Roux-En-Y Gastric Bypass in Non-Bariatric Patients with Refractory GERD

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BACKGROUND

- 10-40% of patients with life-limiting gastroesophageal reflux disease (GERD) are refractory to medical management with proton pump inhibitors [1] .
- Lap or robotic fundoplication fails to alleviate symptoms in 2.5 to 10% of patients [2,3]; rates of physiologic recurrence vary.
- RYGB is well-established to be preferable to other surgical options in morbidly obese patients with severe reflux
- Recent literature suggests early conversion of failed fundoplication to RYGB may confer benefit [4] .

OBJECTIVES

- Describe the demographics, indications, and outcomes of non-bariatric patients undergoing RYGB as an anti-reflux procedure
- Guide practicioners in the discussion of non-bariatric patients who may benefit from early anti-reflux RYGB, both in failed fundoplications and in primary patients

METHODS

- Retrospective 5-year, single-institution review of patients with severe GERD, with BMI <35, or BMI>35 but no comorbid conditions qualifying for bariatric RYGB
- Excluded: patients receiving RYGB for bariatric indication with comorbid GERD, patients lost to follow up
- Preoperative motility, pH studies ordered on case-by-case basis. Preoperative and post-operative GI Quality of Life (GIQLI) surveys compared with paired *t*-test.
- Outcomes: GIQLI at 1 month, 6 months and 1 year, PPI dependence, post-operative pH, motility, and impedance where applicable.
- All RYGB performed in antecolic, antegastric configuration. BP limb 50-60 cm; Roux limb 100-150 cm.

RESULTS

Indications

- **2** patients with severe GERD, esophageal dysmotility, no prior fundoplication
- **4** patients with severe GERD, 1 prior fundoplication
- **3** patients with severe GERD, >1 prior fundoplication
- **All** on maximum PPI
- 4 of 9 with DM2, 7 of 9 female

Subjective/Objective Heartburn Metrics

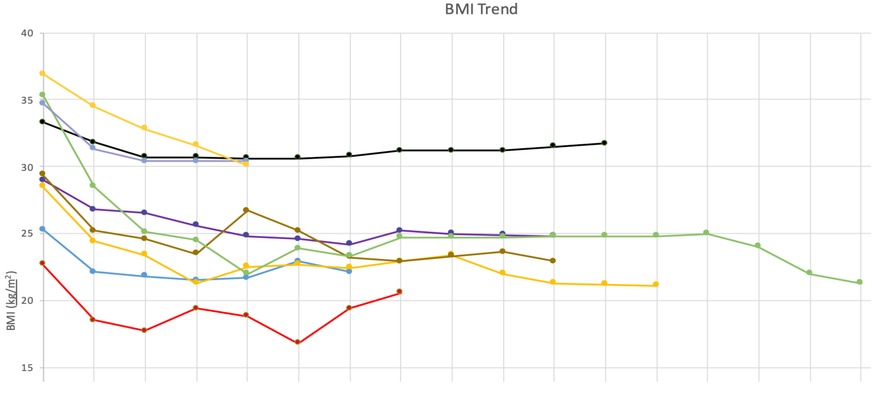
- Mean GIQLI pre-op: 95 (of maximum 150); mean change at 6 months: +33 [95% CI 19-47].
- Significant improvements in regurgitation-specific and heartburn-specific questions
- 6 of 9 discontinued BID PPI; 2 report occasional use, 1 reports QD use
- DeMeester trends in patients included 0.3 from 22.5; 3 from 50.8

Complications

- 1/9 marginal ulcer
- 1/9 internal hernia
- 1/9 uncontrolled weight loss (BMI nadir of 17.7 from 23, managed with nutritionist and now 20.6)

Secondary Benefits

- Post-op A_1C: [5.9-6.5] from [6.7-11]
- Mean preop BMI: 30.4 kg/m^2
- mean change of -4.9 kg/m^2 [95% CI 2.9-7.6]



DISCUSSION

- Unique patient population: non-bariatric patients receiving RYGB for refractory reflux
- Abnormal motility, acid- and non-acid reflux, Barrett's esophagus all experienced subjectiveand objective improvements in reflux
- Secondary benefits: four of four diabetic patients came off medications. 6 of 9 patients reached BMI 20-25 within 1 year; no instances of weight regain
- Complications may be more severe than in patients receiving fundoplication

CONCLUSION

- In patients with severe reflux, RYGB may provide complete or partial symptomatic relief. Patients typically experience a reduction in reflux, improvement in diabetes, and are usually able to achieve and maintain a healthy target weight.
- Complications persist; further study is needed to characterize the outcomes of *de novo* or early RYGB versus fundoplication, especially in cases of repeat fundoplication.

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