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Research Paper

Retrograde Jejunogastric Intussusception - A rare Surgical Encounter

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ABSTRACT:
Introduction:
Jejunogastric intussusception occurs in less than 0.1% of gastric resections. Retrograde jejunogastric intussusception is a rare but potentially lethal complication of gastojejunostomy.
Case Report:
We report a case of 54 year old man who developed sudden abdominal pain and haematemesis. He had a history of distal gastrectomy with loop gastojejunostomy for benign duodenal stenosis twelve years back. On evaluation he was diagnosed as a case of retrograde jejunogastric intussusception. This was followed by exploratory laparotomy in which gangrenous invaginated efferent loop was resected and roux-en-Y was reconstructed.
Conclusion:
Jejunogastric intussusception is one of the complications post gastojejunostomy that needs to be considered and managed with surgical intervention.
Keywords: *Gastojejunostomy, Jejunogastric, Intussusception, Retrograde.*

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I. Introduction:

Retrograde jejunogastric intussusception is a rare but potentially lethal complication of gastojejunostomy (GJ). It occurs in less than 0.1% of gastric resection.[1] About 200 cases of jejunogastric intussusception have been reported so far with the first case reported in 1914 by Bozzi in a patient with gastojejunostomy.[2,3] The jejunum complicates the gastojejunostomy by telescoping into the stomach that may lead to incarceration and strangulation of small bowel inside the stomach. Various predisposing factors have been implicated in causing this retrograde intussusception but none have been found to have an established role. The duration after gastojejunostomy also varies and may occur at any time after the surgery. Diagnosis of this extremely rare entity can be challenging where endoscopy and modern radiology tools play the vital role while surgery remains the primary treatment option to prevent mortality and morbidity.
We present our experience of managing one such case after taking proper consent from the patient.

II. Case Report:

A 54 year old man presented with acute, severe upper abdominal pain since 2 days that was associated with multiple episodes of coffee coloured vomiting. Twelve years ago he had undergone distal gastrectomy with vagotomy for peptic ulcer induced duodenal stenosis. On examination, patient was dehydrated, but was haemodynamically stable. His abdomen was distended with guarded and tender epigastrium. The laboratory parameters were within normal limits except the total leukocyte count of 13,000/ųl. In view of haematemesis an emergency endoscopy was advised that showed prolapsed jejunal loops of efferent limb inside the stomach with gangrenous changes. This was followed by contrast enhanced computerised tomography (CECT) abdomen that confirmed the endoscopic findings, and in addition to it showed dilated proximal small bowel loops.

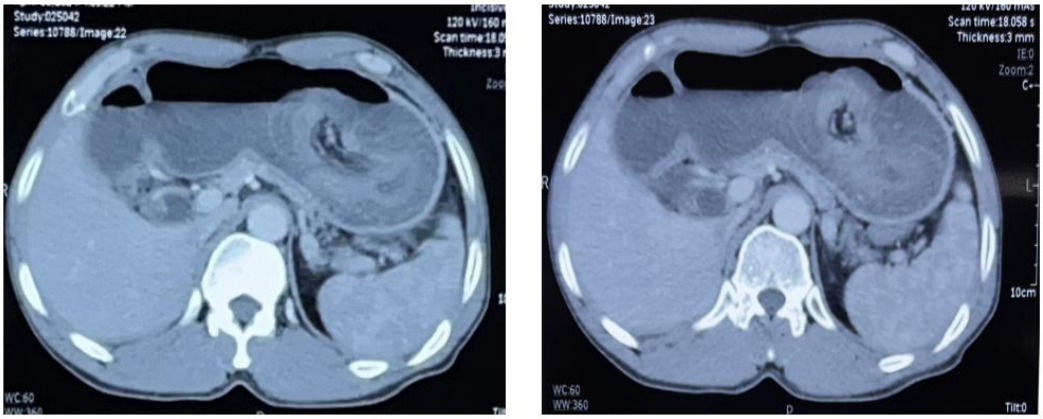

Fig 1: CECT abdomen showing intragastric bowel loops with doughnut sign.

An exploratory laparotomy was performed that revealed a retrocolic, posterior wide gastrojejunostomy. The efferent jejunal loop was intussuscepting into the stomach and afferent loop was dilated. As the intussusceptum was gangrenous, so resection of the involved jejunum was done. No lead point was found. Intestinal continuity was restored by Roux-en-Y reconstruction. The postoperative course of the patient was uneventful, orals were started on 2nd postoperative day and gradually advanced to solid foods and he was discharged on 5th postoperative day.

