

## Jejunogastric Intussusception: A Rare Complication of Gastric Surgery

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A 70-year-old male presented with the complaints of severe abdominal pain and vomiting for two hours at the Department of Radiology & Imaging of Enam Medical College & Hospital. He had a history of gastrojejunostomy operation 12 years back due to chronic duodenal ulcer. His USG of whole abdomen revealed a heterogeneous growth in epigastric and right lumbar regions with distended stomach suggestive of bowel mass/pyloric mass along with intussusceptions (Fig 1). Chest radiography showed features of chronic obstructive pulmonary disease (COPD) with left pulmonary consolidation. Investigations of blood showed neutrophilic leukocytosis and hyponatremia. For further evaluation CT scan of whole abdomen with contrast was advised.

Contrast-enhanced CT (CECT) scan of whole abdomen showed a mixed density jejunal loops measuring about 10 cm × 8 cm having an appearance of spring coil/target sign within hugely distended stomach and extending up to pelvic cavity involving mostly right lumbar region (Fig 2–5). The mass was compressing surrounding structures such as gall bladder and right ureter. After contrast, lumen and walls of bowel loops within the mass were enhanced giving concentric ring appearance. Walls of loops within the mass were thick, edematous and hypodense suggestive of obstruction. Finally complex right abdominal mass within hugely distended stomach suggestive of acute on chronic retrograde jejunogastric intussusception (JGI) was diagnosed provisionally.

Retrograde jejunogastric intussusception is a well-recognized, rare, long-term complication of posterior gastro-jejunostomy, Billroth-II partial reconstruction and Roux-en-Y gastrojejunostomy. Its estimated frequency is approximately 0.1%.<sup>1</sup> The dominant

symptom is pain which may be associated with nausea and vomiting. Patients may present with high intestinal obstruction or severe hematemesis from secondary ulceration.<sup>2</sup> A firm mass may be palpable in the epigastrium. A water-soluble upper GI contrast study may reveal a 'coiled-spring' appearance within the stomach. Upper GI endoscopic examination is often diagnostic and may visualize the jejunal segments as they migrate in and out of the stomach. JGI should be suspected first if a patient presents with hematemesis and has a mobile upper abdominal mass with visible peristalsis, and bears an upper midline or paramedian scar.<sup>1,2</sup> There are two clinical types in an acute variety.<sup>2</sup> In the type I, the patient is suddenly seized with an acute attack of epigastric pain followed by a sensation of severe constriction of abdomen. Visible peristalsis is seen and a mass may be palpable in the epigastrium. Early operation can be life-saving in 90% of the cases. The second variety may seem to be a bleeding anastomotic ulcer, the dumping syndrome or proximal loop syndrome or obstruction due to adhesions. Vomiting is frequent and may be at first blood-stained and then frankly hemorrhagic. Medical treatment is usually tried first but a delay in surgery may cause more morbidity and mortality. Spontaneous reduction is rare.

The chronic variety is characterized by recurrent bouts of epigastric distress, nausea and colicky abdominal pain. Intermittent vomiting which may be severe occurs at a remote date after gastro-jejunostomy. Barium meal study is useful and gastroscopy is a valuable diagnostic tool.<sup>2,3</sup> Surgical options include reduction, resection and revision of anastomosis and take-down of anastomosis depending on the conditions found during operation. Pyloroplasty can be considered as one of the treatment options as it offers many advantages.<sup>4</sup>



Fig 1. USG of abdomen showing spring coil appearance of jejuno gastric intussusception

