An unusual cause of lower gastrointestinal bleed in an uncommon condition

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Abstract

We present a case of lower gastrointestinal bleeding (LGIB) in a patient with previously diagnosed aortic dissection extending to the superior mesenteric artery (SMA). Ischaemic gut due to thrombosis of SMA was considered. However, exploratory laparotomy carried out revealed healthy gut with bleeding jejunal diverticula, excision of which relieved the symptoms. Jejunal diverticula, although rare, must be considered among all the possible causes of LGIB.

Key words: Gastrointestinal bleed, jejunal diverticula, lower gastrointestinal tract.

Introduction

Lower Gastro-Intestinal Bleeding (LGIB) is bleeding occurring distal to the ligament of Trietz. It may present as hematochezia ranging from minor to severe, the latter being occasionally lethal. Almost 20% of all severe gastro-intestinal bleeding may appear as cases of LGIB.[1]

Common causes of the condition include Inflammatory Bowel Disease, haemorrhoids, anal fissures, neoplastic conditions and coagulopathies.[2] A rare cause includes superior mesenteric artery (SMA) dissection resulting in thrombosis and bowel ischemia. It may occur as a complication of aortic dissection[3]. Uncommonly, small bowel diverticula may also present with a similar picture. However, they are usually asymptomatic and difficult to treat and diagnose.[4]

Case Report

A 40 year old man presented with severe, sudden onset of breathlessness, fatigue and bloody stools for the past 10 days. Bleeding was fresh, profuse and constant with a frequency of 5 times per day. It was not associated with pain. He had undergone aortic valve replacement last year and had been on warfarin therapy since then.

Examination revealed blood pressure of 100/60 mmHg, pulse 90/min, Temperature 99.2° F, with marked pallor, raised JVP and systolic murmurs. Complete blood count revealed haemoglobin of 7.1 mg/dl, total red blood cell count of 2.65x 10^{12}/L and total leukocyte count of 19.9x 10^{9} /L. Neutrophils were 83%, serum urea was 11.5 mmol/L and creatinine was 142μmol/L. Coagulation profile was deranged. His blood pH and lactate levels were normal. He was stabilized with transfused blood and Fresh Frozen Plasma (FFPs). Bedside echo showed more than 5 cm dilatation of ascending and descending aorta. Upper GI endoscopy revealed an ulcer in the proximal portion of duodenum with the histopathology report showing a benign nature. Colonoscopy showed presence of fresh blood in the gut. CT angiography was arranged which showed type "A" aortic dissection with extension into superior mesenteric artery.

A provisional diagnosis of aorto-enteric fistula or ischaemic gut secondary to thrombosis due to extension of dissection into superior mesenteric artery was made. Ct angiography showed the same results. Exploratory laparotomy was done with the view to either resect gangrenous bowel or carry out an aorto-mesenteric bypass in case of occluded SMA. However, it showed normal superior mesenteric artery and its dependant bowel area, although multiple actively bleeding jejunal diverticula were found on the mesenteric border. They were resected and end-to-end anastomosis was done.

The patient was followed up after the procedure in the post operation ward. His bleeding had stopped and his blood stats were improving.

Discussion & Conclusion

Lower Gastro-intestinal Bleeding is an important cause of severe lethal bleeding and death in adults. Aortic dissection is a rare cause of this condition. While it usually presents with chest and abdominal pains, it may also manifest as lethal LGIB.[3] This may occur as a result of extension into Superior Mesenteric Artery (SMA) with the subsequent thrombosis causing severe bowel ischemia in the tissue distribution of the vessel. Consequently, severe LGIB may occur resulting in signs of shock.[5] This was the suspected cause of LGIB in our patient. He had previous history and confirmed diagnosis of aortic dissection type "A" extending to SMA thus raising the likelihood of bleeding secondary to ischaemic gut. However, another rare cause, jejunal diverticula must be kept in the differential diagnosis of such patients. They are particularly difficult to diagnose both as a result of lack of routine bowel endoscopies and

the low yield of the procedure [6], leaving laparotomy to be the diagnostic and therapeutic tool in such cases.[7,8,9] The latter procedure was carried out to determine the site of the ischaemic gut in our patient. However, jejunal diverticula were found to be the most probable cause of LGIB in the absence of any ischaemic gut.

This case report therefore highlights the importance of rare causes of LGIB in the adult population including those mentioned in the above case discussion. It also goes to show that a relatively benign condition such as jejunal diverticula may mimic the clinical presentation of a more sinister cause such as SMA thrombosis and bowel ischaemic, the latter associated with greater morbidity and mortality. Nonetheless, a high index of suspicion for these is a must to effectively manage and save the patient's life.

Abbreviations used
LGIB: Lower Gastrointestinal bleed
SMA: Superior mesenteric artery

Authors' Contributions

- **Muhammad Usman Shah:** Patient data collection, literature review and writing of the manuscript.
- **Moarij Amer Qazi:** Patient data collection and literature review of the article.
- **Mobasser Mahmood:** literature review and writing of the manuscript.
- **Ahsin Manzoor Bhatti:** Selected the case report and presented the basic theme of the article, supervised and corrected it.

Conflict of interest: None

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