Abstracts - Video Presentations

A13. Reversal to normal anatomy of a RYGB following a primary OAGB procedure
Authors: *Sandeep Aggarwal, Mehul Gupta, Ravi Ranjan, Vitish Singla* | India

Reversal of primary gastric bypass procedures to normal anatomy has been reported previously for severe malnutrition, postprandial hypoglycemia or marginal ulcers. This report is the first account of reversal of a revision RYGB (Roux-en Y Gastric bypass) done after a primary OAGB (One-anastomosis Gastric Bypass) procedure. The patient (49 year-old female, BMI = 31.25 kg/m2) underwent reversal of revision RYGB in view of inadequate oral intake, recurrent marginal ulcers and chronic abdominal pain. Reversal of revision bypass procedures is associated with greater technical difficulties than encountered for primary bypass procedures; primarily due to increased intra-abdominal adhesions and more dramatic variation from the normal bowel anatomy. The patient underwent a gastrogastric anastomosis with resection of Roux limb of RYGB, so as to leave behind a continuous channel of 600 cm involving the original biliopancreatic limb and the original common channel.

Conclusion: At 3-month follow-up, she reports a stable weight profile with complete resolution of the recurrent chronic abdominal pain and a significant decrease in the hypoglycemic episodes.

A09. Accessing the Common Bile Duct Stones after MGB/OAGB – Same Destination via Different Route
Authors: *Amit Bhambri, Sanchit Budhiraja, HRS Girn* | India

Background
Laparoscopic MiniGastric Bypass/One Anastomosis Gastric Bypass(MGB/OAGB)excludes the common bile duct (CBD) from traditional diagnostic and therapeutic treatment options with Endoscopic Retrograde Cholangiopancreatography (ERCP). Accessing CBD becomes limited and challenging due to altered MGB/OAGB anatomy.
Due to the initial rapid weight loss, MGB/OAGB patients have an increased risk of developing cholelithiasis as well as choledocholithiasis.

Methods
A 53-year-old female with initial BMI of 41kg/m2 and an absolute weight of 134 kgs, underwent MGB/OAGB 6 months ago. She had normal liver function tests (LFTs) and ultrasound abdomen preoperatively. She lost 21 kgs of body weight over period of 5 months postoperatively. She had history of laparoscopic cholecystectomy done 20 years ago, so she was not started on Ursodeoxycholic-acid regimen post-operatively.She was admitted in view of severe episodic epigastric pain since, one week. There were no other complaints.

Results
She was evaluated and showed derangedLFTs includingsignificantly raised serum alkaline phosphatase (ALP) and Gamma glutamyl transferase (GGT) levels, which raised suspicion of somebiliary pathology. MRCP abdomenrevealed dilated CBD of 24 mm with lower CBD calculus sized 9.8 mm, with sludgeand ?stricture.
She underwent Laparoscopic Trans-gastric ERCP. Access was made by creating gastrotomy in remnant of stomach for placement of endoscope. Getting access into the remnant of stomach was challenging due to dense adhesions from previous two surgeries and smaller gastric remnant because of long and lose gastric pouch of OAGB/MGB as compared to Roux-en-Y gastric bypass.

Retrieval of stones and dilatation of lower CBD stricture area was done along with taking biliary stricture brush cytology. Complete clearance of CBD was done with multiple balloon sweeps and endoscopic papillary balloon dilatation was doneupto 12 mm.
The gastrotomy performed on remnant of stomach was closed. Post-surgery her LFTs becamenormal and biliary brush cytology reported negative for malignancy.

Conclusion
Treating theBile duct pathology endoscopically after MGB/OAGB is technically challenging and requires multidisciplinary teams.
It can be managed safely and effectively at centres with both high endoscopic and bariatric expertise.

A04. Retrieval of Gastric Band Eroding into the Stomach and Colon Forming a Gastrointestinal Fistula with a Combined Laparoscopic and Colonoscopic Approach
Authors: *Ahmed Binjaloud, Samar Alsubhi, Ahad Alotaibi, Osama Nafea, Anfal Altamimi, Zeyad Al Yousef* | United Kingdom

Abstract Background:
Obesity is one of the most important global public health problems. In Saudi Arabia, the overall prevalence of obesity has increased from approximately 12% in 1992 to 41% by 2022 in men and from 21% to 78% in women[1]. Laparoscopic approach to bariatric surgery has been established in the 1990s. In 1994, Belachew first performed laparoscopic adjustable gastric banding (LAGB)[2]. During the last 10 years, bariatric procedures have grown rapidly providing safe and efficient surgical treatment for obesity and related metabolic disorders[3].

Case Report:

A 34-year-old woman who underwent LAGB in 2013. She complained of a foreign body passing through the rectum during defecation, which she pushed back manually. Investigations using radiological imaging and upper/lower endoscopy confirmed the diagnosis of gastric band erosion into the stomach, the presence of a tube in the colon, and a reservoir within the splenic flexure.
She developed a complication of complete band erosion and gastrointestinal fistula formation after the delivery of her second child.

Conclusion:

Band erosion is a rare worrisome complication, as most patients with gastric band erosion are asymptomatic or exhibit vague symptoms. The definitive management of gastric band erosion involves the band removal. In this case, a dual approach by laparoscopy and colonoscopy was done to make sure that the gastric band is removed completely from the gastrointestinal tract, assess the fistula site, and get a better view of the whole abdominal cavity as well as recheck the stomach at the end of procedure making sure no leak from the gastrotomy site closure.