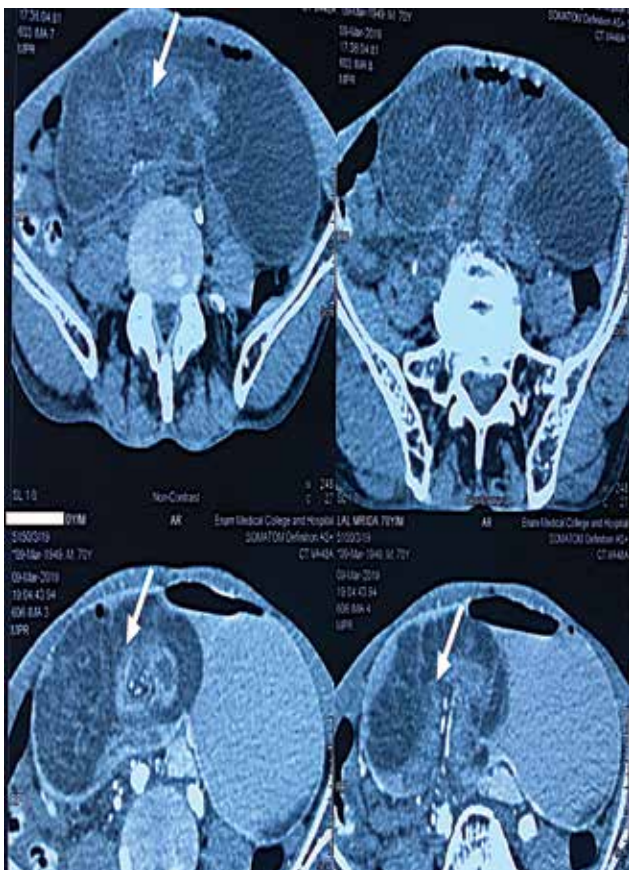


Fig 2. Pre- and post-contrast axial CT scan showing spring coil appearance of complex mass in stomach

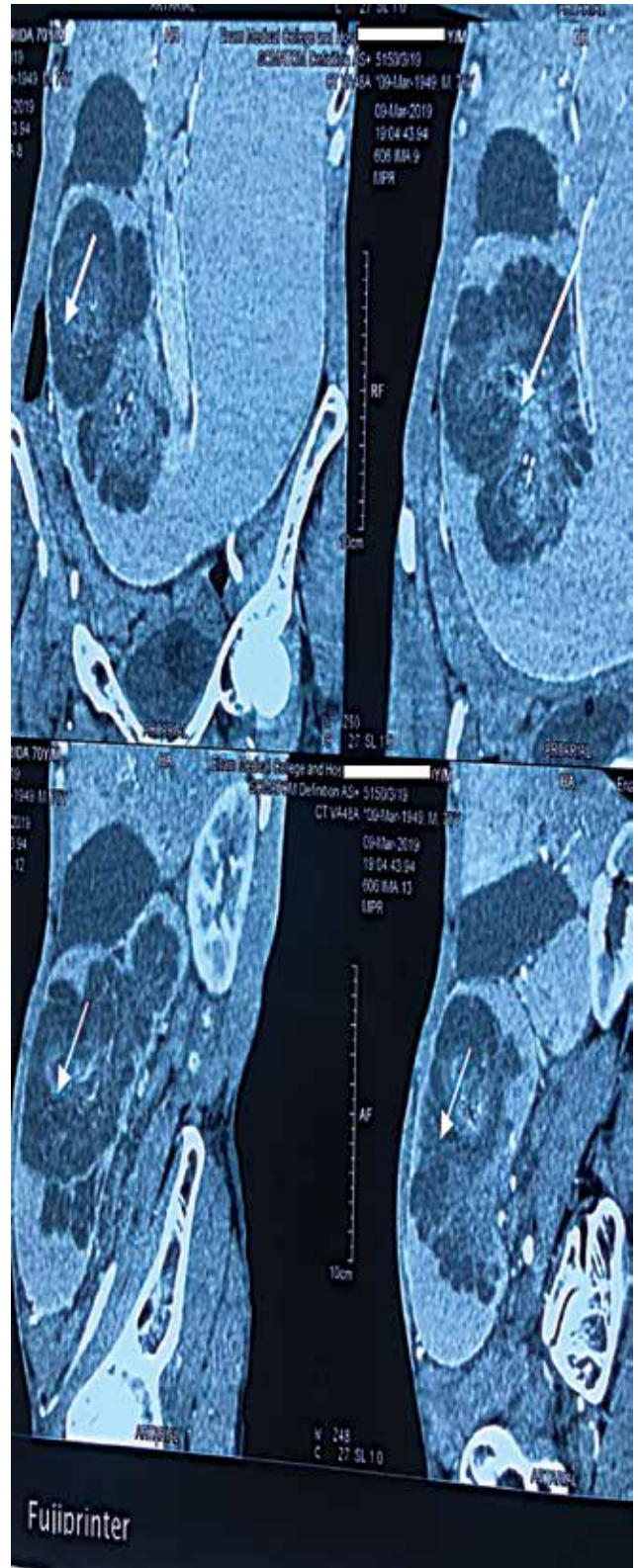


Fig 3. Coronal and sagittal images showing hugely distended stomach with jejunal loops on right lumbar region



