# A01. Bariatric Surgery and Iron Deficiency Anemia: A Retrospective Cohort

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## INTRODUCTION

**Bariatric surgery** has been for a long time one of the most successful interventions when it comes to tackling obesity and preventing its complications. However, weight loss procedures do not come without shifting the balance in metabolism, through new metabolic and nutritional challenges.

## AIM

Our study focuses on analyzing the association of **Iron Deficiency Anemia (IDA)** and its prevalence **post-bariatric surgery** to further deepen our understanding of such new realities in bariatric patients.

## METHOD

A retrospective cohort study, where **3000** patients who underwent bariatric surgery, were selected from a single center, Al Zahraa University Hospital, from the years **2008 till 2018**.

Medical records were carefully reviewed for **demographics**, **type of surgery**, and **postoperative complications**, including **IDA**. The SPSS system was employed for our statistical analysis, in which emphasis was put on IDA incidence after primary and revisional bariatric surgeries.

## CONCLUSIONS

**Iron deficiency anemia** is a complication worth understanding its incidence and impact post bariatric surgery, especially after surgical procedures such as **RYGB** with malabsorptive components. Although a low prevalence was noted, there is still a requirement for screening alongside nutritional monitoring.

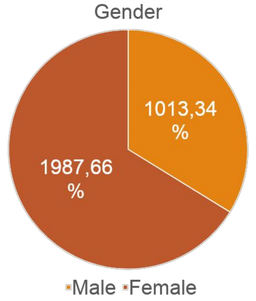
Iron supplementation as a prophylactic **should be** tailored according to the type of bariatric surgery opted for, and the overall strategy of weight loss to ensure the **best care** for our patients.

## RESULTS

*23 patients (0.76%) had iron deficiency anemia post-primary bariatric surgery and 1 patient (0.03%) post-secondary, which* ***showed statistical significance as a complication post-operative with a p-value of 0.044****.*

| Type of bariatric surgery | RYGB | SG | MGB | Total |
|---|---|---|---|---|
| Number of patients who underwent **primary** bariatric surgery | 158 | 2829 | 13 | 3000 |
| Number of patients who underwent **revisional** bariatric surgery | 58 | 62 | 24 | 144 |
| Total | 216 | 2891 | 37 | 3144 |

| Type of bariatric surgery | RYBG | SG | MGB | Total |
|---|---|---|---|---|
| Distribution of patients who had **IDA post primary** bariatric surgery (%) | 7 | 16 | 0 | **23** |
| | 4.43% | 0.57% | 0 | 0.76% |
| Distribution of patients who had **IDA post revisional** bariatric surgery (%) | 1 | 0 | 0 | **1** |
| | 1.72% | 0% | 0% | 0.69% |
| p-value | | 0.1 | 0.415 | |
| | **0.044** | | | |




***All of the 24 patients developing IDA were females***

## ACKNOWLEDGEMENTS

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# A04. Surgical Sequencing in Complex Obesity Patients: Outcomes of Sequential Bariatric Procedures and Gallbladder Interventions

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## INTRODUCTION

**Bariatric surgeries** have evolved drastically over the years, increasing in **complexity**, and **diversity**. At the same, the stories of **revisional procedures** have become part of the routines of bariatric surgeons, with **gallbladder diseases** presenting an important associated factor of repeated surgeries.

## AIM

Our study focuses on the **outcomes** of sequential bariatric procedures and their **association** with **gallbladder pathologies**, hence cholecystectomy.

## METHOD

Our study applied a retrospective cohort design, where **3000** patients who underwent bariatric surgery, were selected from a single center, at Al Zahraa University Hospital from the years **2008 till 2018**.

Our investigation was centered around **144** patients who had undergone **revisional surgery**.

Surgical combinations such as Sleeve Gastrectomy (**SG**) with Roux-en-Y Gastric Bypass (**RYGB**) or RYGB with Mini Gastric Bypass (**MGB**) were observed in **comparison** regarding rates of **post-operative cholecystectomy**.

## RESULTS

***41 patients underwent SG+RYGB from which 12 had a cholecystectomy done with a statistical significance p-value of 0.021.***

*6 patients underwent SG+MGB from which 2 had a cholecystectomy done.*

*9 patients underwent RYGB+RYGB surgeries from which 2 had a cholecystectomy done.*

*6 patients underwent RYGB+MGB from which 1 patient had a cholecystectomy done.*

*48 patients underwent RYGB+SG from which 3 patients had a cholecystectomy done*

***None of the combinations of surgeries showed any statistical significance (p-value>0.05) except for SG+RYGB surgeries as seen in the Table.***

Patients underwent cholecystectomy post revisional bariatric surgery

| Type of surgery (primary + revisional) | Number of patients who performed the surgery (from the overall population) | Number of patients who performed the cholecystectomy (from the total number who performed this surgery) | p-value |
|---|---|---|---|
| SG + RYGB | 41 | 12 | **0.021** |
| SG + MGB | 16 | 2 | 0.665 |
| RYGB + RYGB | 9 | 2 | 0.114 |
| RYGB + MGB | 6 | 1 | 0.453 |
| RYGB + SG | 48 | 3 | 0.167 |

## CONCLUSIONS

Bariatric surgical sequencing may have different **influences** on the **risk** of incidence of **gallbladder** diseases.

**SG+RYGB** was shown to have a **greater** risk in our study and may raise **concern** about the requirements of **prophylactic strategies** such as Ursodeoxycholic acid (UDCA) or concomitant cholecystectomy during redo surgery, or improved monitoring.

Our findings are of **added value** in helping professionals personalize bariatric strategies toward **better outcomes and fewer complications**

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## ACKNOWLEDGEMENTS

This work would have never been done without the support of our families who were always there for us and who always encouraged us. We are extremely grateful for everyone who aided us in some way in our research.

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# A05.Concomitant Cholecystectomy with Revisional Bariatric Surgery: A Necessary Standard or Case-by-Case Decision?

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## INTRODUCTION

One of the most controversial discussions in bariatric surgery is centered around the management of gallbladder pathology during revisional bariatric surgery.

Alongside the high **incidence of gallbladder stones post bariatric surgery** as a result of rapid weight loss, some professionals may advocate for prophylactic cholecystectomy, while others may suggest more selective approaches

## AIM

Our paper focuses on studying the necessity of concomitant cholecystectomy during revisional bariatric surgery.

## METHOD

Our study applied a retrospective cohort design, where **3000 patients** who underwent bariatric surgery, were selected from a single center, at Al Zahraa University Hospital from the years **2008 till 2018**.

144 of those patients underwent revisional bariatric surgery.

Our study compared the outcomes between patients who had a concomitant cholecystectomy (n=6) against those who needed such a procedure later (n=20).

## RESULTS

*Our findings concluded that **only 4.16%** of cases received a **concomitant cholecystectomy**, while **13.88%** required the **procedure postoperatively**. Those who had concomitant cholecystectomy had ultrasound proven gallstone with symptoms prior to the revisional bariatric surgery.*

*Our results add to the discussion that considering prophylactic cholecystectomy **is not always warranted** and that many risk factors come into play for such a surgical decision. There was **no clinical statistical significance** (p-value: 0.835) correlating the ultrasound results to the need of cholecystectomy. Ursodeoxycholic acid has been proposed to be used as a preventive measure for gallbladder stone formation.*

| Number of patients who underwent **revisional** bariatric surgery | Number of **cholecystectomies** done after revisional bariatric surgery | Number of **concomitant cholecystectomies** done along revisional bariatric surgery | Ultrasound results of patients who **underwent** cholecystectomy after revisional bariatric surgery | | p-value | Ultrasound results of patients who **did not underwent** cholecystectomy after revisional bariatric surgery | | p-value |
|---|---|---|---|---|---|---|---|---|
| | | | Normal | Cholelithiasis | | Normal | Cholelithiasis | |
| 144 | 20 | 6 | 0 | 20 | 0.835 | 118 | 0 | 0.178 |

## CONCLUSIONS

Prophylactic cholecystectomy during revisional bariatric surgery remains a controversial discussion, however, our study has denoted on many levels that concomitant prophylactic cholecystectomy **is not a must unless clinically indicated** for the patient's case, proven he has symptomatic gallstones and needs to be operated on.

Justification of prophylactic cholecystectomy has not been formally established. **Physicians should diverge towards a more conservative approach in gallstone formation prophylaxis** to tackle the rise of biliary complications and to try to explain to the patients all the drawbacks of every procedure and if possible, to try alternative methods to prevent concomitant or future procedures as the usage of ursodeoxycholic acid.

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# A06. Gastric Outlet Obstruction as an Early Complication of Intragastric Balloon Treatment for Obesity: A Case Report.

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## INTRODUCTION

Obesity is a global health challenge with significant morbidity and mortality, including an increased risk of cardiovascular disease, diabetes, and cancer[1]. For patients unable to achieve weight loss through traditional lifestyle modifications, bariatric surgery remains the most effective intervention[2]. However, due to its invasive nature and associated risks, minimally invasive alternatives like intragastric balloon (IGB) therapy have gained popularity[3]. IGBs are temporary, designed to induce satiety and promote weight loss. Despite their safety profile, complications such as nausea, vomiting, and, rarely, gastric outlet obstruction (GOO) can occur[4].

## AIM

To present a rare complication of an intragastric balloon and its management

## METHOD

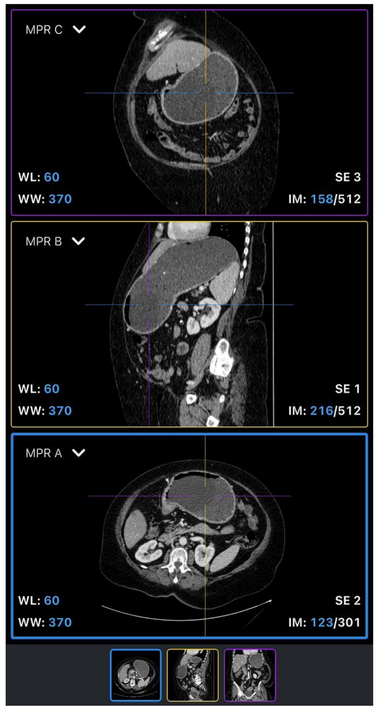
We present a case of a 49-year-old overweight individual with a history of intragastric balloon implantation four weeks prior. The patient's weight prior to placement was 102 kg, with a BMI of 34.1. The patient has been experiencing nausea, vomiting, abdominal pain, and distention for the past week. The current weight at presentation is 84 kg, resulting in a BMI of 28.4. Upon examination, the patient seems dehydrated and has abdominal tenderness and distension in the mid-abdomen. Laboratory results indicate a white blood cell count of 6.5, a C-reactive protein level of 10, and potassium level of 3.4. Computed Tomography Scan The abdomen has significant distension with a trapped balloon located in the pyloric area. Patient admitted to the surgical department overnight; intravenous fluid replenishment initiated and nasogastric tube inserted. The patient exhibited vomiting of foul-smelling food contents. Gastric lavage was performed with warm fluids until the effluent was clear. The patient was transported to the operating theatre the day following admission, where, under general anaesthesia, a balloon was deflated and retrieved from the stomach by upper endoscopy.

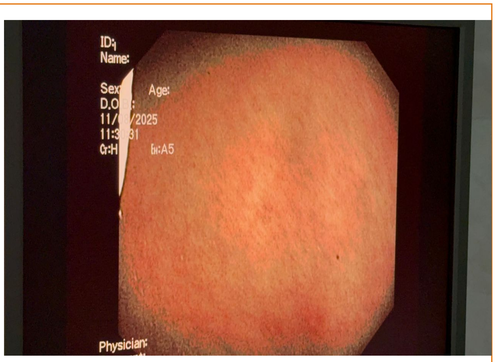
## RESULTS

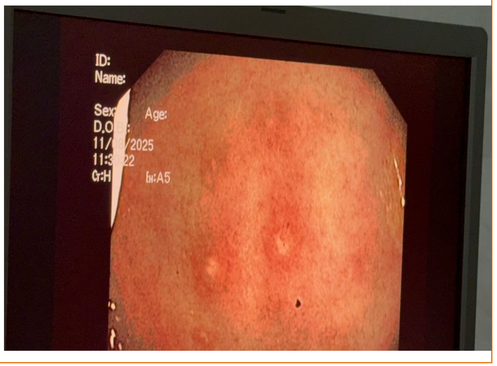
The patient was successfully treated with endoscopic deflation and removal of the balloon. This case underscores the importance of recognizing GOO as a potential complication of IGB therapy, even in the early post-insertion period.

The CT images confirm the presence of a well-defined round foreign object (the intragastric balloon) within the stomach. The stomach may appear distended, consistent with obstruction. No obvious perforation or free air is seen, but delayed gastric emptying is likely.

Endoscopic Images (Images): Show mucosal changes such as erythema, edema, and possible ulceration, indicating irritation and injury to the gastric lining. This is likely due to pressure from the intragastric balloon. Displays congested and edematous gastric mucosa, consistent with ongoing inflammation, likely due to impaired gastric emptying. Clearly shows the intragastric balloon positioned near the gastric outlet (pylorus), causing a mechanical blockage of the gastric exit (gastric outlet obstruction).





## CONCLUSIONS

The pictures confirm that the patient developed gastric outlet obstruction shortly after intragastric balloon placement, manifested by endoscopic and radiologic evidence of obstruction and mucosal injury. Early intervention is necessary to avoid severe complications.

Clinicians should maintain a high index of suspicion for GOO in patients presenting with persistent gastrointestinal symptoms after IGB, especially after the first week of placement, to ensure timely diagnosis and management.

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# A15. INTRA GASTRIC BALLOON AS A FIRST STAGE IN THE SUPER OBESE PATIENTS. IS IT WORTHWHILE?

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## INTRODUCTION

Patients with super obesity require complex treatment and staged approach for weight loss. Intragastric balloon (IGB) is an accepted modality for treatment of obesity. However the efficacy of IGB in the super obese patients as a first stage has not been clearly established.

## AIM

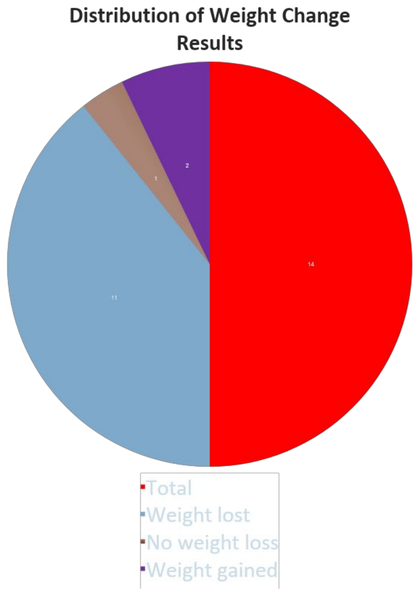
The study aims to evaluate the efficacy of IGB as first stage in selected patient population.

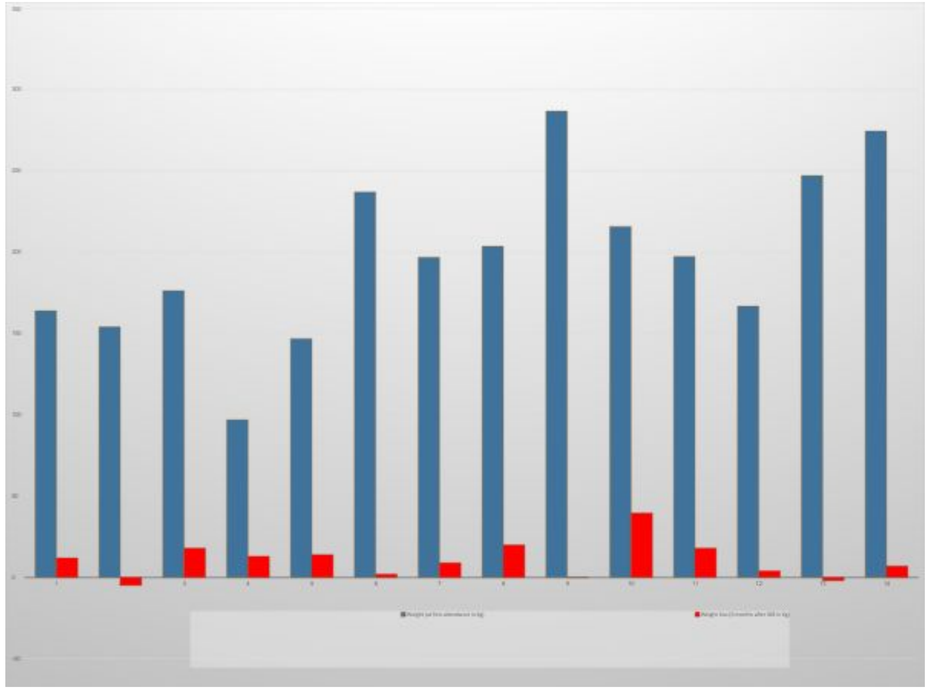
## METHOD

Patients who received IGB as a first stage procedure as part of a staged approach, in our unit, from 2011 to 2021 were included in a prospective database. Demographic data, and weight loss results before and after 6 months of balloon insertion were analysed using Microsoft Excel.

## RESULTS

14 patients were included in the study. All patients received routine IGB support, followed by planned endoscopic removal. Balloon was taken out early from one patient due to intolerance. Majority of the patients were male (64.2%). Median body mass index (BMI) prior to balloon insertion was 66.95 kg/m2 (interquartile range {IQR}: 55.8-72.5 kg/m2) with a median weight of 197.2 kg (IQR: 166-237 Kg). Median total weight loss for all patients at 6 months was 10.5 Kg (range: -4.9-39.6). Two patients gained weight and a third patient did not lose any weight.



## CONCLUSIONS

IGB as a first stage procedure in patients with super morbidly obesity achieved limited reduction in weight. It appears to have limited value in making the 2nd stage safe. Further data is required before IGB can be established as a first stage approach in this patient population.

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# A17. Efficiency of Cruroplasty as a Treatment of Gastro-Esophageal Reflux Disease in Morbid Obese Patients with Hiatus Hernia during Sleeve-Gastrectomy

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## Introduction

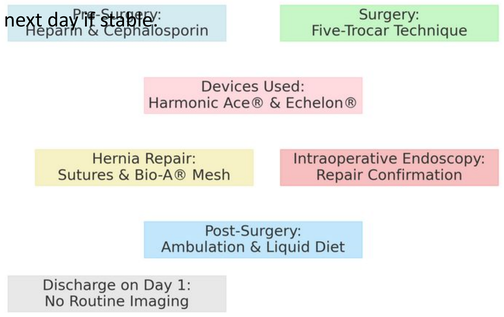
The effect of LSG on GERD is controversial. Although concomitant hiatal hernia repair at the time of LSG is common and advocated by many, there are few data on the outcomes of GERD symptoms in these patients.

## Aim

To analyse the impact of hiatal hernia repair (HHR) on gastro-oesophageal reflux disease (GERD) in morbidly obese patients with hiatus hernia undergoing laparoscopic sleeve gastrectomy (LSG).

