CASE REPORT

Solitary tubercular caecal ulcer causing massive lower gastrointestinal bleed: a formidable diagnostic challenge

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SUMMARY

Gastrointestinal (GI) haemorrhage is a common surgical emergency accounting for approximately 1% of acute hospital admissions. Lower GI bleed is less common and less severe than upper GI bleed and is usually caused by diverticulosis, neoplasms, angiodysplasia and inflammatory bowel disease. A 51-year-old man presented with massive lower GI bleed. He had no history of tuberculosis. He underwent colonoscopy and an isolated caecal ulcer was noted. Segmental ileocaecal resection was performed and no specific cause was identifiable on histopathology. PCR was performed on this specimen and it was positive for *Mycobacterium tuberculosis*. This case reports the unusual presentation of tuberculosis as solitary caecal ulcer with massive lower GI bleed and highlights the role of PCR as an adjuvant diagnostic tool for its diagnosis when characteristic histopathological findings are absent.

BACKGROUND

Gastrointestinal (GI) haemorrhage is a common surgical emergency accounting for 1% of acute hospital admissions. Lower GI bleed (LGIB), defined as a bleed distal to the ligament of Treitz, is less common and less severe than upper GI bleed and is commonly caused by diverticulosis, neoplasms, angiodysplasia and inflammatory bowel disease. Non-specific caecal ulcer (NSCU), a rare entity described by Cruveilhier, can cause LGIB.¹ The final diagnosis is clinched only on histopathological examination after excluding other causes. We report a case which was initially diagnosed as NSCU on histopathology, but later

turned out to be tubercular in aetiology, aided by PCR. The term NSCU is becoming obsolete with the advent of modern investigations.

CASE PRESENTATION

A 51-year-old man presented to the emergency medical department with first episode of passing approximately 500 mL of frank bleeding per rectum with clots, with severe continuous right lower quadrant abdominal pain. He had no history suggestive of tuberculosis or inflammatory bowel disease. His vitals were stable and he was pale. The abdomen was soft, with right lower abdominal tenderness. There was no organomegaly. Digital rectal examination revealed frank blood staining of the gloved fingers and no growth was palpable. There were no haemorrhoids on proctoscopy.

INVESTIGATIONS

Ultrasound evaluation of the abdomen was unremarkable. Colonoscopy after blood transfusion revealed a large ulcer with adherent clot in the caecum (figure 1A). There was no evidence to suggest primary bowel diseases or malignancy. There was no radiological evidence of lung or liver metastasis. He had no radiological evidence of pulmonary tuberculosis.

TREATMENT

Emergency ileocaecal resection with ileostomy and mucous fistula was performed. Fresh cut open specimen revealed an ulcer measuring 5×3×2 cm in the caecum with a clean base (figure 1B).

Figure 1 Colonoscopy and gross images. (A) Colonoscopy showing a large ulcer in the caecum as the source of bleed. (B) Fresh cut open specimen showing a large ulcer (5×3×2 cm³) in the caecum with a clean base; the ileum and caecum are shown and arrow indicates the ulcer.

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Histopathological examination revealed an ulcer in the caecum (figure 2A–C) and there was no evidence of malignant cells, granulomas, acid-fast bacilli, amoebae or vascular changes, suggestive of thrombosis or ischaemia. As no cause was identified on histopathology, it was considered to depict NSCU. However, PCR proved positive for *Mycobacterium tuberculosis*. Hence, a diagnosis of solitary tubercular caecal ulcer was made and he was started on Revised National Tuberculosis Control Programme² (RNTCP) Category-I antitubercular treatment (ATT).

Figure 2 Photomicrographs. (A) Low-power view showing colonic mucosa with evidence of ulceration and dense inflammatory infiltrate in the lamina propria (H&E, ×40). (B) Low-power view showing transmural inflammation of the bowel wall with prominent serositis (H&E, ×40); (C) High-power view showing acute inflammatory infiltrate (neutrophils and plasma cells) in the serosa with proliferating capillaries and occasional foreign body giant cells (H&E, ×400). There is no evidence of granuloma.

OUTCOME AND FOLLOW-UP

The patient completed 6 months of ATT and is on follow-up for 1 year, without recurrence. Mantoux test could not be performed as surgery is an immunosuppressed state and he was started on ATT subsequently.

DISCUSSION

GI haemorrhage is a common surgical emergency accounting for approximately 1% of acute hospital admissions.³ Lower GI bleed (LGIB) is defined as bleed distal to the ligament of Treitz.⁴ Colonoscopy in LGIB aids in diagnosis and therapy. In massive active LGIB, colonoscopy may be frustrating, futile and dangerous; however, few authors still consider it as the first diagnostic investigation in severe ongoing bleeding. Emergency surgery is ultimately required in 10–25% of patients with LGIB, and is usually performed for haemodynamic instability or clinical deterioration, transfusion requirements of more than 6 units of blood and persistent or recurrent haemorrhage.³ Since the morbidity and mortality increase significantly with transfusion of more than 10 units of blood, a lower threshold for surgical intervention is desirable.³ Inflammation and ulceration of the colon account for 6–30% of acute LGIB, including inflammatory bowel disease, infectious colitis, radiation colitis and idiopathic ulcers.⁵ Non-specific caecal ulcer is extremely uncommon and its aetiopathogenesis is a riddle. Non-specific colonic ulcers occur most frequently in the caecum and ascending colon and are mostly solitary.^{5–8} However, in the modern era, the term NSCU has become obsolete as the aetiology is demonstrable in most cases.⁹ Haematochezia with diffuse crampy or right lower quadrant abdominal pain should prompt to the diagnosis of non-specific ulcer in the right colon.¹⁰ Definitive diagnosis is possible only after excluding malignancy and inflammatory conditions such as Crohn's colitis and specific infections on the histopathology of surgically resected specimen.^{5–7} Crohn's colitis is the primary differential in Indian scenario as its incidence is on the raise due to improved diagnostic modalities but PCR analysis from biopsy samples have a high predictive value for tuberculosis.¹¹

In our case, the clinical presentation was suggestive of NSCU. On gross and microscopic evaluation, features such as undermined edge, lymphocytes, epithelioid granulomas with Langhans giant cells and acid-fast bacilli were absent, and hence a diagnosis of NSCU was considered. However, PCR was able to clinch the diagnosis of tuberculosis. A similar case has been reported by Kela *et al*,¹² where ileal tuberculosis has presented with massive rectal bleeding without any evidence of active pulmonary tuberculosis. A case of solitary caecal ulcer has been reported by Shah *et al*¹³ in the literature, which was managed conservatively as the patient refused surgery, but in our case, there was life-threatening LGIB which necessitated an emergency surgery.

Learning points

- ▶ Non-specific caecal ulcer as a cause of lower gastrointestinal haemorrhage is to be forgotten and an earnest attempt should be made towards identifying a specific aetiology.
- ▶ Segmental colonic resection is useful for emergency control of bleeding.
- ▶ Histopathological examination is the gold standard, supplemented by modern investigations.

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Competing interests None.

Patient consent Obtained.

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