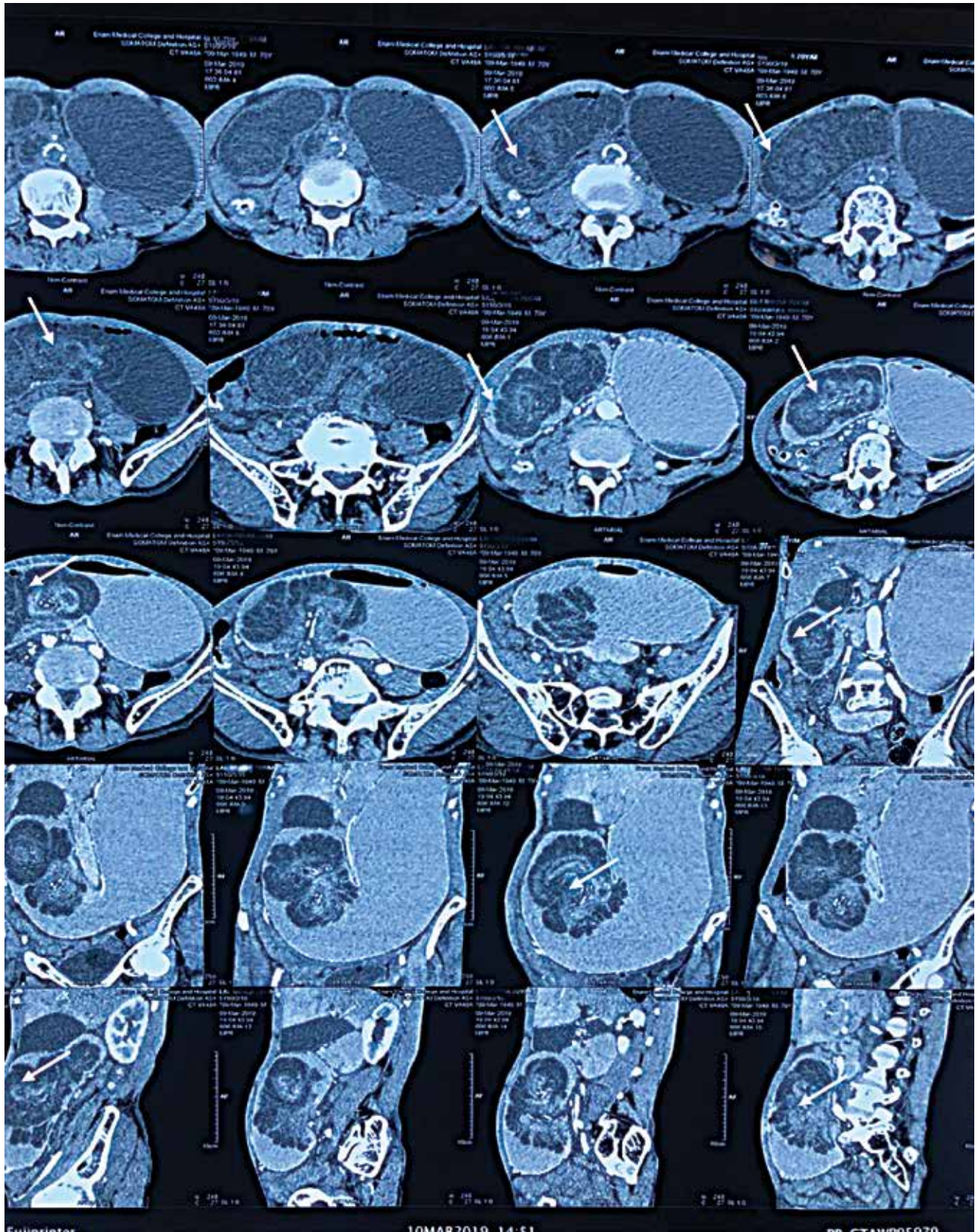


Fig 4. Multi-axial images showing retrograde jejuno-gastric intussusception





Fig 5. Close view of target sign of JGI on post-contrast coronal image of CT scan

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