

Jejunogastric Intussusception: A Rare Case Report Study

Mohd Fazl Ul Haq¹, Bilal Ahmad Wagay², Ajaz Ahmad Malik³, Munir Ahmad Wani⁴, Gowhar Aziz Bhat⁵

Received on: 01 November 2023; Accepted on: 02 December 2023; Published on: 22 December 2023

ABSTRACT

Jejunogastric intussusception (JGI) is a rare, potentially fatal complication of gastrojejunostomy following any gastric resection or gastric bypass surgery. Very less no of cases have been reported to date in the literature, with a very low incidence of <0.1%. Early recognition of JGI followed by prompt intervention is necessary to avoid any serious complications of gut gangrene or even possible death. It carries a mortality rate of approx. 10% of patients subjected to early intervention within 24 hours as compared to 50% in cases where surgery was delayed for more than 48 hours. The usual presenting complaints include a triad of palpable epigastric mass, hematemesis, and epigastric pain with only 50% of patients having this classical presentation. We here, report a middle-aged male with JGI which was diagnosed and managed at our center with emergency surgical intervention.

Keywords: Case report, Gastric cancer surgery, Gastrojejunostomy, Jejunogastric intussusception, Retrograde intussusception, Shock.

Euroasian Journal of Hepato-Gastroenterology (2023): 10.5005/jp-journals-10018-1415

INTRODUCTION

Any gastric resection or gastric bypass surgery can result in the rare but possibly fatal gastrojejunostomy complication known as jejunogastric intussusception (JGI). There have been incredibly few cases recorded in the literature up to this point, with an extremely low incidence of just 0.1%.¹ Early recognition of JGI followed by prompt intervention is necessary to avoid any serious complications of gut gangrene or even possible death. As reported in the literature it carries a mortality rate of approximately 10% in patients subjected to early intervention within 24 hours as compared to 50% in cases where surgery was delayed for more than 48 hours.² The usual presenting complaints include a triad of palpable epigastric mass, hematemesis, and epigastric pain with only 50% of patients having this classical presentation.³ We here, report a middle-aged male with JGI which was diagnosed and managed at our center with emergency surgical intervention.

CASE DESCRIPTION

A 50-year-old male, ND, NT, ET, smoker with history of palliative gastrojejunostomy for gastric outlet obstruction secondary to metastatic pancreatic head lesion (NET) presented to emergency with a history of epigastric pain and multiple episodes of vomiting with occasional hematemesis for 3 days. There was no history of jaundice, abdominal distension, fever, or any respiratory illness. At the time of presentation, patient was anxious-looking, dehydrated, having tachycardia with PR of 106 beats/min, R.R of 20/min, BP of 106/68 mm of Hg, SpO₂ of 93% on R.A and afebrile (98.8°F).

A previous rooftop incision mark across the belly, a palpable lump, and slight pain in the epigastric region on deep touch were all discovered during the patients' general physical examination. Peritonitis symptoms were non-existent. His laboratory parameters were within normal limits with TLC of 10.1 k, serum lactate levels of 1.13, and normal kidney and liver functions.

USG revealed multiple gut loops along with mesentery in the Stomach (Fig. 1).

The patient was subjected to CECT of the abdomen which showed a large pancreatic lesion compressing D2 with findings

¹⁻⁵Department of General and Minimal Invasive Surgery, Sher-I-Kashmir Institute of Medical Sciences (SKIMS), Srinagar, Jammu and Kashmir, India

Corresponding Author: Mohd Fazl Ul Haq, Department of General and Minimal Invasive Surgery, Sher-I-Kashmir Institute of Medical Sciences (SKIMS), Srinagar, Jammu and Kashmir, India, Phone: +91 6005360581, e-mail: fazi0124@gmail.com

How to cite this article: Haq MFU, Wagay BA, Malik AA, et al. Jejunogastric Intussusception: A Rare Case Report Study. *Euroasian J Hepato-Gastroenterol* 2023;13(2):163-165.

Source of support: Nil

Conflict of interest: None

Patient consent statement: The author(s) have obtained written informed consent from the patient for publication of the case report details and related images.

suggestive of retrograde Jejunogastric intussusception with mild hypo-enhancing walls of the intussuscepted loop (Fig. 2).