MeSH Keywords: Gastric band, erosion, gastrointestinal fistula, endoscopy, reservoir

A03. Step By Step Comparison Between Standard Sleeve Gastrectomy And In Situs
Authors: *Ibrahim Abdelhamid, Mohammad Alhaifi, Moataz Abdulla*, *Mustafa Majed* | Kuwait

Introduction:

Laparoscopic Sleeve Gastrectomy (LSG) is recognized as a stand-alone operation and a definite treatment for morbid obesity worldwide.

Situs Inversus Totalis (SIT) is a congenital anomaly presents in 0.01% of the population, results in complete mirror image reversal of all thoracic and abdominal organs , transmitted through autosomal recessive inheritance.

LSG can be done safely with some diificulties in patients with SIT having morbid obesity and candidate for surgery .

Case Report:

A 29 years old male presented to surgical clinic with morbid obesity with a body mass index (BMI) 44.2 KG/m^2.

Patient was known to have SIT since birth.

Here is a step by step comparison between this case and another male (BMI 45) who had LSG in the same hospital and by the same surgical team.

Conclusion:

LSG with staple line plication and omentopexy can be done safely but with some technical difficulties in patients with situs inversus totalis.

Abstracts - Oral Presentations

A08. Long-Term Follow-Up of Roux-en-Y Gastric Bypass in Adolescents: Insights from 15 Years of Data

Authors: Bruno Dillemans, Willem Pype, Rianne Brood, Aiman Ismaeil | Belgium

Background:
Obesity in adolescents is associated with reduced life expectancy and quality of life. Roux-en-Y gastric bypass (RYGB) has been shown to result in significant weight loss and cardiometabolic benefits in adolescents in the short term. However, the long-term outcomes of bariatric surgery in young adulthood are still limited.

Objective:
The objective of this study was to present the 15-year follow-up outcomes of Roux-en-Y gastric bypass (RYGB) in adolescents, with a focus on factors such as the resolution and improvement of co-morbidities, weight loss analysis, and perioperative/postoperative complications.

Methods:
Between June 2005 and November 2016, 58 adolescents with obesity underwent RYGB. Of the 42 patients eligible for enrollment in the study, 38 underwent primary RYGB and 4 underwent RYGB as a revisional procedure after a failed gastric band. The collection of short- and long-term data was conducted retrospectively through routine follow-up appointments and telephone surveys. Demographics, complications, and weight loss analysis were determined.

Results:

Forty-two adolescents with a baseline age of 16.1±1.01 years, a weight of 110.07±17.02 kg, and a body mass index (BMI) of 39.08±6.14 kg/m2 underwent RYGB. Mean percent excess weight loss (%EWL) was 75.14% after 5 years, 82.2% after 10 years, and 83.5% after 15 years of follow-up. Complete resolution of hypertension, dyspnea, hypercholesterolemia and gastro-esophageal reflux disease was noted in 75%, 57.7%, 58.3% and 53% respectively. The prevalence of micronutrient deficiencies was highest for iron, with 51.7% of individuals exhibiting a deficiency. The majority of patients (37.9%) who underwent bariatric surgery opted for post-surgical body contouring, with abdominoplasty being the most frequently performed procedure.

Conclusion:
The long-term results of RYGB in adolescents indicate impressive maintenance of weight loss and improved health trajectories. However, these benefits are accompanied by concerns about micronutrient deficiency and the potential need for additional surgeries related to the procedure.

A20. Does the diameter of the gastro-jejunostomy in Roux-En-Y Gastric Bypass affect post-surgery weight loss?

Authors: *Othman Al-Fagih, Osamah Niaz, Ahsen Razzaq, Moaz Ahmar, Oluwatofunmi Sesby-Banjoh, Alan Askari, Md Tanveer Adil, Aruna Munasinghe, Farhan Rashid, Periyathambi Jambulingam, Douglas Whitelaw, Vigyan Jain, Omer Al-Taan, Alex Yuen Hua Loh* | United Kingdom

Introduction: The influence of gastrojejunostomy diameter on weight loss post-Roux-En-Y Gastric Bypass (RYGB) remains a subject of debate. This study aimed to assess the impact of anastomosis diameter on weight loss, as reflected in Body Mass Index (BMI), by comparing two cohorts with distinct gastrojejunostomy diameters.

Methods: We retrospectively analysed patients who underwent primary RYGB at our institution between January 2017 and July 2021. Patients with a gastrojejunostomy performed with 30mm stapler were compared against those done using a 45mm stapler. Weight loss outcomes were evaluated at 12, 24, and 60 months post-operatively. All participants were managed and monitored through a unified peri-operative and post-operative program.

Results: Of the 1,081 patients who underwent RYGB, 79.6% were female with a median age of 48 years (IQR 40-55). The median pre-operative BMI stood at 44.6 Kg/m2 (IQR: 40.4-50.1). The 30mm cohort constituted 36.6% (n= 396/1,081) of the total. Baseline characteristics including sex, age, ASA, and pre-existing medical conditions showed no significant difference between the cohorts. At 12 months post-procedure, the mean BMI reduction was 12.8 Kg/m2 (IQR: 9.3-17.9), with no significant difference between the 30mm (median: 13.0 Kg/m2, IQR: 9.4-23.5) and 45mm cohorts (median: 12.6 Kg/m2, IQR: 9.1-16.9, p=0.053). However, 24-month data revealed a more pronounced BMI decrease in the 30mm cohort (median: -16.2 Kg/m2, IQR: 11.6-40.5) versus the 45mm group (median: -15.3 Kg/m2, IQR: 10.0-35.6, p=0.006). This disparity widened at 60 months, favouring the 30mm cohort (median: -17.2, IQR: 11.3-31.1) over the 45mm (median: -15.8, IQR: 11.9-28.3, p=0.003).