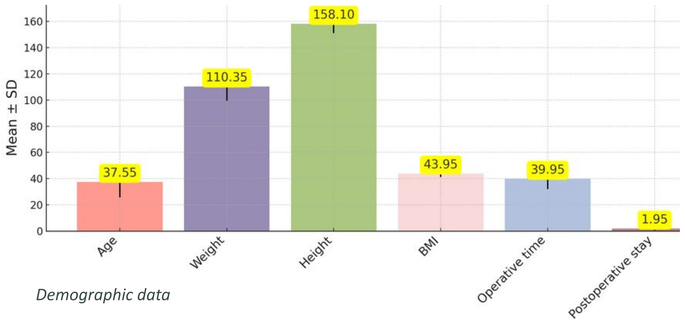
## Method

This retrospective cohort study analyzed 20 patients (ages 18-60) undergoing LSG with cruroplasty at Ain Shams hospitals. Outcomes from July 2018 to July 2019 focused on GERD improvement, BMI changes, and crural repair efficacy. Preoperative heparin and antibiotics were given; no catheters, drains, or postoperative heparin were used. Patients ambulated early, began a liquid diet within six hours, and were discharged the next day if stable.

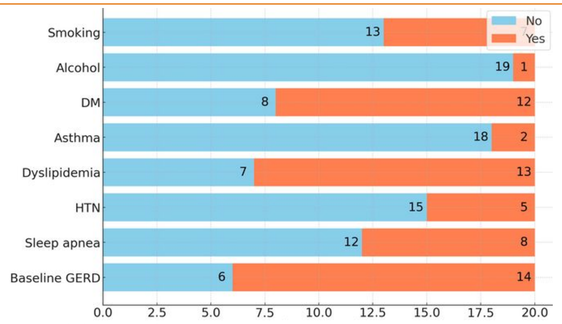



## Results

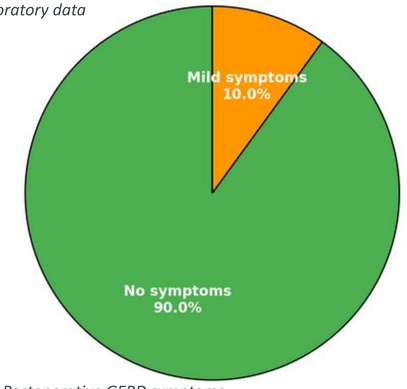
*The study included 20 participants aged 20–55 years (mean 37.55 ± 11.77), with 75% female and 25% male. Their mean weight was 110.38 ± 20.54 kg, height 158.10 ± 6.98 cm, and BMI 43.55 ± 1.98. The average operative time was 399.95 ± 30.89 minutes, and hospital stays lasted 1.95 ± 0.76 days. GERD was present in 70%, sleep apnea in 40%, hypertension in 45%, dyslipidemia in 85%, and asthma in 15%. Diabetes affected 40%, with treatments split between oral (20%), insulin (41.7%), and both (38.3%). Additionally, 15% consumed alcohol, and 35% were smokers.*




*Demographic data*




*Laboratory data*




*Postoperative GERD symptoms*

| Variable | Preoperative | 3 Months Postoperative | Significance |
|---|---|---|---|
| Size of H. Hernia | | | HS |
| - 0 | 0 (0.0%) | 18 (90.0%) | |
| - 1 | 11 (55.0%) | 2 (10.0%) | |
| - 2 | 9 (45.0%) | 0 (0.0%) | |
| Esophagitis | | | HS |
| - No | 5 (25.0%) | 15 (75.0%) | |
| - Yes | 15 (75.0%) | 5 (25.0%) | |
| Gastritis | | | S |
| - No | 15 (75.0%) | 20 (100.0%) | |
| - Yes | 5 (25.0%) | 0 (0.0%) | |

*Comparison between preoperative data and 3 months postoperative*

*Most participants (65%) were non-smokers, and 95% did not consume alcohol. Other conditions such as DM (40%), dyslipidemia (65%), hypertension (25%), and sleep apnea (40%) were reported, with asthma being the least common (10%). Baseline GERD was present in 70% of participants. Figure 2 shows postoperative GERD symptoms, with 90% of participants reporting no symptoms and 10% experiencing mild symptoms, suggesting that the intervention was effective in minimizing GERD-related symptoms.*

## Conclusion

SG with HHR is feasible and safe, providing good management of GERD in obese patients with reflux symptoms. Small hiatal defects could be underdiagnosed at preoperative endoscopy and/or upper gastrointestinal contrast study. Thus, a careful examination of the crura is always recommended intraoperatively.

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# A18. The Outcomes of Revisional One Anastomosis Gastric Bypass Versus Revisional Roux-en-Y Gastric Bypass After Primary Restrictive Procedures

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## Introduction

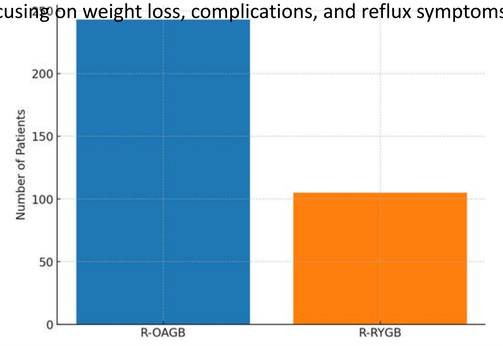
primary restrictive bariatric procedures, such as laparoscopic gastric banding and VBG, were once popular but often resulted in complications like weight regain and poor quality of life. LVSG also gained popularity but has shown long-term weight regain.

## Aim

to evaluate the effectiveness of one-anastomosis gastric bypass (OAGB) as a revisional procedure for failed restrictive bariatric surgeries and compare its outcomes with those of Roux-en-Y gastric bypass (RYGB) in terms of weight loss, reflux symptoms, and complications.

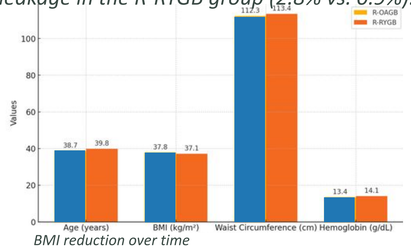
## Method

between May 2009 and December 2016, involved 348 patients with failed restrictive bariatric procedures. Patients underwent laparoscopic revisional gastric bypass, with 243 receiving one-anastomosis gastric bypass (OAGB) and 105 undergoing Roux-en-Y gastric bypass (RYGB). The study excluded patients with certain conditions and aimed to compare outcomes, focusing on weight loss, complications, and reflux symptoms.




## Results

*Between May 2009 and December 2016, 348 patients underwent laparoscopic revisional bypass surgery after failed restrictive bariatric procedures. The mean age was 39.3 years, with a preoperative BMI of 37.5 kg/m². All surgeries were completed laparoscopically, averaging 71.5 minutes, with a 2.1-day hospital stay. R-OAGB was performed on 243 patients and R-RYGB on 105. R-OAGB resulted in greater weight loss (71.8% vs. 58.3%, p=0.032). The overall mortality rate was 0.2%, with higher leakage in the R-RYGB group (2.8% vs. 0.9%).*



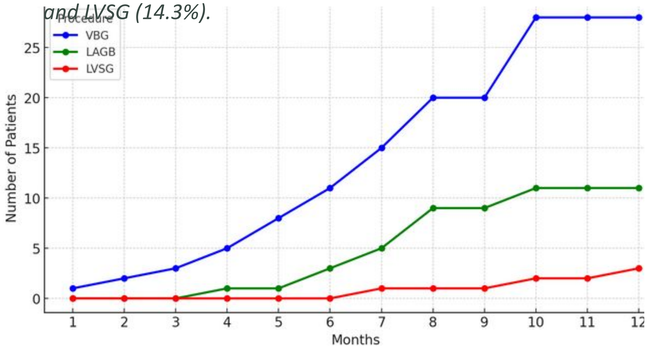

*BMI reduction over time*

| Parameter | R-OAGB | R-RYGB | p-value |
|---|---|---|---|
| Operative time (min) | 57.7 ± 55.8 | 85.3 ± 44.5 | 0.023* |
| Mean of EWL% | 71.8 ± 5.9 | 58.3 ± 6.6 | 0.032* |
| Minor complications | 15 (6.2%) | 12 (11.4%) | 0.279 |
| Major complications | 27 (11.1%) | 9 (8.6%) | 0.946 |
| Leakage | 1 (0.4%) | 3 (2.8%) | 0.033* |
| Bleeding | 1 (0.4%) | 0 (0%) | 0.481 |
| Intractable reflux | 52 (21.4%) | 3 (2.9%) | 0.001* |
| Hb 1 year post-op (g/dL) | 8.2 ± 0.5 | 12.8 ± 3.2 | 0.030* |
| Iron deficiency | 33 (13.5%) | 5 (4.7%) | 0.048* |
| Mortality | 1 | 0 | 0.481 |

*Operative Parameters and Complications Between Revisional-One Anastomosis Gastric Bypass and Revisional-Roux-en Y Gastric Bypass*

*R-OAGB has shorter operative times, higher EWL%, and more iron deficiency but higher reflux rates. Significant differences appear in operative time, reflux, and Hb levels.*

*Intractable reflux occurred in 21.4% of R-OAGB patients versus 2.9% in R-RYGB ($p < 0.001$). While 78.6% of R-OAGB patients reported no reflux (SS score <4), 97.1% of R-RYGB patients did. Among 52 R-OAGB patients with severe reflux, 18 were treated with proton pump inhibitors, 4 underwent Braun anastomosis, and 30 were converted to RYGB, with 3 showing no improvement. Reflux rates were highest among R-OAGB patients with prior VBG (25.2%) compared to LAGB (16.9%) and LVSG (14.3%).*




*Onset of reflux complaint*

## Conclusion

The R-OAGB is simple, safe, effective, and easy to learn with a better weight loss than R-RYGB, but it has a higher chance of reflux and anemia in long-term follow-up. R-OAGB has acceptable reflux rates after LAGB and LVSG, but not recommended after LVBG

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## Acknowledgements

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# A19. Outcomes of One Anastomosis Gastric Bypass in 472 Diabetic Patients

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## Introduction

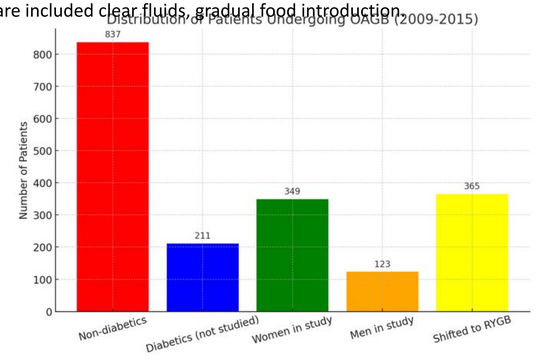
Morbid obesity and type 2 diabetes are rising rapidly, with 80% of diagnosed cases being obese (1). Metabolic surgery, particularly OAGB, offers effective diabetes remission, even for lower BMI patients, with fewer complications than Roux-en-Y gastric bypass (RYGB) (2).

## Aim

The aim of the study is to evaluate the outcomes of OAGB in diabetic obese patients treated at the bariatric center, Also to assess whether OAGB could serve as an alternative to Roux-en-Y Gastric Bypass (RYGB) for managing diabetes in obese individuals. Additionally, the study investigates whether preoperative factors, such as Body Mass Index (BMI) and the usage of antidiabetic medication, can predict postoperative diabetes remission outcomes

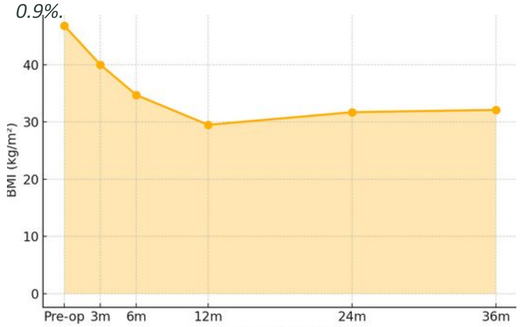
## Method

Between 2009 and 2015, 472 diabetic patients (349 women) underwent OAGB surgery, with comprehensive preoperative evaluation and follow-up by a multidisciplinary team. Pre- and postsurgical management followed NIH guidelines, with Barrett's esophagus and severe GERD patients redirected to RYGB surgery. A five-port technique was used for the procedure, and postoperative care included clear fluids, gradual food introduction.

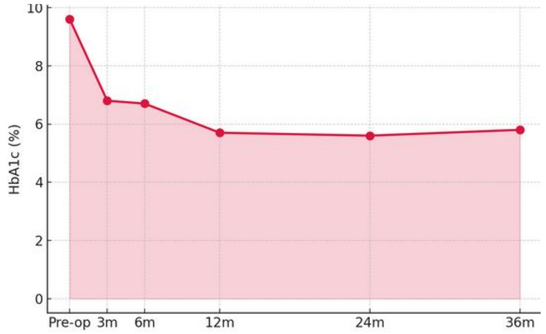



## Results

*The study evaluated the outcomes of One Anastomosis Gastric Bypass (OAGB) on 472 diabetic patients, focusing on weight loss, HbA1c improvement, and diabetes remission over three years. At one year post-operation, the mean BMI significantly dropped from 46.8 ± 7.2 kg/m² to 29.5 ± 2.8 kg/m², and HbA1c reduced from 9.6 ± 1.3% to 5.7 ± 1.5%. By the three-year follow-up, the mean BMI stabilized at 32.1 ± 3.3 kg/m² with HbA1c at 5.8 ± 0.9%.*




*BMI reduction over time*



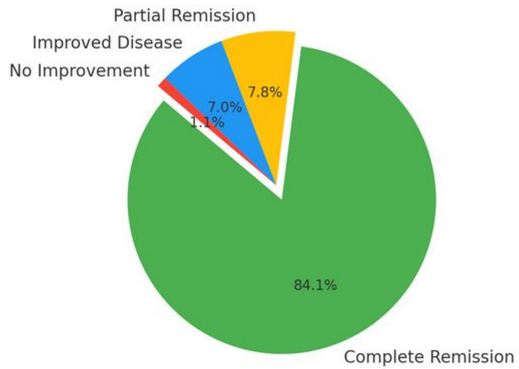

*HbA1c evaluation post surgery*

*Complications were minimal, with an overall rate of 6.8%. The most common issue was iron deficiency anemia (3.8%). Weight loss patterns showed rapid reduction within the first year, followed by slight weight regain over the next two years.*

| Preoperative Treatment of DM | No. of DM Remission | Percentage of DM Remission |
|---|---|---|
| No drugs | 43/43 | 100% |
| Single oral drug | 142/154 | 92.2% |
| Two oral drugs | 139/146 | 95.2% |
| Three oral drugs | 21/29 | 72.4% |
| Injection | 52/100 | 52% |

*Diabetes remission rates according to the preoperative management of DM*

*The study achieved complete diabetes remission in 84.1% of patients at one year, increasing to 90.9% by year three among those with continued follow-up. Partial remission was observed in 7.8% of patients, while 7% showed improved diabetes control, and 1.1% exhibited no improvement. The remission rates were higher in patients using oral hypoglycemic drugs before surgery, with 95.2% remission for those on two oral medications. In contrast, only 52% of patients on insulin achieved remission.*




*Diabetes remision after year*

## Conclusions

OAGB is a simple, safe, effective, easy to learn and easy to reverse procedure. It has acceptable complications and mor?tality rates. Therefore, OAGB has the ability to be an excellent alternative to RYGB in the treatment of diabetic obese pa?tients. BMI could not be used for the prediction of postoper?ative diabetic remission, but preoperative medication is a good predictive factor. Longer follow-up for diabetic remission is needed. Future prospective and large subjective trials about the impact of bariatric surgery on type 1 DM should be performed

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## Acknowledgements

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# A21.Unlocking the Gut–Brain Connection: Microbiota and Neurohormonal Pathways in Obesity and Bariatric Surgery

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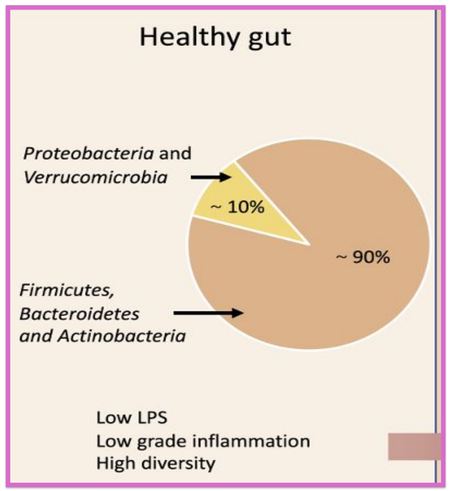
## INTRODUCTION

Obesity is way more than excess weight—it is a complex, systemic disorder driven by metabolic, inflammatory, and neurohormonal dysregulation. Central to this network is the gut microbiota (GM), which orchestrates energy balance, appetite, and metabolism. Bariatric surgery (BS) offers dramatic weight loss and metabolic improvement, not only by anatomical alteration but by reshaping the GM–gut–brain axis.

## METHODS

We synthesised current evidence from human and experimental studies exploring GM composition in obesity and post-BS, with a focus on neurohormonal mediators, including GLP-1, PYY, and bile acids. Literature was identified via PubMed, Medline and Scopus, with inclusion of translational studies highlighting microbiota-driven metabolic pathways.




## RESULTS

Obese individuals exhibit reduced microbial diversity, an increased Firmicutes/Bacteroidetes ratio, and depletion of beneficial taxa such as Christensenellaceae, Lactobacillus, Bifidobacteria, and Akkermansia. These changes promote chronic inflammation, insulin resistance, and energy dysregulation. BS induces rapid, profound shifts in GM, enhancing production of short-chain fatty acids, modulating bile acid signalling, and stimulating anorexigenic hormones. The resulting recalibration of the gut–brain axis drives sustained appetite suppression, improved glucose homeostasis, and durable weight loss. Novel microbiota-targeted strategies—including prebiotics, probiotics, and faecal transplantation—show promise as adjuncts to surgery, particularly in patients with incomplete metabolic response.

| | Related GM Changes | |
|---|---|---|
| | Increased relative abundance | Decreased relative abundance |
| RYGB | Proteobacteria, Bacteroidetes, Verrucomicrobia, Bacteroidaceae, Genera Escherichia, Akkermansia, Veillonella, Bacteroides, Streptococcus and Slackia | Firmicutes, Blautia |
| SG | Actinobacteria, Bacteroidetes, Rikenellaceae, Christensenellaceae, Blautia, Akkermansia, Eubacterium, Lactobacillus, Cyanobacteria, and Haemophilus | Firmicutes, Blautia |
| GLP-1 analogues | Bacteroidetes, Proteobacteria, Bacilli, Collinsella, Akkermansia and Clostridium | Alistipes |

| | RYGB | SG | GLP-1 analogues |
|---|---|---|---|
| Leptin | ↓ | ↓ | ↓ |
| Ghrelin | ↓ | ↓ | ↓ |
| GLP-1 | ↑ | ↑ | ↑ |
| PYY | ↑ | ↑ | ↑ |
| OXM | ↑ | ↑ | ↑ |

## CONCLUSION

The GM-neurohormonal interface is a master regulator of obesity and post-surgical metabolic recovery. By decoding this axis, we can move beyond one-size-fits-all interventions toward personalised, microbiota-informed strategies, blending surgery, nutrition, and pharmacology. Harnessing the gut–brain dialogue may redefine obesity treatment and open new horizons for precision metabolic medicine.

