Retrograde jejunogastric intussusceptions: A rare case report

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ABSTRACT
Introduction: Retrograde jejunogastric intussusception is a rare acute abdominal condition where the small bowel loops get incarcerated and may get strangulated inside the stomach. Case Report: We report one such rare case of a 50-year-old female who had retrograde jejunogastric intussusception following gastrojejunostomy and outline our treatment. Conclusion: Retrograde jejunogastric intussusception is a rare acute abdominal condition which is a rare complication after gastric surgery. The presence of a mobile mass associated with nausea and vomiting in a patient with previous history of gastric surgery is virtually pathognomonic of acute retrograde intussusception. A high degree of suspicion is required for pre-operative diagnosis of the case which should be followed by prompt surgery.

Keywords: Retrograde intussusception, Acute abdomen, Sausage mass

INTRODUCTION

Jejunogastric intussusception is a rare complication of gastrojejunostomy or partial gastrectomy [1, 2]. Bozzi described the first case of this complication in 1914. Around 200 cases have been reported in the literature till now. This paper reports a case of retrograde jejunogastric intussusception of both the loops of jejunum in a female patient who underwent surgery for acid peptic disease twenty years back.

CASE REPORT

A 50-year-old female patient presented to ESI-PGIMSR with complaints of acute abdominal pain, vomiting and mass in the upper abdomen since four days. She had undergone gastrojejunostomy and truncal vagotomy for chronic duodenal ulcer twenty years back. On physical examination, the patient was dehydrated with pulse rate of 108/minute, blood pressure of 100/60 mmHg and respiratory rate of 18/min. Abdominal examination revealed upper midline abdominal scar of previous laparotomy. A tender sausage shaped lump was palpable in the umbilical region measuring 10x5 cm which moved with respiration (figure 1). Laboratory investigations showed hemoglobin of 9.3 gm%. After
correction of dehydration and electrolyte imbalance, an emergency upper gastrointestinal endoscopy was carried out which revealed an intussusception of small bowel at gastro-jejunal anastomosis (figure 2). Computed tomography (CT) scan of the abdomen and pelvis revealed retrograde jejuno-gastric intussusception through previous gastrojejunostomy with edematous walls of intussusception and minimal ascites (figure 3). After initial treatment with intravenous fluids, nasogastric suction and antibiotics, emergency exploratory laparotomy was carried out.

**Operative findings:** Peroperatively a soft mass was palpable in the stomach with evidence of a posterior gastro-jejunostomy afferent and efferent loops intussusception into the gastric stump. Manual reduction of the same showed viable bowel. Jejunostomy was performed and afferent and the efferent loops fixed to the gastric wall. The postoperative recovery was uneventful and patient was discharged on the ninth postoperative day (figure 4-6).

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**Figure 1:** Sausage shaped mass with previous scar of gastric surgery in epigastrium.

**Figure 2:** Endoscopic photograph showing intussuscepted mass sharply demarcated and normal gastric mucosa.

**Figure 3:** CT scan of abdomen showing dilated stomach with intragastric non homogeneous mass compatible with small bowel loops.

**Figure 4:** Intraoperative photograph showing dilated stomach and intussuscepted congested jejunal loops.
DISCUSSION

Retrograde jejuno gastric intussusception is a rare acute abdominal condition [1, 2], where the small bowel loops get intussuscepted/incarcerated and strangulated inside the stomach. This is a rare complication after gastric surgery [2]. Till date, around 200 cases of jejuno gastric intussusception have been reported in world literature.

The widely accepted anatomical classification proposed by Shackman et al. distinguishes three categories of jejuno gastric intussusception [3, 4]:

Type I: Afferent loop intussusception (antegrade)
Type II: Efferent loop intussusception (retrograde)
Type III: Combined form.

The mechanism of jejuno gastric intussusception is poorly understood [3]. Suggested underlying causes include - a long afferent loop, jejunal spasm with abnormal motility, increased motility of efferent loop, adhesions leading to intussusception of a more mobile segment into fixed segment, widening of upper jejunum, causes of increased intra-abdominal pressure like vomiting, pregnancy and labor, dilated atonic stomach and retrograde peristalsis [3].

Clinically patients with jejuno gastric intussusceptions may be divided into two types according to the presentations [1, 3], Type 1 - acute fulminant and Type 2 - chronic intermittent. In acute form, onset is usually sudden and consists of colicky or constant upper abdominal pain associated with vomiting. In chronic form, the symptoms may be roughly similar to the acute form but are milder and transient or sudden and spontaneous. The presence of a mobile mass in association with pain and vomiting in a patient who has had a previous gastric surgery is considered virtually pathognomonic of acute retrograde intussusception. Most of the reported cases have not been diagnosed preoperatively. In our case, the condition was suspected and pre-operative upper gastrointestinal endoscopy was done. The reported mortality rate range from 10% for treatment within the first 48 hours to 50% within a 96 hour delay [5]. The surgical options available are manual reduction, resection of gangrenous bowel and revision of anastomosis. Fixation of the jejunum to adjacent tissue like mesocolon, colon, or stomach may be added to prevent recurrence [2].

CONCLUSION

A high index of suspicion is required for diagnosis of jejuno gastric intussusception. Early recognition of acute variant of jejuno gastric intussusception and prompt surgical intervention is the treatment of choice. To
prevent recurrences, jejunum may be fixed to the adjacent tissues like mesocolon, colon or stomach.

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Guarantor
The corresponding author is the guarantor of submission.

Conflict of Interest
Authors declare no conflict of interest.

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REFERENCES