Conclusion: A 30mm gastrojejunostomy diameter is associated with superior long-term BMI reduction compared to a 45mm diameter. Further research is essential to ascertain the implications of this finding over extended periods and its potential influence on weight regain.

A12. Diagnostic utility of Enhanced Liver Fibrosis (ELF) to predict presence and severity of Advanced Liver Fibrosis in patients with morbid obesity undergoing Bariatric Surgery
Authors: Sandeep Aggarwal, Ritwik Chekuri, Vitish Singla, Shalimar | India

Diagnostic utility of Enhanced Liver Fibrosis (ELF) to predict presence and severity of Advanced Liver Fibrosis in patients with morbid obesity undergoing Bariatric Surgery

Introduction

Non Alcoholic Fatty Liver Disease (NAFLD) is present in up to 90% of patients with morbid obesity. Patients with advanced fibrosis require continuous monitoring for progression. A non-invasive test, which can accurately predict advanced fibrosis, is the need of the hour for such patients.

Methods

This prospective observational study conducted at a tertiary care academic institute from March 2020 to November 2021 aimed to determine the best non-invasive marker of NAFLD in correlation with liver biopsy in morbidly obese patients. Patients with alcohol consumption > 20gm/day, Hepatitis B/C infection, autoimmune and storage disorders were excluded. The non invasive tests included Liver stiffness measurement (LSM), Controlled attenuation parameter (CAP), Enhanced liver fibrosis (ELF), AST to platelet ratio index (APRI) and Fibrosis-4.

Results

Out of the 48 patients in the study, 17.9% of the patients had advanced (F3/F4) fibrosis on liver biopsy. Enhanced Liver Fibrosis had an AUROC of 0.8 and 0.85 for significant and advanced fibrosis respectively. The cut off for Significant Fibrosis was 9.1 with a sensitivity of 84.62% and specificity of 78.26%. For advanced Fibrosis, the cut off was 9.33 with a sensitivity of 85.71% and specificity of 82.76%. The best LSM cut-off for significant fibrosis (AUROC 0.85) was 7.5kPa, which had 91.67% sensitivity and specificity of 57.69%. The best LSM cut-off for advanced fibrosis (AUROC 0.80) was 9.2kPa, with 83.33% sensitivity and 71.88% specificity. Out of the clinical scoring tests, APRI had an AUROC of 0.76 for Advanced Fibrosis. At a cut off 0.5952, a sensitivity of 71.4%, specificity of 84.38% and NPV of 93.1% were achieved. FIB4 performed very poorly in predicting any grade of fibrosis.

Conclusion

Non invasive markers including ELF, LSM and APRI score correlate well with liver biopsy. ELF was found to have the best predictive value for significant and advanced fibrosis as compared to other non invasive tests.

A21. The Natural History of Dumping Syndrome Bariatric Surgery
Authors : *Arkeliana Tase, Mohamed Aly, Alan Askari, Debbie Musendeki, Jane Rix, Md Tanveer Adil, Aruna Munasinghe, Farhan Rashid, Periyathambi Jambulingam, Douglas Whitelaw, Vigyan Jain, Omer Al-Taan* | United Kingdom

A22. Standardisation leads to excellent results in primary laparoscopic sleeve gastrectomy (LSG) without staple line reinforcement- Results of 947 consecutive cases.

Authors : *Naveed Hossain, Mahran Mostafa; Kaur Vasha; Agrawal Sanjay* | United Kingdom

Introduction

LSG is the most popular bariatric procedure worldwide. There is evidence of modest benefit of staple line reinforcement on bleeding and leak rates, however, this is at considerable cost. Standardisation of technique in primary LSG could result in lower rate of complications, as has been shown in primary roux en y gastric bypass.

Objectives

To assess outcomes following primary LSG under a standardised protocol.

Methods

A prospectively maintained database was analysed to identify all patients undergoing primary LSG under a single surgeon, between July 2010 and October 2023. Perioperative complication was within 30 days of index procedure. A standardised protocol was adopted for operative and post-operative management. Enhanced recovery principles were followed and discharge planned at day 2.

Results

947 primary LSG procedures were performed. Mean age was 41.3 ±10.5 years, range 19-70 years. Mean BMI was 45.3 ±7 kg/m2, range 33.2-84.7 kg/m2. The majority were female (F:M 837:110). 22 complications were identified in 20 patients (2.11%). Ten (1.06%) were major complications (Clavien Dindo >3b) requiring return to theatre, including six cases of haemorrhage (0.63%), two negative laparoscopies (0.21%), one thermal injury gastric leak (0.11%) and one staple line leak (0.11%). There were 8 readmissions (0.84%) and no deaths in the perioperative period until discharge.

Conclusion

Standardisation of operative and post-operative protocol in primary LSG leads to excellent early outcomes and low rates of complication, 30-day readmission and zero mortality. This may have a greater effect on reducing complications, in a more cost-effective way than staple line reinforcement (SLR).

Abstracts – Poster Presentations

A01. Possible Role of Omentopexy in Minimising Post-Sleeve Gastrectomy Complications:A Retrospective Study

Authors : *Ibrahim Abdelhamid, Mohammad Alhaifi* | Kuwait

Objective: Laparoscopic sleeve gastrectomy (LSG) has recently been recognised as a potential stand-alone operation for the treatment of obesity worldwide[2,5,6]. The incidence of post-operative nausea and vomiting is frequent in surgical practice, while other serious complications, including leakage or bleeding, might also occur[3]. This study evaluated the possible role of adding post–sleeve gastrectomy staple line plication and omentopexy to minimise the aforementionedpostoperative complications.

