

Case Report

Endoscopic Diagnosis of Jejuno-Gastric Intussusception

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Summary

Jejunogastric intussusception is a rare complication of gastric surgery that is potentially life threatening if it is not diagnosed early. This condition is a surgical emergency and is most commonly seen after gastro-jejunostomy. The authors report a case of an elderly female patient who presented with hematemesis and abdominal pain. Endoscopic evaluation revealed prolapsed small bowel into the stomach which was subsequently reduced intra-operatively. She had an uneventful post operative stay. This entity is fatal without surgical intervention. Diagnostic modalities like CT scan and endoscopy are key in the management of this entity.

Keywords: Retrograde jejunogastric intususception, Gastric surgery, Gastro-jejunostomy

Introduction

Retrograde jejuno-gastric intussusception (JGI) is a rare entity that is usually fatal without surgical intervention (1). Few cases have been reported in literature and in these diagnoses had been done by clinical suspicion and barium studies. This condition is most frequently associated with previous gastrointestinal tract surgery (2).

Case report

We report a case of a 60-year-old female patient, who presented at our facility after a referral from a peripheral facility with hematemesis and abdominal pains for 4 days. The initial clinical impression was bleeding peptic ulcer disease. It was noted that she had previous surgery for a perforated duodenal ulcer 15 years prior. An erect abdominal x-ray was normal.

On examination she was hemodynamically stable, with stable vital signs and saturating well on room air. She had a soft, moderately distended abdomen with generalized tenderness and no guarding. She had no palpable mass. She had a midline sub umbilical scar. Her other systems were normal.

Laboratory results revealed an elevated hematocrit and thrombocytosis, with a normal white blood cell (WBC) count at 8400. She had a normal International Normalised Ratio (INR) lab result at 1.16. The patient received initial fluid resuscitation and was prepared for endoscopy.

Endoscopy report: The endoscopic evaluation was performed by Dr Mwachiro- endoscopy fellow with two years experience and Dr Burgert who is the resident gastroenterologist consultant with over 20 years experience. Endoscopic evaluation revealed a normal esophagus, but with the prolapsed of loops of small bowel into the stomach with twisting of loops (Figure 1). A tentative diagnosis of duodenal prolapse was made. She was immediately transferred to the operating room, where an exploratory laparotomy was performed to reduce the prolapsed bowel.

Insert Figure 1 here

Intra-operatively, adhesionalysis was performed and the intussusceptum was identified on palpation and was reduced. It was noted that she had a gastro-jejunostomy from the prior surgery with no resection of stomach. . She had a type II JGI (Figure 1). The patient had an uneventful post-op stay and was discharged home on day 6 after surgery.

Discussion

JGI was described in 1914 by Bozzi in a patient with gastro-jejunostomy and it was later reported by Lundberg in 1922 in a patient with Billroth II resection (2, 5). It is a rare complication after gastro-jejunostomy or Billroth II gastrectomy and has also been described in association with previously placed gastrostomy tubes (4, 13) .The incidence post gastric surgery has been reported as 3 in 2000 cases or 0.0015% (5).

Three anatomic types have been described (6): type I concerns the afferent loop, type II the efferent loop and type III represents a combined form. Type II or retrograde efferent loop intussusception is the most common (80%) with the two other types accounting for 10% each (7). Our case was type II.

There is a wide variation in the lapse time between the gastric operation and the JGI to occur: 6 days to 20 years and 8 days to 19 years in patients with gastro-anastomosis and partial gastrectomy respectively (8). The etiology is poorly understood¹. Several factors have been thought of like hyperacidity, long afferent loop, jejunal spasm with abnormal motility, increased intra-abdominal pressure and retrograde peristalsis (9).

Literature review names retrograde peristalsis as the cause of type II JGI by most authors (1). There are two clinical forms: an acute and a chronic form. The acute form has incarceration and strangulation of the intussuscepted loop and is characterized by acute severe colicky epigastric pain, vomiting and, subsequently, hematemesis. Spontaneous reduction is usual in the chronic type and it is characterized by epigastric tenderness, a palpable abdominal mass and signs of high intestinal obstruction can also be found.

