Case Report

Disseminated tuberculosis presenting as massive lower gastrointestinal bleeding

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Abstract

Intestinal tuberculosis has varied clinical presentations and often requires high index of suspicion for clinching the diagnosis. We report a case of an 18-year-old male who presented with abrupt onset of massive lower gastrointestinal bleeding and was diagnosed to have ileocecal tuberculosis. This case signifies the need to consider the possibility of intestinal tuberculosis as a cause of severe hematochezia among other etiologies to prevent mortality and morbidity.

Keywords: Anaemia, Intestinal tuberculosis, lower gastrointestinal bleeding

Introduction

Lower gastrointestinal (GI) bleeding is bleeding from intestinal tract below the ligament of Treitz. Common causes of lower GI bleed include haemorrhoids, polyps, infective colitis (amoebic, bacillary), carcinoma colon and rectum, diverticular disease of colon, angiodysplasia, inflammatory bowel disease, etc.[1] In tropical countries, enteric fever (typhoid) and tuberculosis (TB) are also common causes of lower GI bleed which is generally mild.[2]

Extrapulmonary TB (EPTB) is increasingly becoming a public health concern globally. Abdominal TB is a common type of EPTB which can involve the gastrointestinal tract, peritoneum, lymph nodes, or solid viscera.[3] It has a myriad of clinical presentations which are non-specific and hence needs a high index of suspicion for an accurate diagnosis. Mild lower GI hemorrhage can be seen in intestinal tuberculosis but massive bleeding is rare.[4,5] We describe a case of young male presenting with massive lower GI bleed who was diagnosed to have ileocecal TB.

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Case Report

An 18-year-old male, without any pre-existing comorbidities or addictions, presented with chief complaints of massive bleeding per rectum for 2 days. He had history of fever 10 days ago which was documented to be 38.0°C-38.8°C. It was not associated with any cough, expectoration, sore throat, skin rashes, pain abdomen, loose stools, or vomiting. He was admitted to another hospital on day 4 of illness where laboratory investigations revealed a high total leukocyte count (15,000/mm^3), with normal haemoglobin and platelet count. Liver and renal function tests, and other biochemical parameters were normal. He was diagnosed to have enteric fever because of a widal titre of 1:160 for O-Ag and was started on intravenous ceftriaxone and azithromycin. His fever subsided on fifth day and he was symptomatically better.

On the 9th day of the illness, the patient developed acute onset of passage of fresh blood per rectum. It was not accompanied with

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mucus, stool, or tenesmus. There was no prior history of bleeding episodes or bleeding from any other sites. The hematochezia was massive and he lost around 2 liters of blood over two days. He was started on pantoprazole infusion and tranexamic acid and was given three units of packed red blood cells. Upper gastrointestinal endoscopy and ultrasound abdomen were normal. Colonoscopy could not be completed as whole colon was filled with blood and blood clots. As patient continued to bleed profusely, he was referred to us.

At presentation in the emergency department of our hospital, the patient still had passage of 500 ml of blood per rectum in the last 6 hours. On examination, he was pale with a pulse rate of 116/min and blood pressure of 100/60 mmHg. Rest of the general physical and systemic examination were unremarkable. Ryle's tube aspiration did not show any blood. Per rectum examination showed presence of fresh blood with clots.

Laboratory investigations revealed haemoglobin of 3.8 g/dl, total leukocyte count of 6200/mm^3, and platelet count of 1,50,000/mm^3. The liver and renal function tests were all within normal limits. International normalized ratio/prothrombin time was normal. Chest X-ray showed patchy infiltrates in left upper zone [Figure 1]. The patient was resuscitated with intravenous fluids and transfused 3 units of packed cells. He was also started on ceftriaxone and metronidazole intravenously.

On day 2, per rectal bleeding decreased to around 200 mL, and the patient was further transfused 1 unit of packed cells. A contrast-enhanced computed tomography of chest and abdomen was done which showed areas of consolidation with cavitatory changes in apical and anterior segment of left upper lobe with surrounding tree-in-bud appearance suggesting a possibility of pulmonary tuberculosis [Figure 2]. A bronchoscopy was done and reverse transcription polymerase chain reaction (RT-PCR) on bronchial aspirate was positive for *Mycobacterium tuberculosis*.

A colonoscopy was repeated on day 4 of hospitalization which revealed multiple small ulcerations in the ileocecal area. A biopsy was taken which showed focal lymphoplasmacytic infiltrate with epithelioid granulomas and Langhans giant cells, suggestive of tuberculosis aetiology [Figure 3]. However, Ziehl-Neelsen stain for acid-fast bacilli was negative.

A final diagnosis of disseminated tuberculosis involving left lung and ileocecal region was made. The patient was started on anti-tuberculous drugs and was doing well 2 months after discharge.

