

Preliminary Data on a Single Center Experience of Three Years of Roux-En-Y Gastric Bypass in Patients with Gastroesophageal Reflux Disease

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I have the following potential conflict(s) of interest to report:

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Gastroesophageal Reflux Disease (GERD) & Obesity

Worldwide prevalence at ~20%

Risk factors: age, **obesity**, tobacco, non-steroidal anti-inflammatory drugs, genetic factors

→ altered lower oesophageal sphincter (LES) function, decreased LES pressure, increased intra-abdominal pressure, higher presence of hiatal hernia

- Prevalence of GERD up to ~70% with obesity (Suter M. 2020)
- 2.5 times higher risk of developing reflux and erosive gastritis (El-Serag H. 2008)

→ Laparoscopic Roux-en-Y gastric bypass (LRYGB)

- Weight loss
- Reduction of intra-abdominal pressure
- Prevention of bile reflux

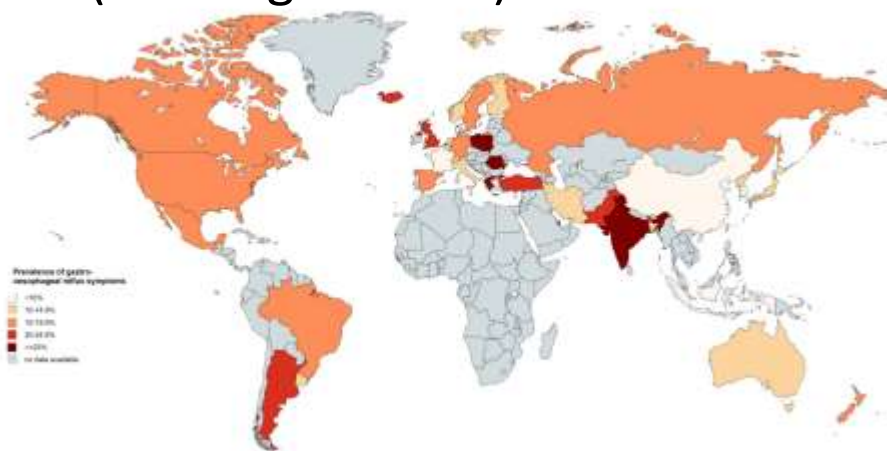


Figure 1. Prevalence of gastro-oesophageal reflux symptoms worldwide.

Eusebi LH et al. Gut 2018;67:430-440.

OBJECTIVE & METHODS

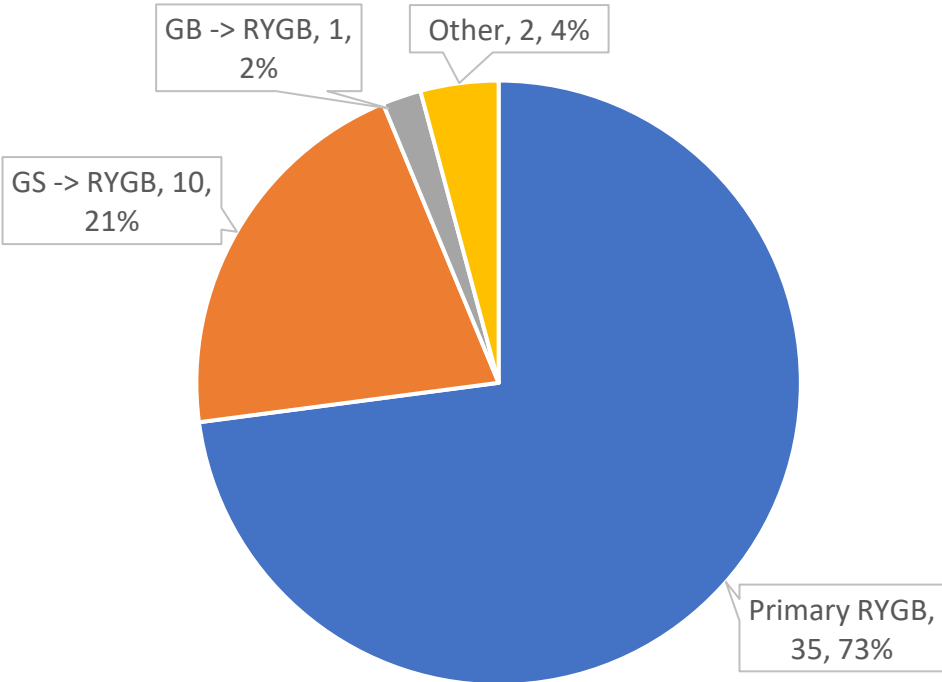
Assessment of short-term outcomes and postoperative complications for patients with GERD undergoing LRYGB as a primary vs. secondary procedure.

