A Rare Cause of Haematemesis: Retrograde Jejunogastric Intussusception

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Abstract

Retrograde Jejunogastric intussusception is a well-recognised, rare but potentially fatal, long-term complication of gastro-jejunostomy or Billroth-II reconstruction. Only about 200 cases have been reported in literature to date. Diagnosis of this condition is difficult in most of the cases. To avoid mortality early diagnosis and prompt surgical intervention is mandatory. Since gastrojejunostomies with vagotomy are on a declining trend, it is extremely rare to come across such a complication. We report such a case that presented with haematemesis.

INTRODUCTION

Retrograde jejunogastric intussusception (JGI) is a well-recognised, rare, long-term complication of gastro-jejunostomy or Billroth-II reconstruction.1 It occurs in acute or chronic form, the acute form being fatal without timely surgical intervention. Approximately 200 cases have been reported in literature to date.2 Early diagnosis of this condition and prompt surgical intervention is mandatory; a mortality of 10% and sometimes even as high as of 50% has been reported, if operation has been performed 48 hours later after the onset of severe symptoms.3 We report a 45-year-old patient, who was admitted to the hospital with the diagnosis of upper gastrointestinal (GI) bleeding. Retrograde JGI was diagnosed by upper GI endoscopy.

CASE REPORT

A 45-year-old male patient presented with a history of colicky abdominal pain since 2 days and 3 episodes of haematemesis. The patient had undergone truncal vagotomy and gastro-jejunostomy 10 years ago for chronic duodenal ulcer. On examination, he was not anaemic, Pulse 100/minute and BP: 120/70 mmHg. The respiratory and cardiovascular systems were normal. Abdominal examination revealed a healed supraumbilical midline incisional scar. Visible gastric peristalsis was present. A firm, tender, mobile mass (10x8cm) in the left hyochondrium and epigastric region was palpable. Impaired percussion note over the mass and succussion splash was present. Hyperperistaltic bowel sounds were heard. Per rectal examination was normal. Hb – 11g/dl, PCV – 28%, blood urea, serum creatinine, and serum electrolytes were within normal limits. Liver function tests and coagulation profile revealed no abnormalities. Chest X-ray and plain X-ray abdomen in erect position were normal. Abdominal ultrasonography revealed a multi-layered bowel mass in the left hyochondrium with possibility of internal herniation. Gastroscopy revealed an oedematous and gangrenous bowel mass with prominent dimpling at its tip, along the greater curvature of the stomach. Stomal opening was not visualised. Based on these findings, diagnosis of retrograde JGI was made.

Management

The patient was subjected to emergency laparotomy through the same incisional scar, which revealed a posterior JGI (Fig. 1). A gastrostomy revealed 20cms. intussusceptum (Fig. 2). The efferent loop of jejunum was oedematous and gangrenous. The afferent loop was of adequate length and the pyloric canal admitted 2 fingers. 40 cm long gangrenous efferent loop was resected with disconnection of gastro-jejunostomy and a new gastro-jejunostomy was performed using a Roux-en-Y reconstruction. The gastrostomy was closed in 2 layers. Patient had an uneventful postoperative recovery. Patient is asymptomatic after two years of follow up.

DISCUSSION

Bozzi in 1911 reported the first case of retrograde JGI following gastro-jejunostomy, and later in 1917 by Von...
Steber. Afferent loop is involved in 15% of the cases (type I). The most common type of JGI (75% of cases) is the one in which the efferent loop of jejunum prolapses into the stomach (type II). In the remaining 10% of cases, both afferent as well as efferent loop undergo intussusception (Type III), which usually occurs in the early post-operative period. All the above 3 types can occur following gastro-jejunostomy, but the intussusception of afferent loop into the stomach has been reported after partial gastrectomy (Billroth-II reconstruction). It may occur from 5 to 30 years after the gastro-jejunostomy operation.

The causes of JGI are poorly understood. Various factors have been incriminated such as hyperacidity, long afferent loop, jejunal spasm with abnormal motility, increased intra-abdominal pressure, retrograde peristalsis etc. Retrograde peristalsis, which can occur in normal people prior to gastric surgery, seems to be accepted as the cause type II JGI. If not suspected, the clinical picture can be quite non-specific and the possibility of intussusception may not even be considered. The dominant symptom is pain, occasionally associated with nausea and vomiting. Patients may present with high intestinal obstruction or severe haematemesis from secondary ulceration. A firm mass may be palpable in the epigastrium. A water-soluble upper GI contrast study may reveal a “coiled-spring” appearance within the stomach. Upper GI endoscopic examination is often diagnostic and may visualise the jejunal segments as they migrate in and out of the stomach. When a patient presents with haematemesis and has a mobile upper abdominal mass with visible peristalsis, and bears an upper midline or paramedian scar, one should suspect this complication first.

There are two clinical types in an acute variety. In the 1st type, the patient is suddenly seized with an acute attack of epigastric pain followed by a sensation of severe constriction of abdomen. There will be visible peristalsis and a mass may be palpable in the epigastrium. Here, early operation has proved to be life saving in 90% of the cases. The 2nd variety may closely resemble a bleeding anastomotic ulcer, the dumping syndrome or proximal loop syndrome or obstruction due to adhesions. Vomiting is frequent, being at first bloodstained and then frankly haemorrhagic. Since the medical line of treatment is usually tried first, a delay in surgery occurs causing more morbidity and mortality. However spontaneous reduction is rare.

The chronic variety is characterised by recurrent bouts of epigastric distress, nausea and colicky abdominal pain. Intermittent and sometimes severe vomiting occurs at a remote date after gastro-jejunostomy. Barium meal study is useful and Gastroscopy is a valuable diagnostic tool.

Treatment of JGI consists of: (1) Reduction of the intussusception. (2) Revision of the anastomosis. (3) Anchoring of the efferent limb to parietal peritoneum or suturing together of the efferent and afferent limbs after reduction of intussusception (4) A new gastro-jejunostomy, ideally using a Roux-en-Y reconstruction can be fashioned. (5) Resection and revision of...
anastomosis if the intussusception is gangrenous, provides the correct treatment. Although recurrence after operative reduction is rare, it has been reported by Hamilton D. (1923), Hublin (1951) and Douglas (1954).5

**CONCLUSION**

Retrograde JGI is a rare condition and less than 200 cases have been reported since its first description in 1914. Endoscopy is the diagnostic investigation of choice. Timely surgical intervention prevents morbidity and mortality of JGI. Since gastrojejunostomies with vagotomy are on a declining trend, it is extremely rare to come across such a complication.

**REFERENCES**


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