



## Case Report

# Retrograde Jejuno gastric Intussusception (RJGI): Two Case Reports

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### Abstract

Retrograde jejuno gastric intussusception (RJGI) is a rare but potentially very serious complication of gastrojejunostomy or partial gastrectomy [1]. [2]. Around 200 cases have been reported in literature till now :[3]. This paper reports two cases of RJGI of efferent loops developed 20 years and 10 years after gastrojejunostomy of a 70 yrs and 78 yrs old man respectively. Both the patients presented with sudden abdominal pain and hematemesis. Upper GI-endoscopy Established the diagnosis. On emergency basis laparotomy was done and intussusception was reduced through gastrotomy. Efferent loop was found viable in case no 01, but gangrenous in case no 02, where resection was done. In both the cases the efferent loops were fixed to anterior parietal wall to prevent recurrence. Post operative recovery were uneventful except minor superficial wound infection in the second case.

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### Introduction

RJGI is an antiperistaltic invagination of a distal bowel lead point through a more proximal segment of bowel. It is a well described complication of gastric surgery [1]. [2].

The occurrence of RJGI in the absence of previous gastric resection is extremely rare, with only four cases previously reported. All cases were associated with previous gastrojejunostomy or some form of gastric surgery. The mechanism of RJGI is poorly understood :[3]. Hyperacidity, long afferent loop, Jejunal spasm with abnormal motility, increased motility of afferent loop, increased intraabdominal pressure, dilated atonic stomach and retrograde peristalsis may be responsible as an aetiological factor. Clinically Patients with RJGI present with two types: type-01, acute ; type-02 or chronic. In the acute form,

the onset is sudden, upper abdominal pain associated with coffee coloured vomiting . In chronic form symptoms may be roughly similar to that of acute but milder form. Endoscopy of upper GIT is the most accurate investigation for diagnosis. Treatment of the acute variant of RJGI is prompt surgery. The previously reported 200 cases show a mortality rate ranges from 10% for treatment within first 48 hours to 50% with a 96 hours delay [5]

### Case-1

Mr. Jahir Ali, 70 Yrs old, hailing from Sariakandi, Kustia, admitted in RMCH with the complaints of sudden pain in the upper abdomen; abdominal distension and coffee coloured vomiting since 3 days. The vomitus contained undigested food material mixed with blood. Twenty two years back the patient had undergone an elective operation for

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peptic ulcer disease. But details were not available. On physical examination, the patient was dehydrated. Pulse rate was 105/min and BP was 100/70 mm Hg. Abdomen was distended. There was an evidence of upper midline scar mark of previous laparotomy. A tender lump was felt in upper abdomen. Laboratory investigation showed Hemoglobin-9gm per dl, ESR-40; WBC-12000 cu mm, neutrophil-72%, USG of abdomen showed grossly dilated stomach down to the pelvis with hyperperistalsis and a lobulated mass of 7.1 cm × 4.2 cm noted within the stomach with looplike impacted structure, may be intestinal loop. Endoscopy showed (Fig- 01) gastric mucosa inflamed and there are multiple segments of gut in the lumen of the stomach coming through the previous gastrointestinal stoma suggestive of RJGI. After initial treatment with I.V fluid NG-suction and antibiotics, Laparotomy (Fig – 02) was done on emergency basis through previous upper midline scar and preoperative diagnosis was confirmed. Gastrotomy was done and the intussusception was reduced by gentle traction. The efferent loop (Jejunal loop) was found viable. It was fixed with anterior abdominal wall (Fig – 04) and gastrotomy was closed. Post operative recovery was uneventful and oral feeding started on 4<sup>th</sup> POD. Patient was discharged on the 10<sup>th</sup> POD.

### Case-2

Md. Samad, 78 Yrs old admitted with complains of pain in abdomen with hematemesis for seven days. Ten years earlier he had undergone an elective operation for peptic ulcer disease but details of that operation were not available. On physical examination, the patient was dehydrated, pulse rate 120/mim, BP-90/60 mmHg. A tender lump was palpable in the epigastric region. Endoscopy showed there are multiple segments of gangrenous gut within the lumen of the stomach coming through the previous gastrointestinal stoma suggestive of RJGI. After resuscitation by I.V fluid, NG Suction, antibiotics, laparotomy was done on emergency basis. Gastrotomy was done and the efferent loop, which was gangrenous (Fig –03), was resected and end to end anastomosis was done. Efferent loop was fixed

with parietal wall (Fig-04). The patient recovered well except minor wound infection. He was discharged on the 18<sup>th</sup> POD.

