

Introduction

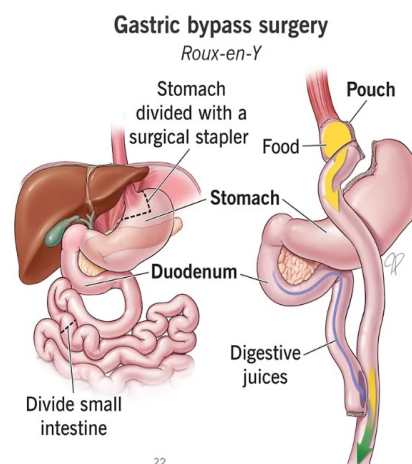
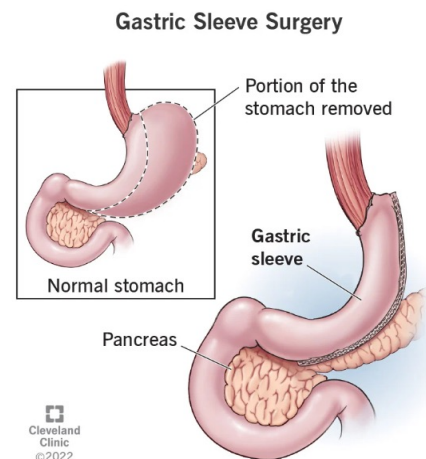
- Bariatric/metabolic surgery → most common elective general surgical procedure performed in the US (~205,000 operations in 2018) with ~ 95% sleeve gastrectomy (SG) or Roux-en-Y gastric bypass (RYGB).
- 90-day mortality rate: ~0.1%–0.3% and 90-day overall complication rate: ~7%–10%.
- The principal method of diagnosing and treating many early complications is endoscopy.

Considerations Prior to Endoscopic Management

- Treat early (<90 days) major postoperative complications → multidisciplinary approach (IR and surgery)
- Need comprehensive knowledge of the indications, contraindications, risks, benefits, and outcomes of each of the endoscopic treatment techniques and knowledge of the best approach (if endoscopic vs surgical).
- Need expertise in interventional endoscopy techniques i.e. use of concomitant fluoroscopy, stent deployment and retrieval, managing stenosis, and managing percutaneous drains.
- Screen for dietary intolerances & comorbid medical and psychological conditions.

Immediate Postoperative Period

- Endoscopic assessment: insufflation with CO₂ recommended → Minimize pressure along fresh staple lines.
- Acutely (hours to days) → postoperative edema or a hematoma at the anastomosis.
- Upper GI bleed → DDX: Marginal ulcer in RYGB
- Through the scope clips (TTS) clips > ablative methods to minimize the risk of consequent leak at the site.
 - If TTS clips fail to achieve hemostasis → hemostatic powders or over the scope clips (OTSC).
 - If massive bleeding → use overtube to allow to reduce clot burden.
- If a true obstruction is found → Consider self-expandable metallic stent (SEMS) rather than TTS balloon dilation.
 - If at the level of incisura angularis (IS) or site of prior laparoscopic adjustable gastric band → covered SEMS secured with endoscopic suturing OTSC.
 - If at GJ anastomosis in RYGB → lumen-apposing metal stent (LAMS) performed.
 - Securing the stent → the distal end of the stent may reside distal to the pylorus or GJ anastomosis.
 - Large-caliber stents (15-20mm) are safe to use and will not cause dehiscence of fresh staple lines.



AGA Clinical Practice Update on Evaluation and Management of Early Complications After Bariatric/Metabolic Surgery: Expert Review

By Preeyanka Sundar, MD, MPH



Functional Stenosis Precipitating and Propagating Leaks

- Downstream stenosis → level of the IS or proximal stomach (in a patient with SG with prior laparoscopic adjustable band).
- Dilations (Q2-4 wks) side by side with the endoscope with pneumatic balloons (8-10cm long, range from 30-40mm in diameter; dilation should rarely exceed 35mm; fluoroscopic assistance recommended).
 - Can be performed as early as 2 wks after surgery.
 - Balloon inflated to 20psi for 1-3 minutes, reassess for tear.
 - If the tear involves muscularis propria or beyond → endoscopic suturing
- **Consider SEMS** ~ 60mm long across the stenosis and secured in position for 2 months → improves pressure and flow dynamics as opposed to cover the leak.