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## AKNOWLEDGEMENTS

None

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# A22 - Revision Bariatric Surgery: Technical Challenges Following Laparoscopic Sleeve Gastrectomy (LSG) and Laparoscopic Greater Curvature Plication (LGCP)

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## INTRODUCTION

Both LSG and LGCP are restrictive bariatric operations used to treat obesity; however, they may require revisional procedures due to weight regain, food intolerance, gastroesophageal reflux disease (GERD), or other reasons.[1] Roux-en-Y gastric bypass (RYGB) and one-anastomosis gastric bypass (OAGB) are the most common types of revisional surgery.[2] [3]
This study aims to compare the technical difficulties encountered during revisional surgery after both LSG and LGCP.

## AIM

To assess the technical difficulties encountered in revisional bariatric surgery when converting **LSG** or **LGCP** to **Roux-en-Y gastric bypass (RYGB)** or **one-anastomosis gastric bypass (OAGB).**

## METHOD

Between 2020 and 2025, 37 patients required revisional surgery (from LSG or LGCP converted to RYGB or OAGB). All operations were performed by the same surgeon. Patients were divided into two groups according to their primary procedure (LSG or LGCP).

Operative technical challenges were assessed based on:
- Total operative time
- Time required to prepare the gastric pouch
- Intraoperative adhesions
- Bleeding
- Partial resection of the remnant stomach
- Hospital stay duration

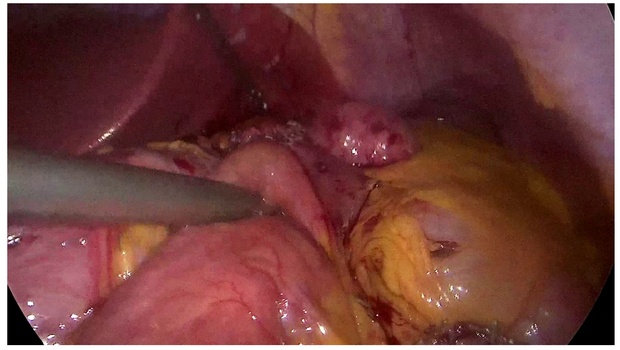
## RESULTS

Of the 37 patients included:
- 24 had prior LSG (11 converted to RYGB and 13 to OAGB).
- 13 had prior LGCP (5 converted to RYGB and 8 to OAGB).

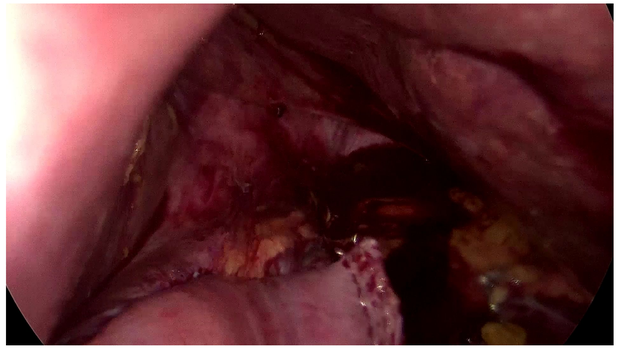
The average operative time for conversion of LGCP to RYGB was 190 minutes, compared with 110 minutes for the LSG group. Conversion of LGCP to OAGB required an average of 140 minutes, compared with 78 minutes in the LSG group.

Most of the operative time was spent on gastric pouch preparation — approximately 110 minutes in LGCP cases versus 50 minutes in LSG cases.

Adhesions around the stomach were more frequent and denser in LGCP cases than in LSG. The estimated blood loss averaged 170 ml in the LGCP group versus 45 ml in the LSG group; no case required blood transfusion. Partial resection of the remnant stomach was necessary in three LGCP cases but in none of the LSG cases. Prolonged hospital stay (more than one day) was required in two LGCP cases and one LSG case.



*LGCP to RYGB*



*LSG to RYGB*

## CONCLUSIONS

Both LSG and LGCP may necessitate revisional bariatric surgery; however, conversions following LGCP are technically more challenging and demand higher surgical expertise compared with LSG.

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## ACKNOWLEDGEMENTS

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# A23. Evaluation of One Anastomosis Gastric Bypass with Modified Fundoplication Using the Excluded Stomach as a Novel Antireflux Technique

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## INTRODUCTION

Gastroesophageal reflux disease frequently persists despite weight reduction, thereby diminishing anticipated improvements in quality of life following bariatric surgery. While one-anastomosis gastric bypass is metabolically effective, it may not completely manage reflux symptoms. This study assessed whether the incorporation of a modified fundoplication could enhance symptom control and health-related quality of life compared with OAGB alone

## AIM

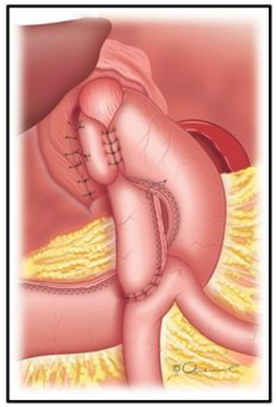
To evaluate the feasibility, safety, and efficacy of combining One Anastomosis Gastric Bypass (OAGB) with a novel modified fundoplication using the excluded stomach in the management of obesity associated with gastroesophageal reflux disease (GERD) and/or hiatus hernia.

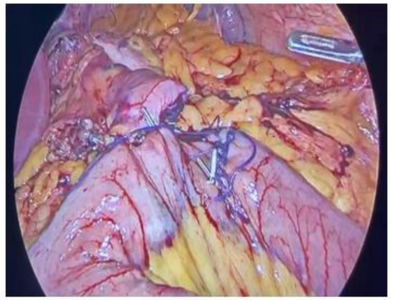
## METHOD

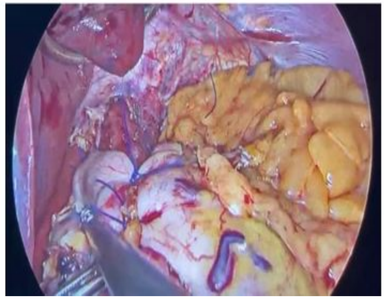
- Prospective randomised comparative study was conducted on 60 patients with obesity and GERD and/or hiatus hernia.
- Participants were randomly assigned into two equal groups: Group A underwent standard OAGB, and Group B underwent OAGB combined with modified fundoplication.
- All patients were assessed preoperatively using upper gastrointestinal endoscopy and esophageal manometry.
- Postoperative outcomes included GERD symptoms assessed by the GERD-HRQL questionnaire, VISICK score, PPI dependency, weight loss, operative time, and complications. Follow-up was conducted over a 24-month period.

## RESULTS

Both groups showed similar excess weight loss percentages at 6, 12, and 24 months, with no significant difference ($p > 0.05$). The OAGB + fundoplication group showed significantly lower postoperative VISICK scores (median 2 vs. 4, $p < 0.001$) and reduced PPI usage duration ($p = 0.00014$). Manometric findings at two years post-op showed increased LES high-pressure zones in the fundoplication group (56.6% vs. 0%) and improved LES relaxation (23.3% vs. 13.3%). There was a slight increase in dysphagia in the fundoplication group, requiring careful patient selection.







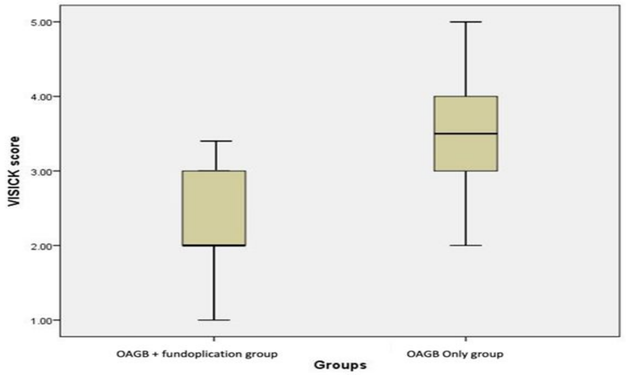



**Figure (17):** Box plot between groups and VISICK score.

## CONCLUSIONS

Overall, OAGB with modified fundoplication appears to be a feasible, safe, and effective alternative to conventional OAGB for patients with obesity, GERD, and/or hiatus hernia, reducing the need for long-term GERD management and potentially avoiding more invasive procedures like Roux-en-Y conversion.

## REFERENCES

**Petrucciani et al. (2023)** – A 10-year retrospective study analyzing factors contributing to **gastroesophageal reflux after gastric bypass**, highlighting long-term reflux risk despite bypass benefits.

**Carbajo & Caballero (2002)** – Introduced the **one-anastomosis gastric bypass (OAGB)** as a new technique aimed at reducing postoperative gastroesophageal reflux.

**Al-Khyatt et al. (2023)** – A systematic review and meta-analysis comparing **sleeve gastrectomy with hiatal hernia repair versus sleeve-fundoplication**, finding differences in efficacy for **GERD resolution**

## ACKNOWLEDGEMENTS

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## CONTACT INFORMATION

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# A24. Analysis of the Supportive Care Needs after bariatric surgery in Germany using an adjusted Supportive Care Needs Survey- Short Form (SCNS SF34)

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## INTRODUCTION

Currently, bariatric surgery is the most effective treatment for patients with obesity. While lifelong follow-up care is recommended to support long-term outcomes, follow-up attendance remains suboptimal [1]. The reasons for this are not yet fully understood.

## AIM

To identifying patients' needs to improve engagement in long-term follow-up care, this study aimed to assess unmet supportive care needs in patients following bariatric surgery using the SCNS-SF34.

## METHOD

Patients who had undergone bariatric surgery at a university medical center and attended at least one follow-up appointment were invited to complete an adjusted SCNS-SF34 questionnaire online. The SCNS-SF34 is a validated instrument originally developed to assess supportive care needs in patients with cancer [2]. For this study, the questionnaire was adapted to the context of bariatric surgery and obesity care. To compare levels of unmet needs across SCNS-SF34 subscales within individuals, a fixed-effects linear regression model was applied. The model included subscales as categorical predictors and controlled for individual-level heterogeneity by using patient ID as the panel variable. To explore differences between patients with and without unmet supportive care needs, participants were categorized based on the presence of at least one response rated ≥4 ("some need" or "high need") in any SCNS-SF34 domain. This threshold was used to indicate an unmet need in line with established scoring procedures. Comparisons between groups were conducted using chi-square tests for categorical variables and two-sample t-tests for continuous variables. Differences in mean SCNS-SF34 domain scores between postoperative year groups were analyzed using one-way analysis of variance (ANOVA) with Bonferroni correction for multiple comparisons.

## RESULTS

A total of 327 patients were contacted, of whom 260 participated in the study, yielding a participation rate of 79.5%. The mean age was 44 ± 11.1 years, and the majority were female (68%). The average preoperative weight was 151 ± 27.1 kg, with a mean BMI of 50.5 ± 7.9 kg/m². Surgical procedures included laparoscopic sleeve gastrectomy, Roux-en-Y gastric bypass (RYGB), and other techniques. At the time of data collection, patients had attended an average of 3.3 follow-up visits. The mean score for physical and daily living needs was 17.3 ± 21.8, the mean score for psychological needs was 21.3 ± 22.5, the mean score for sexuality needs was 17.5 ± 28.1, the mean score for patient care and support needs was 21.3 ± 22.5 and the mean score for health system and information needs was 26.1 ± 26. Next, we used a fixed-effects linear regression model to compare the needs levels within one patient. Health system and information needs score were significantly higher compared to each other category (Figure 1). A trend toward increasing need scores across all domains was observed during the first three postoperative years (Figure 2). Finally, we identified patients with high needs, defined by at least one response rated ≥4 ("some need" or "high need") in any SCNS-SF34 domain. Patients with high needs had a significantly lower weight (147kg ± 25.5 vs 156kg ± 27.7, p = 0.005) at the operation and were significantly smaller (172cm ± 8.7 vs 174cm ± 9.9, p = 0.018), albeit no difference in BMI was observed (p = 0.066). Additionally, patients with high needs were more often females (77.7% vs 59.2%, p < 0.001).

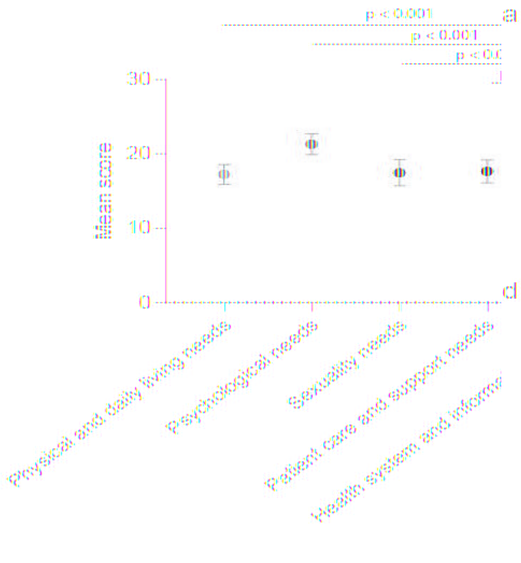


*Figure 1 Mean scores for each SCNS-SF34 domain. Data are presented as mean ± standard deviation. Statistical analysis was performed using a fixed-effects linear regression model to compare domain scores within individuals.*

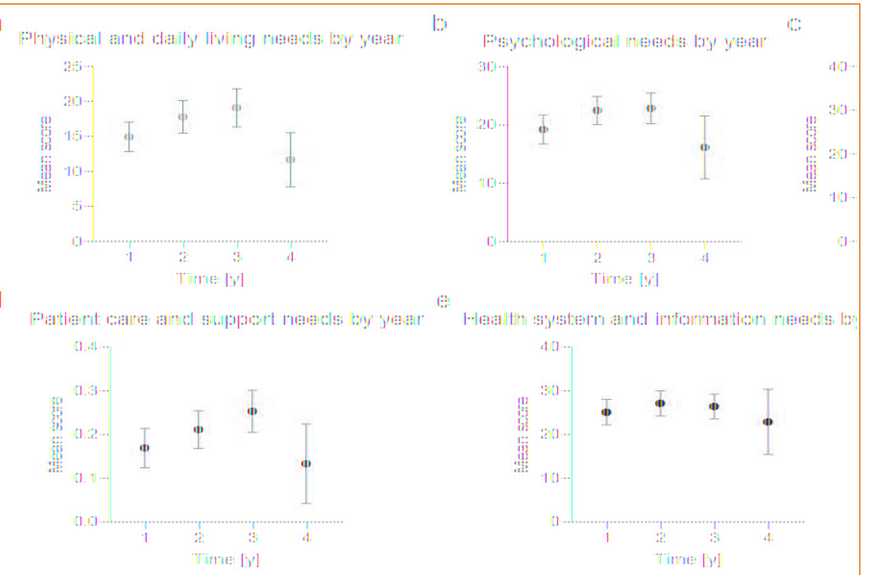


*Figure 2 Mean SCNS-SF34 domain scores for physical and daily living needs (a), psychological needs (b), sexuality needs (c), patient care and support needs (d) and health system and information needs (e) by postoperative year. Data are presented as mean ± standard deviation. Statistical analysis was performed using one-way analysis of variance (ANOVA) with Bonferroni correction for multiple comparisons.*

## CONCLUSIONS

Needs assessment using a modified version of the SCNS-SF34 revealed generally low levels of unmet supportive care needs among patients after bariatric surgery. The highest scores were observed in the domain of health system and information needs. Improving patient education and communication regarding follow-up care may help enhance long-term adherence. Female patients more frequently reported high levels of need and may benefit from more individualized follow-up strategies.

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## ACKNOWLEDGEMENTS

We thank all patients who participated in this study for their time and valuable contributions.

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# A25. Surgical weight loss Strategies and Outcomes after Eroded Gastric Band,2025 Updates.

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## INTRODUCTION

**History of Gastric Banding:**

Non Adjustable bands:1970+

Adjustable bands: 1980+

The use of bands increased and got popularity since 2000+

> After 20210:-, Gastric bands started to decline gradually.

## AIM

**Why Gastric bandings became rare in Bariatric Practice:-.**

-Poor weight loss compared to Laparoscopic Sleeve gastrectomy, Laparoscopic Gastric bypass, Laparoscopic Mini Gastric bypass, and Laparoscopic bipartition.

-Long Term complications (up to 52%). Long Term Reoperation (up to 66.1%). Erosion (1.6%- 3%).

-Other complications: Port and tube disconnection, Port infection\Abscess, Band slippage, Proximal Dilatation.

## METHOD

From 2012- 2025, In 3 High volume Bariatric Centers in Kuwait (SRC Accredited).
1500+ Bariatric Cases.
Primary bands represented 1%.
**Band Erosion:**
Mostly due to Gastric wall Ischemia and Necrosis due to chronic over Inflammation.
**Presentation**: Variable
- Asymptomatic.
- Loss of Restrictive effect (weight regain)
- Epigastric Pain.
- Recurrent Port infection.
- Reflux\ Regurgitation.
- Fever\ Vomiting.
- Back Pain\ Splenic abscess.

**Diagnosis:**
- Clinical Suspicion.
- CT with oral contrast.
- Gastroscopy.

ONCE Diagnosed should be REMOVED

**Removal Options:**
- Endoscopy.
- Laparoscopy.
- Hybrid.

## RESULTS

***What is next:***

- *No revisional Surgery at time of removal of eroded gastric band (wait for 3-6 months)*

***Why revision is challenging:***

- *Depends on severity of erosion.*
- *Degree of fibrosis.*
- *Ischemic gastric pouch (Impaired vascularity)*

***MDT Assessment before deciding Revision**:*

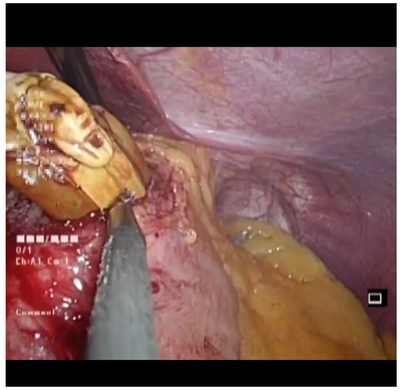
*- Full Labs, Barium, Esophageal Manometry, Gastroscopy, CT Volumetry, Dietary Assessment.*

*Surgical Options: LSG\GBP\MGB\BPD\Bipartition/ in very selected cases → Rebanding.*

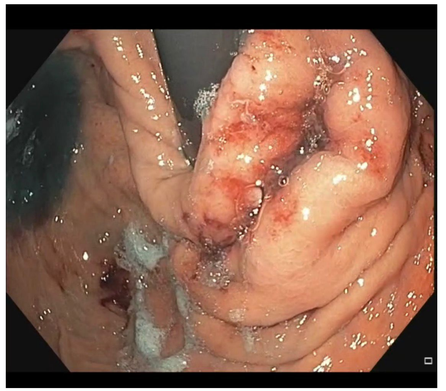
***Recent Technologies:***

*Indocyanine injection& Robotic surgery:*

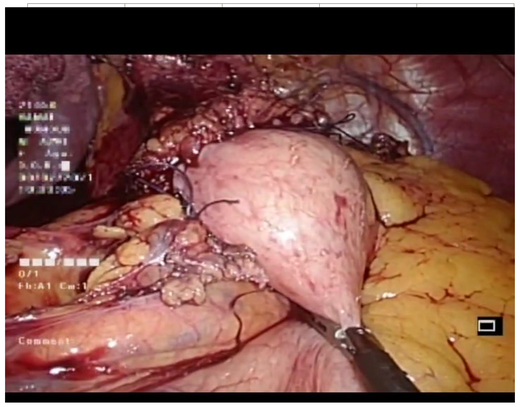
- *Improves visualization of tissue vascularity.*
- *Enhances intraoperative decision making.*
- *Reduces the risk of postoperative leaks and strictures.*
- *Assists in confirming adequate vascularization before completing an anastomosis or staple line.*



Eroded gastric band laparoscopic removal



Endoscopic assessment after repair of erosion and removal



Repaired Stomach hole in layers

## CONCLUSIONS

- Laparoscopic gastric banding is declining world wide.
- Gastric band erosion is a rare complication, management needs high level of suspicion for proper diagnosis and early removal.
- Post operative care needs MDT care.
- Revisional surgery is challenging, using recent technologies like ICD or Robotic assistance may help.

