

CASE REPORT

Gangrenous jejuno gastric intussusception as a complication of gastric surgery

SM Hossain¹, AKMR Iqbal², SF Ahmed³, MW Rahman⁴

Summary

Jejunogastric intussusception (JGI) is a rare but serious complication following gastrojejunostomy operation. Clinical presentation may be acute or chronic. The efferent loop intussusception is most frequent type. Our case report include a 60 years male presented with sudden onset of epigastric pain, vomiting, hematemesis and a palpable mass at epigastrium with previous history of gastric surgery about 11 years back. Diagnosis of JGI was confirmed with endoscopy findings. After prompt resuscitation early surgery was done. Gangrenous segment was resected and revision surgery was done in Roux-en-Y pattern. Post-operative period was uneventful. Awareness of such complication, early diagnosis and prompt surgery can reduce the mortality of JGI.

Bang Med J (Khulna) 2010; 43 : 18-20

Introduction

Jejunogastric intussusception though uncommon is a serious life threatening complication that can occur after partial gastrectomy or gastrojejunostomy.¹ The first case of this complication was described by Bozzi in 1914.² A delay in diagnosis significantly increase the risk of mortality.^{3,4} Surgery is indicated for all patients of acute type, whereas the chronic type may or may not require operative intervention, depending on the severity of the symptoms. The aim of this report is to highlight the need for early diagnosis and prompt intervention in acute Jejunogastric intussusception.

Case Report

A 60 years old male presented with colicky epigastric pain and vomiting for 7 days and hematemesis for 2 days duration. Eleven years ago, he had undergone truncal vagotomy and posterior retrocolic gastrojejunostomy for the treatment of chronic duodenal ulcer. The patient was asymptomatic until his recent admission with above mentioned symptoms. On examination, patient was dehydrated and anxious. Pulse rate was 135/min, blood pressure 90/60mmHg. There was tender and a vague ill-defined epigastric mass. His haemoglobin was 8.5 gm% with neutrophilic leucocytosis. Plain Xray abdomen revealed evidence of acute intestinal obstruction. An emergency upper gastrointestinal endoscopy was performed which showed a gangrenous bowel mass with altered blood in the stomach. The adjacent gastric mucosa was normal. A diagnosis of gangrenous JGI was made. After prompt resuscitative measure with fluid and blood transfusion, emergency exploratory laparotomy was performed. Peroperative finding was telescoping of the efferent loop of the jejunum into the stomach (Fig-I).



Fig 1 : Telescoping of efferent loop (Jejunum) in the stomach

It was impossible to reduce the telescoping loop. Stomach was explored by careful incision at the level of gastrojejunostomy stoma. The intussusceptum was gangrenous and length was about 45cm (Fig-II). The gangrenous segment was resected and bowel continuity was restored by Roux-en-Y anastomosis. Post-operative recovery was smooth and patient was discharged on 11th post-operative day.

1. Syed Mozammel Hossain FCPS, Assistant Professor, Department of Surgery, Khulna Medical College, Khulna.

2. AKM Rabiul Iqbal DA, Assistant Professor, Department of Anaesthesiology, Khulna Medical College, Khulna.

3. Sk Farid Uddin Ahmed DA, Consultant, Department of Anaesthesiology, Khulna Medical College Hospital, Khulna.

4. Md Waliur Rahman FCPS, Resident Surgeon, Khulna Medical College Hospital, Khulna.



Fig 2 : Gangrenous changes of the intussusceptum (Jejunum)

Discussion

Retrograde jejuno gastric intussusception is uncommon life threatening condition. On medline search - we could find out limited cases reported in the literature. Only 16 documented cases have been reported at the Mayo clinic (Rochester, Minn) during the past 72 years.¹ The jejuno gastric intussusception has been reported after every type of gastroenteric anastomosis except Billroth I. Clinically JGI can be divided into two categories. Acute fulminant and chronic intermittent type. Acute form usually has five classic manifestations: severe colicky epigastric pain, vomiting, hematemesis, a palpable epigastric mass and high intestinal obstruction. Our case report belonged to the acute variety.