- single centre retrospective analysis
- Inclusion criteria: patients with GERD and BMI 35-40 or previous bariatric procedure undergoing LRYGB
- Between March 2019 and March 2022
- Primary endpoint: 30-day postoperative complications
- Basic demographics, BMI, medical history, gastroscopic evaluation, reflux scores



RESULTS

TYPES of SURGERY



30D COMPLICATIONS

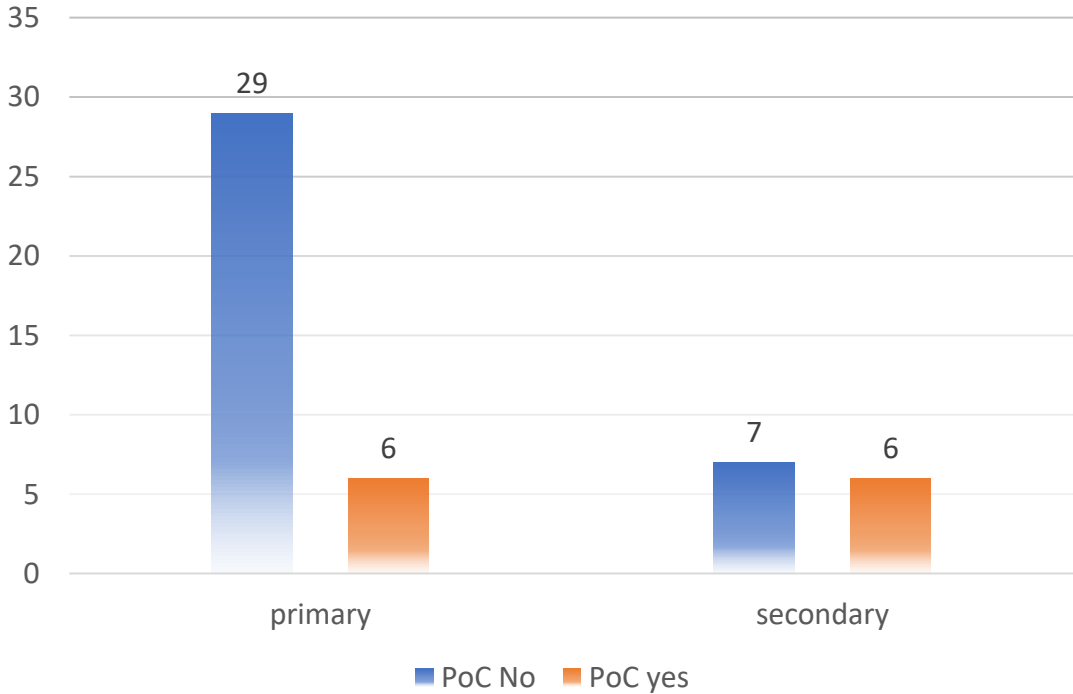



Table 1. Baseline characteristics.

