

Case Report

Recurrent gastrointestinal bleeding in a 16-year-old with enteric perforation peritonitis: a surgical challenge

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ABSTRACT

We present a rare and complex case of recurrent lower gastrointestinal bleeding following emergency laparotomy for enteric perforation peritonitis in a 16-year-old boy. Despite initial surgical management with primary repair, the patient developed persistent rectal bleeding, leading to hemodynamic instability and necessitating extensive investigations. Upper gastrointestinal endoscopy and computed tomography (CT) angiography failed to localize the bleeding source. A second laparotomy revealed diffuse mucosal oozing in the terminal ileum, prompting a right hemicolectomy with ileo-ascending side-to-side anastomosis and diversion loop ileostomy. Histopathology confirmed typhoid enteritis. This case underscores the importance of early recognition, aggressive management, and consideration of diffuse mucosal pathology in postoperative gastrointestinal bleeding, especially when standard diagnostics are inconclusive. Multidisciplinary collaboration and timely surgical intervention were crucial in achieving a favorable outcome. The case highlights the need for individualized surgical strategies to manage refractory bleeding in pediatric patients with enteric perforation.

Keywords: Enteric perforation, Peritonitis, Gastrointestinal bleeding, Pediatric surgery, Hemicolectomy, Ileostomy

INTRODUCTION

Enteric perforation peritonitis is a life-threatening condition commonly associated with typhoid fever, tuberculosis, or other infectious causes.¹ Postoperative gastrointestinal bleeding is an uncommon but serious complication that poses a diagnostic and therapeutic challenge.² Here, we report a case of persistent lower gastrointestinal bleeding following an emergency laparotomy for enteric perforation in a 16-year-old boy, requiring re-exploration and extensive bowel resection.

CASE REPORT

A 16-year-old male presented with acute abdominal pain, fever, and signs of peritonitis. Imaging confirmed pneumoperitoneum and an emergency laparotomy was performed. Intraoperatively, a single ileal perforation was

identified and repaired primarily. Postoperatively, the patient was stable but developed significant per rectal (PR) bleeding with altered blood from the postoperative day (POD) 1.

Investigations

Investigations include - upper gastrointestinal endoscopy: no active bleeding source, colonoscopy: inconclusive due to blood pooling, computed tomography (CT) angiography: no evidence of active contrast extravasation, and hemodynamic monitoring: progressive drop in haemoglobin levels requiring transfusion support.

Second surgery (POD 5)

Given persistent bleeding and hemodynamic instability, a re-exploration was performed. Intraoperatively, the terminal ileum showed diffuse mucosal oozing without a

focal ulcer or obvious source of bleeding. A right hemicolectomy with ileo-ascending side-to-side isoperistaltic anastomosis and diversion loop ileostomy was performed.

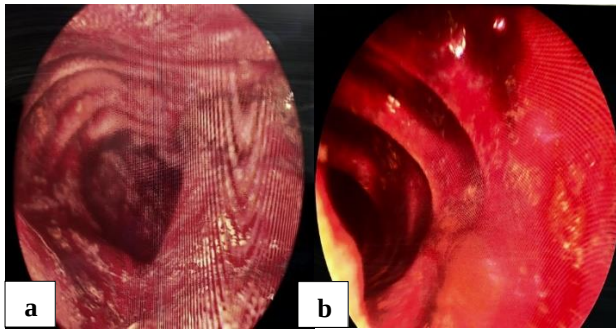


Figure 1 (a and b): Intraoperative endoscopic view of terminal ileum.



Figure 2: Specimen.

Outcome and follow-up

The patient showed significant improvement postoperatively, with cessation of PR bleeding. Histopathology of the resected bowel revealed multiple mucosal ulcerations with inflammatory changes, suggestive of typhoid enteritis. The patient was managed with appropriate antibiotics and nutritional support. He was discharged in a stable condition and planned for ileostomy closure in a later setting.

DISCUSSION

Postoperative gastrointestinal bleeding in enteric perforation peritonitis is rare and often poses a diagnostic challenge. Common causes include surgical site hemorrhage, undiagnosed vasculitis, infectious enteritis, or coagulopathy. In this case, extensive investigations failed to localize a bleeding source, necessitating a second surgery where diffuse mucosal oozing was identified. A right hemicolectomy effectively controlled the bleeding, underscoring the importance. Studies by Bhatnagar et al, Misra et al, and Arora et al highlight the challenges of managing typhoid-related perforations of early surgical intervention in such cases.¹⁻³

The case also highlights the limitations of traditional diagnostic modalities like endoscopy and CT angiography in detecting diffuse mucosal bleeding. When standard approaches fail, early surgical intervention remains vital. The decision to perform a right hemicolectomy was based on intraoperative findings, aligning with studies supporting resection in refractory cases. Gupta et al and Mehta et al discuss the utility of CT angiography and surgical re-exploration in similar cases.^{4,5} Moreover, histopathology confirming typhoid enteritis emphasizes the need for considering infectious causes even when initial tests are inconclusive. This aligns with findings from prior studies that discuss the atypical presentations of typhoid enteritis, which can mimic other inflammatory bowel diseases.

Multidisciplinary approach involving surgeons, gastroenterologists, and critical care specialists were crucial in managing this complex case. Timely blood transfusions, nutritional support, and postoperative monitoring ensured a favorable outcome. This case underscores the importance of personalized surgical strategies and vigilant postoperative care in managing persistent gastrointestinal bleeding in pediatric patients with enteric perforation. Literature also supports the rarity and complexity of managing postoperative bleeding in enteric perforation cases. Additionally, Karam et al emphasize hemodynamic monitoring, while Gopalakrishnan et al and Smith et al provide insight into postoperative complications and re-exploration outcomes.⁶⁻⁸

CONCLUSION

This case emphasizes the need for high clinical suspicion and prompt surgical decision-making in managing persistent postoperative gastrointestinal bleeding. Surgeons should consider diffuse mucosal pathology when standard diagnostic modalities fail to identify a focal source of hemorrhage.

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