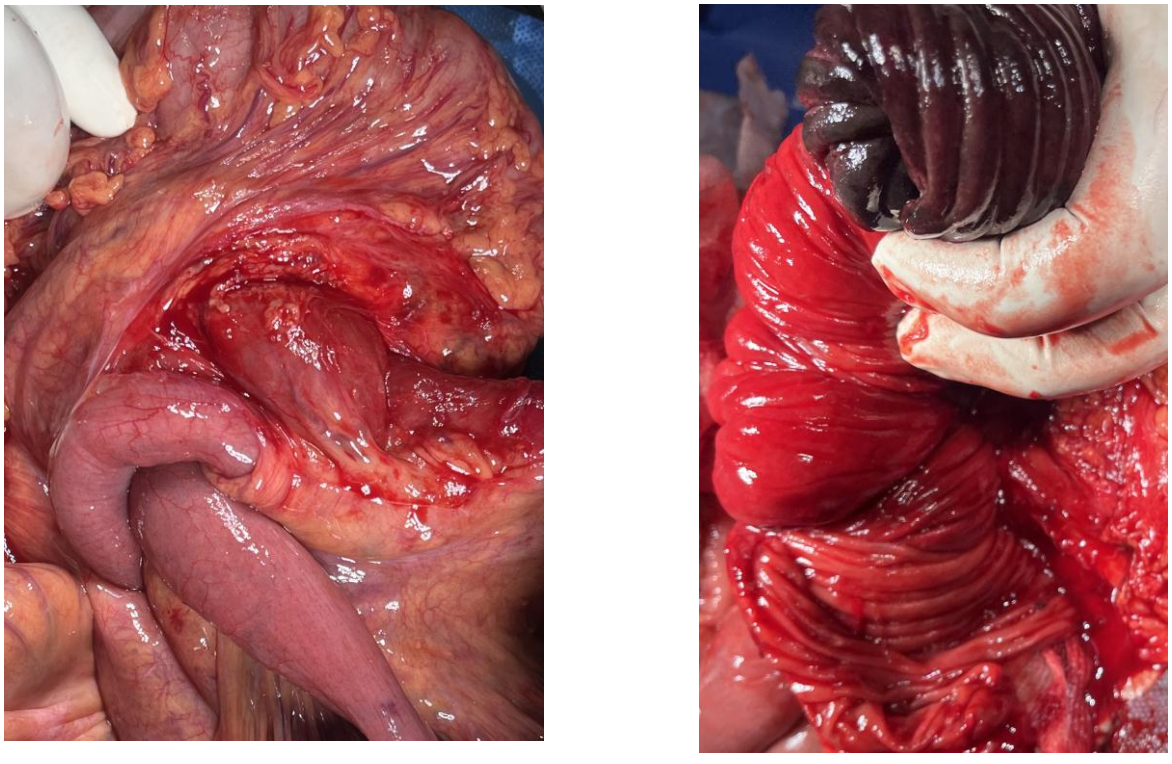

Fig.2: Intraoperative images of jejunogastric intussusception.

III. Discussion:

Jejunogastric intussusception is a rare complication of gastojejunostomy. It can occur in loop as well as roux-en-Y gastojejunostomy . Its occurrence after gastric surgery is highly variable, ranging from few days to few decades.[4] The pathophysiology of jejunogastric intussusception has invoked a debate but the precise mechanism remains elusive. Two theories have been put forward that leads to this complication- functional and mechanical. Functional theory states that disordered motility with functional hyperperistalsis triggered by spasm or hyperacidity leads to retrograde jejunal intussusception into the stomach where as wide anastomotic orifice, long afferent loop, intra-abdominal hypertension, long mesentery are the instigating mechanical factors.[5,6,7]

According to Shackman's classification, there are three types of jejunogastric intussusception; Type I consists of antegrade intussusception of afferent limb (5.5%), Type II comprises of retrograde intussusception of efferent limb and is the most prevalent (75.5%) and Type III includes invagination of both afferent and efferent limbs in the stomach (6.5%).[8] Our case had type 2nd jejunogastric intussusception.

