Case Report

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Surgery Section

Ileo-Ileal Intussusception Caused by Inflammatory Fibroid Polyp in an Adult Female: A Case Report

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ABSTRACT

Intussusception occurs when a segment of the intestine telescopes into an adjacent part, leading to obstruction and possible ischaemia. Although common in children, adult intussusception is rare and frequently associated with a pathological lead point. We report the case of a 62-year-old woman who presented with abdominal pain, vomiting, and constipation. Contrast-Enhanced Computed Tomography (CECT) revealed ileo-ileal intussusception with a suspected lesion measuring approximately 6 cm. Intraoperatively, a 3×3 cm serosal tumour was identified as the lead point. Resection and ileo-ileal anastomosis were performed, and histopathology confirmed the mass to be an Inflammatory Fibroid Polyp (IFP) with eosinophilic infiltration. This case highlights the importance of early diagnosis using imaging and the necessity of surgical intervention to avoid complications. Awareness of IFPs as rare causes of adult intussusception can guide timely and accurate clinical decision-making.

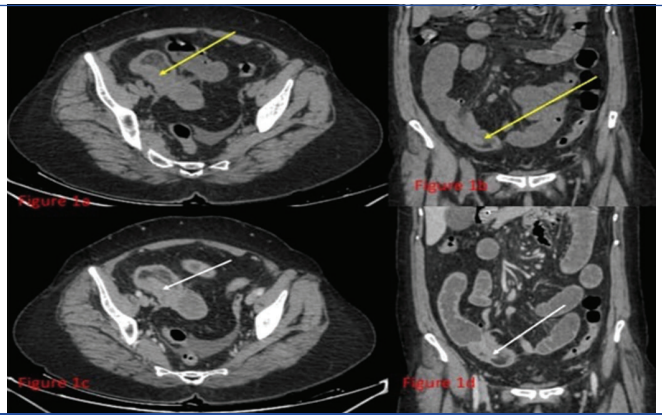
Keywords: Abdomen, Diagnosis, Eosinophils, Intestinal obstruction, Polyp, Surgery

CASE REPORT

A 62-year-old woman presented with a complaint of dull, non-radiating abdominal pain that gradually worsened, especially after food intake for 10 days. She also had non-bilious vomiting, constipation, and loss of appetite for the past four days. There was no history of fever, melena, haematemesis, or weight loss. Her past medical and surgical history was unremarkable.

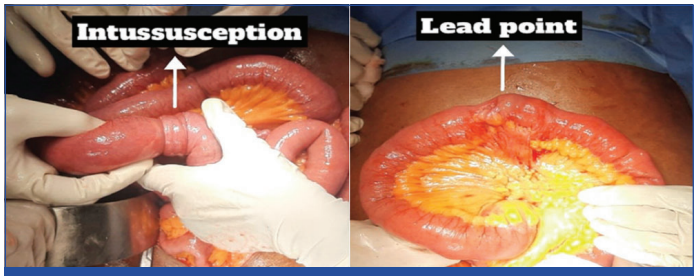
On general examination, she was afebrile, alert, and oriented. Vital signs were stable. No signs of pallor, icterus, clubbing, cyanosis, or lymphadenopathy were present. Abdominal examination revealed tenderness in the umbilical and hypogastric regions. There were no palpable masses, no rigidity, and no guarding. Bowel sounds were hyperactive. Rectal examination showed an empty rectum without blood staining.

CECT of the abdomen showed ileo-ileal intussusception in the right iliac fossa with a target sign and a suspected lesion measuring approximately 6 cm, causing partial Small Bowel Obstruction (SBO). The involved bowel loops showed normal enhancement [Table/Fig-1].



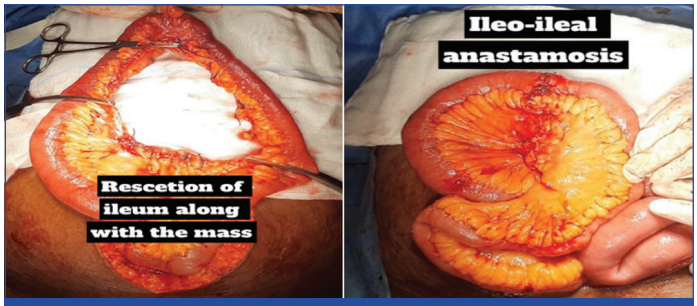
[Table/Fig-1]: Contrast-enhanced Computed Tomography (CT) showing ileo-ileal intussusception with characteristic "target" appearance in the right iliac fossa. Yellow arrows denote the "target sign" of ileo-ileal intussusception on axial and coronal CT scans.

The patient was optimised preoperatively and classified as the American Society of Anaesthesiologists (ASA) Grade II. She was taken up for an exploratory laparotomy. Intraoperatively, a segment of ileo-ileal intussusception was encountered and carefully reduced. A firm lesion measuring 3×3 cm was identified on the serosal surface of the ileum and confirmed as the lead point [Table/Fig-2].



[Table/Fig-2]: Intraoperative photograph showing the intussuscepted ileal segment and a 3×3 cm serosal lesion acting as the lead point.

A segmental resection of the affected ileum was performed with adequate margins, followed by an end-to-end ileo-ileal anastomosis. The remaining bowel appeared normal [Table/Fig-3].