In chronic type of JGI, the patient usually experiences recurrent episodes of vague upper abdominal discomfort, usually confused with dumping syndrome or stomal ulcer. The chronic recurrent variety is more common.⁵ Three anatomic types of JGI have been described.³ Type I- afferent loop intussusception (antegrade); Type II-efferent loop intussusception (retrograde); type III-combined. Our patient had type-II JGI. The time interval between the gastric surgery and JGI is extremely variable. The shortest interval reported is 2 days and the longest 30 years with an average of 6 years. In our case 'lapse time' was 11 years.

The factors held responsible for JGI include hyperacidity, long afferent loop, Jejunal spasm with abnormal motility, increased intraabdominal pressure and retrograde peristalsis. Among these, retrograde peristalsis is the most accepted precipitating factor.⁶ For early diagnosis, awareness of the condition and a high degree of suspicion are essential prerequisites. X-ray studies, ultrasonographic examination, endoscopy, CT scan have all been described as useful diagnostic tests.⁷

Ultrasonographic examination may reveal distended stomach with loops of intestine within it. Jejunal loop can be identified on the basis of presence of volvulae connivents seen within it using high resolution probe. In our case report sonologist reported distended stomach and loops. CT scan may reveal jejunal loop in the stomach with mesenteric vessel being pulled along with the intussusception. This imaging is diagnostic for type-II variety of JGI. In our report we did not take the opportunity for CT scan.

Contrast x-ray of stomach may reveal distended stomach with filling defect. We could not perform the contrast x-ray because patient's physical condition did not permit such types of imaging study. Gastroscopic examination is the important diagnostic tool. In our case endoscopist could find the gangrenous loop of jejunum with blood mixed fluid in the stomach. Diagnosis of chronic JGI can be difficult and challenging. For correct diagnosis, upper GI imaging should be performed during symptomatic period. It has been suggested that JGI can be precipitated during upper gastrointestinal endoscopy.⁸ Correct treatment is the surgical intervention as soon as possible. Surgical options include reduction, resection and revision of the anastomosis.

Treatment of acute JGI is urgent surgery. Delay in surgery beyond 48 hrs is associated with an approximate 50% mortality.⁹ If the involved segment is viable, simple reduction and anchoring of the involved segment to neighboring Jejunal loop and to the transverse mesocolon is the treatment of choice.

Gangrenous JGI demand resection anastomosis with revision of previous anastomatic stoma. In our patient, we performed resection of gangrenous segment and revision of anastomosis with Roux-en-Y pattern. In acute JGI early recognition and prompt surgery can reduce the high mortality.

References

1. Waits JO, Beart RW Jr, Charboneau JW. Jejunogastric intussusception. Arch Surg 1980; 115: 1449-1452.
2. Bozzi E. Annotation. Bull Acad Med 1914; 122:3-4.
3. Shackman R. Jejunogastric intussusception. Br J Surg 1940; 27: 475-480.
4. Sibley WL. Chronic intermittent intussusception through the stoma of a previous gastro-enterostomy. Proc Staff Meet Mayo Clin 1934; 9: 364-365
5. Reyelt, W.P., and Anderson, A.A.: Retrograde jejunogastric intussusception, Surg. Gynecol. & Obstet., 119: 1305-1311, 1964.
6. Wolukae-Wanambwa, PP. An uncommon cause of haematemesis- retrograde jejunogastric intussusception. Brit J Clin Prac 1979; 33: 53-54.
7. S.S. Prasad, L Rama Chandra: Grangrenous Jejunogastric intussuception. The internate Journal of surgery ISSN: 1528- May 2009.
8. Czeriak A, Bass A, Bat L, Shemesh E, Avigad I, Wolfstein I. Jejunogastric intussusception - a new diagnostic test. Arch Surg 1987; 122: 1190-1192.
9. Gupta SS, Singh GG. Retrograde jejunogastric intussusception: an unusual cause of hematemesis (a case report). J Postgrad Med 1986; 32: 105.