Jejunogastric intussusception is an event in which the jejunum serves as the intussusceptum, and the stomach is the intussusci-
piens. This rare complication following gastric surgery with jejunal anastomosis has been described extensively in adults: however, there is a paucity of data in the pediatric literature. Three refer-
cences to a single case have been described in which an infant developed a bowel obstruction secondary to jejunogastric intus-
suception with a gastrostomy feeding tube as the lead point [1e3].

In this case report, we present a second case of pediatric jejuno-
gastric intussusception following duodenal bypass for duodenal duplication.

1. Case report

A ten year old male with a past medical history of previous gastrectomy with Billroth II reconstruction for a duodenal duplica-
tion four years prior presented to an outside institution with a two day history of intermittent abdominal pain and bilious emesis. He was transferred to our institution with a diagnosis of bowel obstruction due to constipation based on an abdominal x-ray. Continued emesis and abdominal pain prompted a computed to-
mography scan which revealed the efferent loop of jejunal intussuscepted into the stomach (Figs. 1 and 2-CT scan).

Urgent exploratory laparotomy was performed, and the intussuscepted jejunum in a retrocolic position through the pos-
terior gastric anastomosis was noted (Fig. 3-bowel in stomach). The bowel was manually reduced and noted to have venous congestion that resolved after a short period of observation. The anastomosis was revised to a Roux-en-Y reconstruction, and the jejunal efferent limb was sutured to the transverse colon to pre-
vent recurrence. The patient did well post-operatively and was discharged on post-operative day five tolerating a regular diet. At follow up one month later, he continued to tolerate a regular diet and had normal bowel movements with no evidence of repeat obstruction.

2. Discussion

Jejunogastric intussusception has been well characterized in the adult literature. It occurs most frequently following gastric surgery including gastrojejunostomy, Billroth II gastrectomy, and Roux-en-Y gastrojejunostomy [4]. These occurrences have been categorized into four types: afferent limb, efferent limb, a combination of afferent and efferent, and a rare side-to-side intussusception through a Braun anastomosis [4]. The most common is the efferent limb intussusception, accounting for approximately 75% of the
reported adult cases [4,5]. Multiple etiologies for jejunogastric intussusceptions have been suggested, including increased acid exposure, shortening of the mesentery, short mesocolon, negative pressure in the stomach, a large stoma, jejunal stenosis, or a long efferent loop. Abdominal trauma, scar tissue, parasites, and gastrostomy tubes have been confirmed in previous reports [4].

Two distinct clinical entities of this phenomenon exist. Acute fulminant jejunogastric intussusception, in which an intussuscipiens becomes acutely incarcerated in the stomach, presents with pain, vomiting, hematemesis, a palpable abdominal mass, and occasionally bilious emesis depending on the type of intussusception [4,6]. Numerous imaging modalities can confirm this diagnosis, including CT, ultrasound, and barium studies [7]. The striated filling defect in the stomach on a barium study of the stomach is pathognomonic of jejunogastric intussusception [8]. These cases are surgical emergencies which require prompt reduction and resection of non-viable bowel. In the majority of cases, exploratory laparotomy is required, though there are reports of endoscopic reduction of acute on chronic jejunogastric intussusceptions [9–11]. The appropriate surgical treatment is uncertain due both to a very small number of cases and to the low likelihood of recurrence. Isolated reduction of the intussusception as well as reconstruction of the anastomosis to a Roux-en-Y gastrojejunostomy, a Billroth I, and/or suturing the now reduced bowel to the colon or opposite limb mesentery have all been reported. All of treatment options have a low rate of recurrence with the Roux-En-Y reconstruction reported to have the lowest [4].

Chronic recurring jejunogastric intussusception is a more challenging diagnosis, owing to its similar presentation to intestinal ischemia, dumping syndrome, or post-gastrectomy syndrome. These patients report a history of gastrectomy with vague epigastric discomfort, nausea, and vomiting. Often these symptoms are exacerbated by eating with post-prandial pain lasting 60–90 min. Up to 70% of these patients can develop acute incarceration. Imaging for chronic recurring jejunogastric intussusception is similar to the acute type, though obviously complicated by timing. A unique endoscopic test has been described by Abraham et al. that involved endoscopically directing a jet of water at the jejunogastric anastomosis that resulted in invagination of jejunum into the stomach [9].

3. Conclusion

Jejunogastric intussusception is an uncommon but potentially lethal complication of prior gastric surgery. It often presents as vague complaints of abdominal pain, especially in children who are commonly unable to verbalize specific symptoms. The diagnosis should be considered in any child that has had a gastric-jejunal anastomosis. Prompt imaging and urgent surgery to reduce the intussuscepted bowel, resection of non-viable tissues and revision to a Roux-en-Y gastrojejunostomy, with or without jejunopexy is the most appropriate treatment.

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References


