Conversion of Sleeve Gastrectomy to Roux-en-Y Gastric Bypass in a Rural Population

Alexander Weimer, MD, Haley Harman, BS, Christa Lilly, PhD, Lawrence Tabone, MD, Salim Abunnaja, MD, Nova Szoka, MD

West Virginia University School of Medicine, Morgantown, WV

Background

- In the past decade, sleeve gastrectomy (SG) has become the most popular bariatric operation in the United States[1].
- The most common indications for revision of SG to Roux-en-Y gastric bypass (RYGB) are medical refractory gastroesophageal reflux disease (GERD), inadequate weight loss, or weight regain[2].
- **Objective:** This study examined the indications and outcomes for bariatric patients who underwent revision from SG to RYGB at an academic medical center in a rural state.

Methods

This was a retrospective review from years 2017-2024 using the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) database information from a rural academic tertiary care center.

Measures:

- Percentage of Excess Weight (PEWL) (weight lost preoperatively/initial weight – ideal body weight) and Percent Total Weight Loss (PTWL) was compared to weight loss at 1, 6, 12, 24, and 36 months
- Indications for SG to RYGB revision
- Pre-operative and post-operative incidence of GERD
- Rate of intraoperative/postoperative complications

Statistical Analysis

- Advanced longitudinal models were run using linear mixed models.
- Models included PTWL as an outcome, with baseline weight in kg as a covariate.
- Final models used Kenward-Rogers degree of freedom correction and restricted and restricted estimation maximum likelihood (REML) methods

Results

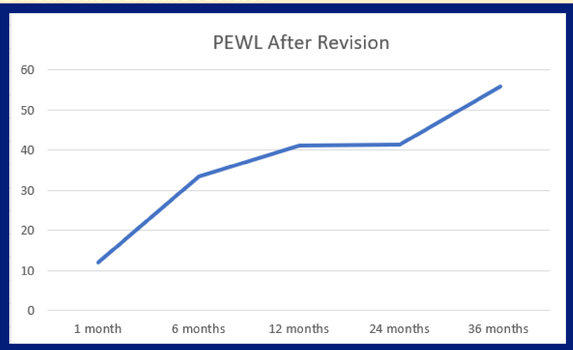
Patient Demographics, % (n)			
Sex		**Preoperative BMI**	40.8
Male	4% (3)		
Female	96% (66)	**Concurrent Hiatal Hernia Repair**	42% (29)
Age	46.6		
Sex			
White	91% (63)	**GERD Resolution**	72% (50)
Unlisted	9% (6)		
Indication for Revision	81% (56)	**Perioperative Complications**	10.1% (7)
GERD	7% (5)		
Inadequate weight loss	12% (8)		
Both			

Perioperative Complications, (n)	
Surgical site infection	3
Gastrojejunostomy leak	1
Marginal ulcer	1
Intra-operative bleeding requiring conversion to open	1
Post-operative anemia requiring blood transfusion	1

Percentage of Excess Weight (PEWL) & Percent Total Weight Loss (PTWL) after revision	
PEWL	12.0 % at 1 month 33.3 % at 6 months 41.0 % at 12 months 41.3 % at 24 months 55.9 % at 36 months
PTWL	3.7 % at 1 month 12.1 % at 6 months 16.2 % at 12 months 17.8 % at 24 months 24.0 % at 36 months

Conclusions

- SG to RYGB is an effective procedure for patients who have undergone SG with medication resistant reflux or inadequate weight gain/weight regain, with weight loss occurring up to 36 months postoperatively
- Reflux was the most common indication for revision with hiatal hernia repair occurring frequently at the time of revision.
- Further studies are needed examine long-term weight loss and GERD outcomes from this bariatric revision





References

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