

CASE REPORT

Imaging

Gastrogastric intussusception in the setting of a small bowel obstruction

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Abstract

Adult patients comprise 5% of all intussusceptions with 2 to 3 cases per million per year. Of those, only 10% of adult intussusceptions involve the stomach. Gastrogastric intussusceptions are most often associated with lead points caused by gastric neoplasms, with a few caused by hiatal hernias or ascites. Unlike children, adult intussusceptions are rarely idiopathic. Herein, a case is presented of a 65-year-old male who was found to have a gastrogastric intussusception in the setting of a small bowel obstruction with no evidence of neoplasm confirmed by biopsy. The patient initially presented to the emergency department with nausea, emesis, and epigastric pain. Given that almost all reported cases have been associated with gastric neoplasms, this case shows an unusual phenomenon of gastrogastric intussusception that has not reported before. Furthermore, our case offers a different etiology of gastrogastric intussusception in adults other than being due to a gastric neoplasm.

KEYWORDS

gastrogastric intussusception, small bowel obstruction

1 | INTRODUCTION

According to Behrooz et al, “the earliest known description of intussusception was made by the Dutch physician Paul Barbette in 1674, with the first successful manual reduction of an intussusception being performed by Sir Jonathan Hutchinson in 1871 in a 2-year-old girl.”¹ Adult patients comprise 5% of all intussusceptions with only 2 to 3 cases per million per year. Of those, only 10% of adult intussusceptions involve the stomach. Gastrogastric intussusception involves the “telescoping” of a distal portion of the stomach into the more proximal portion of the stomach. The typical age range is 65 to 83 years old and typical symptoms include abdominal pain, emesis, and generalized weakness. Unlike in children, adult intussusceptions are rarely idiopathic. They are most often associated with lead points created by gastric neoplasms. From 1950 to 2017, there have been only 9 case reports of

gastrogastric intussusception, with all cases attributed to neoplasms.¹ Recently, there have been a few reported cases caused by ascites or hiatal hernias.^{2,3} Here, we present a case of a 65-year-old male found to have a gastrogastric intussusception in the setting of a small bowel obstruction with no evidence of neoplasm confirmed by biopsy.

2 | CASE REPORT

A 65-year-old male presented to the emergency department (ED) with a chief complaint of epigastric abdominal pain, nausea, and a few episodes of emesis for approximately 2 days. He had a past medical history of a duodenal ulcer found on esophagogastroduodenoscopy (EGD) in 2015, gastroesophageal reflux disease on lansoprazole 30 mg daily, and diabetes mellitus type II. The patient had no surgical history. He smoked a quarter of a pack per day. Vital signs remained stable

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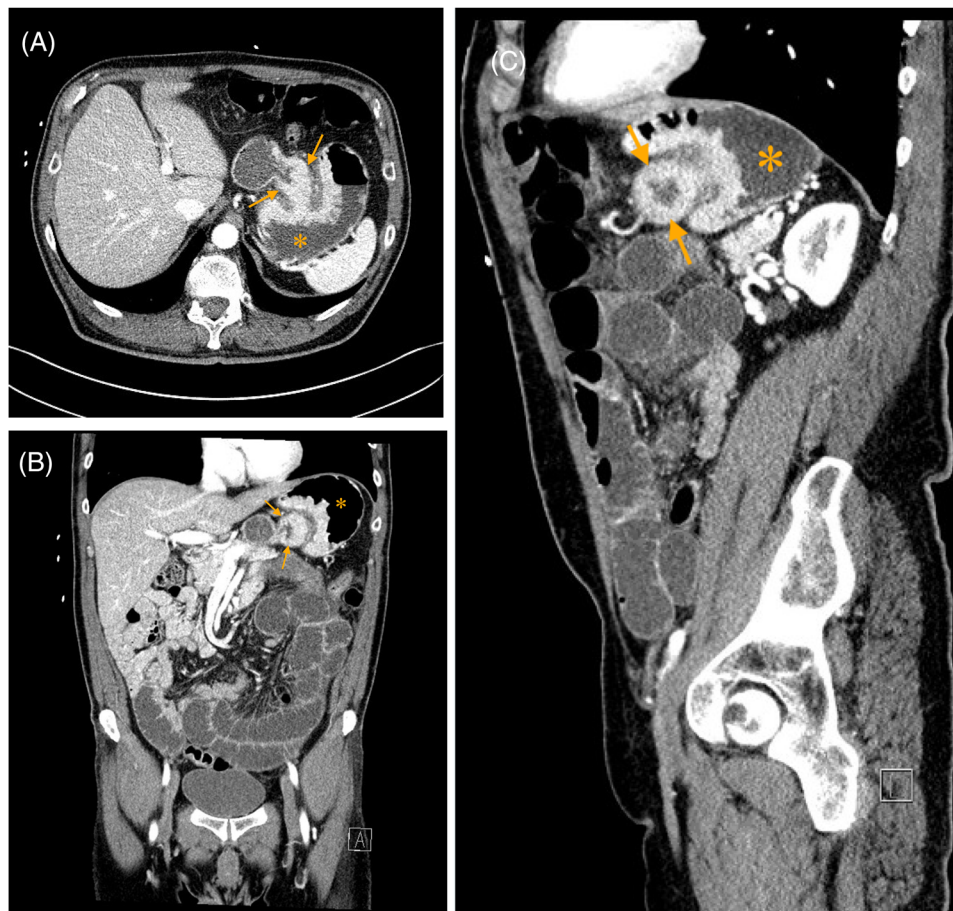