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## ACKNOWLEDGEMENTS

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# A26. Clinical Role of ICG Application in Bariatric Surgery; an Up-To-Date Literati Review

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## INTRODUCTION

Post-operative anastomotic leaks (AL) are one of the most challenging complications of bariatric surgery and can be detrimental. Indocyanine green (ICG) is a fluorescence dye that can provide a real-time intraoperative assessment of organ tissue perfusion. Its use in bariatric operations is still being debated.

## AIM

The present review aims to evaluate the intraoperative utility of ICG during bariatric surgery to focus future research on a reliable tool to reduce the incidence of postoperative leaks.

## METHOD

A systematic search of PubMed, EMBASE, MEDLINE, Scopus, and the Cochrane Library for published studies took place until December 2024, evaluating the use of ICG during bariatric surgical procedures. Studies were included if they assessed the ICG application in various bariatric operations to prevent and reduce AL rates.

## RESULTS

Eleven studies were included, which involved a total of 887 patients. 643 patients underwent ICG-based intraoperative assessments, while 244 were in the control group. The mean age of participants was 43.8 years, and the mean BMI was 43.3 kg/m3. All included patients underwent various bariatric procedures. ICG was used alone in most studies, although it was mixed with methylene blue in one study. ICG administration protocols varied significantly. There were no reported complications from ICG administration. The utility of ICG has changed the intraoperative surgical decision-making of 4.2% of patients.

ICG is a safe and efficient tool to assist bariatric surgeons in early intraoperative detection of technical failures of the anastomosis /staple line and potentially prevent anastomotic leaks.

The findings support ICG's role in improving intraoperative decision-making by providing real-time perfusion assessment and reducing the risk of anastomotic leaks without complications..

## CONCLUSIONS

ICG is a promising technique for successfully preventing or timely managing AL in bariatric surgery. Large, randomized controlled studies are needed to confirm its utility for routine use in primary and revisional bariatric cases.

## CONTACT INFORMATION

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# A27. Ethical Considerations in Bariatric Tourism: A Qualitative Study of UK Patie with Postoperative Complications Abroad

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## INTRODUCTION

**Bariatric tourism** = travelling abroad for privately funded weight-loss surgery.

Growing UK trend: ~10,000 people travel annually; Turkey is the leading destination.

Risks: High complication rates, inadequate aftercare

No prior UK-based qualitative study, exploring both clinician and patient perspectives

**Aims**

- Understand UK patients' motivations and expectations for bariatric surgery
- Explore ethical issues in consent, information, and aftercare.
- Capture NHS clinicians' experiences managing complications.
- Identify policy and practice changes to improve safety.

## METHOD

**Design:** Qualitative, interpretivist; semi-structured interviews

**Sample:** Patients n=5 (30–50, Turkey 2017–2024, all with complications); Clinicians n=3 (A&E, surgeon, GP)

**Recruitment:** Patients via social media; clinicians via professional contacts/snowballing.

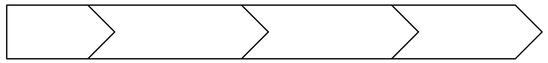


Figure 1. Recruitment to Interview Procedure

**Data collection:** MS Teams, 30 min, recorded & transcribed

**Analysis:** Braun & Clarke thematic analysis → 4 themes

## RESULTS

### Harm & Psychological Impact

All patients experienced acute complications such as leaks, sepsis, strictures, and splenic injury. Four reported ongoing physical issues years later. The emotional toll included fear, regret, and social isolation.

***"I was sent straight to resus… I was dying." -Patient E***

### Compromised Autonomy

Patient choices were shaped by long NHS waiting lists, strict eligibility criteria, high UK private costs, and influence from peers/social media. Several reported booking within weeks, often without thorough consideration. The average price paid was **£2,480**

***"I actually said 'no, stop, I don't want this done'… but they sedated me anyway and brought me down. They ignored me completely." - Patient A***

### Informed Consent & Misaligned Expectations

Pre-operative communication was minimal, with language barriers and poor translation limiting understanding. Several patients misunderstood procedure type or permanence. Risk explanations were brief or absent. All patients felt under informed.

***"I signed papers in Turkish. I thought they knew what they were doing."-Patient C***

### Justice & Resource Allocation

The NHS aftercare costs as patients face weeks in hospital and multiple surgeries – leading to rising ethical tensions over fairness and resource use.

***"These cases stay with us for weeks… huge strain on resources." – Physician B***

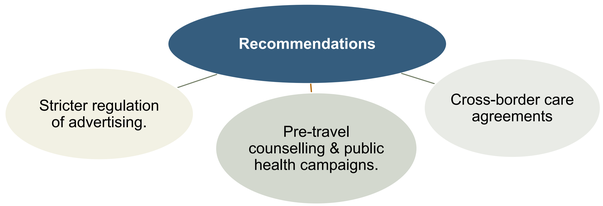
## DISCUSSION

**Autonomy:** Patients' choices were limited by persuasive marketing, selective success stories, financial incentives, rushed booking, and language barriers.

**Non-maleficence:** Safety was compromised by variable standards, minimal regulation, and poor follow-up, leaving patients vulnerable to serious complications.

**Justice**: 4/5 patients were female, already barriers in accessing care, increases existing burden on NHS

| Strengths | Limitation |
|---|---|
| First UK-based qualitative study with both patient and clinician perspectives. | Small sample (n=8) limits generalisability. |
| In-depth narratives on an under-researched issue. | Potential recall bias. |




## CONCLUSION

**Bariatric tourism raises complex ethical concerns that extend beyond individual choice**
**Findings support:**
Enhanced patient education.

Ethical policy reform.

International regulatory oversight

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## REFERENCES

# A28. SASI Bypass Is Comparable to OAGB for Weight Loss and Metabolic Outcomes: Evidence from a Systematic Review and Meta-Analysis

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## INTRODUCTION

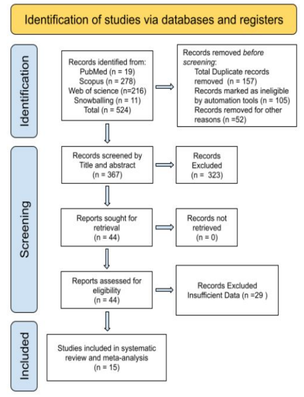
The global obesity epidemic has driven a steady rise in bariatric surgery, with single-anastomosis procedures such as one-anastomosis gastric bypass (OAGB) and single-anastomosis sleeve ileal bypass (SASI-S) gaining popularity

## AIM

This is a systematic review and meta-analysis that aims to compare single-anastomosis Sleeve-ileal ( SASI ) bypass and one-anastomosis gastric bypass ( OAGB ) for patients suffering from morbid obesity in terms of safety and efficacy.

## METHOD

. We searched The major databases for studies comparing SASI and OAGB in adults with obesity
. The primary outcomes were total Weight Loss ( %TWL), Excess Weight Loss (%EWL), Excess Body Mass Index Loss (%EBMIL) and changes in the Body Mass Index at 6, 12, and 24 months.
. Secondary outcomes included the effect on Type 2 Diabetes, Hypertension, Gastro-Oesophageal reflux disease, nutritional indices and complications.
. Risk of Bias was assessed using Newcastle-Ottawa Scale for cohort studies and RoB-2 for randomised trials.




PRISMA flowchart

## RESULTS

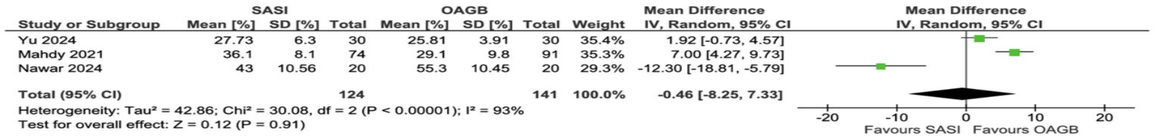
.Fifteen studies (n=1284) met the inclusion criteria.

.There was no statistically significant difference between the two procedures in relation to the weight loss parameters {%TWL (P=0.75 at 6 months; P=0.91 at 12 months), %EWL (P=0.81 at 6m; P=0.61 at 12m), and BMI change (P=0.57 at 6 m; P=0.30 at 12m)}.

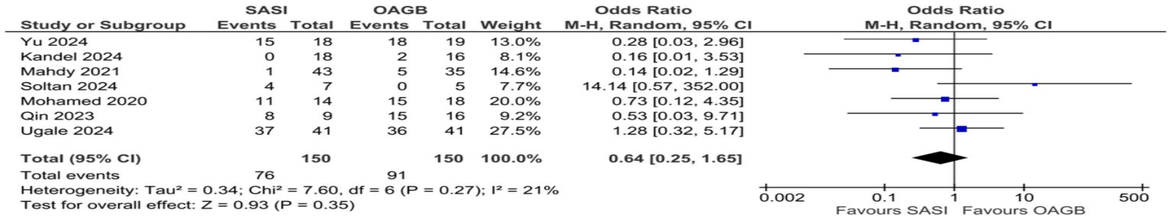
.Other parameters such as remission of T2DM (P=0.35), hypertension (P=0.32), dyslipidaemia (P=0.44), obstructive sleep apnoea (P=0.21), and GORD (P=0.87) were not significantly different.

.Nutritional indices at 1 year (calcium P=0.86; vitamin D P=0.53; vitamin B12 P=0.29; albumin P=0.59) were comparable.

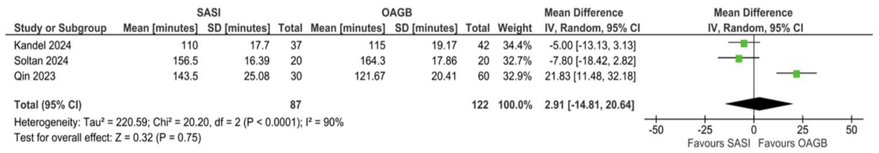
.Operative time (P=0.75), intraoperative complications (P=0.85), overall post-operative complications (P=0.96), and gastrointestinal complications (P=0.18) also showed no significant differences.




**12 months %TWL**




**T2DM remission**




**Operative time**

## CONCLUSIONS

SASI bypass is comparable to OAGB in terms of short- to mid-term outcomes related to weight loss, metabolic disease remission, and safety. Procedure choice may therefore be individualised according to patient profile and surgeon expertise. Longer-term comparative studies are warranted to clarify the durability and long-term adverse events.

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# A29.Changes in fasting plasma glucagon following weight loss

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## INTRODUCTION

Glucagon decreases lipid accumulation in the liver, but resistance to its actions has been reported in people with obesity and metabolic-associated steatotic liver disease (MASLD). Fasting plasma glucagon is a biomarker of glucagon resistance, but its response to weight loss remains unclear.

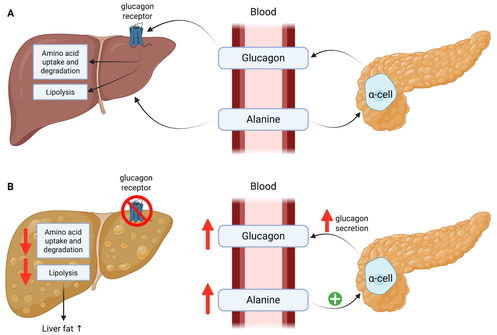


**Figure 1 A:** the liver–α-cell axis in the healthy liver **B:** glucagon resistance in the steatotic liver.

## AIM

To evaluate 1/ if weight loss is associated with a decrease in fasting glucagon in individuals with obesity and 2/ if any association differs between surgical, dietary, and pharmacological interventions.

## RESULTS

- Forty-seven studies reported on fasting plasma glucagon, comprising 69 intervention arms (41 surgical, 14 dietary, 14 pharmacological) and 2,061 participants (Fig. 2).
- **Mean weight loss across all interventions was –18.23kg (95% CI: [–20.20, –16.27]) (Fig. 3A)**
- **This was associated with a reduction in fasting plasma glucagon: –4.05pmol/L (95% CI: [–4.50, –3.60]) (Fig. 3B)**
- **When interventions were grouped by type, mean change in glucagon differed:** surgical –3.9 pmol/L (95% CI: [–5.48, –2.22]), dietary –2.9 pmol/L (95% CI: [–4.20, –1.54]), pharmacological –5.3 pmol/L (95% CI: [–9.85, –0.78]).
- **There was a correlation between weight loss and reduction in fasting glucagon** overall (r=0.33, p=0.006); strongest for dietary (r=0.89, p<0.0001), moderate for surgical (r=0.40, p=0.0091), not significant for pharmacological interventions (r=0.20, p=0.48).
- Risk of bias was generally low to moderate for RCTs and moderate for non-randomised studies.

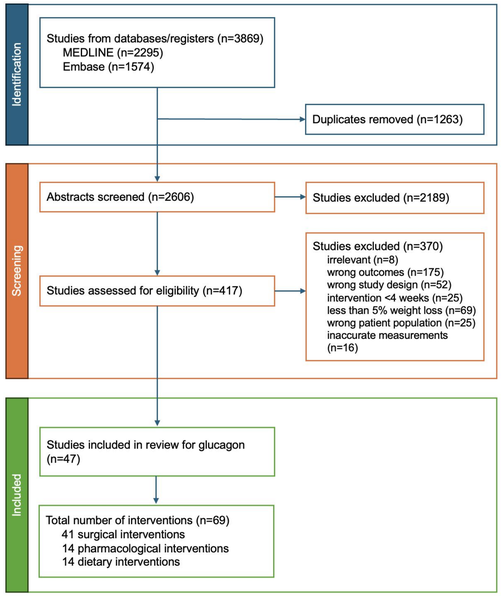


**Figure 2.** Flow diagram of study selection

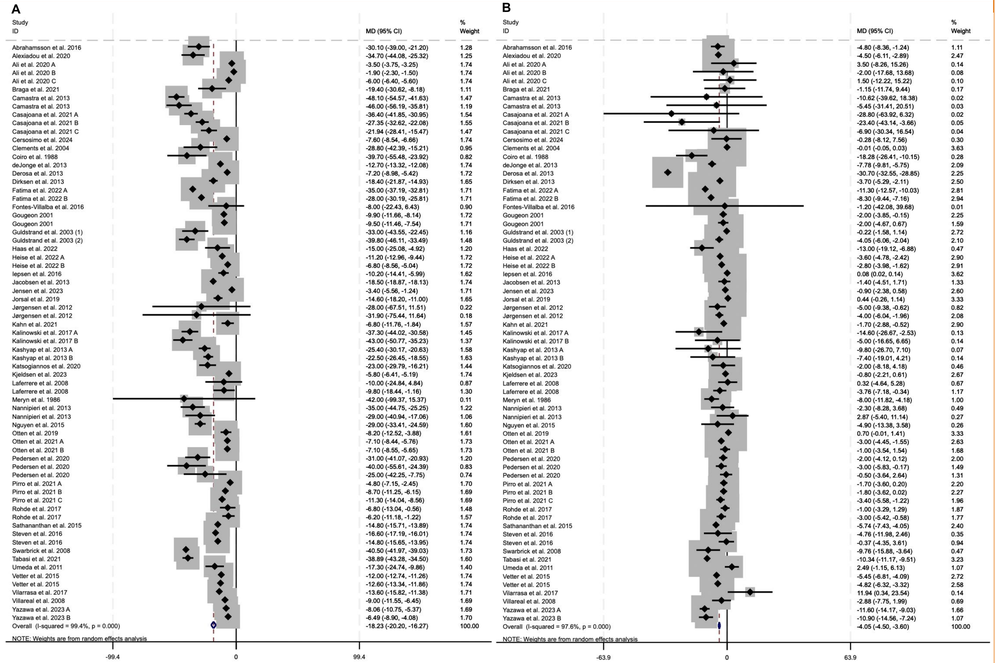


**Figure 3.** Forest plots presenting meta-analysis of mean weighted difference with 95% confidence intervals (CI) for changes in **A:** absolute body weight (kg) and **B:** fasting plasma glucagon (pmol/L) across all intervention arms (n = 69). *DL= DerSimonian–Laird random-effects meta-analysis*

## METHOD

A comprehensive search of MEDLINE and Embase databases yielded 3869 studies that were independently screened by two reviewers.

- **Inclusion criteria:** RCTs, interventional, and cohort studies reporting fasting plasma glucagon levels before and after weight loss. Participants were aged ≥12 years with a BMI >25 kg/m². Interventions (dietary, pharmacological or surgical) had to last at least 4 weeks and achieve mean ≥5% body weight loss.
- **Data Analysis:** Meta-analysis was performed with random-effects model and outcomes were summarized as mean weighted difference with 95% confidence intervals (CI).
- **Quality Assessment:** Risk of bias was assessed using validated scoring systems RoB2 and MINORS for RCTs and non-randomized studies respectively.

## CONCLUSIONS

- Weight loss was associated with significant reduction in fasting glucagon.
- Reductions were observed across surgical, dietary, and pharmacological weight loss interventions.
- These findings suggest that hepatic glucagon sensitivity could be at least partially restored through weight reduction. The dose-dependent relationship observed in dietary and surgical interventions further supports the importance of achieving clinically meaningful weight reduction to improve metabolic outcomes.
- Restoring glucagon signalling could be a promising therapeutic strategy for steatotic liver disease.

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# A32. Laparoscopic Revision of Gastrojejunal (GJ) stricture Following Roux-En-Y Gastric bypass (RYGB): a case report

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1 Luton and Dunstable Hospital, England, United Kingdom

## INTRODUCTION

- Roux-en-Y gastric bypass (RYGB) is widely performed for class III obesity
- Low late-complication burden.
- Gastrojejunal (GJ) anastomotic stricture is one of the long-term complications, typically presenting with progressive dysphagia[1].

