REPAIR

New (Non Standard) Surgical Techniques

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Background

Bariatric operations are justified to provide longterm cure for Type II Diabetes. Best novel techniques.

divert the food and biliopancreatic secretion to the distal small bowel provide total or partial glycemic control. However, further studies are needed for long term effect and safety of these procedures.

Introduction

Here in we have demonstrated a novel technique of laparoscopic sleeve gastrectomy and side to side jejunoileal bypass with the concomittant repair of a giant hiatal hernia.

Objectives

To demonstrate that comorbidities such as giant hiatal hernia and Type II diabetes mellitus (DM) can be treated by a simple and safe operation.

Methods

54 year old type II diabetic male patient with a sliding hiatal hernia underwent Sleeve gastrectomy + SJA procedure with concomittant repair of a giant hiatal hernia. Also he had hypertension. He had a BMI of 36 kg/m² and his preoperative Hba1c value was 8.2%, insulin was 18.49 µU/ml and c-peptide was 1.7µg/ml. He was on metformin 1000mg twice daily and amilodipin 10mg once daily. PO The technique is narreated and demonstrated in the video.

Results

He stopped using his antidiabetic and anti-hypertensive medications right after the operation. The patient's TBWL was 24 ±2.2 kg and Hba1c was 6.4% and LDL value was 113mg/dl and a mean FBG of 108±17.2 mg/dl at the end of 6 months of follow-up.

Conclusion

Sleeve gastrectomy+SJA is an safe and effective operation for the resolution of Type-IIDM also comorbidities like giant hiatal hernias should be accurately detected and repaired during the surgery to prevent short and long term complications.



V.049

ROBOTIC CONVERSION OF BAND TO BYPASS WITH COMPLEX HIATAL HERNIA REPAIR

Robotic bariatric surgery

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Background

Patient had a prior laparoscopic banding procedure. After many years of poor weight loss and symptoms of reflux the patient opted for a conversion from a band to a gastric bypass.

Introduction

Banding procedures have been present for the last 25 years. Numerous patients have had their bands removed for reasons such as poor weight loss or intolerable symptoms such as reflux. Patients choosing to utilize a metabolic/bariatric procedure may wish to have a conversion to another option. Gastric bypass represents an acceptable option especially in those suffering with reflux symptoms.

Objectives

Our objective is to use this video to demonstrate the utilization of the robotic platform for performing a complex revisional surgery.

Methods

The patient underwent a complete preoperative work up including psychologist, dietician and Endoscopy prior to having the conversion surgery.

Results

The patient successfully underwent robotic conversion of her band to a gastric bypass. She was found to have a hiatal hernia which was repaired at the same time.

Conclusion

The failure rate associated with bariatric surgery is a real phenomenon. At times the surgery is successful but the side effects are not compatible with a healthy lifestyle. Patients may choose conversion or revision surgery to address their specific situation. This video demonstrates that the robotic platform represents a viable option for performing a complex procedure in a safe manner.

V.050

LAPAROSCOPIC ROBOTIC-ASSISTED HIATAL HERNIA REPAIR, GASTRIC BAND REMOVAL AND CONVERSION TO ROUX-EN-Y GASTRIC BYPASS

Gastric bypass procedures including Roux-en-Y gastric bypass (RYGB) and One Anastomosis gastric bypass (OAGB)/MGB

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Introduction

Laparoscopic adjustable gastric banding (LAGB) was one of the most commonly performed procedures for morbid obesity, due to its reversibility and minimal invasiveness. However, LAGB has been associated with high failure rates requiring operative revision.

Objectives

The patient was a 53-year old female who underwent laparoscopic band placement in 2010. She presented to our office with BMI of 41.3 and complaints of pain, gastroparesis and GERD. The band was deflated due to intolerance. Patient regained 50 pounds.

The patient was offered laparoscopic robotic-assisted hiatal hernia repair, gastric Band Removal and conversion to Roux-en-Y gastric bypass.

Methods

We performed a laparoscopic robotic-assisted hiatal hernia repair, gastric band removal and conversion to Roux-en-Y gastric bypass.

Results

The procedure took 230 mins, without any intraoperative complications. Blood loss was 50 mL. The band was opened and removed from around the stomach. Mid-sized hiatal hernia was noted. The hiatal hernia was repaired with interrupted 2-0 Ethibond sutures. Attention was turned to creation of the gastric pouch. Then a conventional pre gastric precolic bypass was constructed. The alimentary limb measured 120 cm and the biliopancreatic limb measured 50 cm. Intraoperative endoscopy revealed no intra-gastric bleeding or leak.