Subjects: This was a retrospective cohort study conducted from November 2014 to December 2017; it enrolled 300 patients who were divided into 2 groups: groups A and B. Group A comprised 150 patientswho underwent LGS with a linear cutter (Echelon^{R}), followed by staple line plication

and omentopexy. In group B, LGS was performed alone, without staple line plication or omentopexy.

Results: In group A, 5.3% of the patients had early post-operative vomiting,and 0.66% of the them required hospital readmission. In group B, 12% of patients suffered from vomiting, and 2.6% of them required hospital readmission.In group B, 1.33% of the patients had postoperative bleeding and 0.66% of the patients had staple line leakage in postoperative day 1.

Conclusion: The LGS procedure with staple line plication and omentopexy offers an additional protection against postoperativenausea, vomiting, leakage or bleeding.

Keywords

Bariatric surgery, sleeve gastrectomy, morbid obesity,omentopexy, omental patching, post–sleeve gastrectomy, nausea and vomiting, post–sleevegastrectomy leakage, post–sleeve gastrectomy haemorrhage

Introduction

The world is getting fatter, but malnutrition is still widespread. If the world were 100 people, 18 would be obese. In total, the world estimateof overweight people is around 2.1 billion people (Kuwait Times 2018).[1]Kuwait is officially one of the countries with most obese people in the world.

As with any surgical procedure, the sleeve gastrectomy operation has arisk profile that is important to understand before proceeding. Possibleacute complications might occur, such as bleeding (which may require blood transfusion and occasionally reoperation) and staple line leakage (the most serious complication and can be a life-threatening problem).

The number of bariatric surgical procedures is rising in Kuwait, due to the rise in obesity levels in the country. Bariatric surgeries can have considerable implications in terms of patient morbidity and financial cost. Therefore, the provision of extra resources and expertise needs tobe taken into account.

The aim of this study is to evaluate the burden of post–sleeve gastrectomy in Sidra (Alomooma) Hospital in Kuwait in an effort to measure the post–sleeve gastrectomy complications locally and in the nation. However, larger-scale studies are required to provide a further understanding of this medical burden in Kuwait.

Patients and methods

This is a retrospective study that was performed at Alomooma (Sidra) Hospital in Kuwait. Data was collectedfrom November 2014 to December 2017. Three hundredpatients were selected for this study.

The selection criteria were:

1. Age: ranging from 22 to 50 years

2. Body mass index (BMI): ranging from 38 to 50 kg/m^2

3. Fitness for general anaesthesia according to the American Society of Anesthesiologists (ASA) grading:grades ASA I and II.

The 300 patients were divided into 2 groups to compare the outcome and the potential complications in each group.

- In group A, 150 patients had laparoscopic sleevegastrectomy with staple line plication and omentopexy.
- In group B, 150 patients had laparoscopic sleevegastrectomy alone.

Table 1.

- The mean age for group A was 36 ± 14; for group B,it was 35 ± 12.
- The mean BMI for group A was 44 ± 6; for group B, itwas 43 ± 3.
- The mean operation time for group A was 45 ± 10 minutes, whereas for group B, it was 40 ± 8 minutes.

Group A

Sleeve gastrectomy was performed laparoscopically using a linear cutter (Echelon^R) and 4 to 5 reloads; then the staple line was plicated using absorbable Vicryl 2/0^R sutures, starting from the tip of the staple line just belowthe gastroesophageal junction and continuing to the endof the staple line, 2 cm above the pyloric ring (Figure 1).

The plicated line was supported by omental patching byapproximating the previously cut omental edge to the staple line, using Vicryl 2/0^R sutures (Figures 2,3).

Group B
Sleeve gastrectomy alone was performed, and the staple line was left without plication or omental patching (Figure4).

Both groups were followed up after 1 week, 2 weeks, 3 months, 6 months and then annually postoperatively.
The criteria for follow-up were routine weight checking and general condition in addition to monitoring the 4 major criteria in this study:

1. Postoperative nausea.
2. Postoperative vomiting: early postoperative vomiting was defined in this study as vomiting in the first 48 hours postoperatively; late vomiting was defined as vomiting after 4 weeks.
3. Post operative bleeding.
4. Leakage: early leakage was defined as leakage during the first 10 days postoperatively; late leakage was defined as leakage after 4 weeks.

Results

In the follow-up of both groups, it was noticed that (Table 2):

- No patients had leakage in Group A (0%), whereas 1 patient in group B (0.66%) had leakage on postoperative day 1.
- Eight patients had early postoperative vomiting in Group A (5.33%); one of them required hospital readmission for supportive treatment (0.66%).Eighteen patients in Group B (12%) suffered from vomiting, and 4 of them (2.6%) were hospitalised.

- Two patients in Group B (1.33%) had postoperative bleeding due to haemoglobin drop from 14.9 to 10 g and from 13 g to 9.9 g. Both were treated conservatively with blood transfusion.

Discussion and conclusion

Sleeve gastrectomy is a recently developed surgical procedure to enhance weight loss and treat morbid obesity. Furthermore, this surgery is one of the best treatment options for patients with morbid obesity that has a proven success rate[4,6].

Performing laparoscopic sleeve gastrectomy (LSG) with staple line plication and omentopexy offers an extra guard against postoperative nausea, vomiting, leakage, or bleeding[2].

The added technique is not time-consuming, has low technical complexity and a low rate of surgical complications.

