THIRD TIME'S A CHARM – BAND TO SLEEVE TO BYPASS

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Introduction

- 20-30 of % patients who undergo bariatric surgery will need revisions at some point.
- This is particularly true for Adjustable gastric band (AGB)-to either sleeve gastrectomy (SG) , Roux-en-Y gastric bypass (RYGB) or Duodenal switch (DS).
- Question is what is the best revision of a SG especially since insurance doesn't pay for single anastomosis duodeno-ileostomy (SADI-s) or one anastomosis gastric bypass (OAGB)
- In 2020 MBSAQIP started reporting reasons for conversions and detailing previous surgeries

Materials and Methods

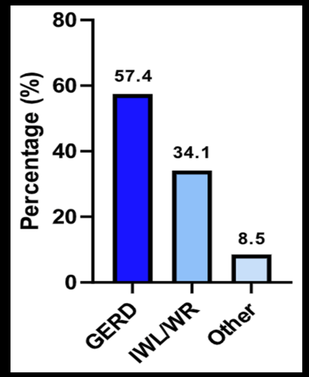
- Retrospective review of 2020 Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) participant use files for patients with AGB who underwent conversions to SG and then to RYGB
- Primary outcome: Indications for conversions including GERD, inadequate weight loss/ weight regain (ILW/ WR) and other
- Cohort divided into 2 groups based on conversion indications; Gastroesophageal Reflux disease (GERD) vs Inadequate weight loss/Weight recurrence (ILW/ WR). Both evaluated at baseline and 30 day follow up
- Secondary outcome: Compared baseline characteristics and surgical outcomes for patients converted for GERD or IWL/WR to establish association between conversion indications and surgical outcomes
- P value <0.05 was set for statistical significance

References

1.Oor JE et al . Laparoscopic sleeve gastrectomy and gastroesophageal reflux disease: a systematic review and meta-analysis. Am J Surg. 2016 Jan;211(1):250-67.
2.Felsenreich DM et al . Update: 10 Years of Sleeve Gastrectomy-the First 103 Patients. Obes Surg. 2018 Nov;28(11):3586-3594.
3.Kallies K et al . American Society for Metabolic and Bariatric Surgery Clinical Issues Committee.
American Society for Metabolic and Bariatric Surgery updated statement on single-anastomosis duodenal switch. Surg Obes Relat Dis. 2020 Jul;16(7):825-830.
https://www.aetna.com/cpb/medical/data/100_199/0157.html

Results

- 92 patients identified;
  - 85% female,
  - mean age 49.5 +/- 10.2 years,
  - mean pre-op BMI 40.1 +/- 7.8 kg/m^2
- Primary indication for conversion was GERD, followed by IWL/WR and other



- An association was established between the two main subgroups and particular baseline characteristics and comorbidities.
- Patients with GERD were more likely females (P= 0.004) and had lower BMI (P<0.01)

Demographic information	GERD (n=54)	IWL/WR (n=32)	*p-value*
Age, Years (SD)	49.4 (9.4)	49.9 (11.6)	0.82
Sex, Female (%)	51 (94.4)	23 (71.9)	0.004
BMI, kg/m^2 (SD)	38.8 (7.3)	45.7 (7.4)	< 0.01
Comorbidities (%)			
History of GERD	52 (96.3)	18 (56.3)	< 0.01
Hyperlipidemia	11 (20.4)	9 (28.1)	0.41
Sleep Apnea	9 (16.7)	12 (37.5)	0.03
Type 2 Diabetes Mellitus	6 (11.1)	2 (6.3)	0.45
Smoker	3 (5.6)	2 (6.3)	0.89
COPD	1 (1.9)	0 (0)	0.43
History of DVT	1 (1.9)	0 (0)	0.43
Chronic Steroid Use	0 (0)	1 (3.1)	0.19
History of PE	0 (0)	0 (0)	
History of MI	0 (0)	0 (0)	
History of dialysis	0 (0)	0 (0)	
Renal Insufficiency	0 (0)	0 (0)	
Operative characteristics			
Operation length, min (SD)	162.3 (66.9)	165.9 (92.2)	0.83
Length of stay, days (SD)	1.7 (1.0)	1.4 (0.9)	0.24

Table 1: Patient Baseline and Operative characteristics

Data are presented as mean and standard deviation for continuous variables, and as frequency and percentage for categorical variables.

BMI, body mass index; GERD, gastroesophageal reflux disease; COPD, chronic obstructive pulmonary disease; DVT, deep vein thrombosis; PE, pulmonary embolism; MI, myocardial infarction

Results

- Outcomes were evaluated in a 30-day window - Mean BMI after 30-day follow-up was lower for patients in the ''GERD'' subgroup vs ''IWL/WG'' cohort.

30-day Outcomes	GERD (n=54)	IWL/WR (n=32)	*p-value*
BMI, kg/m2 (SD)	35.7 (5.9)	42.1 (6.6)	< 0.01
Reoperation (%)	1 (1.9)	0 (0)	0.43
Readmission (%)	4 (7.4)	2 (6.3)	0.83
Reintervention (%)	1 (1.9)	1 (3.1)	0.7

Table 2. 30-day Surgical Outcomes

Discussion

- Patients with GERD had lower BMIs which makes sense as patients with higher BMIs would have IWL/WR listed otherwise.
- Should patients that were converted from AGB to SG have undergone conversion directly to RYGB, therefore avoiding the extra operation (SG)? 20% or more SG is associated with new onset GERD [1] and 33% SG patients are converted to other operations of which 57% are for GERD [2].
- SADI-S and OAGB could offer revisional options for prior failed bariatric surgeries with improved long-term outcomes including fewer comorbidities and higher %TWL than other bariatric procedures over a 10-year period [3]

Conclusion

- Patients who convert from AGB to SG to RYGB do so primarily for GERD or IWL/WG.
- Further efforts to define the best primary operation for each patient are needed to prevent the need for conversions.