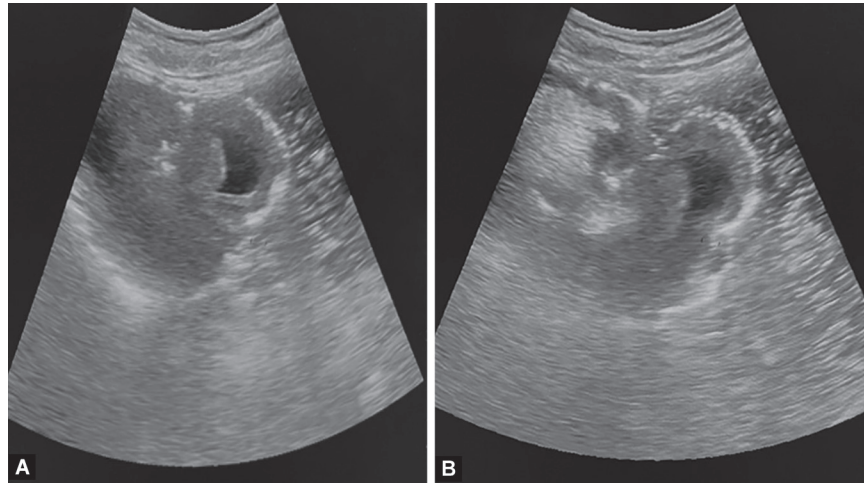
After obtaining consent from the patient emergency laparotomy was done. Intraoperative findings revealed telescoping of approximately 20 cm of the jejunum (efferent loop) into the stomach with no evidence of any lead point. Careful manual reduction of the intussuscepted loop was done. The intussuscepted loop was found edematous but viable with no evidence of any gangrenous changes. The reduced efferent limb was fixed to mesocolon using Vicryl 2-0 interrupted sutures to avoid any recurrence (Fig. 3).

The postoperative course was uneventful. The patient was discharged on POD3 and is on regular follow-up.

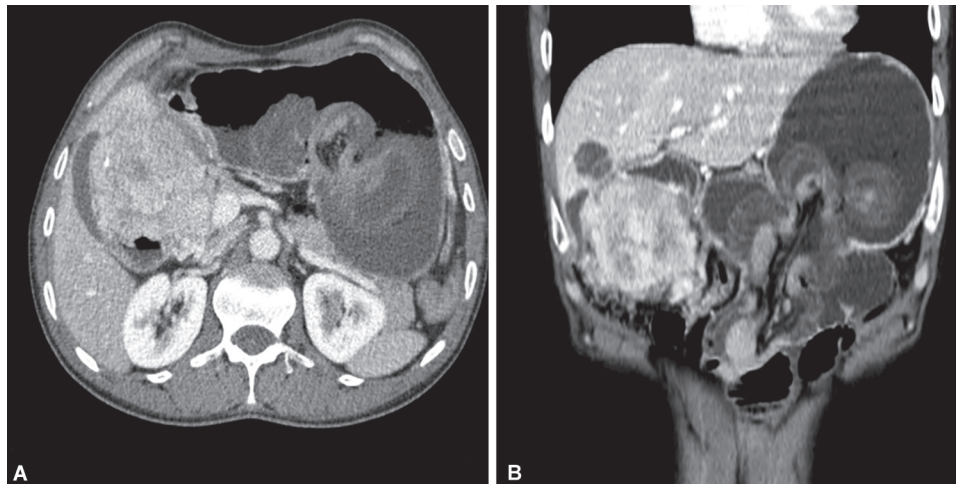
DISCUSSION

Following any stomach resection or gastric bypass surgery, a gastrojejunostomy may result in the rare but potentially fatal complication of jejunogastric intussusception.

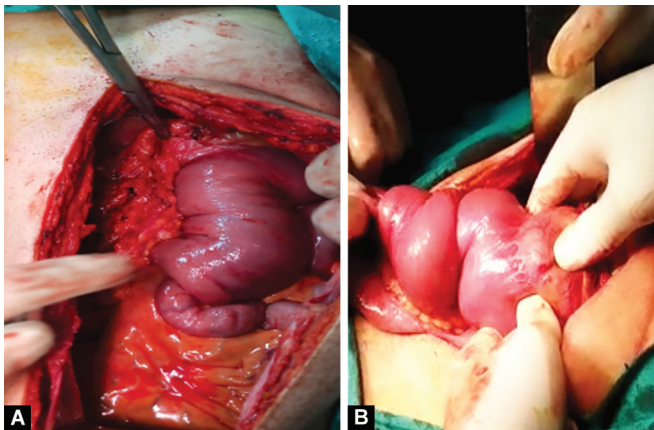
Based on the intussusceptum, there are four main forms of jejunogastric intussusception (Fig. 4).



Figs 1A and B: USG images showing multiple gut loops along with mesentery in stomach



Figs 2A and B: (A) Cross section; (B) Sagittal section; CECT images showing intussuscepted jejunum into the stomach



Figs 3A and B: Intraoperative images showing Jejunogastric intussusception pre- and post-reduction of viable Jejunal loops

Type I afferent loop intussusception, type II efferent loop intussusception, type III combined type I and type II, type IV intussusception via side-to-side jejunal anastomosis (Braun).