The first week after sleeve gastrectomy surgery is a critical period during which to detect complications, because that is when most of the complications will occur.

In this study, it was noticed that the omentopexy technique reduces postoperative morbidities and enhances the postoperative recovery.

A large-scale study is suggested to measure the incidence of post–sleeve gastrectomy complications throughout Kuwait. A study that includes data from many hospitals in Kuwait would provide more credible data for the subject. However, our efforts provide usable information in Kuwait about post–sleeve gastrectomy complications from Alomooma (Sidra) Hospital.

Acknowledgement

Thanks goes to Professor Said Rateb, my Head of Department, and the senior clinician for scientific backup and support in preparing this study.

Conflict of interest

There is no conflict of interest.

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A02. Single Stage Laparoscopic Intragastric Balloon Removal Through Gastrostomy And Sleeve Gastrectomy

Authors : *Ibrahim Abdelhamid, Mohammad Alhaifi* | Kuwait

Abstract Background:

The aim of the study was a prospective evaluation of the safety and feasibility of performing simultaneous laparoscopic balloon removal and Sleeve Gastrectomy in morbidly obese patients(no previously reported data for this procedure).

Method:

Fifty consecutive morbidly obese patients had undergone single stage laparoscopic removal of intragastric balloon through a small gastrostomy at the greater curvature followed by Sleeve gastrectomy.

Results:
-Balloon insertion didn't resulted satisfactory weight reduction.
-Simultaneous laparoscopic balloon removal and Sleeve gastrectomy was achieved for fifty cases.
-There was no operative or postoperative morbidity or mortality.
-Six months follow up showed gradual satisfactory reduction in the body mass index of the patients.

Conclusion:
Simultaneous laparoscopic removal of intragastric balloon and Sleeve gastrectomy is safe procedure and feasible as single stage procedure with good outcome.

A05. Bariatric Surgery in the elderly population >65y: does it worth the risk? A systematic review.

Authors : *Dimitra Peristeri, Myutan Kulendran, Andrew Wan* | United Kingdom

Bariatric Surgery in the elderly population >65y: does it worth the risk? A systematic review

Background: Life expectancy increases, and more elderly patients nowadays fit into the criteria for bariatric procedures. However, obese elderly patients might experience an increased risk of complications after bariatric operations.

Aim: We aimed to systematically review comparative studies on this issue in patients aged 65 years or older.

Material and methods: An up-to-date systematic literature search was performed. Medline, Cochrane Library, Embase, Scopus, and Google Scholar were searched over the last ten years for studies on outcomes of bariatric surgery in obese elderly patients. Primary outcomes were mortality and overall complications. Secondary outcomes were the length of hospital stay, excess weight loss percentage, and effect on comorbidities.

Results: Seven studies involving 90496 patients were retrieved and included in this study. The mean age of the patients involved was 68.72 years. Most studies directly compared elderly obese patients to younger ones < 65 years. The mean pre-op BMI was 43.4kg/m^2. Notably, elderly patients experienced 0.48% increased risk of mortality and 4.63% increased risk of overall complications. Length of stay, diabetes, and obstructive sleep apnea remission rates were similar among the comparison groups. Elderly patients lost significantly more weight with Gastric Bypass compared with Sleeve gastrectomy.

Conclusion: Overall complication rates of bariatric surgery are low in elderly patients >65 years. Bariatric surgery could be a safe and effective treatment option for the geriatric population. Careful selection criteria and thorough pre-assessment studies would definitely contribute to improving outcomes.

A06. Symptomatic GORD after RYGB; what shall we do next?

Authors: *Dimitra Peristeri, Myutan Kulendran, Andrew Wan* | United Kingdom

Background: Laparoscopic Roux-en-Y gastric bypass (RYGB) is considered the gold standard for metabolic surgery in obese patients with GORD; however, in a subgroup of patients, pathological reflux may not be well controlled after this procedure. These patients with persistent or recurrent symptoms have limited surgical options.

Aim: To discuss surgical and endoscopic options to manage refractory GORD after RYGB and to evaluate possible anatomic and physiologic factors contributing to the appearance of these problems.

Materials and Methods: We searched PubMed, MEDLINE, and Cochrane Library for articles published before July 2023 about persistent GORD after RYGB.

Results: Six retrospective studies with a total of 147 patients were identified. All studies investigated surgical and endoscopic options to treat this subgroup of patients. The mean age was 48.46 years, and the mean BMI was 31kg/m2. Pain (89%), heartburn (87%), nausea (78%), dysphagia (64%) and regurgitation (60.7%) were the most reported symptoms; the Mean onset of symptoms occurred at 60 months after RYGB. The most common cause of recurrent GORD was the presence of Hiatal Hernia followed by gastric pouch fistula, short alimentary limb and one study described a case of a long blind jejunal loop. Depending on the cause, surgical repair of the HH was performed in most of the studies with excellent results. One study reported alimentary limb lengthening to 100 cm with complete resolution of symptoms. Endoscopic strategies in the form of Stretta were also proposed in the subgroup of patients without anatomical findings but pathological pH manometry with statistically satisfactory outcomes.

Conclusion: Management of GORD in this uniquely challenging patient population still remains difficult. Careful follow-up and appropriate treatment, including surgical intervention, are needed in patients with ongoing reflux post-RYGB. As described, treatment choice depends on the main cause of symptoms.

A07. Efficacy of liraglutide in weight regain after bariatric procedures: an up-to-date review of the existing literature.

