Adult Jejuno-Jejunal Intussusceptions due to Gastrointestinal Stromal Tumor

Abstract
Intussusception is telescoping of proximal segment of the intestine within the lumen of adjacent segment of intestine. In children, most of the intussusception is idiopathic, whereas in adults, it is always associated with pathological lead point. In adults, jejuno-jejunal intussusception is very rare compared to children. Preoperative diagnosis is difficult in most of the cases, so adequate negative margin is mandatory when a gastrointestinal stromal tumor (GIST) is suspected as the cause of jejuno-jejunal intussusception. This case is reported because jejunal intussusception is one of the rare presentations of GIST.

Keywords: Anastomosis, gastrointestinal stromal tumor, jejuno jejunal intussusception, resection

Introduction
Intussusception is the telescoping of proximal segment of the intestine within the lumen of the adjacent segment of intestine. The highest incidence of intussusception is between 4 and 10 months of age. The incidence of intussusception is higher in children compared to adults. The types of intussusception include ileocolic (77%), ileo-ileo-colic (12%), ileoileal (5%), colocolic (2%), ileocecal, jejuno-jejunal, and retrograde intussusception. In adults, colocolic intussusception is the most common, whereas in children, ileocolic intussusception is common. Jejuno-jejunal intussusception is a rare site for adult intussusception.

Case Report
A 45-year-old male presented with complaints of abdominal pain for 4 days associated with a history of nausea and vomiting for 3 days. On examination, the patient was conscious, oriented, and febrile. Pulse rate was 110/min, and blood pressure was 80/60 mmHg. On abdominal examination, there was distension with guarding and rigidity. On auscultation, bowel sounds were absent. Investigation showed anemia with leukocytosis. Renal function tests and liver function tests were altered. Computed tomography of the abdomen showed dilated small bowel loops with free fluid. Preoperative diagnosis made as small intestine obstruction and planned for laparotomy. Intraoperative findings were small bowel obstruction due to jejuno-jejunal intussusception with jejunal gangrene [Figures 1 and 2]. Primary resection and anastomosis were performed due to the gangrenous bowel. Cut opened specimen of the jejunum showed an intraluminal mass lesion acting as a leading point for intussusception [Figure 3]. Postoperative histopathological examination showed proliferation of bland spindle cells with pale-to-eosinophilic fibrillar cytoplasm [Figure 4]. Tumor showed strong positive reaction for CD117 and CD34 with negative resected margin [Figures 5 and 6]. The above-mentioned findings confirmed the diagnosis of gastrointestinal stromal tumor (GIST). Postoperative recovery was uneventful.

Discussion
Intestinal obstruction due to intussusceptions is more common in children than in adults. In adults, intestinal obstruction due to intussusception is <1%. The intussusception in children is mostly idiopathic, and in adults, it is usually associated with pathological lead point.

The clinical features of intussusception are nonspecific in adults compared to children.

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Most adult intussusceptions present with features of intestinal obstruction. In most of the literature described, abdominal pain is the most common symptom followed by nausea and vomiting. Plain abdominal X-rays, barium upper gastrointestinal series, barium enema, ultrasound, and abdominal computed tomography (CT) scan are used for the diagnosis of intussusception. Diagnostic laparoscopy added...
The other causes of jejunoo-jejunal intussusception reported in the literature include lymphoma, postgastrojejunostomy, Roux en-y gastric bypass, postoperative jejunoo-jejunal anastomosis, jejunal polyp in Peutz-Jeghers syndrome, metastatic melanoma, lipoma, fibroma, adenocarcinoma, GIST, and ectopic pancreatic tissue.[1]

GIST is a relatively rare mesenchymal tumor that originates from interstitial cells of Cajal. GIST constitutes 1% of primary gastrointestinal malignancies. Only few cases reported GISTs as a leading point of adult intussusception.[7]

The incidence of GIST varies from 40% to 60% in stomach, 25% to 30% in jejenum, 5% to 15% in colorectum, 5% in duodenum, and <1% in esophagus.[8-10] Contrast CT is the investigation of choice for evaluation of primary tumor and accurate staging, but in intussusception due to GIST, diagnosis is commonly made in the postoperative specimen rather than preoperative imaging. Segmental resection with negative margin is the treatment of choice for resectable tumor, where imatinib is preferred when the tumor is borderline resectable or unresectable tumor.[11] The management of GIST due to intussusception is slightly different from conventional management of GIST. In most of the cases, primary resection and anastomosis are done for the management of intussusception and management planned according to postoperative histopathology report.

Conclusion

Intussusception is a rare cause of intestinal obstruction in adults. GIST as a cause of jejunoo-jejunal intussusception is rarely reported. Management includes primary resection with negative margin. Preoperative diagnosis is difficult in most of the cases, so adequate negative margin is mandatory when GIST is suspected as a cause of jejunoo-jejunal intussusception.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

References