Conclusion

Laparoscopic Robotic-Assisted hiatal hernia repair, Gastric Band Removal and conversion to Roux-en-Y Gastric Bypass are safe and feasible in one setting. Robotic assistance may facilitate dissection, hiatal hernia closure and possibly decrease complications such as anastomotic leaks.

V.051

ROBOTIC-ASSISTED SINGLE ANASTOMOSIS DUODENO-ILEAL BYPASS WITH SLEEVE GASTRECTOMY

Robotic bariatric surgery

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Introduction

Single anastomosis duodeno-ileal bypass with sleeve gastrectomy (SADI-S) is an emergent bariatric procedure proposed as alternative to bilio-pancreatic diversion (BPD). The rationale of this approach is to maintain the metabolic effect of BPD reducing the complexity of the procedure and to decrease the potential complication rate. To maintain the pylorus function an hand-sewn duodeno-ileal anastomosis is the best option. The robotic surgical system is considered a very useful tool in superobese patients.

Objectives

We perform a Robot-assisted SADI-S (RA-SADI-S).

Methods

A 33-years-old man with BMI 59.3 Kg/m² underwent complete pre-operative screening for bariatric surgery and was scheduled for RA-SADI-S. The patient was placed in supine position with open legs. The operation was performed in two principal steps: a laparoscopic step and a robot-assisted step.

Results

Six trocars were introduced: three for laparoscopic step and three for robotic-assisted step. First the gastric great curvature was prepared and sleeve gastric resection was performed over a 40F bougie. The duodenum was dissected and stapled 2 cm below the pylorus. The ileocolic junction was identified and 250 cm measured proximally. Then the robot was docked and an end-to-side duodeno-ileal hand-sewn anastomosis was performed in double layer running suture. Postoperative course was uneventful. Postoperative stay was three days. At 6-month follow up the percent excess weight loss was 60%.

Conclusion

This video demonstrate the feasibility of RA-SADI-S as primary one step procedure in superobese patients. Indeed the robotic approach facilitates one of the most complex step of the procedure ensuring a comfortable end-to-side duodeno-ileal hand-sewn anastomosis.

□
V.052

A CASE OF INTERNAL HERNIA WITH VOLVULUS AFTER ONE ANASTOMOSIS GASTRIC BYPASS: DIAGNOSIS & MANAGEMENT

Post-operative complications

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Introduction

Internal hernias following one anastomosis gastric bypass is quite rare with only few reported cases.

Objectives

To discuss an interesting rare care case of volvulus with internal hernia following a twisted gastrojejunal anastomosis during a primary one anastomosis gastric bypass.

Methods

After failed attempt to identify any pathology for severe pain, nausea and occasional vomiting one year following an OAGB, a 320 slice CT abdomen, with oral & IV contrast reconstruction was done to diagnose volvulus with ischaemia causing features of obstruction.

Results

Efferent limb was seen herniating into the Petersen's defect induced by the volvulus (1 and half twist of mesentery). The primary cause for the Hernia seemed to be the volvulus. The entire procedure was undone after transecting the jejunum at the level of Gastro-Jejunostomy. An omega loop Gastric bypass was re-done.

Conclusion

Care should be taken to avoid twists in the mesentery, to prevent internal hernias and its complications. Routine closure of Petersen's defect in One Anastomosis Gastric bypass is not required.



V.053

LAPAROSCOPIC CONVERSION OF ROUX-EN-Y GASTRIC BYPASS TO SLEEVE GASTRECTOMY: CHALLENGES AND TECHNICAL FEASIBILITY

Revisional surgery

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Introduction

Laparoscopic Roux-en-Y Gastric Bypass (LRYGB) is the gold standard bariatric procedure, but sometimes revision is necessary.

Objectives

To examine outcome after conversion from LRYGB to SG.

Methods

A 30-year-old obese male (body mass index = 43 kg/m²), with a history of LRYGB. This patient presented with hyperinsulinemic hypoglycemia. The benefits and the risk of reversal LRYGB with or without modified SG were discussed with the patient who decided to proceed with LSG. The video illustrates all the important surgical steps required to perform a conversion to SG: After entry into the abdomen, attention was first turned to the peritoneal adhesions, which was taken down. The Roux limb was about 100cm, the limb dissected from its mesentery and from the gastric pouch, and the jejuno-jejunostomy was taken down. The short gastric vessels and other attachments were divided so as to free the remnant stomach. The fundus was resected. A gastrotomy was performed in the pouch and remnant stomach, and the anastomosis was performed using linear stapler. The gastric sleeve was created around 34Fr gastric tube using a laparoscopic linear stapler, and the gastro-gastrostomy was completed. Endoscopy was performed to visualize the anastomosis and also to perform a methylene blue leak test. A drain was left in place alongside the gastro-gastrostomy.