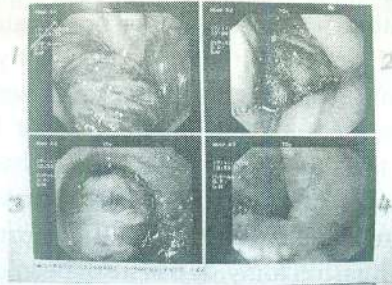


Fig. 1: Endoscopic view of the intussusception



Fig. 2: Efferent loop invaginated into the stomach. (Per-operative view)



Fig. 3: Gangrenous efferent loop, Case- 02. (Per-operative view)



Fig. 4: Efferent loop fixed with parietal wall.

## Discussion

Jejunogastric intussusception was described in 1914 ad. by Bozzi in a patient with gastrojejunostomy [5]. Eight years later this complication was also reported in a patient with Billroth-II resection.[6] . Subsequently a large number of isolated cases and small series have been published and the reviews of the literature showed that less than 200 cases have been reported [1,2,7,8,9,10]. Thus JGI seems to be a rare complication after gastrojejunostomy or Billroth-II gastrectomy. It has also been described rarely in association with previously placed gastrostomy tube [11]. Occasionally jejunojejunal or jejunoduodenal intussusception have been observed after total gastrectomy [12,13,14] and one case of duodenogastric intussusception after Billroth-I gastrectomy. It is interesting to point out that only 16 well-documented cases have been recognized at the Mayo clinic in a period of 72 (1907-1980) years [1]. Three anatomic types of JGI have been described :[3]. type-I concerns the afferent loop, type-II the efferent loop and type-III represents a combined form. It has been stated that type-II or retrograde efferent loop intussusception is the most common (80%) with the two other types accounting for 10% each. In this paper both the patients had a type-II JGI .

There is a wide variation in the lapse time between the gastric operation and JGI to occur; six days to twenty years and eight days to nineteen years [2]. In patients with gastroanastomosis and partial gastrectomy respectively. In the reported cases lapse time was 22 years & 10 years respectively. The cause of JGI is poorly understood [1]. Various factors have been incriminated such as hyperacidity, long afferent loop, Jejunal spasm with abnormal motility, increased intra abdominal pressure, retrograde peristalsis etc. Probably retrograde peristalsis, which can occur in normal people prior to gastric surgery, seems to be accepted as the cause of type-II JGI by the most authors [1,16]. Two forms of JGI have been clinically recognized: an acute and a chronic form. In the acute form, incarceration and

strangulation of the intussuscepted loop generally occur whilst spontaneous reduction is usual in the chronic type. Thus, the acute form is characterized by acute, severe, colicky epigastric pain, vomiting and subsequently hematemesis. Epigastric tenderness and a palpable abdominal mass can be observed in about 50% and signs of high intestinal obstruction can also be found [1,17,18]. It should be pointed out that a sudden onset of epigastric pain, vomiting and subsequent hematemesis and a palpable epigastric mass in a patient with previous gastric surgery are thought as a classic triad of JGI [18]. The picture was absolutely typical described here. In the chronic form the symptoms may be roughly similar to the acute form but milder, transient and subside spontaneously [19].

Early diagnosis of the acute form is of paramount importance [3,4]. The clinical picture is almost diagnostic to the alert, sensitized physician. Endoscopy [21,22], performed by someone familiar with this rare entity is certainly diagnostic. In the chronic form the diagnosis is difficult. In many of such patients, the correct diagnosis have never been established. The main reason is that upper GI series [20] or upper GI endoscopy must be performed during the symptomatic period for the diagnosis to be confirmed. There is no medical treatment for acute JGI and the correct treatment is the surgical intervention as soon as possible. Surgical options include reduction , resection, revision of the anastomosis and the take down of the anastomosis depending on the condition found during the operation. Fixation of jejunum to the adjacent tissue, like mesocolon, colon, stomach may be added to prevent recurrence . Here in both the cases jejunum was fixed to the parietal wall.

## Conclusion

Jejunogastric intussusception is a rare complication of gastric surgery and mortality rate is high (50%) if it is diagnosed and treated with a 96 hours delay [3,4]. High index of suspicion is needed for early diagnosis and to reduce the mortality. The best way to prevent occurrence , if any , has not been identified yet [1,23].

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