	Study cohort	Primary RYGB	Secondary RYGB	P value
	n = 48	n = 35	n = 13	
Female sex – n (%)	43 (89.6)	30 (85.7)	13 (100)	0.999
Age at procedure (years) – mean (SD)	44.8 (9.9)	45.5 (8.7)	42.9 (12.9)	0.43
BMI (kg/m ²) – mean (SD)	36.2 (4.2)	37.7 (1.8)	32.1 (5.8)	0.004
Weight (kg) – mean (SD)	98.8 (14.8)	104.1 (10.4)	84.5 (15.8)	0.003
Length of stay (days) – mean (SD)	4.0 (1.5)	3.9 (1.3)	4.5 (1.9)	0.258
Operation time (min) – mean (SD)	70.6 (16.1)	64.7 (13.6)	86.38 (10.7)	0.01
Hypertension – n (%)	11 (22.9)	10 (28.6)	1 (7.7)	0.156
Diabetes – n (%)	7 (14.6)	5 (14.3)	2 (15.4)	0.924
OSAS – n (%)	6 (12.5)	5 (14.3)	1 (7.7)	0.546
Steatosis – n (%)	12 (25%)	10 (28.6)	2 (15.4)	0.356
Hiatal hernia – n (%)	27 (56.3)	22 (62.9)	5 (38.5)	0.136
DeMeester-Score – mean (SD)	22.71 (5.71)	23.4 (16.8)	45.6 (36.2)	0.087
Upper GI endoscopy – mean (SD)	48 (100)	35 (100)	13 (100)	
Oesophageal manometry - n (%)	30 (63)	18 (51.4)	18 (51.4)	
Impedance-pH monitoring – n (%)	30 (63)	18 (51.4)	12 (92.3)	
Complication rate – n (%)	12 (25.0)	6 (17.1)	6 (46.2)	0.034

Table 1. Complications and management.

	PoC cohort n = 12	Primary RYGB PoC n = 6	Secondary RYGB PoC n = 6
Types of complications – n (%)			
- GJ anastomotic stenosis	4 (33.3)	3 (50.0)	1 (16.7)
- JJ anastomotic stenosis	2 (16.7)	1 (16.7)	1 (16.7)
- intraluminal bleeding	2 (16.7)	1 (16.7)	1 (16.7)
- perforation in alimentary limb	1 (8.3)	–	1 (16.7)
- incarcerated trocar site hernia	1 (8.3)	–	–
- regurgitation	1 (8.3)	1 (16.7)	1 (16.7)
- anastomotic ulcer	1 (8.3)	–	1 (16.7)
Clavien-Dindo classification – n (%)			
- I	1 (8.3)	1 (16.7)	–
- II	2 (16.7)	1 (16.7)	1 (16.7)
- IIIa	4 (33.3)	3 (50.0)	1 (16.7)
- IIIb	5 (41.7)	1 (16.7)	4 (66.7)
Complication management – n (%)			
- conservative	2 (16.7)	2 (33.3)	–
- blood transfusion	2 (16.7)	1 (16.7)	1 (16.7)
- endoscopic balloon dilation	3 (25.0)	2 (33.3)	1 (16.7)
- re-operation	5 (41.7)	1 (16.7)	4 (66.7)



35 primary (73%) vs. 13 secondary (27%) LRYGB

pH impedance performed in 30 patients (63%): mean DeMeester-Score 22.71 ± 5.71

Preoperative gastroscopy performed in all patients: hiatal hernia in 56%

Overall complication rate: 25% (n=12), revisional surgery: 10% (n=5)

→ JJ anastomotic stenosis (n=2), ILB (n=1), perforation alimentary limb (n=1), incarcerated trocar site hernia (n=1)

Complication rate & operation time significantly higher in secondary RYGB (p=0.034; p=0.10)

No mortalities

CONCLUSION

- LRYGB: safe procedure for patients with obesity and GERD
- Previous bariatric interventions can lead to an increased rate of complications and subsequent interventions
- Importance of routine upper gastrointestinal endoscopic assessment prior to bariatric procedures, in order to choose the best procedure in each individual, thus decreasing the risk of developing late complications such as GERD
- Further patient follow-up will be necessary to assess long-term reflux resolution rates