FIGURE 1 1A—Axial post-contrast computed tomography (CT) scan through upper abdomen showing gastric intussusception with distal stomach (arrows) folding antegrade into the proximal stomach (asterisk). 1B—Coronal reconstruction of post-contrast CT scan. Distal stomach (arrows) intussuscepting into proximal stomach (asterisk). 1C—Sagittal reconstruction of post-contrast CT scan. Distal stomach (arrows) intussuscepting into proximal stomach (asterisk)

in the ED. The patient appeared uncomfortable on exam with a distended abdomen and epigastric tenderness to palpation. He was subsequently given morphine 4 mg intravenous (IV), ondansetron 4 mg IV, and a lactated ringer's bolus. Basic laboratory studies were performed including lipase, which were all normal. Computed tomography of the abdomen and pelvis with intravenous contrast showed dilated small bowel with a possible closed-loop obstruction in addition to a distended stomach with a gastrogastic intussusception (Figure 1). General surgery was consulted and the patient was taken to the operating room on the same day for an exploratory laparotomy. Intraoperatively, the patient was found to have omental adhesions causing a closed-loop, small bowel obstruction 10 cm in length and an enlarged stomach with an intussusception upon itself. Lysis of adhesions and gastroplexy were successfully performed. Additionally, an intraoperative EGD was performed to obtain gastric biopsies, which did not show any evidence of any malignancy. The patient was discharged 6 days later with resolution of his symptoms. The patient appeared at his follow-up appointment 3 weeks later healing well, tolerating oral intake, and pain free.

3 | DISCUSSION

In summary, our case describes adult gastrogastic intussusception due to small bowel obstruction rather than gastric neoplasm. Adult intussusception comprises 5% of all intussusceptions, of which 10% (0.5% of all cases) are gastrogastic. Very few reported cases have a benign etiology.¹ Non-malignant ascites have been implicated as an etiology of gastrogastic intussusception in some reports during 2018–2020.^{1,3} In 2019, an 82-year-old patient had a severe gastrogastic intussusception with a gastric volvulus and a hiatal hernia. This led to ischemic necrosis and perforation of the gastric antrum that resulted in death by septic shock.² In 2018, a duodenal intussusception was reported as a complication of biliopancreatic diversion.⁴ Our patient did not have ascites, malignancy confirmed on biopsy, prior abdominal surgeries, volvulus, or hiatal hernia. Our patient was found to have a small bowel obstruction that perhaps contributed to the intussusception. Behrooz et al suggested that gastrogastic intussusceptions could be caused by increased intra-abdominal pressure instead of a “lead point” caused by a gastric malignancy.¹ Our case reinforces this suggested etiology as

our patient's small bowel obstruction most definitely increased intra-abdominal pressure. Regardless of the etiology, gastrogastic intussusceptions are extremely rare in adults and always involve surgical correction.⁵ The possibility of gastric malignancy should always be explored when a patient is found to have a gastrogastic intussusception; however, as shown in our case, it is not the only cause and other etiologies should be considered as well.

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CONFLICT OF INTEREST

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