



Acute Ileo-Colic Intussusception with Perforation Peritonitis in a Young Adult: A Rare Presentation

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Abstract

Background:

Ileo-colic intussusception in adults is a rare cause of intestinal obstruction and rarely presents with perforation peritonitis

Case Report:

We report the case of a 20-year-old male who presented with generalized abdominal pain, distension, and features of intestinal obstruction, later diagnosed intraoperatively as ileo-colic intussusception with perforated ileum and fecal-peritonitis. The patient underwent limited right hemicolectomy with end ileostomy and mucus fistula formation, followed by successful stoma reversal after nutritional optimization. This case emphasizes the importance of timely intervention in rare adult ileo-colic intussusception complicated by perforation

Conclusion:

This case emphasizes the importance of timely intervention in rare adult intussusception complicated by perforation.

Keywords: Adult intussusception, End-ileostomy, Fecal peritonitis, Hemicolectomy, Ileo-colic intussusception, Perforation peritonitis

Introduction

Adult intussusception is uncommon and accounts for 5% of all intussusceptions and 1–5% of bowel obstructions in adults [1]. Unlike pediatric cases, it often has a pathological lead point and rarely presents with peritonitis or perforation. Herein, we present a rare case of ileo-colic intussusception with associated ileal perforation and fecal peritonitis in a young male.

Case Presentation

A 20-year-old male from Uttar Pradesh presented to the surgical emergency department with a history of generalized abdominal pain for the past seven days which was insidious in onset, dull aching initially, but increased in severity over 3 days followed by non-passage of stool and flatus, progressive abdominal distension with bilious vomiting for four days.

He denied any history of prior abdominal surgery, tuberculosis, or substance abuse.

On examination, he was conscious, oriented, dehydrated, hypotensive, and tachycardic. The abdomen was distended with generalized guarding and absent bowel sounds. Digital rectal examination showed fecal staining with a collapsed rectal lumen.

Laboratory investigations revealed, hemoglobin: 11.4 g/dL, TLC: 5600/ μ L (Neutrophils 80%), urea: 67 mg/dL, creatinine: 1.19 mg/dL, sodium: 129 mmol/L, potassium: 3.08 mmol/L. ABG revealed metabolic acidosis with a serum lactate of 3.2 mmol/L, X-ray chest with abdomen: free gas under right hemidiaphragm, ultrasound whole abdomen: Gross

ascites with internal echoes suggesting fecal peritonitis

A provisional diagnosis of perforation peritonitis was made.

Initial resuscitation included securing two wide-bore intravenous lines, followed by aggressive intravenous fluid resuscitation to address dehydration and hypotension. Broad-spectrum intravenous antibiotics, analgesics and oxygen via mask were administered. Additionally, a Foley's catheter was inserted for accurate input-output monitoring, and a nasogastric tube was placed for gastric decompression. Continuous monitoring of vital signs and strict input-output charting were maintained throughout the resuscitation period to ensure hemodynamic stability. Electrolyte correction was done.

Upon stabilization, the patient was taken for emergency exploratory laparotomy.

Intraoperative findings:
 - 600 mL of feco-purulent peritoneal contamination
 - A 0.5 x 0.5 cm perforation in the ileum just proximal to the intussusciens (cecum)
 - 20 cm of gangrenous ileal segment telescoped in the cecum and ascending colon which was resected (Ileo-colic intussusception)
 -28 Fr pelvic drain placed

The procedure performed was exploratory laparotomy with limited right hemicolectomy with end ileostomy and distal colon mucus fistula under GA

Resected specimen: 20 cm gangrenous ileum with perforated segment, cecum, and 5 cm ascending colon.

Post operative stay was uneventful. Nasogastric tube and Foley's catheter was removed on post operative day (POD) -2. Oral feeds were resumed at POD -2 upon functioning of stoma and then discharged on POD-8.

After 4 weeks of nutritional build-up, the patient underwent stoma reversal with end-to-end ileocolic

anastomosis. Postoperative recovery was uneventful, and the patient was discharged on POD-6.