Results

The patient is currently one year post surgery. His BMI is 28 kg/m², and he reports satisfaction with the procedure.

Conclusion

Laparoscopic conversion from LRYGB to SG is feasible and safe with successful in resolving hyperinsulinemic hypoglycemia and does not result in weight gain.



V.054

THE USE OF CYANOACRYLATE GLUE FOR THE CLOSURE OF MESENTERIC DEFECTS IN LAPAROSCOPIC GASTRIC BYPASS

New (Non Standard) Surgical Techniques

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Background

Closure of mesenteric defects in laparoscopic gastric bypass has been a widely debated topic in the world of bariatric surgery. A recently published multi centred randomised trial has shown results supporting the routine closure of the surgically created mesenteric defects.

Introduction

Cyanoacrylate glue is originally used in laparoscopic hernia surgery. Conventional closure of mesenteric defects using a variety of suture methods can sometimes be challenging and technically difficult. In particular, care must be taken to avoid any compromise to the mesenteric vasculature.

Objectives

Closure using cyanoacrylate glue provides an alternate method of closure of mesenteric defects.

Methods

Cyanoacrylate glue was used to close mesenteric defects in a series of patients who underwent laparoscopic gastric bypass at our center for the past two years.

Results

No patients have had a return to theatre or emergency admission due to signs or symptoms of internal hernia. Diagnostic Laparoscopy performed in patients (due to other conditions) who had defects closed using cyanoacrylate glue during previous gastric bypass was found to have a completely and securely sealed defect space.

Conclusion

Although further follow up is required, we have shown in a series of cases over two years that closure of mesenteric defects during laparoscopic gastric bypass using cyanoacrylate glue may be a suitable, alternative and safe method.

□
V.055

ROUX EN Y GASTRIC BYPASS: A GOLDEN PROCEDURE FOR REVISIONAL SURGERY

Revisional surgery

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Background

Obesity is a global epidemic with multiple associated comorbid conditions and GERD (Gastroesophageal Reflux Disease) is caused for Obesity and Hiatal Hernia.

Introduction

The laparoscopic Roux-en-Y gastric bypass (RYGB) is the gold standard operation in the fight against obesity and GERD. This review outlines the common technical aspects of the procedure, as well as the evidence-based recommendations for preoperative and postoperative care.

Objectives

Describe the technique during revisional surgery of previous Sleeve Gastrectomy and Laparoscopic Adjustable Gastric Band to Roux en Y Gastric Bypass.

Methods

We present two cases:

A 25 years old female with GERD after Sleeve Gastrectomy at 4rd years of postoperative time. The EWL (excess weight loss) was 90% at 4rd year. The Upper GI shown a hiatal hernia and the EGD shown a esophagitis grade B of Los Angeles Classification.

A 52 years old female with GERD and Morbid Obesity after 10th years of LAGB. The gastric band was removed 3 months before the RYGB. The EWL was 46.4%, 50% and 44% at 1st, 5th and 8th after LAGB (Laparoscopic Adjustable Gastric Band). And the EGD had shown a Grade B esophagitis and hiatal hernia.

Results

We present both patients into the operating room performing the RYGB technique in two different situations, a conversion of Sleeve Gastrectomy and of LAGB.

Conclusion

Laparoscopic conversion of previous LAGB and Sleeve Gastrectomy to RYGB is a challenging procedure. Learning the key points of such procedure is mandatory to limit postoperative complications.

V.056

LEAK FROM GASTRO-JEJUNOSTOMY SECONDARY TO POST-OPERATIVE INTESTINAL OBSTRUCTION IN AN OPERATED CASE OF LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS

Post-operative complications

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Background

Anastomotic leak at gastro-jejunostomy (GJ) post Roux-en-Y Gastric Bypass (RYGB) is rare, incidence 0-4.3%.

Introduction

Leaks presenting in first two days are due to technical errors, while those after 5-7 days are secondary to tissue ischemia. Our patient presented with GJ leak 10 days post-surgery due to downstream intestinal obstruction due to umbilical port-site hernia.

Objectives

To present laparoscopic management of GJ leak secondary to post-operative intestinal obstruction due to port-site hernia

Methods

45y male, BMI 47.5 kg/m² diabetic on insulin, underwent laparoscopic RYGB. Surgery and early post-operative course >were uneventful. Post-operative gastro-graffin study was normal - discharged on first post-operative day (POD).