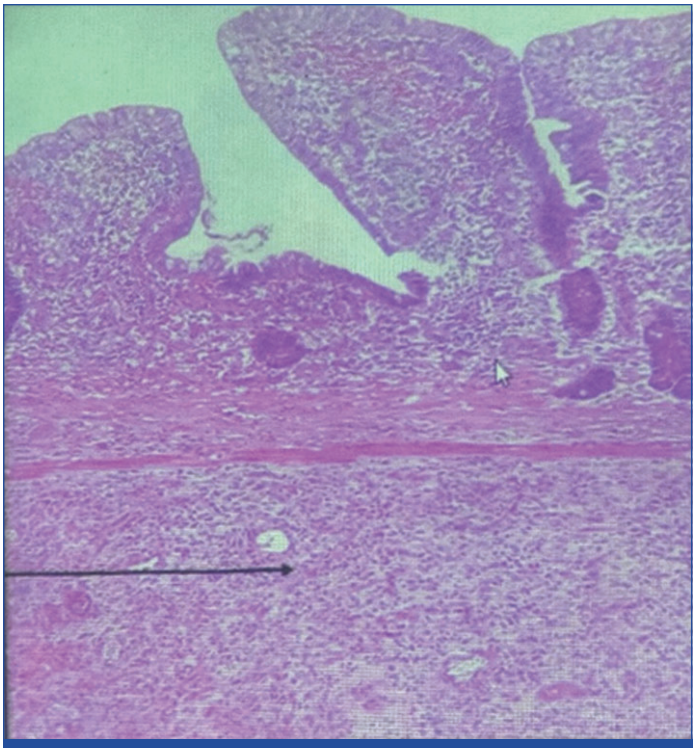


[Table/Fig-3]: Gross specimen showing resected segment of ileum with the mass and completed ileo-ileal anastomosis.

The specimen was sent for histopathological examination. Microscopic evaluation revealed a submucosal lesion with focal eosinophilic infiltration into the lamina propria, consistent with an Inflammatory Fibroid Polyp (IFP) [Table/Fig-4]. The margins were feasible and disengaged. The patient experienced a smooth postoperative recovery and was asymptomatic during the follow-up period.

DISCUSSION

Intussusception occurs when a section of the proximal bowel invaginates into the orifice of an adjacent distal bowel segment,



[Table/Fig-4]: Histological section showing lesion centred in the submucosa with eosinophilic infiltration into the lamina propria {Haematoxylin and Eosin (H&E stain, 40x magnification)}.

resulting in obstruction and the possibility of ischaemic injury or necrosis of the involved bowel segment. Approximately 5% of intussusception cases are deemed to manifest in adulthood [1]. The most common locations are the small intestine, particularly the jejunum and ileum, together with the large intestine [2].

The pathophysiology of IFPs remains incompletely understood. Research suggests that IFPs may arise from a localised inflammatory response, perhaps induced by infection, trauma, or allergies. Recent evidence has shown activating mutations in the Platelet-Derived Growth Factor Receptor Alpha (PDGFRA) gene in numerous instances, indicating a neoplastic origin [3].

The differential diagnoses for adult intussusception encompass several benign and malignant aetiologies. These encompass GastrointestinalStromalTumours(GISTs),lipomas,adenocarcinomas, lymphomas, Meckel's diverticulum, Crohn's disease, and surgical adhesions. Accurate imaging, especially CT scans, is crucial for refining these options [4,5]. Optimal management consists of exploratory laparotomy or laparoscopy and removal of the mass of the lead point or infarcted portion of the intestine. Devkota S et al., reported an ileo-ileal intussusception induced by the IFP, resulting in bowel obstruction, similar to our case [6].

Al Taei TH et al., reported a case of small intestine intussusception in a 35-year-old female who exhibited intermittent abdominal pain, nausea, and vomiting. Imaging tests identified a jejunojejunal intussusception, and surgical exploration verified the existence of an IFP as the lead point. The patient successfully underwent segmental excision of the affected intestine segment, and histological examination validated the diagnosis of an IFP [7].

Khanduri A et al., reported an ileal IFP showing minor bowel obstruction secondary to intussusception of the ileocolic. The patient had an effective surgical excision for treatment. The diagnosis of IFP was established through histological analysis of the excised specimen [5].

The ileocolic intussusception in adults described by Toro Tole D et al., is similar to the ileo-ileal intussusception due to an IFP that we documented in this study. There was an ileocolic intussusception discovered by computed tomography. An ileocolic intussusception caused by a polypoid mass located twenty centimetres distant from the ileocecal valve in the terminal ileum. Histopathological examination of the removed mass showed an IFP that was restricted to the mucosa and submucosa [2].

Reddy HG et al., documented a case of an IFP in the small intestine, which manifested as an abrupt gastrointestinal haemorrhage following an episode of ileo-ileal intussusception caused by an SBO due to the IFP. The case presented highlights the potential for intussusception of the small intestine generated by an IFP, as demonstrated in our instance of acute obstruction requiring emergency intervention [8].

The instance of IFP resulting from ileo-ileal intussusception in this study matches another case documented by Toydemir T, which involved a partial intestinal blockage in the terminal ileum's location as seen by computed tomography imaging. Exploratory laparotomy revealed an ileal intussusception due to a substantial lesion situated 15 cm proximal to the caecum. During exploration, the intussusception spontaneously decreased, and the afflicted intestinal segment underwent a wedge resection. The mass was identified as an IFP by histopathologic analysis [9]. Surgical resection needed in both cases underscores the application of surgery as the most consistent method of management. The similarity acts as an incentive for timely diagnosis and surgery in a bid to avoid complications.

CONCLUSION(S)

Although very uncommon, IFPs can serve as initiators of adult intussusception; early diagnosis and timely surgical intervention are important to prevent serious complications like obstruction and intestinal ischemia. As this is a case report, and this condition is very rare, the exact symptoms cannot be generalised, and the clinical course, recurrence risk, and management strategies for intussusception due to IFP require further research for clarification.

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