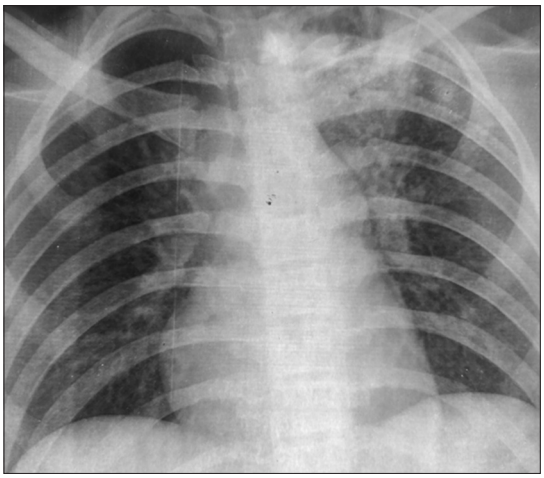

Figure 1: Chest X-ray showing patchy infiltrates in the left upper zone

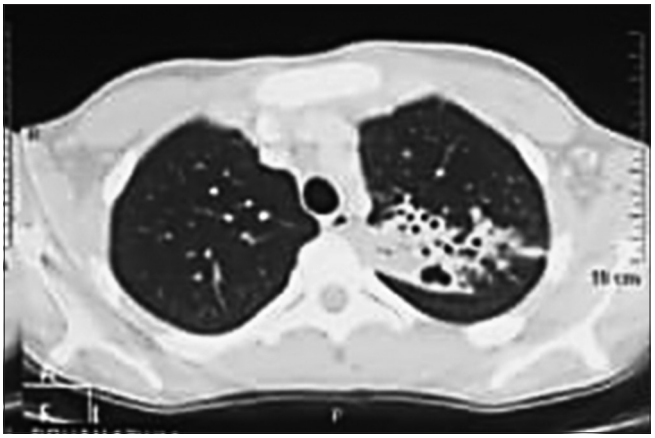

Figure 2: A CECT of chest showing areas of consolidation with cavitatory changes in apical and anterior segment of left upper lobe with surrounding tree-in-bud appearance

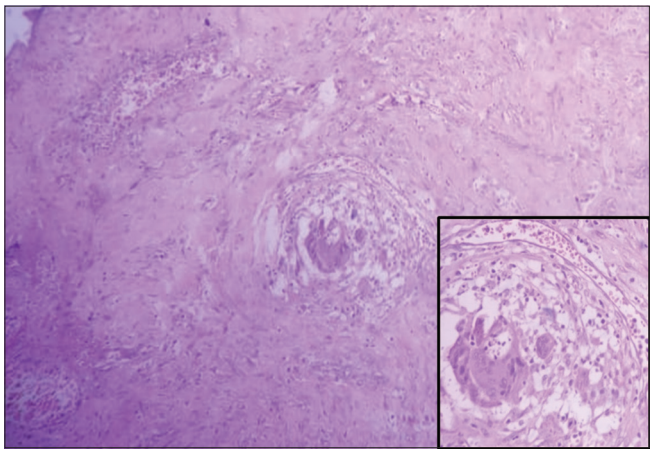

Figure 3: Ileo-caecal biopsy showing focal lymphoplasmacytic infiltrate with in muscularis propria with epithelioid granulomas and Langhans giant cells (H and E, 40×)

Discussion

Tuberculosis is a multi-system, chronic granulomatous infection caused by *Mycobacterium tuberculosis*. It is common in developing countries; however, its prevalence is increasing even in developed countries particularly in immunocompromised individuals and due to migration from endemic countries. Abdominal tuberculosis can involve peritoneum, lymph nodes, intestines, and visceral organs. Concomitant pulmonary tuberculosis in patients with abdominal tuberculosis is seen in 15–20% cases.[6]

The most common site of tubercular involvement of intestines is ileocecal area,[3] most commonly of ulcerative variety. Intestinal tuberculosis has varied clinical features which include fever, abdominal pain, diarrhea or constipation, weight loss, anorexia, and malaise. Acute presentations of intestinal tuberculosis include intestinal obstruction due to stricture formation, intestinal perforation and mild lower GI bleed.[7] Massive lower GI bleed is very rare with very few reported cases worldwide.[4,5] However, in a retrospective study of 91 patients with massive lower GI bleed, eight had ileal tuberculosis.[2]

Due to non-specific features, a high index of suspicion is required for an accurate diagnosis. Imaging for ileocecal TB is non-specific with CT scan having a sensitivity of only 64%.[8] Diagnosis requires colonoscopy and histopathology of biopsy specimen. However, characteristic findings are found only in 30%, while most have non-specific findings with negative mycobacterial staining and cultures in the rest.[9,10] A PCR test on biopsy specimen is more sensitive and can yield a faster diagnosis than staining and culture.

Our patient's chest X-ray and CT chest were suggestive of pulmonary tuberculosis and RT-PCR on bronchial aspirate was positive for *Mycobacterium tuberculosis*. Intestinal tuberculosis was further confirmed by a suggestive histopathology of ileocaecal biopsy.

Conclusion

Massive lower GI bleed is uncommon in intestinal tuberculosis and requires thorough investigation after stabilization of the patient. This case signifies that a tubercular aetiology for massive GI bleed should be kept in mind which can help in early diagnosis and in preventing significant morbidity and mortality.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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