The classic triad is thought of as: sudden onset of epigastric pain, vomiting with or without hematemesis, and a palpable epigastric mass and the patient presented here only had the first two signs. A palpable mass suggests that the intussusception is not likely to reduce spontaneously. The presence of two signs in the diagnosis of JGI more likely did not confirm it completely and did not rule out other differential diagnosis.

X-ray can be occasionally diagnostic (10). However they are not routinely used on their own and are generally considered inconclusive (11). Features of intestinal obstruction can be seen like multiple air fluid levels. In our case, the intussusceptum was still reducible and the patient had presented early. Endoscopic evaluation by someone familiar with this rare entity is certainly diagnostic. Delay in surgery beyond 48 hours is associated with an approximately 50% mortality (12). At operation if the intussuscepted jejunum is reducible and viable, then simple reduction should be performed

Conclusion

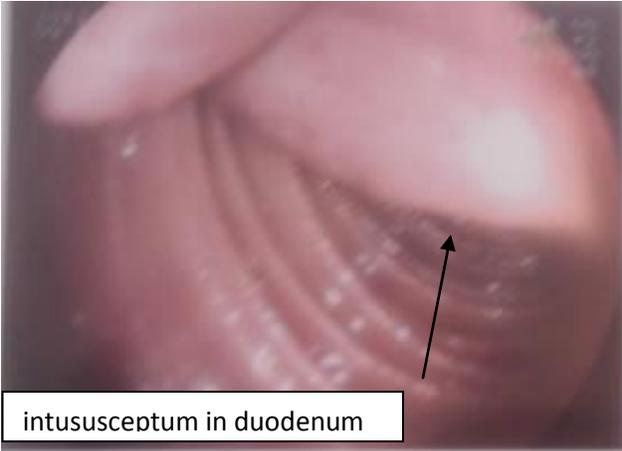
Early endoscopic evaluation is a key factor in making diagnosis of jejuno-gastric intussusception and proceeding to prompt surgical management. A wider differential diagnosis should be entertained in patients with haematemesis, who have had prior gastrointestinal surgery.

References

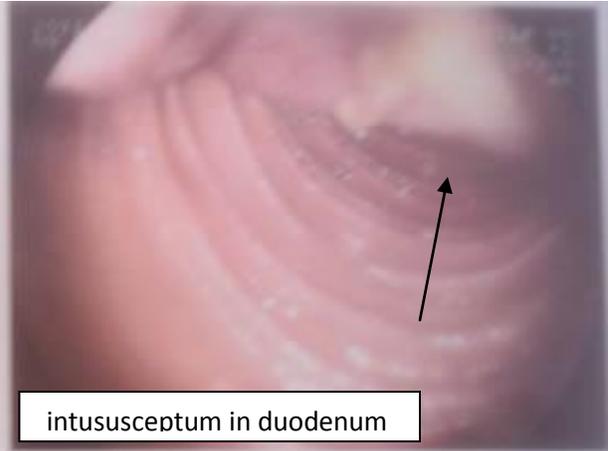
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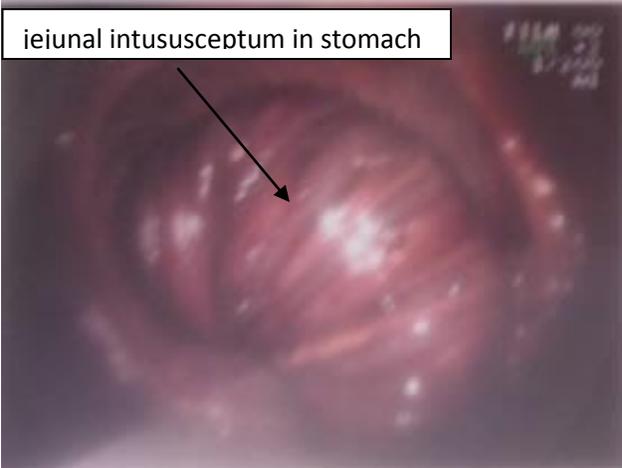
Figure 1 Intraoperative endoscopy pictures



intussusception in duodenum



intussusception in duodenum



ileal intussusception in stomach



gastric retroflex view