Discussion

Adult intussusception is often secondary to a pathological lead point, including neoplasms, Meckel's diverticulum, or adhesions [2,3]. Perforation due to ischemia, though rare, significantly raises morbidity. Early diagnosis remains challenging due to non-specific symptoms. In this case, advanced peritonitis warranted immediate surgical intervention. Right hemicolectomy with stoma was life-saving, with staged reconstruction after recovery.

Conclusion

This case highlights the rare but critical presentation of adult intussusception with perforation peritonitis. Prompt resuscitation, diagnosis, and surgical management are essential to improve outcomes. A two-stage procedure with later stoma reversal can offer excellent results in such high-risk scenarios.

Patient Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Conflict Of Interest

The authors declare no conflict of interest.

References

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2. Wang N, Cui XY, Liu Y, Long J, Xu YH, Guo RX, et al.
3. Adult intussusception: A retrospective review of 41 cases. *World J Gastroenterol.* 2009;15(26):3303-8.Begos DG, Sandor A, Modlin IM. The diagnosis and management of adult intussusception. *Am J Surg.* 1997;173(2):88-94.

Figure Legends

Figure 1: Pre-operative Chest X-ray revealed free air under right dome of diaphragm

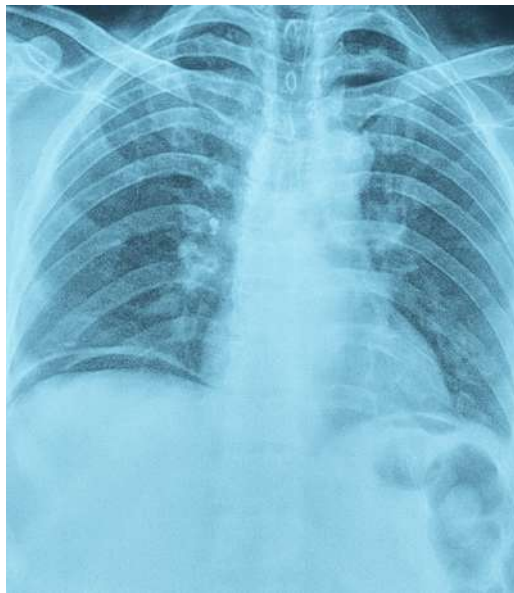


Figure 2: Intra operative view of ileo-colic intussusception with ileal perforation (White-arrow: - perforation, Blue-arrow: - Cecum, Green-arrow: - Ileal loop)

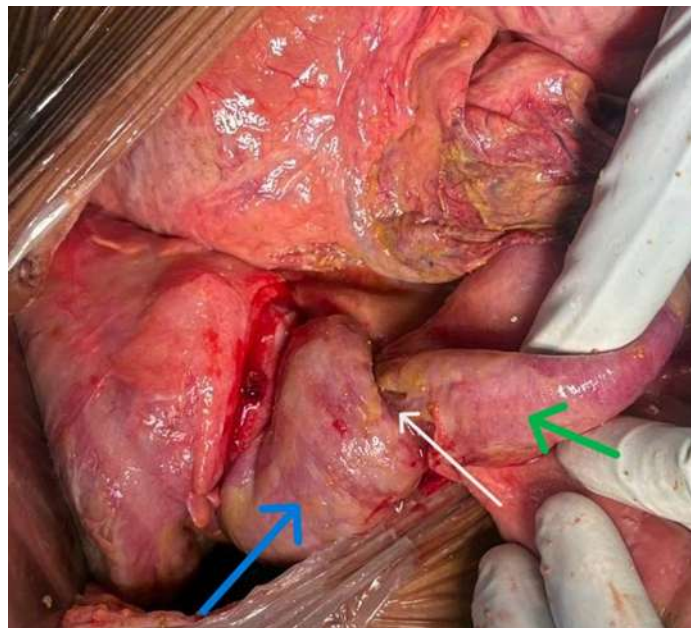


Figure 3: Resected specimen showing gangrenous ileal segment with perforation and cecum with 5cm of ascending colon (White-arrow: -gangrenous ileal segment, Blue-arrow: - viable ileal segment, Yellow-arrow: - Ascending colon)