He presented on 10th POD with abdominal pain/distension, fever, retching.

X-ray abdomen- dilated small bowel loops, air-fluid level in remanant stomach. Diagnostic laparoscopy was done.

Results

Intra-operatively, there was purulent bile-stained abdominal free fluid & umbilical 10 mm port-site hernia, with small intestinal loop as contents. On reduction the bowel loop was congested but vascularity appeared to be preserved. There was a small pin-point perforation on the posterior aspect of GJ. A Ryle's tube was passed across the GJ in to the alimentary limb for feeding. Drains were placed. Port site hernia closed with non absorbable suture

Patient was discharged uneventfully on 4th POD.

He was kept nil orally and fed via Ryle's tube for 21 days. Subsequent gastro-graffin study was normal

Conclusion

Leak at GJ may be secondary to post-operative intestinal obstruction and umbilical port-site hernia. This video demonstrates the importance of closing all ports > 10 mm size.

□
V.057

SAFEST WAY TO DEAL WITH A STRICTURE FOLLOWING SLEEVE GASTRECTOMY IN A PATIENT WITH BMI 18

Post-operative complications

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Introduction

This is a case presentation of a 32 year old lady who presented to our hospital with vomiting and failure to thrive, 6 weeks after a sleeve gastrectomy procedure performed outside the UK. Her BMI pre-operatively was 28 kg/m². On presentation, the patient had a BMI of 18 kg/m² and was not able to tolerate fluids. Her CT and OGD confirmed a 3 cm stricture at the incisura causing an acute angle. The case was discussed in an international MDT forum, and a special endoscopic manoeuvre was chosen for this case on their suggestion.

Objectives

To find the safest way to deal with a stricture at an acute angle, post-gastrectomy, in a malnourished lady with a BMI of 18 kg/m².

Methods

A hard guide wire with achalasia balloon was the method chosen to negotiate around the tight angle at the incisura. The balloon was dilated across the stricture.

Results

The initial dilatation up to 30mm under general anaesthesia gave temporary relief. Repeat dilatation at 4 weeks up to 30mm also gave temporary relief. A third dilatation 6 weeks later was successfully performed up to 30mm, and the patient is still able to tolerate a normal diet at 9 weeks follow-up.

Conclusion

A BMI of 28 kg/m² is not an indication for bariatric surgery. Given the patient's malnourished status on presentation, a more conservative approach, such as an endoscopic dilatation should be considered first before surgery.



V.058

SADI-P TO TREAT FAILED SLEEVE GASTRECTOMY

Malabsorptive bariatric operations

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Background

Sleeve gastrectomy is associated with a high rate of failure on long term. These failures are related in part to the gastric expansion or to the technical resection imperfection. The SADI-P is a new approach which consists of folding the previous sleeve gastrectomy to reduce its capacity. Single anastomosis duodeno-ileal at 3m from the ileo-cecal junction is then performed to add a malabsorption pretending the amelioration of the comorbidities and the excess weight loss.

Introduction

Sleeve gastrectomy is gaining wide spreading over all the world but its results on long term are associated with a high rate of weight regain. Re-sleeve, mini gastric bypass, roux-in-Y gastric bypass are the procedures that the majority of surgeons propose to treat these failures, however the rate of complications (bleeding or gastric leak) can go up to 20% in the majority of the published series. These complications are due to the fibrotic tissue, the stapler line and to the gastric tissue thickness. Gastric plication over a 40 french tube reduces the capacity of the stomach by two running sutures from the GE junction to the pylorus.

Objectives

The objective is to reduce the amount of gastric complications (bleeding and gastric leak.

The second objective is to reduce the cost of bariatric surgery.

The third objective is to increase the long term effectiveness of bariatric surgery on excess weight loss and comorbidities.

Methods

Gastric plication and single anastomosis duodeno-ileal is performed to all sleeve gastrectomy failure with BMI greater than 40.

Results

No results yet.

Conclusion

SADI-P is safe and reproducible.

□
V.059

LAPAROSCOPIC ESOPHAGO-GASTRECTOMY WITH CIRCULAR-STAPLED ANASTOMOSIS FOR CHRONIC LEAK AFTER SLEEVE GASTRECTOMY- A VIDEO PRESENTATION.

Post-operative complications

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Background

Staple-line leak is not uncommon after Laparoscopic Sleeve-Gastrectomy (LSG) and may reach 4% of cases. Treatment options include conservative and other non-surgical interventions, including endoscopic stenting.