With roughly 76.5% of instances, type II is the most prevalent variety of all of them, as was also observed in our patient.⁴

Long afferent limb, wide anastomosis, and retrograde peristalsis are risk factors for JGI, but the exact etiopathogenesis has not yet been identified.⁴ Early recognition of JGI followed by prompt intervention is necessary to avoid any serious complications of gut gangrene or mortality which significantly increases with delay in intervention from 10 to 50% if management is delayed for 2 or more days.² Patients can present with a wide range of symptoms depending on the time of presentation to health care facility since the onset of complaints ranging from nausea, vomiting, pain, hematemesis, abdominal distension, or even shock. The classical triad of palpable epigastric mass, hematemesis, and epigastric pain accounts for only 50% of patients presenting to a Health care facility.² The gold standard for diagnosis for JGI is endoscopy with the additional benefit of assessment of bowel viability and therapeutic reduction of same. Radiological investigations such as ultrasound and CT scans being easily available at most centers also prove helpful in early diagnosis and help in preventing mortality. Our case was also picked during ultrasonographic evaluation for pain abdomen. However, majority of cases are diagnosed with direct visualization, either endoscopically or intraoperatively.^{1,2}

Management of JGI includes both minimally invasive endoscopic reduction of intussusception or surgical intervention. Endoscopic reduction is of less help in the presence of Peritonitis and also

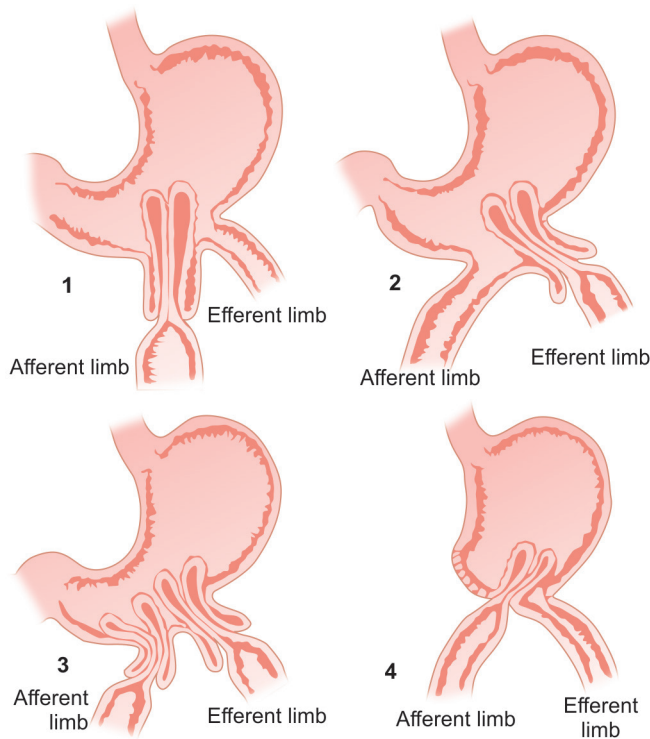


Fig 4: Diagrammatic representation of different types of jejunogastric intussusception

carries high chance of recurrence.⁵ Surgery remains the mainstay treatment for the management of JGI. Operative management should be chosen on a case-by-case basis and will be influenced by both intraoperative results and the patient's general state of health. Based on intraoperative findings, a range of surgical techniques can be carried out. These include resection or revision of anastomosis or creation of Roux-en-Y bypass based on gut viability and intraoperative findings, reduction of the intussuscepted limb manually with gentle traction followed by fixation of a reduced jejunal limb to the adjacent tissue, such as mesocolon, transverse

colon, or stomach, which aims to decrease or even prevent recurrence.⁶ In our case report, manual reduction of intussusception was done, jejunal loops were found to be viable and were fixed to mesocolon with interrupted sutures.

CONCLUSION

In order to add a little to the body of knowledge, we described a rare instance of jejunogastric intussusception in a patient who had undergone palliative gastrojejunostomy. Our case report study will be useful in developing management plans for future instances of comparable situations and in the diagnostic work-up. Even though jejunogastric intussusception is uncommon, prompt treatment is essential to prevent disastrous results, hence an early diagnosis calls for a high index of suspicion.

ORCID

Mohd Fazl Ul Haq <https://orcid.org/0000-0001-8732-0362>

Ajaz Ahmad Malik <https://orcid.org/0000-0001-7334-5518>

REFERENCES

1. Herbella FA, Del Grande JC. Radiology for the surgeon. Soft-tissue case 53. Postgastrectomy jejunogastric intussusception, *Can J Surg* 2003;46(6):465–466. PMID: 14680356.
2. Walstad PM, Ritter JA, Arroz V. Delayed jejunogastric intussusception after gastric surgery: An ever-present threat. *Am Surg* 1972;38(3): 172–175. PMID: 5060235.
3. Tokue H, Tsushima Y, Arai Y, et al. Jejunogastric intussusception: life-threatening complication occurring 55 years after gastrojejunostomy. *Intern Med* 2009;48(18):1657–1660. DOI: 10.2169/internalmedicine.48.2115.
4. Brynitz S, Rubinstein E. Hematemesis caused by jejunogastric intussusception, *Endoscopy* 1986;18(4):162–164. DOI: 10.1055/s-2007-1018361.
5. Archimandritis AJ, Hatzopoulos N, Hatzinikolaou P, et al. Jejunogastric intussusception presented with hematemesis: A case presentation and review of the literature. *BMC Gastroenterol* 2001;1:1. DOI: 10.1186/1471-230x-1-1.
6. Loi CM, Huang SY, Chen YD, et al. Retrograde jejunogastric intussusception: A case report and review of the literature. *Asian J Surg* 2017;40(4):309–312. DOI: 10.1016/j.asjsur.2014.04.001.