Royal Australasian College of Surgeons

Giant Jejuno-gastric intussusception

A 61-year-old male presented to the Emergency Department 8 h after sudden onset of severe epigastric pain. The onset of symptoms was post-prandial and colicky in nature. Before arrival, he had one large volume non-bilious vomit. Interestingly this patient had an extensive surgical history as a sequela of Familial Adenomatous Polyposis (FAP). His previous operations included a subtotal colectomy (1981) and pancreatic sparing duodenectomy with gastric antrectomy for dysplastic polyps (2012). A rectal adenocarcinoma was subsequently detected on screening in 2013, and as such he underwent completion proctectomy, ileoanal pouch formation and covering loop ileostomy. The ileostomy underwent reversal in 2016, and his last surveillance endoscopy (gastroscopy & pouchoscopy) occurred in 2018. We suspect he may have undergone a Bilroth I reconstruction at some stage after his subtotal colectomy, but this could not be confirmed. He has no other significant medical history.

Salient examination findings of dehydration with general abdominal tenderness and distension, without peritonism, were noted. A non-incarcerated incisional hernia was appreciable at the site of the former ileostomy. Initial blood gas showed a metabolic alkalosis, and an abdominal X-ray showed a significantly distended stomach. Evaluation with computed tomography (CT) showed a large mass of intussuscepting jejunum telescoping into the stomach, measuring 16 × 7 cm (Fig. 1).

Initial management included appropriate fluid resuscitation, insertion of a nasogastric tube (NGT) and urinary catheter. The Gastroenterology team were consulted for a possible endoscopic reduction but declined to intervene. The NGT temporarily relieved his vomiting; nevertheless, he continued to experience abdominal pain. The decision to expedite his operation was triggered following further large vomits.

A grossly dilated stomach acted as an intussuscipiens for approximately 60 cm of telescoping jejunum (Fig. 2). There was evidence of a side-to-side gastroenterostomy, with the longer efferent limb as the intussusceptum. At no stage did we open the stomach. The intussusceptum showed signs of strangulation, but all bowel was viable (Fig. 3). It was reduced by gentle milking. Multiple small lesions, measuring between 10 and 25 mm, were palpable in the jejunum. We considered that these might have been acting as a lead point. The lesions spread over 30 cm, with no other identifiable mass lesion or clear lead point. In the context of multiple prior resections, we opted not to resect further in favour of staged push enteroscopy.

A four-point jejunopexy to the right side of the anterior abdomen was performed to prevent a recurrence. A transnasal double-lumen jejunal feeding and gastric decompression tube was inserted 40 cm into the jejunum to serve as an adjunct to this.

The postoperative period was uneventful. Outpatient push enteroscopy found several small benign polyps, with no evidence of malignancy. The patient was well and has had no recurrence at 1 year follow up.

Adult intussusceptions are uncommon, with enteric intussusception being the most common. It represents only 5 % of all intussusceptions, with up to 85% of cases associated with a definable lesion as a lead point.[1,2] Jejuno-gastric intussusception is rare (<0.1%) complication following gastrojejunostomy, Billroth II gastrectomy and Roux-en-Y anastomosis.[3]

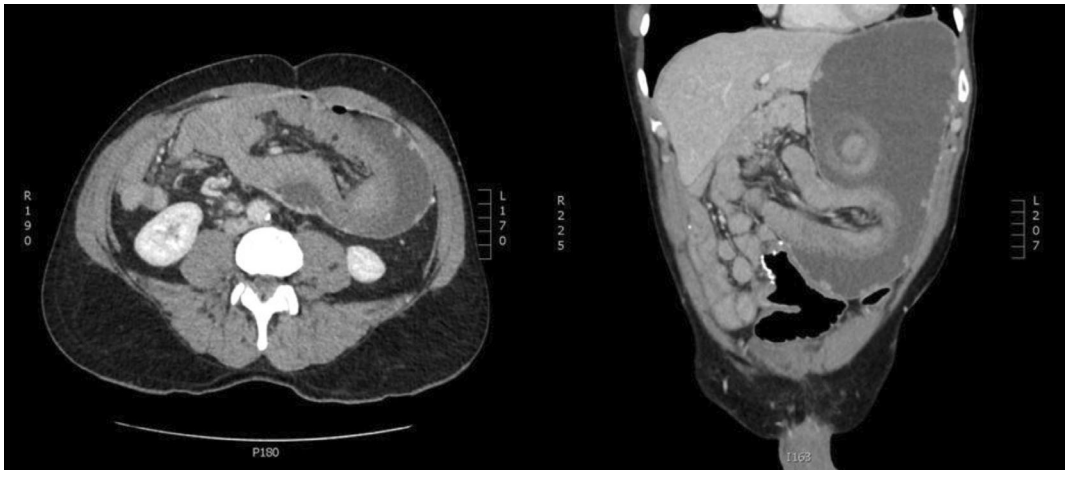

Fig. 1. Axial and coronal CT evidence of intussusception.

