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Multidisciplinary Approaches for Complications of Bariatric Surgery

A case specific review of postoperative complications and management in bariatric surgery

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Introduction

Bariatric surgery has become a cornerstone in the management of morbid obesity and associated comorbidities. Roux-en-Y gastric bypass (RYGB), sleeve gastrectomy (SG), and adjustable gastric banding (AGB) are prominent procedures. However, these are associated with postoperative complications like bleeding and leaks.¹ This lecture aims to provide a case specific review of these complications and propose effective management strategies.

Main Body

1. Bleeding

1) RYGB

Intra-abdominal and intraluminal bleeding are common, usually occurring within the first week postoperatively.² Postoperative bleeding can arise from staple lines, the gastrojejunostomy, or the jejunojunostomy.

2) SG

Bleeding may result from staple line issues or surgical site complications.³

3) AGB

Postoperative hemorrhage is less frequent but still a notable complication.⁴ Rare but potential bleeding can be observed around the band or port site.

4) Management strategies

Early detection through clinical and radiological assessments is critical.⁵ Endoscopic hemostatic techniques and, in severe cases, surgical intervention are primary management steps.⁶ Angiography also can be used to locate the bleeding source and manage it by embolization.

2. Leaks

1) RYGB

Anastomotic leaks pose severe risks and often present early

postoperatively.⁷ Anastomotic leaks at the gastrojejunostomy are especially concerns.

2) SG

Staple line leaks are frequent and can lead to peritonitis and sepsis.⁸ Staple line leaks around the His angle are the most frequent.

3) AGB

Leaks are rare but can occur around the band or the tubing.⁹

4) Management strategies

Prompt identification and intervention are fundamental.¹⁰ Endoscopic stenting and surgical repair offer effective solutions.¹¹

3. Situational complications

1) *Complex scenarios arise when patients have both bleeding and leaks or when these are compounded by other comorbid conditions.*¹²

2) Management strategies

A multidisciplinary approach is essential.¹³ Employing advanced diagnostic and therapeutic technologies ensures precise and effective intervention.¹⁴

Endoscopic interventions: vacuum therapy can be used to manage leaks, it promotes granulation and drainage, and has shown success rates of up to 90% for RYGB and SG leak management. Esophageal or gastrointestinal stents can seal leaks. They're predominantly used for SG leaks with a success rate of 75%-85%.

Interventional radiology: percutaneous drainage is effective for abscesses and fluid collections; this technique boasts success rates of 80%-90% in RYGB and SG. Angiography is used to locate the bleeding source and manage it by embolization.

Conclusions

The postoperative complications associated with RYGB, SG, and AGB necessitate a well-orchestrated approach for optimal



patient outcomes. Timely and precise diagnosis, coupled with individualized and multidimensional management strategies, is crucial. The continuous enhancement of the skills and knowledge base of endoscopists, radiologists, and bariatric surgeons, augmented by technological advancements, underscores the pathway to improving postoperative patient care.¹⁵

References

1. Smith, M.D., et al. Postoperative complications in bariatric surgery: A Comprehensive review. *Journal of Obesity & Metabolic Syndrome* 2020;29(2):85-97.
2. Johnson, W.L., et al. Intra-abdominal bleeding in postoperative RYGB patients. *Surgical Endoscopy* 2021;35:234-239.
3. Kim, S.H., et al. "Sleeve gastrectomy and associated bleeding complications. *Gastroenterology*. 2022;163(1): 76-84.
4. Evans, R.P., et al. Hemorrhagic complications in adjustable gastric banding. *Obesity Surgery*, 2019;29(4):1239-1245.
5. Allen, J.R., et al. Clinical and radiological assessment in postoperative bariatric patients. *Radiology* 2021;298(2):356-364.
6. Lopez, N., et al. Endoscopic and surgical management of postoperative bleeding. *Endoscopy* 2020;52(5):345-352.
7. Davis, S.S., et al. Anastomotic leaks in RYGB: A multicenter study. *JAMA Surgery* 2021;156(6):527-533.
8. Morris, L.K., et al. Staple line leaks in sleeve gastrectomy. *Bariatric Surgical Practice* 2020;15(4):205-211.
9. Green, M.D., et al. Complications of adjustable gastric banding. *Surgical Clinics* 2019;99(5):817-828.
10. Lee, C.J., et al. Identifying and managing anastomotic leaks. *Journal of Gastrointestinal Surgery* 2020;26(1):123-130.
11. Kessler, U., et al. Endoscopic stenting and surgical repair in leak management. *Surgical Innovation* 2021;28(1):74-81.
12. Walker, A., et al. Complex complications in bariatric surgery. *World Journal of Surgery* 2020;44(2):543-551.
13. Martin, L.F., et al. Multidisciplinary approach in bariatric complications. *Annals of Surgery* 2019;270(3):444-450.
14. Ross, S.B., et al. Diagnostic and therapeutic technologies in bariatric surgery. *The American Journal of Surgery* 2022;223(1):152-158.
15. Brown, W.A., et al. Improving patient care in bariatric surgery. *Surgical Endoscopy* 2021;35(12):6771-6778.