Gastric Remnant Outlet Obstruction: Will it Become a GROO-ing Problem?

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Introduction

Gastric outlet obstruction can be caused by several etiologies—including peptic ulcer disease, caustic ingestion, inflammatory bowel disease, or even malignancy[1]. Within the field of bariatric surgery, gastric outlet obstruction was often a complication from vertical gastric banding[2]. However, there are very few reports of gastric outlet obstruction due to mechanical obstruction from Roux-en-Y gastric bypass. Here, we present three unique cases of gastric remnant outlet obstruction (GROO) in patients who were over ten years post operative. The approach to management was either endoscopic, radiological, surgical, or a combination. Patients reported symptom improvement within the first few follow up visits after undergoing intervention. Even though the presumed incidence of GROO is low, there may be more cases given the incidence of roux en- y gastric bypass rose in the mid 1990s[3]. Thus, there will become a need for concise management of GROO

Case 1

The first patient is a 53-year-old African American female with past medical history of laparoscopic gastric bypass, hx of left polycystic kidney disease and subsequent development of ESRD s/p deceased donor kidney transplant and left native nephrectomy, who presented to the ED with acute abdominal pain, nausea, and vomiting. Patient's CT scan demonstrated a dilated stomach remnant with right polycystic kidney slightly compressing the duodenum. (Figure 1).

Case 1 (continued)

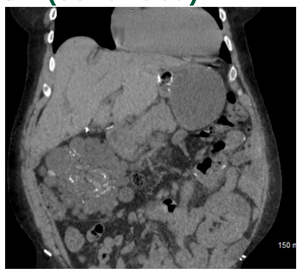


Figure 1: Patient with polycystic kidney disease causing gastric outlet obstruction.

Patient was taken to the operating room for a native right nephrectomy as the pain was thought to be due to the compression of the duodenum. Intraoperatively, patient was found to have a hypertrophic pylorus, which was patent. The patient did well post operatively and was sent home POD3 in stable condition.

Case 2

This patient is a 64-year-old African American female who had an open gastric bypass in 1991 and had successful weight loss; however, a few years afterwards, the patient had worsening left sided pain. She was evaluated by her gastroenterologist and was found to have a dilated gastric remnant without obstruction of her biliopancreatic limb, likely from a hypertrophic pylorus. . Eventually, the patient underwent a PEG tube placement and an attempted endoscopic antegrade dilation.

Case 2 (continued)

While the patient's symptoms were improving from being able to drain, her stenosis was still not resolved. Because of this, she was offered a laparoscopic pyloroplasty. During the operation, it was found that the pylorus was completely obliterated, and the patient underwent remnant gastrectomy. Post-operatively, the patient was discharged home on POD7 and at one month follow up, the patient's symptoms were resolved.

Figure 2: A case of obliterated pylorus causing gastric remnant outlet obstruction. The patient underwent endoscopic intervention initially; however, ultimately required operative intervention.



Case 3

The third patient was a 48-year-old African American female who underwent an open gastric bypass in 1991 and had been doing well until 2020 when she started having chronic upper abdominal pain with nausea and emesis. Because of this, patient had presented to the ED several times and CT scan demonstrated remnant dilation. She was offered endoscopic intervention; however, the patient was found to have several fixed angulations including at the pancreaticobiliary limb, so the enteroscope could not reach the remnant stomach. Subsequently, she underwent IR guided Gastrostomy tube , which helped relieve her symptoms. Unfortunately, the patient was diagnosed with cholangiocarcinoma shortly after and ultimately passed away from complications.

Conclusions

Overall, the approach to management in these cases was either endoscopic, radiological, surgical, or a combination. Patients reported symptom improvement after undergoing intervention, due to their main symptoms being from the mass effect of a severely dilated gastric remnant. Even though the reported incidence of GROO is low, there may be more cases given the increase in performance of Roux en- y gastric bypass since the mid 1990s. Thus, an algorithmic management strategy for diagnosis and treatment of GROO will help to avoid missed diagnoses with the potential for more serious outcomes.

References

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