## AIM

- To understand the clinical problem of gastrojejunostomy (GJ) anastomotic stricture following Roux-en-Y gastric bypass (RYGB).
- To explore the aetiology and underlying pathophysiology contributing to stricture formation and symptom recurrence.
- To review the diagnostic approach, including endoscopic and radiological investigations.
- To evaluate the treatment options, comparing endoscopic balloon dilatation with surgical revision strategies.

## CASE REPORT

- 59-year-old male, Roux-en-Y gastric bypass (RYGB) performed in 2018
- Progressive dysphagia to solids and viscous liquids and weight loss
- Ceased smoking one year prior to RYGB
- Demonstrated gastrojejunostomy (GJ) anastomotic stricture with associated ulceration
- Underwent three endoscopic balloon dilatations over an 8-month period
- Only temporary symptom relief after each procedure and weight gain

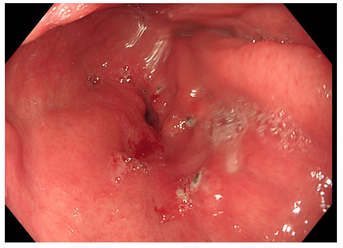

**Figure 1:** Endoscopy demonstrating a pinhole stricture in Gastrojejunostomy (GJ) anastomosis

Due to recurrent symptoms, underwent laparoscopic resection of GJ stricture and gastric pouch with:

- Oesophagojejunostomy (OJ) reconstruction
- Hiatus hernia repair

Performed in July 2025

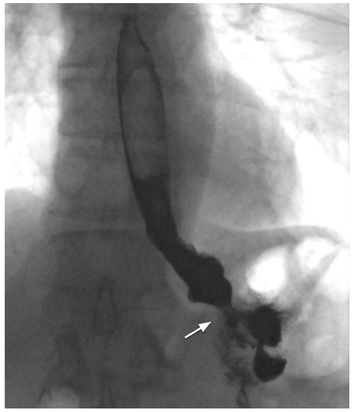

**Figure 2.** Barium swallow demonstrating a focal narrowing at the anastomotic site, consistent with a stricture (indicated by arrow).

## OPERATIVE PROCEDURE

Key operative steps

- Lysis of dense adhesions
- Complete dissection and repair of hiatus hernia
- Resection of the strictured segment
- Reconstruction with OJ anastomosis using 45 mm linear stapler and V-Loc sutures

Postoperative course

- Day 5: Negative Ribena swallow test
- Day 7: Drain removed
- Recovery: Uneventful; discharged in good condition

Follow-up and discharge plan

- Lifelong nutritional supplementation prescribed
- Smoking cessation reinforced
- Scheduled for routine postoperative surveillance and nutritional monitoring

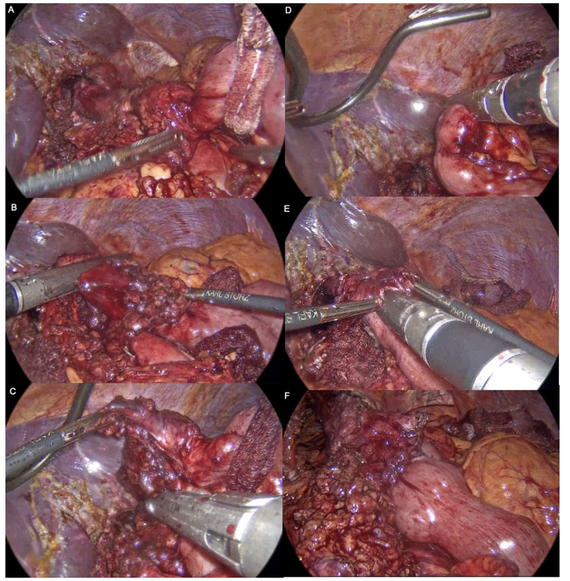


**Figure 3.** Intraoperative steps of surgical revision:

A. Adhesiolysis performed.
B. Proximal staple to disconnect the pouch from the lower oesophagus.
C. Staple applied to the gastric remnant due to dense adhesions.
F. Jejunum divided from the previous alimentary limb to create a new limb.
G. Vertical stapling of the oesophagojejunostomy (OJ).
H. Completed OJ anastomosis following enterotomy closure.

## CONCLUSIONS

- Endoscopic dilatation: Effective temporary treatment for short, non-angulated, non-fibrotic benign strictures without ischaemia, leak, or malignancy[2].
- Limitations: Risk of leak, ulceration, and recurrence[3].
- Surgical revision: Indicated after failed dilatations or in cases of severe fibrosis, ulceration, fistula, or abscess[4].

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# A38. Iron Deficiency Anaemia Following Bariatric Surgery: A Literature review of Prevalence, Pathophysiology and Adherence to supplementation

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## INTRODUCTION

Iron deficiency anaemia (IDA) is a common complication following bariatric surgery.

Changes in gastrointestinal anatomy impair iron absorption and although prophylactic supplementation is widely recommended, adherence remains suboptimal (1, 2).

## AIM

This review evaluated reported adherence to iron supplementation and related challenges.

## METHOD

We searched PubMed, EBSCO and Cochrane Library for studies published:

- Between 2010 and 2025.
- Included studies focused on adult populations and reported both the rates of IDA and the adherence to iron supplement.
- We excluded case reports, studies with fewer than 10 participants, and those that did not provide data on IDA.

We collected information on the frequency of iron deficiency, patient adherence to supplement recommendations, the types and doses of supplements used and the primary clinical outcomes.

## RESULTS

Nine studies met the inclusion criteria and included patients had undergone different types of bariatric surgery. Reported rates of iron deficiency ranged from 6% to 34%, with men showing the highest prevalence. The variation between studies likely reflects differences in surgical methods, follow-up care and adherence rates.

In one study, ferrous sulfate and heme-iron polypeptide were found to be equally effective in the short term, with about 94–95% of patients showing improvement after eight weeks. This suggests that either option can be used effectively to correct iron deficiency soon after surgery. Adherence to iron supplementation varied widely. Of the 340 patients assessed, 37.6% took their supplements regularly, while 23.6% did not take them at all. Those who maintained over 90% adherence had much better iron levels, whereas those who were inconsistent had more than twice the risk of iron deficiency.

The main reasons for skipping supplements were pill burden, gastrointestinal side effects, and difficulty maintaining a daily routine. These findings highlight how important it is to support patients with practical strategies to improve adherence—such as simplifying regimens, managing side effects, and emphasizing the long-term benefits of supplementation.

Image source: Lunatta / Shutterstock.com (3)

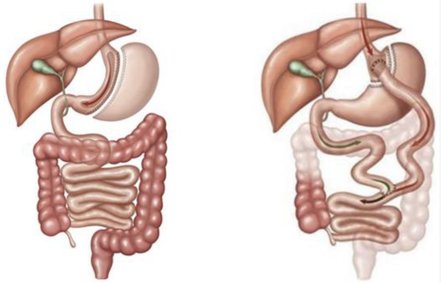

Image source: Sage Bariatric. *Sleeve Gastrectomy* (4)

## CONCLUSIONS

Persistent iron deficiency after bariatric surgery can often be linked to poor adherence to supplementation.

To overcome this, we need improved tools for measuring adherence, improved patient education and personalised supplementation plans. Future research should focus on new formulations, better delivery options and practical strategies such as behavioural and educational support.

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## ACKNOWLEDGEMENTS

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# A39. The impact of psychological trauma on weight loss, psychosocial functioning, and psychopathology in bariatric and metabolic surgery candidates: a systematic review.


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2. Lewisham and Greenwich NHS Trust, London, UK
3. Homerton University Hospital, London, UK


## INTRODUCTION

- Up to 22% of bariatric surgery (BS) candidates present with current trauma symptoms or diagnoses (active trauma), such as post-traumatic stress disorder (PTSD)[1,2].
- While many patients benefit from BS, some show suboptimal weight loss or substantial weight regain[3].
- Evidence suggests that trauma may be linked to suboptimal postoperative results[4,5].
- Investigating active trauma on BS outcomes can help identify individuals who may be at greater risk of suboptimal results and/or may benefit from additional psychological support.

## AIMS

01 How do pre-surgical active trauma symptoms/diagnoses influence post-surgical weight loss over time in BS patients?

02 How do pre-surgical active trauma symptoms/diagnoses influence post-surgical psychosocial functioning or psychopathology over time in BS patients?

03 What is the trajectory of active trauma symptoms over time in BS patients?

## METHODS

A protocol was registered prospectively on PROSPERO (CRD42024523258) in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) statement[6]

**PECOS[7] inclusion criteria**

**POPULATION**
All adults (≥18 years) who have undergone BS

**EXPOSURE**
- PTSD; acute stress disorder; complex PTSD (C-PTSD); prolonged grief disorder; adjustment disorder
- Borderline personality disorder (BPD)/emotionally unstable personality disorder

**COMPARATOR**
Pre-surgery vs post-surgery (within-subjects design)

**OUTCOMES**
- Weight loss-related outcomes
- Psychosocial and/or psychopathological outcomes

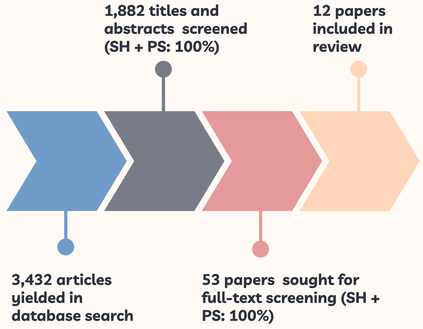
**STUDY DESIGN**
Any quantitative design

**Electronic databases searched:**
(1) MEDLINE; (2) EMBASE; (3) PsycINFO; (4) CINAHL; (5) Web of Science

**Grey literature sources:**
(1) HMIC database; (2) SSRN; (3) PsycEXTRA; (4) EThOS; (5) WorldCat OCLC

**Risk of bias: The *Newcastle-Ottawa Scale* (NOS)[8]**
- Authors SH/SQM used NOS to examine methodological quality across three domains: selection, comparability, and ascertainment of outcome
- Studies were rated as poor, fair or high quality

## RESULTS




### Study characteristics

**Study Designs:** 12 longitudinal studies (7 prospective, 5 retrospective)

**Participants:** Total N = 5,543 (32-2,373); Age range= 38–53 years

**Procedures:** Roux-en-Y Gastric Bypass, Laparoscopic Adjustable Gastric Band, and Sleeve Gastrectomy

**Outcomes:** BMI (n=5), %EWL (n=3), PTSD (n=7), BPD (n=3), Adjustment disorders (n=2)

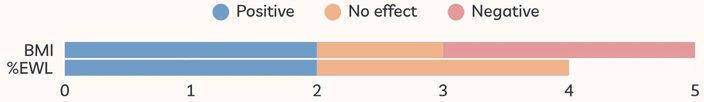
**Follow-up:** Range = 6–84 months (M = 20.23, SD = 19.26)

### Methodological quality

**Poor study quality: n=8** | **Fair study quality: n=4**
- Non-representative samples of the exposure cohort (n=12)
- Inadequate follow-up procedures (n=9)
- Failure to control for key confounders (n=9)

### Key findings

**1. Weight-Related Outcomes (n=8)[9-16]**
- PTSD showed no significant effect on post-surgical weight loss
- One study found that a previous adjustment disorder predicted greater weight loss
- Results for BPD were mixed with small, imprecise effects




**2. Psychological Outcomes (n=2)[11,15]**
- One study found that PTSD was strongly associated with other Axis I diagnoses
- One study found that PTSD was significantly associated with poorer mental health-related quality of life

**3. Trauma Symptom Trajectories (n=5)[11,17-20]**
- Only two studies provided statistical comparisons
- No significant symptom reduction was observed across studies

## CONCLUSIONS

**Methodological considerations**

**Overall, poor study quality**

**Measurement Issues:**
- Widespread use of outdated assessment tools lacking alignment with diagnostic manuals
- Inconsistent outcome reporting

**Sample Bias:** Predominantly white and privately insured sample → not

**Review strengths and limitations**
- Comprehensive search strategy
- Inclusion of two diagnostic manuals'[20,21] definitions of trauma-related disorders
- Incorporation of BPD given symptom overlap with C-PTSD

**Substantial methodological heterogeneity:**
- Restricted comparability across studies
- Precluded meta-analysis
- Limits the precision of findings

**Clinical Implications**
- Current evidence is insufficient for evidence-based clinical guidelines.
- Active trauma may co-occur with other psychiatric disorders → comprehensive screening

**Future research**
- Well-designed longitudinal studies with robust retention strategies
- Representative samples and standardised assessment tools.
- Mediation models to identify causal mechanisms

**Conclusions**
- A paucity of high-quality research in this area
- Substantial methodological heterogeneity limits firm conclusions
- Future research is needed, employing standardised, validated measures of trauma, robust designs, and long-term follow-up at standardised timepoints

## REFERENCES

SCAN FOR REFERENCE LIST

## CONTACT INFORMATION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# A43. Expanding Bariatric Indications: Retrospective Evidence from Laparoscopic Sleeve Gastrectomy in Class I vs. II-III Obesity

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## INTRODUCTION

- Metabolic and bariatric surgery (MBS) has traditionally been restricted to BMI ≥ 35 kg/m$^2$
- Recent guidelines support extending eligibility to class I obesity (BMI 30-34.9 kg/m$^2$)
- Evidence directly comparing outcomes between low- and high-BMI obese cohorts remains limited

## AIM

To evaluate the efficacy of laparoscopic sleeve gastrectomy (LSG) in patients with class I obesity (BMI 30-34.9 kg/m$^2$) compared to higher BMI patients (class II-III obesity, BMI 35-50 kg/m$^2$), focusing on weight loss and metabolic disease improvements.

## METHOD

Study design

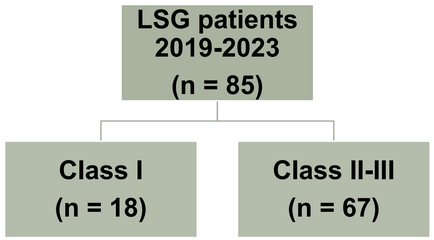
- Retrospective analysis of obese patients who underwent LSG at a tertiary hospital in South Korea from 2019 to 2023

Patient groups

- Class I obesity: BMI 30-34.9 kg/m$^2$ (n = 18)
- Class II-III obesity: BMI 35-50 kg/m$^2$ (n = 67)

Outcomes evaluated

- Weight loss results (%TWL, %EWL)
- Metabolic disease improvements at baseline, and postoperative 6 and 12 months




## RESULTS

**Table 1. Baseline characteristics**

| Variable | Class I | Class II-III | p-value |
|---|---|---|---|
| Age (years) | 45.7 ± 10.6 | 36.8 ± 11.5 | 0.004 |
| Sex (% Female) | 77.8% | 55.2% | 0.143 |
| Weight (kg) | 87.6 ± 10.0 | 117.0 ± 17.8 | <0.001** |
| BMI (kg/m$^2$) | 32.8 ± 1.6 | 41.5 ± 4.1 | <0.001** |
| Type 2 DM (%) | 61.1% | 34.3% | 0.074 |
| Hypertension (%) | 44.4% | 76.1% | 0.021* |
| Dyslipidemia (%) | 61.1% | 49.3% | 0.530 |

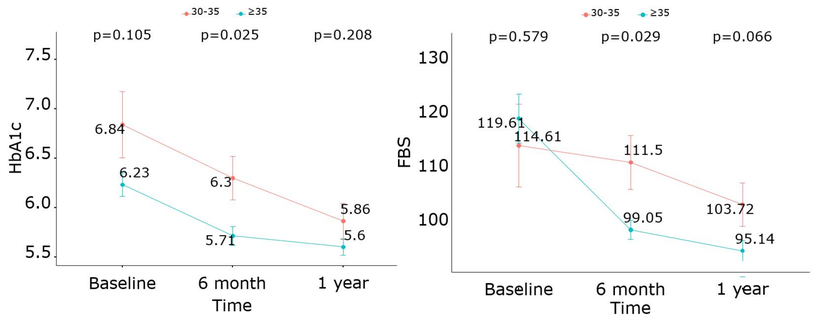



**Table 2. Changes in anthropometric measurements at 6-month and 1-year post-surgery.**

| | Baseline | | | 6 months | | | 1 year | | |
|---|---|---|---|---|---|---|---|---|---|
| Obesity Class | I | II-III | p-value | I | II-III | p-value | I | II-III | p-value |
| %TWL | - | - | - | 23.7 ± 5.5 | 23.5 ± 6.8 | 0.918 | 26.6 ± 6.8 | 28.8 ± 8.7 | 0.252 |
| %EWL | - | - | - | 66.7 ± 14.1 | 50.2 ± 14.8 | <0.001** | 74.7 ± 17.7 | 61.1 ± 18.0 | 0.008** |
| BW (kg) | 87.6 ± 10.0 | 117.0 ± 17.8 | <0.001** | 66.7 ± 7.7 | 89.2 ± 13.8 | <0.001** | 64.0 ± 6.8 | 82.7 ± 12.8 | <0.001** |
| BMI (kg/m$^2$) | 32.8 ± 1.6 | 41.5 ± 4.1 | <0.001** | 25.0 ± 1.7 | 31.7 ± 3.7 | <0.001 | 24.0 ± 1.9 | 29.4 ± 3.6 | <0.001 |
| WC (cm) | 108.8 ± 7.3 | 127.6 ± 13.7 | <0.001** | 66.7 ± 7.7 | 89.2 ± 13.8 | <0.001 | 64.0 ± 6.8 | 82.7 ± 12.8 | <0.001 |

**Table 3. Patients taking medications for metabolic diseases (DM, HTN, and DL) and prevalence of metabolic syndrome at 6-month and 1-year post-surgery.**

| | Baseline | | | Postoperative 6 months | | | Postoperative 1 year | | |
|---|---|---|---|---|---|---|---|---|---|
| Obesity Class | I | II-III | p-value | I | II-III | p-value | I | II-III | p-value |
| T2DM (n, %) | 11 (61.1) | 23 (34.3) | 0.074 | 7 (38.9) | 10 (15.2) | 0.044* | 7 (38.9) | 8 (12.1) | 0.015* |
| HTN (n, %) | 8 (44.4) | 51 (76.1) | 0.021* | 2 (11.1) | 29 (43.3) | 0.025* | 1 (5.6) | 23 (34.3) | 0.035* |
| DL (n, %) | 11 (61.1) | 33 (49.3) | 0.530 | 4 (22.2) | 20 (30.3) | 0.705 | 6 (33.3) | 19 (28.8) | 0.934 |
| MS (n, %) | 16 (88.9) | 58 (86.6) | 1.000 | 6 (33.3) | 25 (37.3) | 0.972 | 6 (33.3) | 20 (29.9) | 1.000 |

## CONCLUSIONS

**Comparable weight loss**: Class I obesity patients achieved similar %TWL to class II-III, with superior %EWL outcomes

**Excellent metabolic outcomes**: both groups showed significant improvements in glycemic control (HbA1c and FBS) at postoperative 6- and 12-months

**Differential benefits**: Class I patients had better hypertension control, while class II-III patients showed higher diabetes medication discontinuation

**Clinical implication**: LSG is effective and safe for class I obesity, supporting expanded bariatric surgery indications to BMI 30-34.9 kg/m$^2$

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## CONTACT INFORMATION

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# A44. Laboratory indicators of ketonemic syndrome in nonalcoholic steatohepatitis after laparoscopic sleeve gastrectomy”

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## INTRODUCTION

Metabolic syndrome, particularly hypercholesterolemia and hypertriglyceridemia, contributes to the development of a chronic inflammatory process in the liver in the form of nonalcoholic fatty liver disease (NAFLD). The negative consequences of NAFLD include disease progression in the setting of nonalcoholic steatohepatitis (NASH)

## AIM

To identify laboratory manifestations of nonalcoholic steatohepatitis in the form of ketonemic syndrome in obese patients after laparoscopic sleeve gastrectomy (LSG).