Authors : *Dimitra Peristeri, Myutan Kulendran, Andrew Wan* | United Kingdom

Background: Weight regain after bariatric surgery (BS) is, unfortunately, a reality that many patients face nowadays. It usually occurs in the long-term following most bariatric procedures, with 20–30% of patients either failing to reach their target weight goals or failing to maintain the achieved weight loss. This review is aiming to shed light on the role of liraglutide in those patients who suffer from weight regain after their BS.

Materials and methods: A systematic literature search through the PubMed database, Embase and the Cochrane Library was conducted in July 2023 in order to identify all relevant studies describing the use of Liraglutide after a failed bariatric procedure.

Results: 13 studies, with a total of 2983 patients and a median BMI of 39.89kg/m2, were included in this review. More specifically, six were directly assessing weight loss with liraglutide; three were comparing liraglutide with revisional surgery, two were comparing liraglutide versus semaglutide

and one study was comparing liraglutide to placebo. The median percentage of weight loss was 7.1% (IQR 5.1-12.2%), and the median BMI change was 3.5 kg/m2. The use of liraglutide in patients after failed bariatric surgery has also been associated with improvements in blood pressure and HbA1c, as demonstrated in 6 studies. Patients who had a history of RYGB lost significantly more weight (-4.9%) than patients with a history of Sleeve gastrectomy (-2.8%). The median follow-up time was 18.6 months. The mortality rate was 0% in the liraglutide group.

Conclusion: Post-bariatric surgery patients with insufficient weight loss or excessive weight regain who used liraglutide for more than six months achieved a statistically significant weight loss, regardless of the type of BS they had undergone.

A10. Dramatic Functional Improvement Following Sleeve Gastrectomy in a Super-Super Obese Patient with Comorbidities equivalent to Absolute Contraindications for Bariatric Surgery

Authors : *Amit Bhambri, Dr Gurpreet Singh, Dr Sanchit Budhiraja, Dr HRS Girn* | India

Background

Bariatric Surgery(BS) is effective in treating morbid-obesity and Obstructive Sleep Apnea(OSA). Pulmonary artery Hypertension(PAH) is usually associated with OSA. PAH can also occur secondarily due to Left Heart disease. While BS is typically denied to patients with severe PAH, we suggest that aggressive medical therapy for patients with severe PAH may allow for its safe performance of surgery. Also, clinical improvement resulting from the subsequent weight loss may be quite dramatic.

Methods

A short-statured patient with a BMI of 67.1 kg/m2, weighing 155 kgs had severe OSA with history of being put on ventilator thrice in past due to Type-2 Respiratory failure. She was moribund and unable to walk out of her bed for the past 12 years.

She presented to Emergency Room with severe respiratory distress and was intubated.Her Trans-esophageal ECHO(TEE) suggested of severe Mitral-Stenosis(MS) with moderate Mitral-Regurgitation(MR) with severe PAH secondary to Rheumatic heart disease(RHD). She was already refused for cardiac surgery for her severe MS with MR due to very high risk of cardiac surgery secondary to super-super obesity and severe OSA.She was managed conservatively on bosentan, and inhaled iloprost drugs to decrease her PAH preoperatively.

Results

With Low Calorie Diet she lost 15 kgs.She was extubated after 12 days. She was further optimised for next 10 days. Two cardiologist opinion was taken,(one from another hospital). Both DIFFERED over their opinions for going ahead with BS.

After adequate optimisation she underwent Sleeve Gastrectomy. She was kept intubated till 1st day post operative because of deranged blood gas parameters and poor cardiac function. After extubation, she made an uneventful recovery.

10 months after surgery she has lost 55kgs of weight and now is relieved of all OSA symptoms with no respiratory distress on waking. Her follow-up TEE also showed marked improvement in Systolic Pulmonary artery pressures and Trans Mitral valve Pressure gradients.

Conclusions

BS can be performed after adequate pre-operative optimization of patients with severe PAH with an acceptable safety profile.

BS possibly offers the best chance for real functional improvement and, perhaps, extended survival of such high-risk patients.

A14. Revision Bariatric Surgery Following the failure of Initial restrictive surgery : A systematic review and Meta analysis

Authors : *Giovanni Santoro, S Kirkham, J. Alfred, A. Rehman, A. Tandon* | United Kingdom

Objectives

The number of bariatric operations are on the rise each year, which is true both for the primary procedure but also for revision surgeries. Sleeve gastrectomy is still the most popular bariatric procedure however often requires a revision surgery because of insufficient weight loss, weight regain or symptomatic GERD. The most populars revision procedures RYGB and OAGB. Our primary outcome was to look at the effect on weight loss in patients undergoing revision surgery and the secondary outcomes were gastro- oesophageal reflux, operative time and intra-operative complications.

Methods

A systematic search was performed among four major electronic databases (PubMed, Ovid, Embase and SCOPUS) identifying all studies comparing OAGB to RYGB as revision surgery. Initial search identified 1600 articles, after title and abstract review eight papers met the inclusions criteria, seven retrospective studies and one RCT.

Results

There were a total of 2,262 patients that fit the inclusions criteria. 742 patients had a OAGB and another 1520 had a RYBG. All patients previously had restrictive bariatric procedures for weight loss. The length of follow up was 12 months. We found no statistically significant difference demonstrated between OAGB and RYGB. (OR 0.42 95%CI -0.10,0.94,P= 0.12). The incidence of post operative reflux was higher in patients that had a OAGB compared to patient in the RYGB group (16.4% vs 6.4%, P=0.0001).

Operative time was statistically significant lower in the OAGB group (P=0.00001)

Conclusion

Our systematic review and meta-analysis showed no statistically significant difference between the two revision bariatric surgery procedure for %EWL. RYGB was superior to OAGB in reducing the incidence of symptomatic GERD while OAGB had a significant shorter operative time. No difference was found for post-operative bleeding and anastomotic leak.