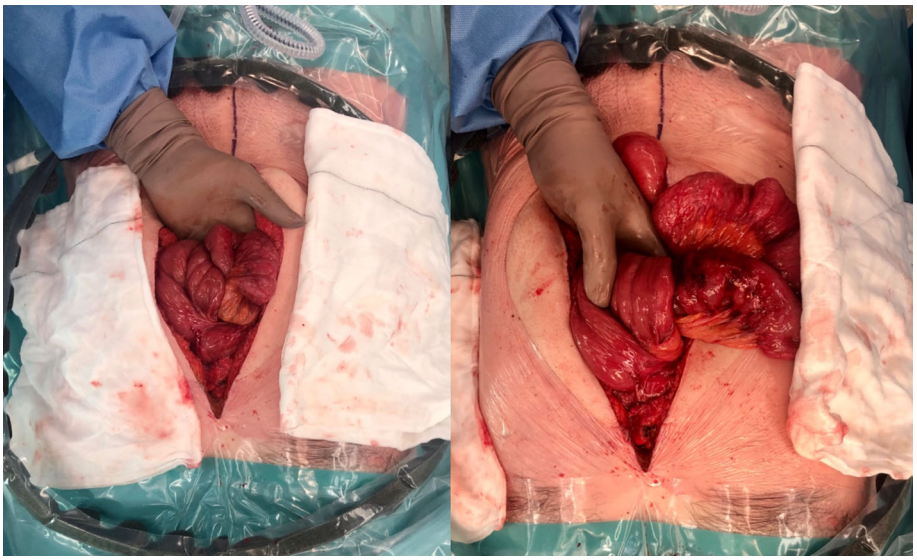

Fig. 2. Jejuno-gastric intussusception.

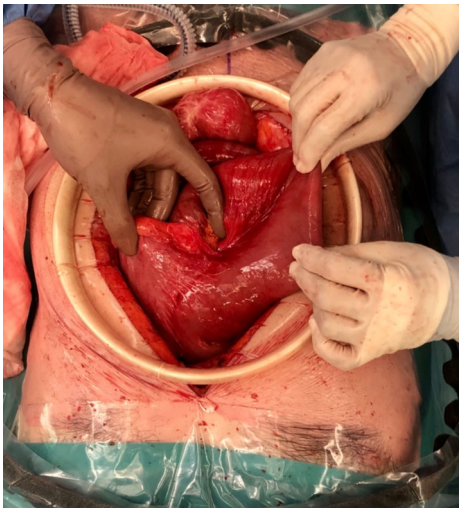

Fig. 3. Viable jejunum.

Surgery remains the mainstay for the management of adult intussusception.[1] We have found no studies discussing the role of enteropexy at index operation for reducing the chance of future intussusception. Despite this, enteropexy/jejunopexy is described in many studies for management of enteric intussusception, primarily in the post-bariatric surgery patient population following Roux-en-Y. The studies are primarily small cases series, owing to the rarity of intussusception. A case series of 34 patients with jejuno-jejuno intussusception describes laparoscopic or open operative management ranging from; 'reduction only', 'reduction and enteropexy', or 'revision of jejunojejunostomy'. It found reoccurrence was likely in patients that underwent 'reduction only'.[4] The recurrence rate following 'reduction only', was as high as 100% in a series of 23 patients.[5] In contrast, recurrence following 'reduction and enteropexy' was 26.5% in a study of 34 patients.[6]

Outcomes of 'surgical reduction with or without enteropexy' or 'resection/revision of jejunostomy',[7] were also investigated, however did not specifically examine the role of enteropexy. The authors favoured laparoscopic 'surgical reduction with or without enteropexy', due to lower rates of complications observed, and shorter length of hospital stay.[7] Only one patient in this series, who had undergone revision, experienced recurrence. Their subsequent management was adhesiolysis and enteropexy of the jejuno-jejuno anastomosis. The technique for enteropexy described in this study involved suturing the common limb to the biliopancreatic limb with 3–0 silk sutures.

Extrapolating from this and considering the morbidity associated with repeated laparotomy and bowel resection, we consider jejunopexy to be a relatively low-risk manoeuvre at the time of index operation that might reduce the risk of jejunum-gastric intussusception.

Author contributions

Damian Wong: Conceptualization, Writing – original draft; **Matthew Jacob:** Methodology; writing – review and editing. **Odette Sproston:** Data curation; writing – review and editing. **Tulsi Menon:** Supervision.

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