On the basis of presentation, jejunogastric intussusception can be acute or chronic. In acute cases, patient develops sudden abdominal pain that is continuous, vomiting with or without haematemesis and a palpable tender epigastric swelling. In chronic presentation, symptoms are mild , transient and subside spontaneously. Our case had an acute presentation with two days duration of symptoms. Diagnosis of jejunogastric intussusception is challenging due to its meagre prevalence and non-specific symptoms. Hence high index of suspicion in patients with previous gastric surgery should always be kept in mind. Early diagnosis and accurate intervention is the key of jejunogastric intussusception management as mortality rises from 10% in first 48 hours to 50% with 96 hour delay.[9] Primary diagnosis in a patient with haematemesis can be made by endoscopy as it directly visualises intussuscepted bowel.[10] Our case also had intussuscepted bowel loops into the stomach but with gangrenous changes on the endoscopy. Transabdominal ultrasound reveals a mass with echogenic centre surrounded by concentric echogenic rings with a peripheral rim of hypoechogenicity, described as doughnut sign.[11] The CECT abdomen is a definite diagnostic tool that shows intragastric swirling appearance of invaginated loops with target or sausage appearance.[11] Treatment is nearly always surgical. As endoscopic reduction of intussusception have been reported in cases without bowel necrosis however in presence of peritonitis role of surgical intervention stands undebated. The operative techniques comprise of manual reduction of intussusception with correction, resection and revision of anastomosis or creation of Roux-en-Y bypass depending on the viability of bowel. As our patient had gangrene of the intussuscepted bowel hence resection of the involved segment with Roux-en-Y reconstruction was done. A clinician must be vigilant to consider jejunogastric intussusception in cases with acute abdominal pain and vomiting following gastric surgery, allowing prompt diagnosis and timely intervention to prevent bowel necrosis and death.

IV. Conclusion:

Jejunogastric intussusception is a possible complication of gastojejunostomy that can be safely managed by early diagnosis and intervention. However due to its rare incidence we need to explore the causative factors, compare the surgical strategies and evaluate their impact on recurrence rate to establish optimal guidelines for jejunogastric intussusception management. We need to be vigilant in such cases as early diagnosis and treatment is of paramount importance, with the surgical intervention standing as an undebated treatment option

Bibliography

[1]. Wheatley MJ. Jejunogastric intussusception diagnosis and management. J Clin Gastroenterol1989; 11: 452-454.
[2]. Bozzi E. Annotation. Bull Acad Med 1914;122:3-4.
[3]. Cipe G, Malya FU, Hasbahceci M, Ersoy YE, Karatepe O, Muslumanoglu M. Jejunogastric intussusception: A rare complication of gastric surgery. Case Rep Surg 2013;2013:838360.
[4]. Kawano F, Tashiro K, Nakao H, Fujii Y, Ikeda T, Takeno S, et al. Jejunogastric intussusception after distal gastrectomy with roux-en-Y reconstruction: a case report. Int J Surg Case Rep 2018;44:105–9.
[5]. Robertson DS and Weder CH. Acute jejunogastric intussusception. Can J Surg 1968; 11:210-214
[6]. Bundrick TJ and Turner MA. Retrograde jejunogastric intussusception. Rev Interam Radiol1981; 6: 21-24.
[7]. Kitasato Y, Midorikawa R, Uchino Y , Saku S, Minami T, Shirahama T, et al. A case of retrograde intussusception at Roux- en-Y anastomosis 10 years after total gastrectomy: review of the literature. Surg Case Rep. 2016;2:123.
[8]. Caudell WS, Lee CM. Acute and chronic jejunogastric intussusception. NEngl J Med. 1955;253(15):635–40.
[9]. Walstad PM, Ritter JA and Arroz V. Delayed jejunogastric intussusception after gastric surgery:an ever-present threat. Am Surg 1972;38: 172-175.
[10]. Loi CM, Huang SY, Chen YD, Chen SD, Wu JM, Chen KH. Retrograde jejunogastric intussusception: a case report and review of the literature. Asian J Surg. 2017;40(4):309–12.
[11]. Hammond N, Miller FH and Dynes M. Intussusception into the enteroanastomosis after Billroth II gastrectomy and Roux-en-Y jejunostomy: sonographic and CT findings. AJR Am J Roentgenol 2001; 177: 624-626.