A15. Meta-Analysis of Bariatric Surgical Procedures in Adolescent Obesity: Impact on Weight Loss and Complications

Authors : *Nasser Abdulsalam M AlJoaib, Dr. Faisal AlGhamdi, Dr. Ghazi AlOtaib ,Dr. Hazem Zakaria* | Saudi Arabia

Objectives

Our meta-analysis aimed to assess the impact of bariatric surgeries on weight reduction in adolescents. Laparoscopic Sleeve Gastrectomy (LSG), Laparoscopic Adjustable Gastric Banding

(LAGB), and Roux-en-Y Gastric Bypass (RYGB) were evaluated, along with associated complications.

Methods

We conducted a systematic review following PRISMA and Cochrane Handbook guidelines, searching databases from inception to May 12, 2023. Inclusion criteria comprised studies investigating bariatric surgery effects on weight loss, reporting BMI outcomes in English, involving human adolescents. The quality assessment used the Newcastle-Ottawa Scale and the National Institutes of Health tool, and the meta-analysis was conducted using Stata software.

Results

From 1,826 initial studies, 56 met the criteria, and 45 were included in the meta-analysis. LSG and LAGB showed significant body mass index (BMI) reductions up to 60 weeks (LSG: -10.008, $p = 0.002$; LAGB: -9.684, $p = 0.003$). Also, RYGB demonstrated a significant and sustained BMI reduction, notably at 24 weeks (-18.076, $p < 0.001$) and 36 weeks (-18.145, $p < 0.001$). Complications were assessed, revealing minimal complications related to LRYGB and LAGB. However, LSG was associated with a 1% incidence of hernia (Relative Risk (RR) = 0.01, $p = 0.001$), an 11% occurrence of cholecystectomy (RR = 1.1, $p = 0.01$), and a 10% leak incidence (RR = 1.01, $p = 0.01$).

Conclusion

This meta-analysis highlights the efficacy of bariatric surgery in reducing BMI among adolescents. LSG, LAGB, and RYGB all yielded significant and sustained BMI reductions. While complications were generally low, LSG exhibited specific risks, emphasizing the importance of individualized patient assessment.

A19. Improving the care of patients with obesity needing joint replacement - time for a combined ortho-bariatric approach?

Authors: *Marta Burak, Yashashwi Sinha, Saad Ikram, Thalia Ballinger, Santiago Gouveia, Sian Davies, Tom Wiggins* | United Kingdom

Introduction

Patients with obesity awaiting joint replacement surgery of the lower limbs may benefit from referral to weight-management services. (1)
NICE provides BMI criteria for referral to tertiary bariatric services, however this does not always translate into clinical practice. (2, 3)
Our aim was to assess the number and management of patients with obesity attending orthopaedic clinics for consideration of lower limb joint replacement.

Methods
A retrospective analysis was undertaken of all patients attending orthopaedic clinics for joint replacement secondary to osteoarthritis, in the lower limbs, at a single centre, over a two year period. Details of demographics, BMI, comorbidities and management plans were recorded from electronic patient records.

Results
335 patients (60% of 558 cases) had BMI recorded and were used for subsequent analysis.
36% (n=120) of patients were eligible for referral to weight-management services.
10% (n=32) were refused joint replacement surgery due to BMI, of which 81% (n=26) were eligible for referral to weight-management services. Instead of surgery, these 32 patients were offered: physiotherapy (n=10, 38%), analgesia (n=12, 46%), non-specific weight-loss advice (n=16, 62%), GP referral for weight-loss (n=6, 23%), and tertiary service referral for weight-loss (n=2, 8%).

Conclusions
BMI is an important risk factor for orthopaedic operations and increased efforts should be made to record it pre-operatively. An MDT approach would capture the notable proportion of patients who are not being appropriately referred to weight-management services which may impact on their quality of life and postoperative outcomes.

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A23. How women who have undergone bariatric/metabolic surgery conceptualise weight loss success: a qualitative study.
Authors : *Karen Pr, Stephanie Attersley-Smith, Kathryn Hart and Jane Ogden* | United Kingdom

Aims: The aim of the study was to explore what weight loss success means to women who have undergone bariatric/metabolic surgery.

Methods: Women (n=15) aged 18-45 who underwent bariatric/metabolic surgery at Western Sussex NHS Foundation Trust, were interviewed ≥ 1 year post surgery about their weight loss experiences

and what success meant to them following surgery. Interviews were transcribed and analysed using Thematic Analysis.

Results: Four themes with sub themes were identified. 1) Life being less of a struggle (e.g. improvement in mobility, comorbidities, and sleep); 2) Improved relationship with food (making healthier food choices and having greater portion control); 3) Better interactions with others (e.g. improved relationships with partner/family/friends); 4) Feeling better about oneself (e.g. improved self-image, mood and feeling more hopeful about the future). Transcending these themes was a strong sense of gratitude towards the surgery tinged with a feeling of guilt at having taken the easy way out.

Conclusion: Women conceptualise success following bariatric/metabolic surgery as much more than just weight loss but can feel guilty about the improvements they experience. Given the variability in weight loss in the longer term, a focus on the wider benefits of surgery may help women adjust to the changes they experience.

A24. "What innovations can we expect due to the development of artificial intelligence in bariatric surgery?"

