Sleeve Gastrectomy Leak: Successful Laparoscopic/Endoscopic Management

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Case Presentation

Introduction

- Sleeve gastrectomy is the most common metabolic bariatric surgery performed worldwide.
- While metabolic bariatric surgery has a favorable safety profile and staple line leak rates are low, they can be technically challenging to treat.
- We present the case of a sleeve gastrectomy leak that was successfully managed with endoscopic closure after transabdominal drainage, laparoscopic washout, feeding jejunostomy, endoscopic internal drainage, and botox pyloroplasty.

History of Present Illness

- 34-year-old female with a BMI of 32.0kg/m2 presented to an outside hospital with abdominal pain after laparoscopic sleeve gastrectomy in Peru two weeks prior.
- Index operation was complicated by bleeding and return to the operating room for clot evacuation and drain placement, which was eventually removed.
- Imaging was significant for a gas containing fluid collection, suspicious for leak. She had a transabdominal drain placed, then was transferred to our bariatric center for further management.



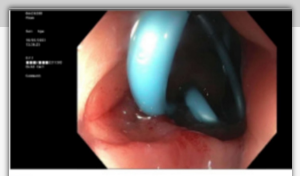
Hospital and Outpatient Course

Surgical / Endoscopic Management

- She was admitted and underwent laparoscopy and endoscopy, which confirmed two areas of proximal gastric perforation and an intra-abdominal walled off collection lateral to the sleeved stomach.
- Patient underwent feeding jejunostomy, endoscopic trans-gastric pigtail drainage x 3 and botox pyloroplasty.



19 Gastric Sleeve, proximal and distal leak



21 Gastric Sleeve, 3 pigtail drains (2 in distal, 1 in proximal)

Medical Management

- Cultures from her abdominal drain grew multidrug resistant Enterobacter, Klebsiella, and Staphylococcus.
- She was started on intravenous antibiotics and tube feeds.
  - Patient was discharged home on hospital day ten.

Outpatient Management

- Later that month, she was able to tolerate twelve ounces of oral intake with less than one ounce leaking out of the transabdominal drain.
- She underwent upper GI that revealed a persistent leak.
- Four weeks later, after drain output continued to decline, she underwent repeat endoscopy and removal of two (of three) internal pigtail catheters and her transabdominal drain.

Conclusion

Final Management

- Eight weeks later, she underwent another endoscopy, internal pigtail drain removal and endoscopic suture closure of the remaining defect.
- She was followed for four months, completed her antibiotics, and had the jejunostomy tube removed.
- Patient was able to tolerate fluid and protein goals by mouth and remained at a BMI of 25.9kg/m2.



11 Post endoscopic suturing

Discussion

- For patients with gastric sleeve staple line leaks, a high index of suspicion, prompt detection, and early intervention can help decrease morbidity and mortality.
- It is vital to obtain source control of any intra-abdominal infection and maintain nutrition to promote wound healing.
- Definitive surgical planning should be done by a bariatric surgeon after the patient is stabilized and the leak is controlled.
- Endoscopic defect closure can be considered for stable patients with viable tissue approximation.

References

Altieri MS, Rogers A, Afaneh C, et al. Bariatric emergencies for the general surgeon. Surg Obes Relat Dis. 2023;19(3):421-433. doi:10.1016/j.soard.2023.02.007