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Case Report

Ileo-cecocolic intussusception in an adolescent with chronic colitis: A rare surgical emergency

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Abstract

Intussusception is uncommon in adolescents and, when it occurs, is frequently associated with a pathological lead point. Ileo-cecocolic intussusception is a particularly rare variant, and its occurrence in patients with chronic colitis is even more unusual. We report the case of a 15-year-old male with a known history of chronic colitis who presented with abdominal pain and was diagnosed with ileo-cecocolic intussusception. Prompt recognition and timely surgical intervention resulted in a favorable clinical outcome. This case underscores the importance of maintaining a high index of suspicion for intussusception in older children and adolescents presenting with abdominal symptoms, particularly those with pre-existing gastrointestinal conditions.

Keywords: Intussusception, Chronic colitis, Adolescent, Emergency

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1. Introduction

Intussusception is a condition in which a segment of the intestine telescopes into an adjacent distal segment, leading to intestinal obstruction, vascular compromise, and, if untreated, bowel necrosis. It is the most common abdominal emergency in infants and young children under two years of age, accounting for approximately 1–4 cases per 1,000 live births in that age group. However, its incidence decreases significantly with age rare and becomes in adolescents and adults, where it represents only 5–10% of all intussusception cases and less than 1% of intestinal obstructions in adults.[1,2]

In infants and young children, most cases are idiopathic and are thought to be related to hypertrophied Peyer's patches following viral infections. In contrast, intussusception in older children and adolescents is more likely to be associated with a pathological lead point, such as a Meckel's diverticulum, intestinal polyp, lymphoma, or other benign or malignant neoplasm.[3]

Chronic colitis, including forms of inflammatory bowel disease (IBD) such as ulcerative colitis or Crohn's disease, is a rare predisposing factor for intussusception, particularly in the adolescent population. Inflammation in colitis can cause mucosal thickening, lymphoid hyperplasia, and abnormal peristalsis, all of which may contribute to the development of a transient or functional lead point.[4,5] Additionally, symptoms of colitis, such as abdominal pain and bloody diarrhea, may overlap with or obscure the presentation of intussusception, leading to delayed diagnosis.

Due to its rarity and nonspecific clinical features in this age group, intussusception in adolescents is often diagnosed late, increasing the risk of complications and the likelihood of requiring surgical intervention. Imaging—particularly ultrasound and contrast-enhanced computed tomography (CT)—plays a vital role in early diagnosis.[6] Surgical exploration is typically warranted in adolescents due to the high incidence of pathological lead points and the lower success rate of non-operative reduction.

We report a rare case of ileo-cecocolic intussusception in a 15-year-old male with chronic colitis, emphasizing the diagnostic and therapeutic challenges involved and highlighting the importance of maintaining a high index of suspicion in similar clinical settings.

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2. Case Presentation

A 15-year-old male presented with abdominal distension and acute abdominal pain for the past 3–4 days. He also had a prolapsed and non-functional stoma for 2 days. His surgical history was significant for multiple prior abdominal procedures. Approximately one year earlier, he had undergone primary closure of a sigmoid colon perforation. Three months later, he developed another rectosigmoid perforation at a different site, for which he underwent primary repair and a loop ileostomy at an outside facility.

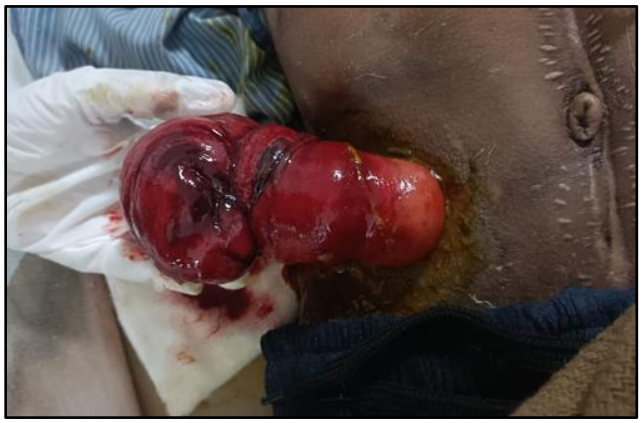

Figure 1: Clinical image

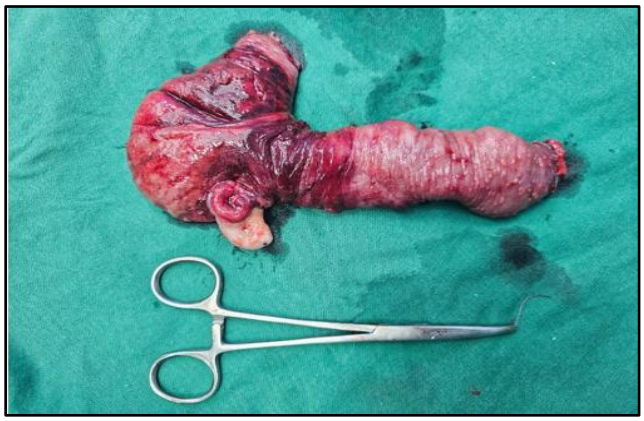

Figure 2: Resected specimen

Following these events, a colonoscopy revealed multiple aphthous ulcers and features of pancolitis. Biopsies taken during the procedure showed non-specific chronic inflammation, but no definitive features of inflammatory bowel disease (IBD) were itidenfied.