Authors : *Manana Gogol, Andrew A.Gumbs Khatuna Kaladze, Yameen Khan* | Georgia

Introduction: The rising incidence of obesity is a global threat that is being only partially met by bariatric surgery. Laparoscopic sleeve gastrectomy remains the most frequent bariatric procedure, but limited dexterity, poor ergonomics and increased fatigue on surgeons due to the increased abdominal wall thickness, increased fat deposits and hepatomegaly contributes to a limited and challenging working space for surgeons. Despite the development of robotics and its evolution in abdominal surgery, the role of the complete robotic surgical system in obesity surgery still remains controversial.
This article aims to provide a better understanding of robotic sleeve gastrectomy in the treatment of morbid obesity.

Methods: A current systematic review of the available literature on robotic sleeve gastrectomy from 2011 to 2021 was done.

Results: The list includes 11 articles that emphasize the relevance and importance of the robotics in bariatric surgery. Of these articles 8 studies gave a direct comparison to traditional laparoscopic sleeve gastrectomy and results include preoperative and postoperative outcomes, the extent of the learning curve and the differences in cost. The literature notes advantages due to the facilitation of the procedure with robotic-assistance, similar operating times, but costs are significantly higher with robotics. Notably, the length of stay and the learning curve are non-significantly higher for laparoscopy.

Discussion: Randomized-controlled trials with longer follow up specifically looking at sustained rates of weight loss between robotic and laparoscopic sleeve gastrectomy are still required to see if there are any significant and meaningful differences between these 2 approaches for sleeve gastrectomy.
Keywords: Robotic sleeve gastrectomy, Bariatric surgery, Laparoscopic sleeve gastrectomy

A25. Predictors of weight loss following pre-operative liver shrinkage diet

Authors: *Alex Rothnie, Thomas Jones, Caroline Jarman, Stephen Agboro, Max Marsden, Rajab Kerwat, Midhat Siddiqui, Cynthia Borg, Kyriacos Shiamtanis, Ravikrishna Mamidanna* | United Kingdom

Introduction:
Liver shrinkage diet (LSD) is recommended for patients who are scheduled for bariatric surgery. The rationale for this being that an enlarged, fatty liver, especially the left lobe, can make visualisation of the stomach and hiatus difficult, thereby increasing operative complexity and complication risk. Weight loss on the LSD is variable and we aim to investigate factors which can impact the degree of total body weight loss for patients undertaking this prior to bariatric surgery.

Methods:
We performed a single centre, retrospective study of all patients who underwent bariatric surgery between 1st December 2019 and 1st March 2023 at our institution. Our institution's LSD advises 800-1000kcal for two weeks prior to surgery. We collected patient demographic data, ethnicity, multiple deprivation index, and weight at both preoperative assessment and on the day of surgery. Statistical analysis was performed with GraphPad Prism.

Results:
One hundred and fifteen patients were analysed with a mean age of 46years. Of the patients, 78% were female, with an average total body weight loss (TBWL) of 4.5% as compared to 3.8% amongst the male group. Univariate analysis of gender and weight prior to starting LSD showed a weak association ($p=0.0647$ and $p=0.1$ respectively) with TBWL. In multiple regression analyses these two variables were independently associated with percentage of TBWL ($p=0.01$ and $p=0.02$ respectively) and together explained 7% of the variance. Age, ethnicity and social deprivation did not predict weight loss following LSD.

Discussion:
LSD is standard prior to patients undergoing bariatric surgery at our institution. Female patients and those with higher preoperative weight are likely to lose more weight following LSD. The fact that neither ethnicity nor social deprivation affects total body weight loss on the preoperative LSD means that a standardised approach can be used for all patients and diets do not need to be modified.

A26. Role of Bariatric Surgery in management of Idiopathic Intracranial Hypertension; a tertiary centre experience.
Authors: *Michail Chatzikonstantinou, Ahmed Binjaloud, Wint Mon, Haris Markakis, Andrew Jenkinson, Mohamed Elkalaawy, Marco Adamo* | United Kingdom

Idiopathic intracranial hypertension (IIH) is a rare condition of raised cerebrospinal fluid pressure of unknown cause that mostly affects female patients with obesity. There is overwhelming evidence that bariatric surgery achieves sustainable weight loss with clinical improvement of the symptoms of IIH.

Objectives. To review the waiting time from the decision to operate, weight loss, and improvement of symptoms of IIH on bariatric patients with this condition operated in UCLH over the last four years.

Methods. We performed a retrospective analysis of electronic health records of the bariatric patients who underwent surgery from 2019 until 2023 and had IIH as a comorbidity. We reviewed their preoperative symptoms and assessed any documented improvement in IIH symptoms after surgery.

Results. From June 2019 until Aug 2023 a total of 18 patients with docum ented IIH underwent bariatric surgery. Seventeen patients were female, and one was male. Average age was 36.3 years old (23 to 52). The average waiting time from decision to operate until surgery was 3.9 months (1 to 9). Mean BMI at the time of surgery was 46.2 kg/m2 (34.2 to 61.9). At max follow up the mean BMI was

35.3 (20.8 to 52.9). Preoperative symptoms were severe headache (94.4%) visual disturbances (blurred vision diplopia with or without papillooedema) (66.7%), dizziness and tinnitus. Postoperatively 10 out of 17 patients reported improvement in daily headaches; Visual symptoms were improved in 8 out of 12 patients and four patients reported no improvement in symptoms with one patient to be scheduled for second stage due to poor weight loss.

Conclusion. Due to our close collaboration with the neurosurgical department our unit has frequent urgent referrals of patients living with obesity and IIH. These are prioritised accordingly, and our data strengthen the current evidence of the effect of bariatric surgery in patients with IIH.