## METHOD

1. A total of 257 obese patients who underwent LSG were analyzed.
2. Patients were divided into three groups: control — obese without NAFLD (n=94, BMI 39.05±7.1 kg/m²), comparison — obese with nonalcoholic fatty hepatosis (n=83, BMI 42.0 ±7.5 kg/m²), and study — obese with NASH (n=80, BMI 42.4±8.3 kg/m²).
3. Assessment included ketone body concentration in exhaled air condensate, blood, and urine, as well as serum γ-glutamyl transpeptidase (GGT) and alkaline phosphatase (ALP) activity

**Laboratory findings in non-alcoholic fatty liver disease**

| DIAGNOSTIC AND PROGNOSIS PARAMETERS | GROUPS OF PATIENTS | | |
|---|---|---|---|
| | NORM | NAFLD | NASH |
| | n=11 | n=12 | n=19 |
| γ-GTP activity | 0,177 | 0,514 | 0,937 |
| ALP activity | 0,189 | 0,439 | 0,877 |
| Ketonuria | 0,053 | 0,497 | 0,792 |
| Ketone levels in air condensate | 0,104 | 0,428 | 0,713 |
| Ketonemia | 0,012 | 0,312 | 0,681 |

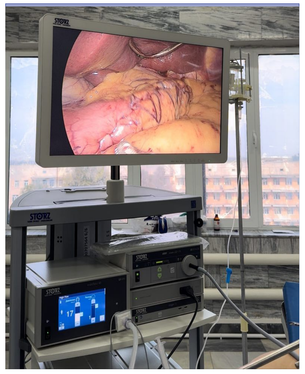
## RESULTS

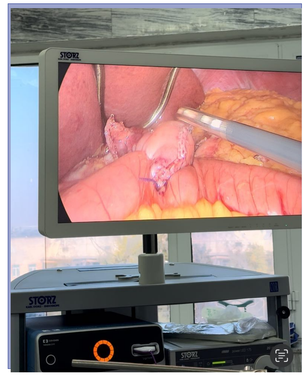
After LSG, all groups demonstrated increased ketone levels, peaking at 1 month postoperatively.

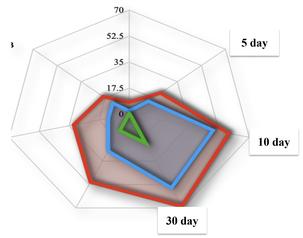
In exhaled condensate, NASH patients showed significantly higher values (68.9±8.91 ppm) compared with controls (21.82±0.09 ppm; p<0.05).

Serum ketone bodies were also elevated in NASH (8.0±1.18 mmol/L vs. 1.48±0.13 mmol/L in controls; p<0.05), while hyperketonuria occurred earlier and more intensively in NASH (2.32±0.49 mmol/L) and fatty hepatosis (1.66±0.22 mmol/L) than in controls (0.57±0.09 mmol/L). Importantly, normalization of ketone levels by 6 months was observed only in controls, whereas in NASH patients hyperketonemia persisted.

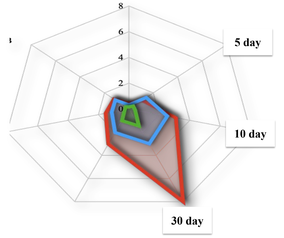
GGT and ALP activities increased 1.4-fold in NASH patients and remained elevated up to 10 months, indicating prolonged hepatic stress and intensified lipolytic processes.







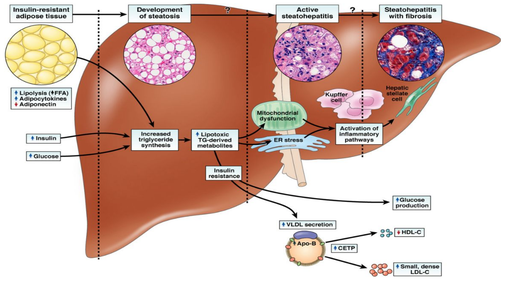

COMPARATIVE DYNAMICS OF CHANGES IN THE LEVEL OF KETOSIS IN EXHALED AIR CONDENSATE (ppm)




COMPARATIVE DYNAMICS OF CHANGES IN THE LEVEL OF KETONEMIA (mmol/l)

**LABORATORY CRITERIA FOR THE PROBABILITY OF THE DEGREE OF ACTIVE MANIFESTATION OF NASH IN THE FORM OF KETONEMIC SYNDROME AFTER BARIATRIC SURGERY**

| DEGREE OF PROBABILITY | LABORATORY CRITERIA | | | | |
|---|---|---|---|---|---|
| | Ketosis level | | | Activity in the blood | |
| | Exhalation (ppm) | Blood (mmol/L) | Urine (mmol/l) | γ-GT (U/L) | ALP (U/L) |
| Absent | ≤0,4 | ≤0,4 | ≤0,4 | ≤70 | ≤120 |
| Low | 0,5-14,9 | 0,41-0,99 | 0,41-0,8 | 71-90 | 121-140 |
| High | 15≤ | 1,0≤ | 0,81≤ | 91≤ | 141≤ |




## CONCLUSIONS

NASH in obese patients after LSG is characterized by sustained hyperketonemia, hyperketonuria, and elevated ketone concentrations in exhaled air, accompanied by prolonged elevation of GGT and ALP. These findings highlight ketonemic syndrome as a key laboratory marker of hepatic functional alterations in the early and intermediate postoperative period after LSG.

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## ACKNOWLEDGEMENTS

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# A45. Reproductive Age vs Postmenopausal Status: Does Hormonal Background Influence Weight Loss Outcomes After Sleeve Gastrectomy?

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## INTRODUCTION

Sleeve gastrectomy (SG) is the most frequently performed bariatric procedure worldwide [1,2]. While outcomes are well documented, the role of hormonal differences—especially between reproductive-age and postmenopausal women—remains underexplored [3].

Age-related changes in estrogen levels, insulin sensitivity, and fat distribution may influence metabolic response after surgery [4,5]. However, most studies have not stratified patients by menopausal status. Understanding whether hormonal background affects postoperative weight loss could improve patient counseling and outcome expectations.

## AIM

This study aims to compare total weight loss (%TWL) and excess weight loss (%EWL) between reproductive-age and postmenopausal female patients one year after sleeve gastrectomy, and to evaluate whether hormonal status influences weight loss outcomes.

## METHOD

- We retrospectively analyzed female patients who underwent sleeve gastrectomy between 2019 and 2024. Patients were grouped as reproductive (≤45 years) and postmenopausal (>45 years).
- Demographics (age, BMI, height, weight) and weight loss outcomes at 12 months were compared. %TWL and %EWL were calculated using standard formulas.
- Group comparisons were performed using independent t-tests. Statistical significance was defined as $p < 0.05$.

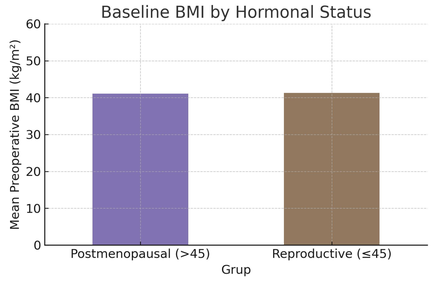
## RESULTS

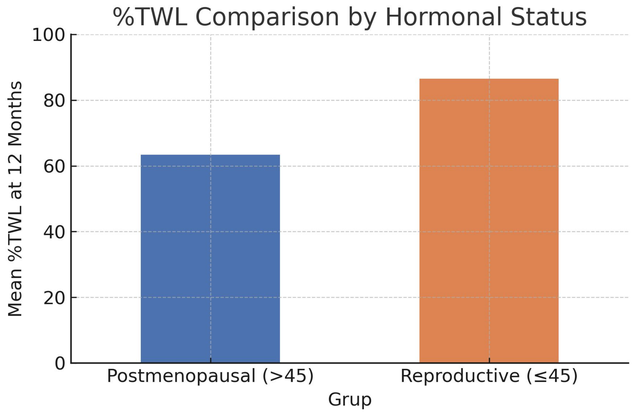
*A total of 702 patients were in the reproductive group and 173 in the postmenopausal group. Mean age was 33.6 ± 6.2 and 51.5 ± 4.8 years, respectively. Both groups achieved substantial weight loss at 1 year:*

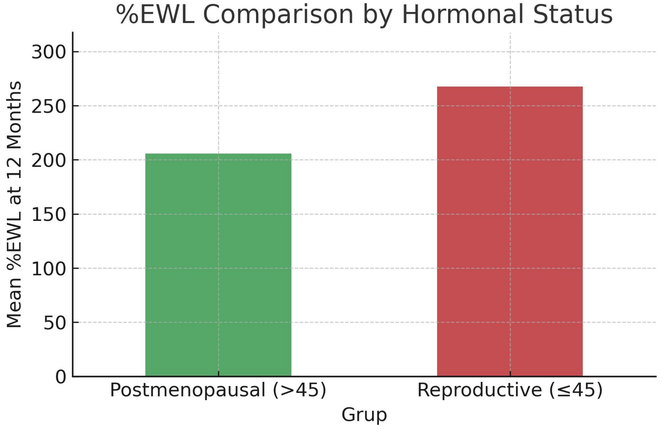
*- %TWL: 66.2% (reproductive) vs 69.1% (postmenopausal), p = 0.455*

*- %EWL: 192.8% (reproductive) vs 208.2% (postmenopausal), p = 0.293*

*Although postmenopausal patients had slightly higher weight loss outcomes, the differences were not statistically significant.*




## CONCLUSIONS

Menopausal status does not appear to significantly alter the effectiveness of sleeve gastrectomy in terms of short-term weight loss. Although postmenopausal women showed marginally greater outcomes, these differences were not statistically significant.

These findings support the notion that hormonal background alone should not influence surgical candidacy. Future studies should explore long-term metabolic, hormonal, and quality-of-life outcomes in distinct female age groups to better understand the interaction between bariatric surgery and endocrine changes throughout the female lifespan.

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## ACKNOWLEDGEMENTS

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# A46: Unexpected Chemical Pathology Leading to Excess Weight Regain Post-Bariatric Surgery

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## INTRODUCTION

Primary Ovarian Failure (POI) is ovarian defect which encompasses both primary amenorrhoea and secondary amenorrhea. The latter is due to the premature depletion of ovarian follicles before the age of 40 years. [1]

It often presents with fatigue and bone and musculoskeletal pain due to reduced oestrogen signalling [1][2]. Menopausal changes in the hormonal milieu are additionally associated with an increase in total body and abdominal fat [3].

As contraceptive methods such as the progesterone based Mirena Coil and 'mini-pill' can cause oligomenorrhoea or amenorrhea, they can make POI harder to diagnose. [4] This can complicate the management of post-bariatric surgery patients, as seen in this case of a patient presenting with refractory multi-morbidities and associated weight regain post-surgery.

## RESULTS

A 28-year-old African-Caribbean lady presented with excess weight regain, fatigue, bloating, hip arthralgia and plantar fasciitis 8 years post Roux-en-Y Gastric bypass surgery. Her pre-surgery BMI was 39kg/m2 (96kg),and the patient had lost more than 45% excess weight in 2 years post-surgery (61.4kg) but had now started regaining this. She had reached a current weight of 86kg, despite being diligent with her dietary and lifestyle modifications post-surgery. Coeliac disease was ruled out, and patient was found to have SIBO which failed to respond to treatment with Doxycycline. The patient was also treated for vitamin D deficiency and secondary hyperparathyroidism. However, despite these treatments, her musculoskeletal pains persisted, continuing to significantly limit her mobility and thus ability to lose weight.

Utilising an MDT approach, it was evaluation of her gynaecological history which provided a breakthrough in this case. The patient had an in situ Mirena coil for the past several years and therefore no regular bleeding. However, she had recently reported loss of her normal, cyclical, pre-menstrual symptoms such as Mittelschmerz pain and mastalgia. Upon investigation, her FSH, LH, oestradiol and AMH levels were in the menopausal range, despite being in her late 20s, confirming primary ovarian failure (POI). She was referred to gynaecology/fertility and rheumatology clinics and was initiated on HRT, testosterone gel and statins (due to POI related increased CVD risk). Her MSK symptoms finally improved in response to hormonal treatment, improving her tiredness and mobility.

The patient has since been successful in losing weight now, aided by Mounjaro for a brief period, further highlighting the importance role of hormonal therapies and multi-speciality care in preventing excess weight regain post bariatric surgery.

## CONCLUSIONS

This case demonstrated that patients with weight regain post bariatric surgery should be extensively investigated and treated for any other new medical pathologies using a multidisciplinary approach. This can help to maintain bariatric surgery related excess weight loss and its associated health benefits.

Unexplained weight gain in female patients post bariatric surgery should be evaluated for causes other than lifestyle factors. A high-index of suspicion should be maintained for gynaecological causes and even rare conditions such as primary ovarian failure(POI). As contraception can mask these symptoms, we recommend that female patients of all ages have gonadotropins measured if clinically indicated and perimenopausal women have annual monitoring.

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# A47: A Rare Case of Refractory Night-Blindness Post-Bariatric Surgery

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## INTRODUCTION

Vitamin A is a fat-soluble vitamin being absorbed in the small intestine. It is converted into retinyl palmitate and stored in the liver for two years which can then be later hydrolysed into retinol. Vitamin A is vital for rhodopsin formation from rod and cone opsins which are essential for phototransduction [1].

As bariatric surgery is becoming more popular for morbid obesity, and the long duration of liver stores of vitamin A, there is a risk of delayed diagnosis and treatment of vitamin A deficiency as well as a rise of cases in the developed world. [1][2][3]

Recovery of visual function appears to be rapid following replacement therapy. [2]

## RESULTS

A 40-year-old Caucasian female presented with a two-year long history of diminished vision in the evening, xanthopsia, paraesthesia and debilitating fatigue, following a laparoscopic sleeve gastrectomy and laparoscopic duodenal switch surgery five and three years ago respectively. The patient was diagnosed with papilledema, night blindness and glove and stocking neuropathy, despite good compliance with oral multivitamin and mineral supplements.

Her indication for surgery was morbid obesity with a body mass index (BMI) of 68.12kg/$m^2$, and she had no other medical conditions except for asthma. The patient demonstrated good surgical outcomes, with a 53.1% reduction in body weight four years after her second surgery.

Upon review, she was diagnosed with severe vitamin A deficiency, with a level of less than 0.35µmol/L (normal range 1.05-3.84 µmol/L). Despite treatment with AquADEKs, a fat-soluble preparation of vitamin A, and stepwise increases in dosing up to 40,000 IU oral vitamin A per day, the patient presented 18 months later in A&E with a significantly reduced visual acuity, which had left her wheelchair bound.

Investigations in A&E revealed undetectable blood vitamin A levels, prompting an urgent series of three vitamin A intramuscular injections, a total of 300,000 IU, which resulted in dramatic improvement of vision and detectable levels at 0.49µmol/L.

Therefore, it was concluded that this patient cannot absorb vitamin A orally and will require lifelong parenteral vitamin A administration. Following 4 years of regular vitamin A intramuscular injections, her serum vitamin A levels normalised to 1.30µmol/L, and the patient reported complete resolution of her symptoms.

## CONCLUSIONS

This case report highlights the severe malabsorptive nature of fat-soluble vitamins, especially vitamin A, in duodenal switch surgery patients, and therefore the importance of long-term biochemical monitoring to achieve good surgical outcomes. Additionally, there is a potential need for lifelong, high-dose, parenteral vitamin supplementation after duodenal switch surgery.

Vitamin A deficiency should be a differential in night blindness, especially in the context of bariatric surgery patients.

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Our deepest appreciation to the patient whose story we have been fortunate to share and the staff at Homerton University Hospital.

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# A48. Venous Thromboembolism and Metabolic and Bariatric Surgery: a Case-Informed Literature Review

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## INTRODUCTION

Venous thromboembolism (VTE) is fatal postoperative complication of metabolic and bariatric surgery (MBS) and the leading cause of mortality within the first postoperative 30 days.

Standard prophylactic measures:
- Early postoperative ambulation
- Sequential compression devices (SCDs)
- Chemoprophylaxis with LMWH

However, additional risk factors (sometimes hidden) may incite VTE and necessitate extended anticoagulation therapy.

Hormonal Therapy (HT):
- Includes: Oral contraceptives (OCs), hormone replacement therapy (HRT), and selective estrogen receptor modulators (SERMs)
- Increases coagulation factor activity and impairs fibrinolysis  Prothrombotic state
- Patients on HT undergoing MBS may have increased risk of VTE, especially porto-splenic-mesenteric venous thrombosis (PSMVT), a rare but potentially fatal type of VTE

## AIM

To present two cases of VTE following laparoscopic sleeve gastrectomy (LSG) in patients with a history of HT and to discuss optimal thromboprophylaxis strategies with literature review.

