Jejunogastric intussusception: An unusual cause of hematemesis

Inian Samarasam MS FRCS¹, Sudhakar Chandran B MS¹, Uday Shankar DNB¹, Biju George DM²,
Ashok Chacko DM², George Mathew MS MD¹

I Samarasam, S Chandran B, U Shankar, B George, A Chacko, G Mathew. Jejunogastric intussusception: An unusual cause of hematemesis. *Can J Gastroenterol* 2005;19(12):735-736.

Jejunogastric intussusception is an uncommon but potentially life-threatening complication of a previous gastrojejunal anastomosis. Although jejunogastric intussusception was first described in 1914, fewer than 200 cases have been reported in the English literature thus far. Awareness of this rare complication would help in early diagnosis and appropriate management. Described here is a case report of a patient who presented with hematemesis due to an acute jejunogastric intussusception associated with gangrene of the intussuscepted jejunum.

Key Words: Gastric surgery; Hematemesis; Jejunogastric intussusception; Late complication

CASE PRESENTATION

A 57-year-old man presented to the emergency department with a three-day history of worsening upper abdominal pain. He had two episodes of large volume hematemesis just before his presentation. He also gave a history of having an abdominal operation for peptic ulcer disease nine years prior, the details of which were not available.

On examination, he was dehydrated but hemodynamically stable. Abdominal examination revealed minimal tenderness in the epigastric region with no evidence of generalized peritonitis. Blood investigations revealed a hemoglobin of 102 g/L. The white cell count, serum electrolytes and renal function were within normal limits. Blood gas analysis showed a mild metabolic acidosis. The plain x-rays of the abdomen revealed an abnormal homogeneous density in the left upper quadrant. An urgent esophagogastroduodenoscopy was performed, which showed large amounts of altered blood and a blackish intraluminal mass in the stomach.

An emergency laparotomy was performed. At operation, the stomach was dilated with an intraluminal soft tissue mass. The previous retrocolic gastrojejunostomy was noted, along with intussusception of the efferent loop of the anastomosis. A gastrotomy was performed, which revealed intussuscepted loops of jejunum with full-thickness gangrene (Figures 1 and 2). The intussusception was reduced, the gastrojejunostomy was taken down, and a small-bowel resection and anastomosis was performed. Because there was no evidence of previous vagotomy,

L'invagination jéjunogastrique : Une cause inhabituelle d'hématémèse

L'invagination jéjunogastrique est une complication peu courante d'anastomose gastrojéjunale pouvant mettre en jeu le pronostic vital. Bien que l'invagination jéjunogastrique ait été décrite pour la première fois en 1914, moins de 200 cas ont été déclarés jusqu'à présent dans les publications de langue anglaise. La sensibilisation à cette complication rare contribuerait à un diagnostic précoce et à une prise en charge pertinente. Est décrit aux présentes le cas d'un patient qui a consulté en raison d'une hématurie causée par une invagination jéjunogastrique aiguë associée à une gangrène du jéjunum invaginé.

nor any evidence of scarring of the pylorus due to peptic ulcer disease, a further drainage procedure was not performed. The patient had an uneventful postoperative recovery and was discharged on day 12.

DISCUSSION

Jejunogastric intussusception was first reported by Bozzi (1) in 1914 in a patient who had undergone a gastrojejunostomy. Lundberg (2) reported this complication following a Billroth II gastrectomy. Subsequently, jejunogastric intussusception has been reported in almost all types of gastric surgery that involve the creation of an anastomosis between the stomach and the jejunum.

There have been reports of the occurrence of this problem, from as early as six days to as late as 20 years following a gastrojejunal anastomosis (3).

Three anatomical types of jejunogastric intussusception have been described by Shackman (4): afferent loop intussusception (16%); efferent loop intussusception (74%); and intussusception involving both loops (10%).

The etiology of jejunogastric intussusception is still unclear. The most widely accepted theory is disordered motility with functional hyperperistalsis triggered by spasm or hyperacidity (5). Mechanical predisposing factors include adhesions, a long mesentery and a sudden increase in abdominal pressure.

Jejunogastric intussusception can present in an acute or chronic form. The classical triad of acute jejunogastric

¹Department of Surgery; ²Department of Gastroenterology, Christian Medical College and Hospital, Vellore, Tamilnadu, India

Correspondence: Dr Inian Samarasam, Department of General Surgery, Christian Medical College Hospital, Vellore 632 004, Tamilnadu, India.

Telephone +91-416-2282079, fax +91-416-223-2035 or 223-2103, e-mail inians@cmcvellore.ac.in

Received for publication August 6, 2005. Accepted September 15, 2005

Figure 1) A view of the intussuscepted loops of jejunum on opening the stomach

Figure 2) The 'coil spring' appearance of the gangrenous, jejunal loops inside the stomach, due to jejuno gastric intussusception

intussusception includes sudden onset of epigastric pain, vomiting with or without hematemesis and a palpable epigastric mass in a patient who has undergone previous gastric surgery (6). The chronic form may present with symptoms similar to the acute form, but the symptoms may be milder and transient and may subside spontaneously.

A plain x-ray of the abdomen may show a homogeneous density in the left upper quadrant that represents small bowel in the stomach (7). Upper abdominal contrast series also confirms the diagnosis showing a 'coil spring' jejunal-filling defect in the stomach produced by barium between the edematous folds (8) (Figure 2). Endoscopy, performed by someone familiar with this rare entity, will certainly be diagnostic.

The treatment of the acute variety of jejuno gastric intussusception is prompt surgery. At operation, if the intussuscepted jejunum is viable and reducible, 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. If the bowel is nonviable it must be resected, as in this patient. The treatment of the chronic recurrent variety of jejuno gastric intussusception is symptomatic. If symptoms persist then revisional surgery may have to be performed.

CONCLUSION

Jejuno gastric intussusception is a very rare complication of gastrojejunal anastomosis. When a patient who has had a gastrojejunal anastomosis presents with hematemesis, melena or upper abdominal pain, the possibility of a jejuno gastric intussusception should be considered along with more common diagnoses such as a stomal ulcer. Because this entity is not frequently encountered, awareness of this rare complication is essential to recognize this condition during endoscopy and to treat this problem effectively by operation.

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