Staple-Line Leaks

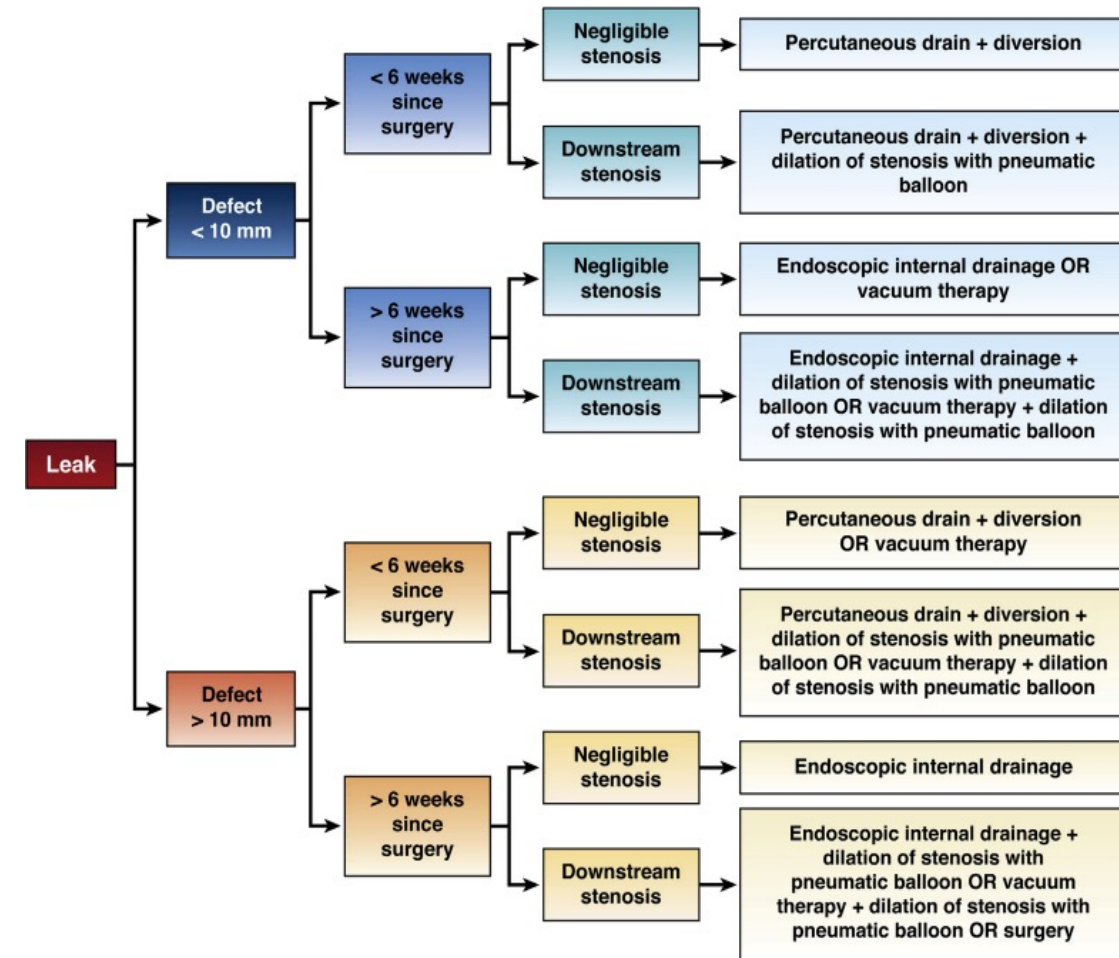
Mechanism:

1. Poor integrity of tissue surrounding the leak (ischemia/inflammation).
2. Difficulty obtaining an endoscopic view of the leak for optimal repair.
3. Failure to address high intraluminal pressures caused by downstream gastric stenosis or anastomotic stricture.

Management (see Figure):

- Diversion therapy using SEMS
- Internal drainage: Double pigtail stents/s through the leak, septotomy, endoscopic vacuum therapy/necrosectomy Q2 weeks until cavity is cleaned.

Endoscopic Management of Leaks Following Bariatric Surgeries



If leak has not closed after reasonable endoscopic attempts, then surgical revision is required.