

## Case Report

### Retrograde Jejunogastric Intussusception: A Case Report

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#### Abstract

Jejunogastric Intussusceptions is a rare but potentially life threatening complication of a previous gastrectomy or gastrojejunostomy. A 70 years old man presented with severe epigastric pain followed by haematemesis, 8 years after truncal vagotomy and gastrojejunostomy for pyloric stenosis. Ultrasonography revealed dilated stomach with a large intragastric mass which has minimal peristaltic movement. Endoscopy of upper GIT revealed prolapsed segment of jejunal loops through the gastrojejunostomy stoma. Laparotomy disclosed a retrograde type II jejunogastric intussusception and was managed by reduction of jejunogastric intussusception, resection of gangrenous segment and end to end anastomosis. Post operative recovery was uneventful. Retrograde jejunogastric intussusceptions is a rare condition and around 200 cases has been reported since its first description in 1914. Urgent recognition and surgical treatment is mandatory to reduce the mortality rate from this complication.

Key words: Retrograde Jejunogastric Intussusception, gastrojejunostomy, gastric surgery.

#### Introduction

Retrograde Jejunogastric Intussusception is an uncommon but potentially life threatening complication of gastrojejunostomy or partial gastrectomy which may occur any time after primary surgery<sup>1,2</sup>. Usual clinical presentations of patient are severe epigastric pain, vomiting and haematemesis with history of previous gastric surgery. Bozzi described the first case of this complication in 1914. Around 200 cases have been reported in English literature till now<sup>3,4</sup>. We present a case report of retrograde jejunogastric intussusception with characteristic ultrasonographic and endoscopic finding.

#### Case Report

A 70 yrs old man presented with acute abdominal pain and vomiting and haematemesis. He has undergone gastrojejunostomy operation for pyloric stenosis 8 years back. He was asymptomatic until his recent admission

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to the emergency ward. Patient was dehydrated; with pulse rate 110/min and BP 100/60 mm of Hg. Patient has an upper midline scar. Epigastric region was distended and there was a vague feeling of epigastric mass. Laboratory investigation showed haemoglobin 13.4 gm%, RBS 6.7 mmol/L, S. Creatinine 1.6 mg/dl, White cell count 16,800 /cmm with 87% polymorph, ESR 32 mm in 1<sup>st</sup> hour, Plain X-ray abdomen was within normal limit. Ultrasonography of abdomen showed hugely distended stomach filled with fluid and a large intragastric mass with minimal peristaltic within the mass (Figure 1). After initial resuscitation, upper GIT endoscopy was performed which revealed the classic scenario of retrograde jejunogastric Intussusception (Figure 2).

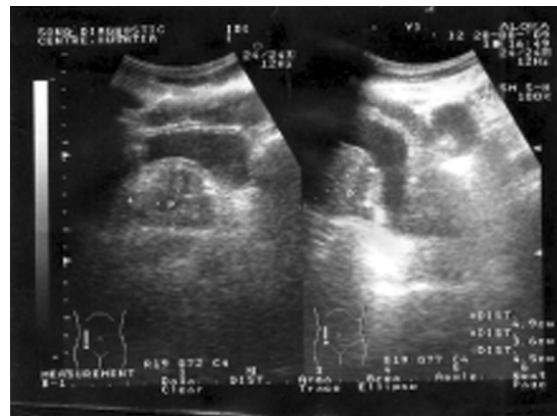


Figure 1: USG shows the presence of jejunal loops with in dilated fluid filled stomach.

There was a posterior stoma of gastrojejunostomy and prolapsed jejunal loops through it.

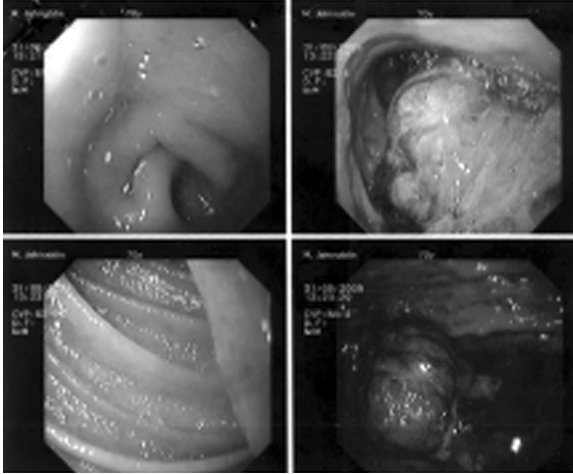


Figure 2: Gastric endoscopy shows a lobulated congestive mass which consistent with jejuno-gastric intussusception.

After initial resuscitative measures with intravenous fluid, blood transfusion, nasogastric suction and antibiotics, emergency laparotomy was carried out. At operation, stomach was found hugely distended with an intraluminal mass. The presence of posterior gastrojejunostomy was confirmed with intussusception of efferent jejunal loop into the stomach. A gastrostomy was done which revealed intussuscepted gangrenous efferent jejunal loop. Then intussusception was reduced, the gangrenous segment was resected with end to end jejunal anastomosis was made. Finally gastrostomy wound was repaired and in two layers. The patient had an uneventful postoperative recovery and was discharged on day 8.