A small portions do not heal and evolve into chronic intra-abdominal abscesses or gastro-cutaneous fistulas, causing pain, difficulty eating and low-grade sepsis.

Introduction

A 48 year-old woman with a BMI of 40, underwent LSG with a normal post-operative period. She was re-admitted to her operating hospital with sepsis and underwent laparoscopic lavage and drainage, followed by a 9-day admission to ICU. She recovered, receiving TPN and IV Antibiotics. A chronic fistula developed, with recurrent fevers and septic events, requiring repeated admissions and Antibiotic treatment. She was referred to our facility for endoscopic evaluation and treatment. She was treated by dilatations of the incisural area and repeated septotomies without improvement.

A CT scan with oral contrast demonstrated contrast material leak from the stomach, near the esophago-gastric junction, with a sub-phrenic abscess.

A decision was made to operate the patient.

Objectives

Definitive treatment for chronic post-LSG leak and GI reconstruction.

Methods

Laparoscopic surgery. Partial removal of stomach and Esophago-Jejunal anastomosis with jejuno-jejunal anastomosis.

Results

The patient underwent the operation as planned- Anatomic reconstruction, proximal gastrectomy and Esophago-Jejunostomy with Roux-en-Y Bypass. Immediate postoperative course was unremarkable. Minor leak from the EJ anastomosis developed and was treated endoscopically with an over-the-scope clip.

Conclusion

Laparoscopic Esophago-Gastrectomy with Anastomosis and bypass is a possible surgical solution for post-LSG leak.

V.060

DOUBLE GASTRIC FISTULA AFTER LAP SLEEVE GASTRECTOMY WITH EVENTFUL FOLLOW UP

Post-operative complications

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Background

Laparoscopic sleeve gastrectomy (LSG) is gaining acceptance as the preferred option for treating morbid obesity. gastric fistula (GF) is the most serious complication after LSG with incidence ranging from 0 to 5%.

To our knowledge, no double gastric fistulas has yet been reported as a complication of sleeve gastrectomy.

Introduction

46 yo man was referred to our hospital 20 days post LSG for abdominal pain, fever and sepsis. complete workup showed evidence of double gastric leaks.

Objectives

Management of double gastric fistulas post LSG

Methods

On admission, chief complaints: diffuse abdominal pain, fever, tachycardia and septic (WBC 25000, CRP 232).

UGI series and Ct scan: gastric leak and perigastric contained collection, treated by broad spectrum antibiotics, TPN and Ct-guided drainage. sepsis resolved.

after 11 days: sudden episode of hematemesis, abdominal angioscan showed no active bleeding, and gastroscopy showed a large clot of blood covering the fistula. decision made to operate for bleeding control and fistula management.

intra-operatively findings: bleeding from distal staples line and double gastric fistulas:

-1st: proximal part of the gastric tube

-2nd: at the body

treated by double fistulo-jejunostomy (double baltazar procedure) on the same jejunal loop. on day 5, tiny leak, well drained, from the gastrojejunal anastomosis was found and treated conservatively.

on day 16 post-op, he developed severe abdominal pain and severe sepsis (WBC 49000) ...

Results

Complete remission of the patient fistulas

Conclusion

Double gastric fistulas is a rare complication after LSG.

Double Fistulo-jejunostomy (double Baltazar procedure) is a safe and proper method to treat double gastric fistulas after LSG.

V.061

LAPAROSCOPIC CONVERSION TO SLEEVE GASTRECTOMY AFTER GASTRIC CLIPPING FOR MORBID OBESITY – VIDEO PRESENTATION

Revisional surgery

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Introduction

Laparoscopic gastric clipping (GC) is a relatively novel bariatric surgical procedure and the 2-year excess weight loss was 64.4%. Though relatively safe, its revisional solution still remained in doubt. Herein, we reported a 40-year-old, morbidly-obese woman experienced intractable belching difficulty 6 months after initial laparoscopic GC.

Objectives

Herein, we made a video presentation of this revisional surgery, laparoscopic conversion to sleeve gastrectomy after gastric clipping for morbid obesity.

Methods

We converted to sleeve gastrectomy laparoscopically after removal of gastric clip. The whole operation time was 140 minutes. The estimated blood loss was 20 mL.

Results

The post-operative course was uneventful and the patient was discharged 2 days later.

Conclusion

Laparoscopic conversion to sleeve gastrectomy could be a safe revisional surgery for patients after gastric clipping.

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