At the current presentation, the patient exhibited acute abdominal symptoms along with a prolapsed, non-functioning stoma. Clinical examination and subsequent imaging confirmed the diagnosis of intussusception.

The patient was stabilized and taken up for emergency laparotomy. Intraoperatively, intussusception of the ileum and ileocecal (IC) junction into the ascending colon was noted, with gangrenous changes at the IC junction. Resection of the gangrenous ileal segment was performed, and a double-barrel ileostomy with an ascending colon stoma was fashioned.

Postoperatively, the patient recovered well and was discharged on postoperative day five. He was subsequently nutritionally optimized in preparation for stoma closure. Two months later, he underwent stoma closure with a single-layer ileo-ascending anastomosis. Follow-up at 7 days, 1 month, and 3 months postoperatively showed that he remained clinically well, with no complications.

3. Discussion

Intussusception is a common cause of intestinal obstruction in infants and toddlers but becomes increasingly rare in older children and adolescents, accounting for only 5–10% of pediatric cases and an even smaller proportion of adolescent presentations.[1] Common pathological lead points include Meckel's diverticulum, lymphoid hyperplasia, polyps, and neoplasms.[3] Chronic colitis, including inflammatory bowel diseases (IBD) such as Crohn's disease and ulcerative colitis, is a rarely reported predisposing factor; however, it may contribute to intussusception through mucosal inflammation, lymphoid hyperplasia, and altered intestinal motility.[4]

Diagnosing intussusception in adolescents with chronic colitis is challenging due to overlapping clinical features, as both conditions may present with abdominal pain, vomiting, and hematochezia. Consequently, intussusception may be misinterpreted as a colitis flare, potentially delaying definitive management and increasing the risk of bowel ischemia or perforation.[5]

Although abdominal ultrasonography is typically the first-line imaging modality and highly effective in pediatric patients, computed tomography (CT) is often required in adolescents and adults to confirm the diagnosis and assess complications or potential lead points.[6] In our patient, intussusception was confirmed on imaging following clinical evaluation. Surgical exploration revealed an irreducible, ischemic ileocolic segment, necessitating the creation of a double-barrel stoma due to the patient's poor general condition. No neoplastic lesion was identified; however, hypertrophic Peyer's patches and bowel wall thickening were noted and likely served as the lead point, possibly associated with chronic mucosal inflammation secondary to colitis, as confirmed on histopathological examination.

Several cases of intussusception associated with IBD—particularly Crohn's disease—have been reported, often involving the small bowel and occasionally presenting postoperatively or resolving spontaneously[7,7] In contrast, chronic colitis causing intussusception unrelated to IBD is exceedingly rare, with only a few cases linked to giant pseudopolyps acting as mechanical lead points.[9]

Non-operative reduction using pneumatic or hydrostatic enemas is effective in young children but less successful in older children and adolescents, particularly when a

pathological lead point or signs of bowel compromise are present.[10] Surgical intervention is therefore often required and may involve manual reduction or bowel resection, depending on the viability of the affected segment and the presence of a lead point.[11] In patients with IBD, bowel-preserving strategies are preferred whenever feasible, especially in Crohn's disease, where repeated resections may lead to short bowel syndrome.[12]

4. Conclusion

This case highlights a rare but clinically significant presentation of ileo-cecocolic intussusception in an adolescent with chronic colitis, underscoring the diagnostic and therapeutic complexities that arise when inflammatory bowel disease (IBD) coexists with acute surgical pathology.

It contributes to the limited but growing body of literature documenting intussusception in adolescents with underlying inflammatory bowel disease. The case serves as an important reminder to pediatricians, gastroenterologists, and surgeons that surgical emergencies can coexist with chronic gastrointestinal disorders, and that timely differentiation is critical to preventing serious complications.

Ultimately, early recognition, appropriate imaging, and prompt surgical intervention can result in favorable outcomes, even in complex clinical scenarios such as this. Further research and accumulation of similar cases are necessary to enhance understanding of the underlying pathophysiological mechanisms and to develop tailored management guidelines for intussusception in patients with chronic colitis.

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6. Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

7. Conflict of Interest

None.

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