



Why Laparoscopic Sleeve Gastrectomy can go so wrong



Philomena Hutter
Department of Surgery
Hospital Barmherzige Brüder Graz Austria
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L-Sleeve Gastrectomy



- most performed bariatric procedure worldwide (up to 60%)
 - lower overall complication rates
 - lower risk-adjusted 30-day morbidity compared to BP
 - Austria BB GRAZ SG minority
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- *Bariatric Surgery Worldwide: Baseline Demographic Description and One-Year Outcomes from the Fourth IFSO Global Registry Report 2018* Welbourn R, Hollyman M *Obesity Surgery* 2018/2019
 - *ASMBS Metabolic Bariatric Surgery Fact Sheet 2021*
 - *Laparoscopic Sleeve Gastrectomy Is Associated with Lower 30-Day Morbidity Versus Laparoscopic Gastric Bypass: an Analysis of the American College of Surgeons NSQIP* Guerrier *Obesity Surgery* 2018
 - *The Comparative Effectiveness of Sleeve Gastrectomy, Gastric Bypass, and Adjustable Gastric Banding Procedures for the Treatment of Morbid Obesity* Carlin A *Annals of Surgery* 2013

Simple and straightforward technique



- Rate of revision 2.5 to 33.0% after LSG
- Persistent Reflux up to 84%, De novo GERD 21%

Mid-longterm Revisional Surgery After Sleeve Gastrectomy: a Systematic Review and Meta-analysis Guan Obesity Surg 2019

Revisional Surgeries of Laparoscopic Sleeve Gastrectomy, Diabetes, Metabolic Syndrome and Obesity: Siyuan Targets and Therapy 2023

Laparoscopic Roux-en-Y gastric bypass versus laparoscopic sleeve gastrectomy: 5-year outcomes of merged data from two randomized clinical trials (SLEEVEPASS and SM-BOSS) BJS 202

Gastric stenosis after laparoscopic sleeve gastrectomy: diagnosis and management. Rebibo, Obesity Surg 2016

The Comparative Effectiveness of Sleeve Gastrectomy, Gastric Bypass, and Adjustable Gastric Banding Procedures for the Treatment of Morbid Obesity Carlin Annals of Surgery 2013

Guidelines in periop diagnostics and technical aspects?



Key steps for sleeve gastrectomy

Detaching posterior attachments stomach

Alignment of gastric bougie

Placing and firing first stapler

Firing stapler cephal. dir. alongside bougie

Changing stapler cartridge depending on tissue thickness

Lateral traction to avoid leaving excessive posterior stomach tissue

Dissecting angle of His ventral side

Final stapling sleeve

Hemostasis

Expert Consensus

92.5% orogastric tube of 36–40 Fr

90.7% stay at least 1 cm away from the angle of His

81.1% screening endoscopy every 5 years after surgery to screen for BE

*A Delphi Consensus of the Crucial Steps in Gastric Bypass and Sleeve Gastrectomy Procedures in the Netherlands
Obesity Surg 2018*

The first modified Delphi Consensus Statement on Sleeve Gastrectomy and Other Interventional Techniques Surg Endosc 2021

Fifth International Consensus Conference: Current Status of Sleeve Gastrectomy Gagner Surg Obes rel Dis 2016

Is preoperative pH and manometry study necessary?



- Patients with gastroesophageal reflux disease should have pH and manometry study pre–laparoscopic sleeve gastrectomy
32.8% versus 50.0%; $P = .033$
- Increased IGP in 77%
- Increased reflux episodes in 52% after LSG

High-resolution Impedance Manometry after Sleeve Gastrectomy: Increased Intra-gastric Pressure and Reflux are Frequent Events, Mion F, Obesity Surgery 2016

Is Preoperative Manometry in Restrictive Bariatric Procedures Necessary? Weiss H, Klaus A, Obesity Surgery 2008

Outcome of LSG by means of esoph manometry and pHmetry before and after LSG Bariatric surgery 2020

Data Hospital BBGraz Austria 2018-2023



1369 bariatric procedures (1271 primary/98 revisions)

SG (4.5% n=57)

BP (95.5% n =1214)

Indication for SG: coexisting comorbidities 37%
 two- step 42% (av. BMI 48.4kg/m²)
 others: 21%

Data Hospital BBGraz Austria 2018-2023



Revisional surgery after LSG 7.15% (n=4)

for weight regain n=1

for reflux disease n=2

for leak n=1 (mortality n=1)

for bleeding n=1 (endoscopic)

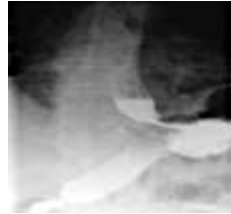
Case report

Multiple revisional surgery after LSG

48y male BMI 53kg/m2 ph/manometry study/gastrografin study



LSG 08/18



postop



Leak prox stapleline
Angular incisure stenosis



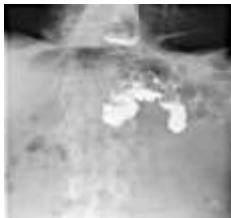
SEMS



Ulceration after stent



OAGB 12/18



ulceration gastrojejunostomy
bile reflux



RYGB 06/19



Pouchslip



HIATOPLASTY 10/20





Follow the expert consensus

Teamstandard



Philomena Hutter
Department of Surgery
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