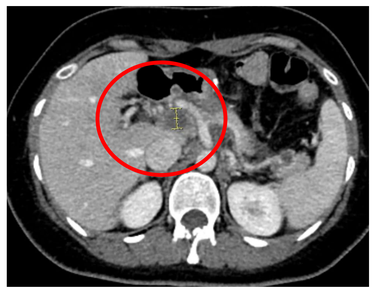
## METHODS

Study Design:
- Two cases of post-MBS VTE were reviewed
- Focus areas: Clinical presentation, imaging findings, treatment course

Literature Review
- Contextualization of cases within the broader evidence on HT, MBS, and thrombotic risk factors
- Emphasis on optimal DVT prophylaxis strategies

## CASE PRESENTATION

| Case | #1: M/37 | #2: F/30 |
|---|---|---|
| BMI (kg/m$^2$) | 27.5 | 24.2 |
| Comorbidity | None | None |
| Smoking | Current, 10 P-Y | Never |
| HT history | Estrogen<br>-Duration: 1 month<br>-Discontinued 3 months before MBS | OC pills<br>-Duration: unknown<br>-Discontinued 3 days before MBS |
| Previous VTE history | None | None |
| Surgical procedure | LSG | LSG |
| Perioperative DVT prophylaxis? | Yes, LMWH | No |
| VTE Symptoms | Fever and left abdominal pain on POD 14 | Left lower abdominal pain on POD 10 |
| CT findings | Portal and splenic vein thrombosis without bowel ischemia | Portal, splenic, and superior mesenteric vein thrombosis without bowel ischemia |
| Intervention | PV mechanical thrombectomy | PV mechanical thrombectomy<br> Failed |
| Anticoagulation therapy | Enoxaparin 80 mg BID (7 days)  Rivaroxaban 15 mg BID (11 weeks)<br>(total duration: 3 months) | Enoxaparin 80 mg BID (7 days)  Rivaroxaban 15 mg BID (11 weeks)<br>(total duration: 3 months) |
| Outcome | Follow-up loss | Follow-up loss |



## RESULTS & DISCUSSION

Key Findings:
- Both patients presented with delayed postoperative VTE (POD 10-14)
- Resolution with thrombectomy: 1 case; one with medical therapy (subacute-chronic nature)
- Neither developed bowel necrosis nor required additional surgery

VTE Risk Factors in MBS
- Postoperative VTE incidence: ~0.5% (80% occur post-discharge)
- Key risk factors: obesity, surgical stress, smoking, BMI > 60 kg/m$^2$, hormonal therapy, past VTE

Thromboprophylaxis Recommendations:
- For all patients: Mechanical prophylaxis, early ambulation, LMWH within 24 hours of MBS
- High-risk patients: Extended prophylaxis
- Those with history of DVT/PE, hypercoagulable state, HT use
- Consider risk calculators (e.g., Capirini Risk Assessment Motel) for post-discharge anticoagulation

## CONCLUSIONS

- ✔ Increased risk of VTE in MBS patients on hormonal therapy, particularly with additional risk factors such as smoking
- ✔ Detailed history taking is essential to identify hidden risk factors (e.g., hormonal therapy use)
- ✔ Individualized thromboprophylaxis is critical
- ✔ Extended post-discharge anticoagulation should be considered for high-risk patients
- ✔ Given that 80% of VTE cases following MBS occur post-discharge, routine postoperative surveillance is recommended
- ✔ Early imaging in symptomatic patients may facilitate prompt intervention and prevent severe complications
- ✔ Further prospective studies are needed to establish evidence-based guidelines for thromboprophylaxis in MBS patients with exposure to hormonal therapy

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# A50. Reframing Obesity: comparing pre-clinical and clinical obesity and implications for metabolic bariatric surgery pathways in the NHS

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## INTRODUCTION

Obesity is now understood not merely as elevated body mass index (BMI) but as a complex, progressive condition of excess adiposity that may remain sub-clinical or evolve into full systemic illness. A recent expert commission led by Francesco Rubino and colleagues proposes a reframing of obesity into distinct categories of pre-clinical and clinical obesity to reflect differences in organ dysfunction and risk. In the context of metabolic bariatric surgery (MBS), this reframing has important implications for timing of referral, optimisation, and surgical prioritisation.

## What is Pre-clinical and Clinical Obesity?

According to the commission, pre-clinical obesity denotes the presence of excess adiposity (i.e., confirmed excess fat mass beyond what BMI alone captures) without measurable impairment of organ or tissue function or significant limitation of daily activities. In contrast, clinical obesity is defined as excess adiposity with demonstrable dysfunction of tissues, organs, or the whole individual, or substantial limitations of day-to-day activities caused by the excess fat. The authors further emphasise that BMI alone is insufficient for individual diagnosis: additional anthropometric or adiposity measurements (e.g., waist-circumference, waist-to-hip ratio, DEXA) and evidence of dysfunction are needed. This conceptual distinction supports more targeted intervention: individuals with pre-clinical obesity have variable level of risk for progression, while those with clinical obesity already require timely therapeutic interventions and may qualify for MBS or metabolic surgery interventions earlier.

## Implementation on the NHS: Waiting Lists for Surgery

Within the National Health Service (NHS) context, waiting lists for bariatric and metabolic surgery remain long, and resource constraints challenge prioritisation. The reframing of obesity into pre-clinical and clinical categories offers a framework for triaging surgical referral and optimisation. Patients categorised as clinical obesity (i.e., with established end-organ dysfunction) may warrant expedited surgical pathways, while those with pre-clinical obesity might be managed with intensive medical/pharmacologic optimisation and monitored for progression. Adoption of this stratification could promote more efficient use of surgical capacity, reduce delay for highest-need patients, and potentially reduce downstream burden of complications (e.g., T2DM, renal failure) that drive high costs and morbidity. Real-world data suggest delay in surgery leads to worse outcomes and increased health system burden. Integrating this approach into NHS bariatric services would require protocol development (e.g., pre-surgical assessment for organ dysfunction, metrics of adiposity beyond BMI), updated referral criteria, and collaboration across endocrinology, renal, and surgical services.

## Case Discussion

Pre-clinical case: A 34-year-old male with class 3 obesity (BMI 51 kg/m², weight 183 kg) and a history of deep venous thrombosis following a knee dislocation, no metabolic medications or prior abdominal surgery. Although his adiposity is very high, he currently lacks evidence of organ dysfunction and might thus be characterised as pre-clinical obesity under the new framework.
Clinical case: A 44-year-old male with class 3 obesity (BMI 57.54 kg/m², weight 160 kg) with osteoarthritis of knee, end-stage renal failure (CKD 5), obstructive sleep apnoea (OSA), type 2 diabetes mellitus (T2DM) with diabetic maculopathy, and multiple antihypertensive and insulin therapies (doxazosin, moxonidine, amlodipine, NovoRapid, Abasaglar). This profile clearly indicates established organ/system dysfunction and fits the definition of clinical obesity.
From a surgical-pathway perspective, the pre-clinica patient offers a window for prophylactic care aimed at risk-reduction (which may include metabolic surgery) and perhaps fewer immediate peri-operative risks, whereas the patient with clinical obesity presents both higher surgical risk and higher urgency for metabolic surgery to prevent secondary complciations and end-organ damage and improve multiple comorbidities. Classification as “clinical obesity” should prompt expedited evidence-based treatment.

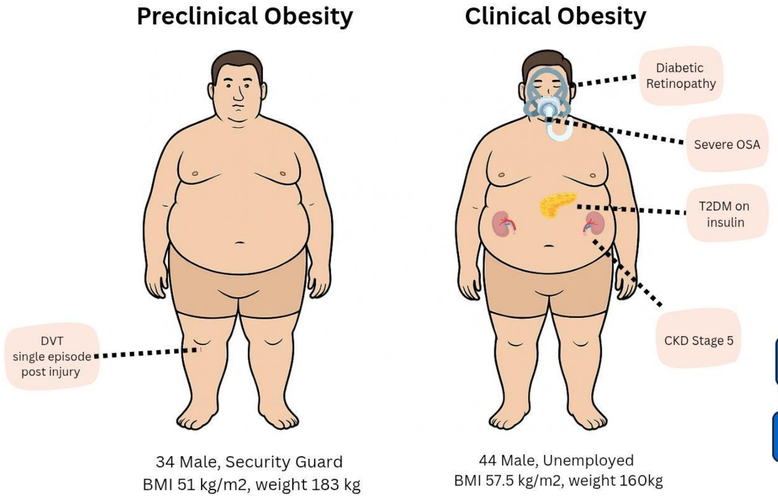


*Figure 1, illustration comparison of pre-clinical and clinical obesity . Pre- clinical case 34 male, security guard workers with a BMI 51kg/m2, weight 183kg with no co-morbidities. Clinical case 44M , unemployed with a BMI 57.5 kg/m2, weight 183 with multiple co-morbidities including severe OSA, insulin dependent T2DM, diabetic retinopathy . Dr Grishma Pradip*

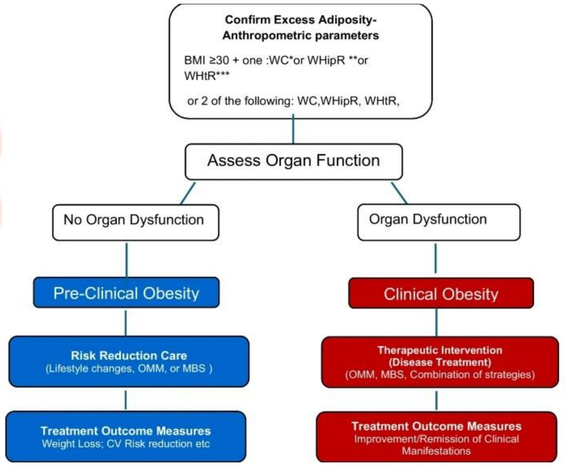


*Figure 2, Pathway for assessment of excess adiposity, the diagnosis of preclinical and clinical obesity, and the treatment strategies. BMI, body mass index; WC, waist circumference (*102 cm for men, 88 cm for women); WHipR, waist-to-hip ratio (* > 0.90 for men, > 0.85 for women); WHtR, waist-to-height ratio (* > 0.50 for all); DEXA, dual-energy X-ray absorptiometry; MRI, magnetic resonance imaging; MBS, metabolic bariatric surgery; OMM, obesity management medication. Rubino et al 2025.*

## CONCLUSIONS

Within the National Health Service (NHS) context, waiting lists for bariatric and metabolic surgery remain long, and resource constraints challenge prioritisation. The reframing of obesity into pre-clinical and clinical categories offers a framework for triaging surgical referral and medically coherent assessment of urgency of surgical treatment. Patients categorised as clinical obesity (i.e., with established organ dysfunction) may warrant expedited surgical pathways, while those with pre-clinical obesity might be managed on separate surgical waiting lists (akin to polyps and colon cancer). Pre-clinical obesity generally requires prophylactic therapy, which may include lifestyle and monitoring or pharmacologic treatment or even surgery depending on the individual level of health risk/prgression. Adoption of this stratification could promote more efficient use of surgical capacity, reduce delay for highest-need patients, and potentially reduce downstream burden of secondary complications that drive high costs and morbidity.

## RESULTS / DISCUSSION

The new classification framework highlights disease severity, rather than simply weight. Earlier access to MBS in pre-clinical obesity may prevent progression to irreversible complications. Patients with clinical obesity often derive the greatest metabolic benefit from surgery, including improved renal function trajectories and diabetes remission. However, they also face higher peri-operative risk and require multi-disciplinary optimisation.

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# A51. Developing Evidence-Based Exercise Guidelines for Metabolic and Bariatric Surgery

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## INTRODUCTION

Strength training and aerobic training have been shown to improve strength and metabolism in patients with obesity. However, the long-term prevalence of sarcopenia after surgery underscores the need for research on both short and long-term exercise programs.

## AIM

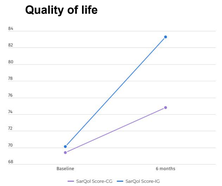
This study aims to introduce a novel 16-week exercise program based on the FITT-VP (Frequency, Intensity, Time, Type, Volume, Progression) framework, based on American College of Sports Medicine (ACSM) guidelines, designed specifically for bariatric patients to enhance recovery and long-term health outcomes.

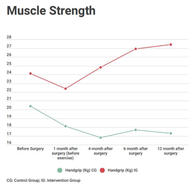
## METHOD

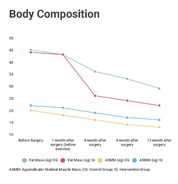
The proposed exercise protocol, initiated 1-month post-surgery, comprises three progressive phases: resistance (weeks 1-4), hypertrophy (weeks 5-10), and strength (weeks 11-16). The program integrates aerobic and resistance training tailored to the unique needs of bariatric patients. In a controlled randomized trial of post-bariatric surgery, patients (n=36) were assessed for strength, muscle mass, systemic inflammatory index, quality of life, hormonal profile, and body composition pre- and post-intervention.

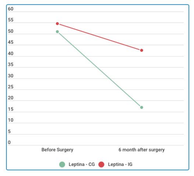

## RESULTS

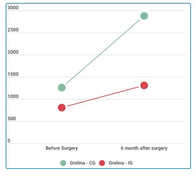
Preliminary findings indicate significant improvements in muscle strength ($p<0.05$), lean muscle mass ($p<0.05$), and body composition, including reduced fat mass ($p<0.01$). The systemic inflammatory index decreased, reflecting reduced chronic inflammation ($p<0.05$). Participants reported enhanced QoL scores ($p<0.01$) and favorable changes in hormonal profiles, including improved insulin sensitivity and cortisol levels ($p<0.05$). Adherence to the early intervention (1-month post-surgery) was higher compared to delayed initiation attempts at 17 months post-surgery.

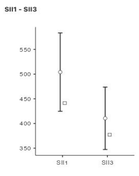


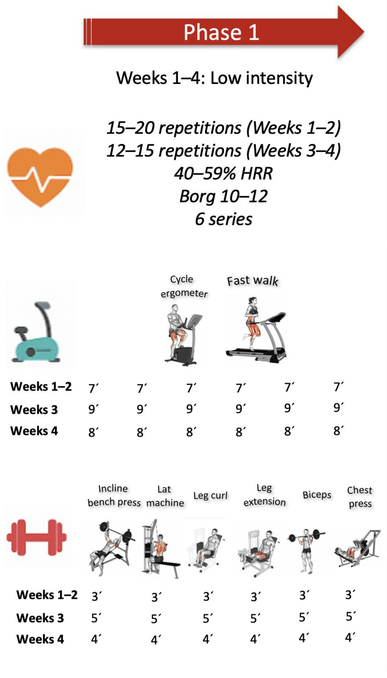




## CONCLUSIONS

- This 16-week FITT-VP-based exercise program initiated 1-month post-bariatric surgery demonstrates significant benefits in strength, muscle mass, systemic inflammation, quality of life, hormonal profile, and body composition.
- Early exercise intervention appears critical for optimizing patient outcomes and adherence.
- These findings support the integration of structured, phased and combined exercise protocols into post-bariatric care to enhance recovery and long-term health.

## REFERENCES

## ACKNOWLEDGEMENTS

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# A52. Improving the SF-BARI Score with a Structured Postoperative Exercise Program: A Randomized Trial after Metabolic and Bariatric Surgery

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## INTRODUCTION

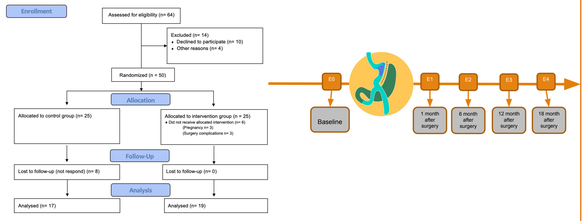
Obesity is a complex and multifaceted condition that can lead to serious health issues. Bariatric surgery, particularly Roux-en-Y gastric bypass (RYGB), is highly effective treatment for severe obesity but may often leads to significant skeletal muscle loss, compromising long-term metabolic outcomes. Structured exercise may mitigate these effects, yet its impact on comprehensive surgical success remains underexplored.

## AIM

This randomized controlled trial evaluated the synergistic effects of a 16-week combined exercise program on the SF-BARI score, a holistic composite measure of weight loss and comorbidity remission, in post-RYGB patients.

## METHOD

Thirty-seven patients (mean age 46.9 ± 11.4 years, BMI 42.9 ± 5.14 kg/m²) underwent RYGB and were randomized to a supervised intervention group (IG, n=19) or control group (CG, n=17). The IG completed three 55-minute sessions weekly (aerobic and resistance training) starting one-month post-surgery for 16 weeks. Outcomes, including anthropometry, percentage total weight loss (%TWL), SF-BARI score (integrating %TWL and remission of type 2 diabetes mellitus, hypertension, dyslipidemia, and obstructive sleep apnea), and complications, were assessed at one, five, eleven- and seventeen-months post-surgery.



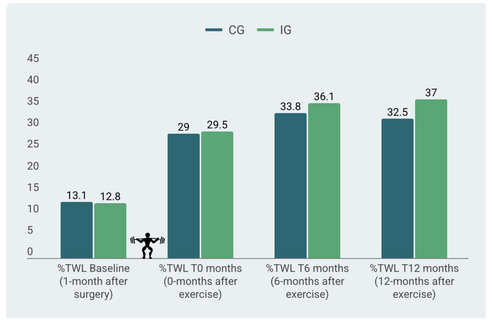




## RESULTS

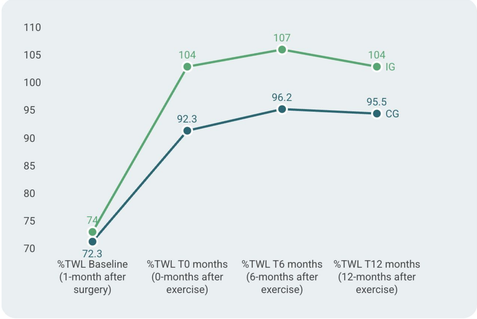
Both groups achieved substantial weight loss (%TWL: IG 37% vs. CG 32.5% at 17 months, p=0.139, d=0.506), with no between-group differences in BMI or weight. However, the IG showed superior SF-BARI scores at 5 months (104 ± 13.8 vs. 92.3 ± 12, p=0.012, d=0.883) and 11 months (107 ± 13.2 vs. 96.2 ± 16.8, p=0.032, d=0.747), driven by enhanced remission of hypertension (0% vs. 41.2%, p=0.002) and dyslipidemia (0% vs. 23.5%, p=0.025) at 17 months. Type 2 diabetes mellitus remission was high in both (>94%, p=0.935), and effect sizes indicated large clinical benefits in the short-to-medium term.

**% Total weight loss**

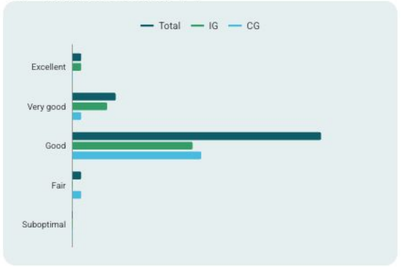



| Variables (Mean ± SE) | Before Exercise | | | After Exercise | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Baseline | | | T0-month | | | | T6-month | | | | T12-month | | | |
| | IG | CG | p-value | IG | CG | Group effect | Surgery effect | IG | CG | Group effect | Surgery effect | IG | CG | Group effect | Surgery effect |
| **Diabetes (%)** | 10.5% | 29.4% | 0.162 | 5.3% | 5.9% | p=0.935 | p=0.041 | 5.3% | 5.9% | p=0.935 | p=0.041 | 5.3% | 5.9% | p=0.935 | p=0.041 |
| **Hypertension (%)** | 63.2% | 76.5% | 0.404 | 10.5% | 17.6% | p=0.537 | p=<0.001 | 0% | 35.3% | p=0.005 | p=0.004 | 0% | 41.2% | p=0.002 | p=0.009 |
| **Dyslipidemia (%)** | 10.5% | 41.2% | 0.041 | 0% | 17.6% | p=0.056 | p=0.041 | 0% | 17.6% | p=0.056 | p=0.041 | 0% | 23.5% | p=0.025 | p=0.014 |
| **Obstructive sleep apnea (%)** | 10.5% | 41.2% | 0.041 | 0% | 17.6% | p=0.056 | p=0.041 | 0% | 11.8% | p=0.124 | p=0.020 | 0% | 17.6% | p=0.056 | p=0.083 |

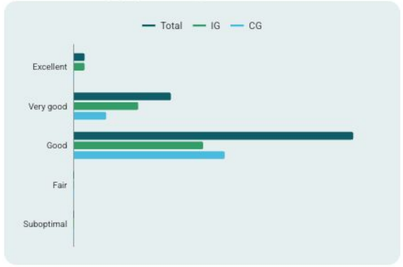
**SF- BARI SCORE**



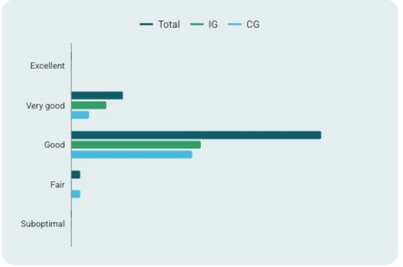

**SF-BARI SCORE T0**




**SF-BARI SCORE T6**




**SF-BARI SCORE T12**




## CONCLUSIONS

- The SF-BARI score provides a validated, holistic assessment of surgical outcomes by combining %TWL with remission status of key comorbidities, offering superior sensitivity over isolated metrics.
- A 16-week supervised combined aerobic-resistance exercise program yielded comparable %TWL to controls but significantly higher SF-BARI scores in the short-to-medium term, primarily through superior hypertension and dyslipidemia remission.
- Exercise amplified surgery-induced gains, with no increase in complications.