## Discussion

Retrograde jejuno-gastric intussusception is a rare but serious complication after gastric surgery where small bowel loops get incarcerated and strangulated inside the stomach<sup>1,2</sup>. It was first described by Bozzi in a patient with gastroenterostomy<sup>5</sup>. Eight years later this complication was also reported in a patient with Billroth II resection<sup>6</sup>. Subsequently, a large number of isolated cases and small series have been published<sup>1-4,7</sup>. Thus, jejuno-gastric intussusception seems to be a rare complication after gastrojejunostomy or Billroth II gastrectomy; it also has been described in association with previously placed gastrostomy tube<sup>8</sup>, after total gastrectomy<sup>9</sup>, after Billroth I operation<sup>1</sup> and after Roux-en-Y gastric bypass<sup>10</sup>. The widely accepted anatomical classification proposed by Shackman<sup>11</sup>

distinguishes three categories of jejuno-gastric intussusception; Type – I: afferent loop intussusception (antegrade), Type – II: efferent loop intussusception (retrograde) and Type – III: combined form. Type II or retrograde efferent loop intussusception is the most common (80%) with two other types accounting for 10%<sup>1,12</sup>. In the case presented, a type II jejuno-gastric intussusception was documented.

The mechanism of jejuno-gastric intussusception is poorly understood<sup>1-3</sup>. Two major theories are functional and mechanical. The most widely accepted functional theory is the disordered motility with functional hyperperistalsis triggered by spasm or hyperacidity<sup>7,13</sup>. Mechanical factors include adhesions leading to intussusception of a more mobile segment into fixed segments, a long mesentery, gastric derangements and sudden increase in abdominal pressure<sup>3,7,13</sup>.

Two forms of jejuno-gastric intussusception have been clinically recognized: an acute and chronic form<sup>1,3,7</sup>. In the acute form, incarceration and strangulation of the intussuscepted loop generally occur whilst spontaneous reduction is usual in chronic type. The classical triad of acute jejuno-gastric intussusceptions includes sudden onset of epigastric pain, vomiting with or without haematemesis and a palpable epigastric mass in a patient who has undergone previous gastric surgery<sup>1,3,7,14</sup>. The picture was absolutely typical in the case described here. The chronic form may present with symptoms similar to the acute form, but the symptoms may be milder and transient and may subside spontaneously<sup>1,3,7</sup>. There is wide variation in the lapse time between the gastric operation and the jejuno-gastric intussusception to occur; the shortest reported interval is two days and the longest is 55 years<sup>7,15</sup>. Eight years was lapse time in the present case.

In acute form of jejuno-gastric intussusception, a plain x-ray of the abdomen may show a homogenous density in the left upper quadrant that represents small bowel in the stomach<sup>13</sup>. Ultrasonography is the method of first choice of investigation because it can be performed at bedside without ionizing radiation and is cost effective. It shows intragastric tubular image with or without peristalsis<sup>7</sup>. CT scan also shows a dilated stomach with intragastric filling by bowel loop<sup>12</sup>. Contrast X-rays of stomach using water soluble dyes also confirms the diagnosis showing filling defect with in stomach and in type II jejuno-gastric intussusception, well delineation of duodenal C loop with non visualization of efferent jejunal loop<sup>12,13</sup>. Endoscopy, performed by someone familiar with this care entity, will certainly be diagnostic<sup>13</sup>. Most reported cases of jejuno-gastric

intussusception were diagnosed at surgery<sup>4,14-16</sup>, so it requires high index of suspicion. In our case typical features and ultrasonographic and endoscopic findings enable us to make preoperative diagnosis. In chronic form, for correct diagnosis to be made, upper GI imaging should be performed during the symptomatic period<sup>12</sup>.

Treatment of the acute variety of jejuno gastric intussusception is prompt surgery after resuscitation. At operation, if the intussuscepted jejunum is viable, then simple reduction is performed. To prevent recurrence, the reduced jejunum is fixed to either the afferent limb of the gastrojejunal anastomosis or the transverse mesocolon<sup>3,7,13,14</sup>. If the bowel is nonviable it must be resected, as in this patient. The treatment of chronic recurrent variety of jejuno gastric intussusception is symptomatic. If the symptom persists then revisional surgery may have to be performed<sup>13,14</sup>.

### Conclusion

Jejuno gastric intussusception is a very serious life-threatening complication of gastric surgery. There is a wide variation in the lapse time between the gastric surgery and occurrence of jejuno gastric intussusception. When a patient who has had history of gastric operation present with epigastric pain, vomiting and haematemesis, the possibility of a jejuno gastric intussusception should be considered along with more common diagnosis such as recurrent stomach ulcer. Because this condition is life threatening awareness of this rare complication is essential to save life by operative intervention.

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