## REFERENCES

## ACKNOWLEDGEMENTS

I would like to express my deepest appreciation to my team. I'm deeply indebted to extend my deepest gratitude to all our patients.

## CONTACT INFORMATION

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# A53. Saliva secretion and self-reported dental health 12 Years after RYGB

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## INTRODUCTION

There are limited knowledge of dental problems in patients after bariatric surgery.

## AIM

To examine saliva secretion and self-reported dental health in patients long-term after RYGB.

## METHOD

**12** **Years after RYGB**

**171** **Patients measuring saliva flow.**

**Resting saliva for 15 min.**
**Hyposalivation: < 0.1 mL/min**

**Stimulated saliva with chewing wax for 5 min.**
**Hyposalivation: < 1.0mL/min**

**pH and buffering ability**

**Dental health was assessed by self-reported questionnaire.**

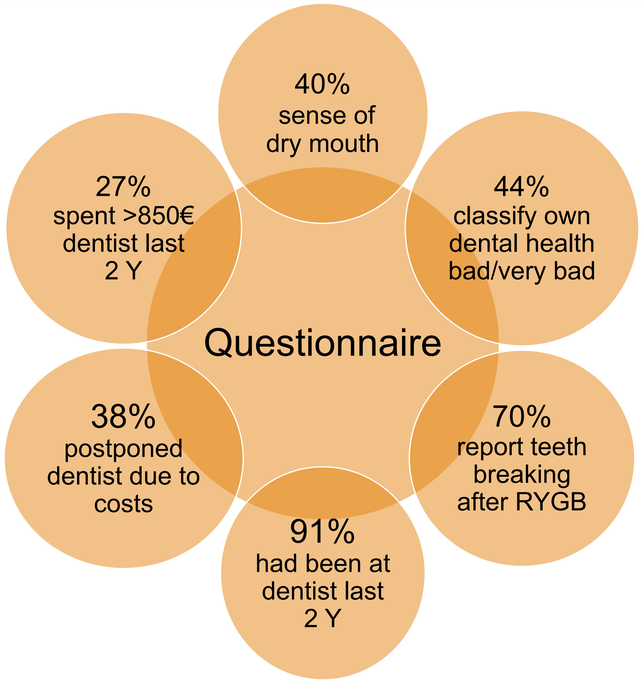
## RESULTS

**131 / 40**
53 Years

Pre op BMI 43 kg/m$^2$

Present BMI 33 kg/m$^2$

| Saliva secretion test results: | Test at rest | Stimulated test |
|---|---|---|
| Patients with hyposalivation | 106 (62%) | 60 (35%) |
| Saliva ml/min, mean ± SD | 0.35 ± 1.1 | 1.6± 1.9 |
| pH, mean ± SD | 6.6 ± 0.4 | 7.4 ± 0.3 |
| Patients with resting pH < 6.8 | 136 (80%) | |
| Patients with stimulated pH < 7.3 | | 61 (36%) |
| Buffering ability, mean ± SD | | 7.5 ± 3.0 |
| Patients with buffering ability < 9 | | 118 (69%) |




## CONCLUSIONS

More than half of the patients have hyposalivation at rest and one third in stimulated state. There are more patients suffering from hyposalivation than self-reported dry mouth.
Patients with low stimulated saliva are 2.2 times more likely to report poor dental health compared to their counterparts with normal saliva flow.

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## ACKNOWLEDGEMENTS

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## CONTACT INFORMATION

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# A54. The effects of a perioperative nurse-led program on self-care, body composition and functional in bariatric surgery patients: A randomized controlled trial

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## INTRODUCTION

Bariatric surgery is an effective intervention for severe obesity, but long-term optimal success relies on sustained self-care behaviors, self-efficacy for exercise, and weight management. Nurse-led case management has shown promise in enhancing patient outcomes, yet robust evidence from randomized controlled trials (RCT) remains limited.

## AIM

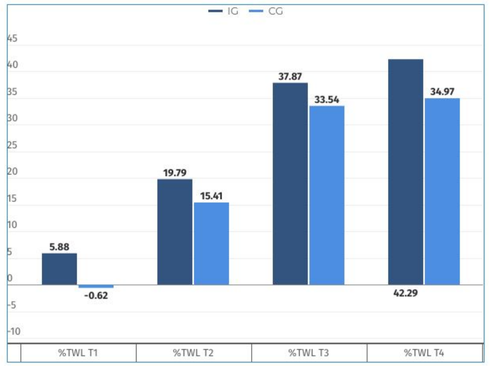
This study evaluated the impact of a nurse-led case management intervention (NURLIFE) on pre- and post-operative weight loss and self-care behaviors in bariatric patients.

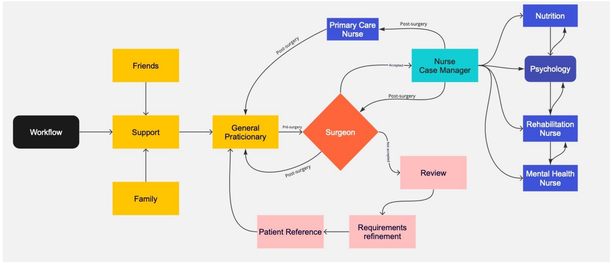
## METHOD

A single-center RCT was conducted from January 2024 to August 2025 in a public hospital in southern Portugal. Forty patients were randomized to an intervention group (IG, n=20) receiving NURLIFE (personalized counseling, goal setting, and follow-up) or a control group (CG, n=20) receiving standard care. Outcomes, including weight, Self-Care of Chronic Illness Inventory (SCII), Self-Efficacy for Exercise (SEE), and Social Appearance Anxiety Scale (SAAS), were assessed at baseline, pre-surgery, and 12 months post-surgery.


## RESULTS

The IG exhibited significant pre-operative weight loss (7.36 ± 7.09 kg vs. -0.10 ± 7.33 kg in CG, p = 0.001, d = -1.03), which was maintained and extended post-surgery (50.83 ± 13.55 kg vs. 42.35 ± 19.81 kg, p = 0.061). Significant improvements were observed in SCII Maintenance (p = 0.012, d = -0.74) and SEE (p = 0.004, d = -0.90) at 12 months, with no significant differences in SAAS or other SCII domains. The absence of significant post-operative weight loss differences suggests that pre-operative gains were sustained.




**Case Management flowchart**

| Variables | | Before Surgery | | After Surgery | | | Group | | Moment*Group | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mean ± SD | | Baseline T0 | Pre-Op T1 | 2-month T2 | 6-month T3 | 12-month T4 | p | $\eta^2$ | p | $\eta^2$ |
| **Weight (kg)** | Control group | 117±13.3 | 117±8.86 | 98.6±8.66 | 76.9±8.66 | 75±10.8 | 0.061 | 0.089 | 0.230 | 0.038 |
| | Intervention group | 119±9.82 | 112±6.45 | 94.8±11.9 | 73.3±8.58 | 68.1±8.14 | | | | |
| **BMI (kg/m²)** | Control group | 44.5±5.46 | 44.6±4.30 | 37.4±3.65 | 29.2±3.65 | 28.5±4.34 | 0.050 | 0.093 | 0.274 | 0.033 |
| | Intervention group | 44.4±3.30 | 41.8±3.56 | 35.5±5.15 | 27.5±4.00 | 25.5±3.48 | | | | |
| **SCII Maintenance** | Control group | 51.8±6.11 | 53.8±4.65 | 54.6±4.85 | 57.1±3.54 | 57.8±2.54 | 0.231 | 0.038 | <0.001 | 0.124 |
| | Intervention group | 49.4±5.57 | 51.3±4.16 | 57.9±2.63 | 60.0±0.08 | 60.0±0.01 | | | | |
| **SCII Monitoring** | Control group | 49.9±5.20 | 53.4±5.59 | 55.5±4.87 | 56.5±3.98 | 57.6±2.80 | 0.002 | 0.226 | 0.408 | 0.026 |
| | Intervention group | 50.3±5.71 | 56.5±4.11 | 58.3±2.42 | 59.8±0.56 | 60.0±0.01 | | | | |
| **SCII Management** | Control group | 48.8±6.09 | 52.1±5.27 | 56.2±4.92 | 57.9±3.38 | 58.2±2.28 | 0.001 | 0.248 | 0.321 | 0.030 |
| | Intervention group | 49.1±5.50 | 56.2±4.42 | 58.2±2.60 | 59.8±0.44 | 60.0±0.01 | | | | |
| **SCII Confidence** | Control group | 49.4±5.12 | 54±5.53 | 55.5±4.37 | 55.5±4.20 | 57.2±3.13 | <0.001 | 0.319 | 0.316 | 0.030 |
| | Intervention group | 52.4±5.72 | 54.6±5.63 | 58.9±2.06 | 59.8±0.47 | 60.0±0.01 | | | | |
| **SEE** | Control group | 43.4±7.35 | 42.7±5.07 | 46.7±6.77 | 46.8±6.75 | 47.3±5.74 | <0.001 | 0.511 | 0.030 | 0.068 |
| | Intervention group | 43.4±6.61 | 48.9±5.58 | 50.9±5.02 | 53.5±2.61 | 54.5±1.09 | | | | |
| **SAAS** | Control group | 55.3±5.66 | 52.0±4.90 | 50.4±5.21 | 52.2±4.95 | 48.2±4.26 | <0.001 | 0.396 | 0.018 | 0.075 |
| | Intervention group | 53.7±5.61 | 51.7±5.12 | 47.1±3.17 | 45.3±0.71 | 45.0±0.01 | | | | |

## CONCLUSIONS

- Specialized perioperative nurse case managers, through personalized support and follow-up, significantly increase pre-operative weight loss, which is maintained and extended after surgery.
- This research compares intervention group receiving tailored nurse-led support to a control group receiving standard care, offering insights into the role of perioperative nursing in optimizing patient-centered care.
- The results support the integration of structured nurse-led interventions into perioperative care, aligning with global priorities for improving chronic disease management and bariatric surgery outcomes.

## REFERENCES

## ACKNOWLEDGEMENTS

I would like to express my deepest appreciation to my team. I'm deeply indebted to extend my deepest gratitude to all our patients.

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# A55- Analysing the long-term impact of Laparoscopic Sleeve Gastrectomy on obesity-related co-morbidities

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## INTRODUCTION

Laparoscopic sleeve gastrectomy is a recognised surgical treatment for patients living with obesity. Currently, the National Health Service offers this treatment to individuals with a Body Mass Index above 40, or over 35 if diagnosed with obesity-related health conditions such as diabetes, hypertension, osteoarthritis and sleep apnoea.

## AIM

To evaluate the long-term impact of Laparoscopic Sleeve Gastrectomy as a treatment for patients living with diabetes, hypertension, osteoarthritis and sleep apnoea.

Furthermore, to assess the effect of Laparoscopic Sleeve Gastrectomy on gastric reflux symptoms.

## METHOD

This was a retrospective study using data collected from patients who underwent Laparoscopic Sleeve Gastrectomy at St George's Hospital, London between January 2016 and December 2017.

Patients were followed up by telephone at 40-months and asked to take part in a questionnaire to assess changes in the management of their obesity-related medical conditions.

Outcomes were based on adjustments to the number or dose of medical therapies being used for obesity-related conditions compared to before surgery.

Patients were categorised into groups showing either resolution, improvement, deterioration or no change in their obesity-related diabetes, hypertension, osteoarthritis and sleep apnoea. Patients were also questioned about symptoms of gastric reflux.

## RESULTS

A total of 76 patients patients were included in the study, having undergone laparoscopic sleeve gastrectomy at our hospital between 2016 and 2017 and providing follow up data.

The effect of surgery on obesity-related medical conditions is summarised below:

**Hypertension (34/76 patients):**
- 6/34 resolved, 15/34 no change, 13/34 deteriorated

**Diabetes Mellitus (29/76 patients):**
- 12/29 resolved, 12/29 no change, 5/29 deteriorated

**Osteoarthritis (24/76 patients):**
- 24/24 reported no change in symptoms

**Sleep Apnoea (18/76 patients):**
- 3/18 resolved, 1/18 improved, 13/18 no change, 1/18 deteriorated

**Gastric Reflux (20/76 patients):**
- 2/20 resolved, 3/20 improved, 3/20 no change, 12/20 deteriorated

| Co-morbidity (number of patients) | % Resolved | % Improved | % No change | % Deteriorated |
|---|---|---|---|---|
| **Hypertension (34)** | 17.6% | - | 44.1% | 38.2% |
| **Diabetes mellitus (29)** | 41.4% | - | 41.4% | 17.2 |
| **Osteoarthritis (24)** | 0 | - | 100% | - |
| **Sleep apnoea (18)** | 16.7% | 5.6% | 72.2% | 5.66% |
| **Gastric reflux (20)** | 10% | 15% | 15% | 60% |

***TABLE 1:*** *Percentage of patients who showed resolution, improvement, no change or deterioration in obesity-related medical co-morbidities 40-months after undergoing Laparoscopic Sleeve Gastrectomy*

## CONCLUSIONS

Overall, laparoscopic sleeve gastrectomy has been shown to offer a good level of resolution/ improvement in obese patients with diabetes mellitus. There were mixed outcomes in the hypertension group and only modest improvement for those suffering with sleep apnoea. Data showed very little improvement in patients with osteoarthritis.

On the other hand, gastric reflux is commonly aggravated, which is a commonly recognised post-operative side-effect after laparoscopic sleeve gastrectomy.

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## ACKNOWLEDGEMENTS

We would like to express our thanks to all the patients who agreed to take part in this study.

## CONTACT INFORMATION

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# A56- Impact of surgical training on long-term patient outcomes undergoing Laparoscopic Sleeve Gastrectomy

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## INTRODUCTION

Laparoscopic sleeve gastrectomy is a commonly practised bariatric procedure to achieve weight loss in the obese population. Surgical outcomes can often be linked to operator experience and training.

## AIM

To compare weight loss outcomes between Consultants and Clinical Fellows/ Surgical Trainees undertaking Laparoscopic Sleeve Gatrectomy as the lead operator.

## METHOD

We conducted a retrospective analysis on patients undergoing Laparoscopic Sleeve Gastrectomy between January 2016 and December 2017, with either a Consultant or Trainee as the lead operator.

Patient demographics, such as obesity-related co-morbidities, age, gender and pre-operative BMI were comparable, in order to minimise bias between the two groups.

We compared operating time, length of stay, complications and excess body weight loss to determine if there was a difference in outcomes based on the experience/ grade of the lead operator.

At 20 months and 40 months post-operatively, a telephone audit was conducted to calculate excess weight loss for each patient, as well as document any complications to compare long-term outcomes between the two groups.

## RESULTS

- **76 LSG patients were included:**
- 44 performed by Consultants
- 32 performed by Trainees

- No difference in age, gender, pre-operative weight/ BMI and number of obesity-related comorbidities between groups.

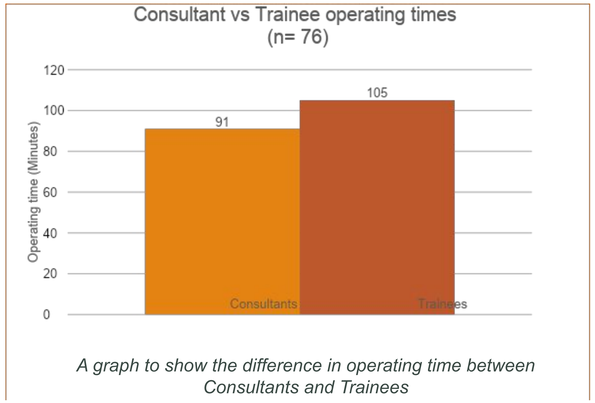
- **Operative time:**
- Consultants 91 ± 18.1 minutes
- Trainees 105 ± 10.0 minutes

- **Length of stay:**
- Consultants 2.8 ± 0.9 days
- Trainees 2.6 ± 0.4 days

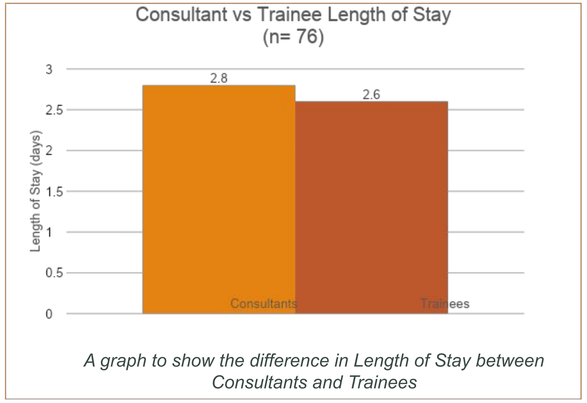
- **Complications:**
- Consultants 2 (wound infection, intra-operative bleeding with ICU admission)
- Trainees 3 (intra-abdominal collection requiring drainage, wound infection and hypokalaemia)

- **Excess Weight Loss (%) at 20 months (*p*=0.49):**
- Consultants 52.4 ± 6.7
- Trainees 55.9 ± 7.5

- **Excess Weight Loss (%) at 40 months (*p*=0.54):**
- Consultants 50.7 ± 9.9
- Trainees 54.9 ± 9.9




*A graph to show the difference in operating time between Consultants and Trainees*




*A graph to show the difference in Length of Stay between Consultants and Trainees*


*A graph to show the difference in % excess weight loss between Consultants and Trainees over 20 months and 40 months*

## CONCLUSIONS

Overall, our results demonstrate that short and longer-term outcomes of Laparoscopic Sleeve Gastrectomy are similar between both groups, regardless of whether the lead operator is the Consultant or the Trainee.

The data suggests weight loss outcomes are comparable, and supports the notion that adequately-supervised trainee-led procedures are a viable method of surgical training.

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## ACKNOWLEDGEMENTS

We would like to express our thanks to all the patients who agreed to take part in this study.

## CONTACT INFORMATION

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