Case Report

Stromal tumour of the ileum: An unusual cause of massive gastrointestinal bleeding

O. S. Omorogbe, A. A. Iloh, O. G. Egigba, O. C. Osime

Department of Surgery, University of Benin Teaching Hospital, Benin, Nigeria

Abstract

Background: Gastrointestinal stromal tumour are rare gastrointestinal tumour that probably originate from the interstitial cells of Cajal and 95% express a specific molecular marker. They occur most commonly in the stomach (60%) followed by the small intestine (30%) and may present with gastrointestinal bleeding.

Case Report: A 40year old man presented with passage of frank blood per rectum with associated haemodynamic instability necessitating several units of blood transfusion. Following adequate resuscitation, lower and upper GI endoscopy done were negative and subsequently had emergency laparotomy for continued gastrointestinal bleeding. We found a bleeding ileal tumour which was resected. Histopathology confirmed gastrointestinal stromal tumour.

Conclusion: small bowel stromal tumour rarely and unusually presents with massive lower GI bleeding. Diagnosis may be delayed due to inaccessibility of the small bowel to routine upper and lower GI endoscopy. Mesenteric angiography, radionuclide RBC, capsule endoscopy, push enteroscopy depending on the fitness of the patient, may aid diagnosis. Prompt surgical resection and adjuvant imatinib therapy for malignant variants is the treatment of choice.

Keywords: Difficult diagnosis, massive gastrointestinal haemorrhage, stromal ileal tumour

Address for correspondence: Prof. O. C. Osime, Department of Surgery, University of Benin Teaching Hospital, Benin, Nigeria.
E-mail: clementosime@yahoo.com
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INTRODUCTION

Gastrointestinal stromal tumours (GIST) are rare gastrointestinal (GI) tumours that constitute about 1% of all GI tumours;[1] they probably originate from the interstitial cells of Cajal and 95% express c-kit-CD117 mutation, a specific molecular marker.

The stomach is the most common location (50%–60%) followed by the small intestine (30%–35%).[2] It is the least common small bowel tumour constituting about 10%–15%.[3] GIST is usually asymptomatic and only found incidentally during abdominal procedures for other reasons. Symptoms of GIST are commonly mechanical effect of the tumour, palpable mass and haemorrhage.[3,4]

GIST has a greater propensity to be associated with overt haemorrhage than other small intestinal malignancies.[4] Massive lower GI bleeding is a rare and unusual symptom of GIST.[5]

GI bleed arising from beyond the ligament of Treitz with associated haemodynamic instability or necessitating blood transfusion of more than 3–5 units in 24 h is considered massive lower GI bleeding.[6]

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This report is intended to increase the awareness that small bowel stromal tumour can cause massive lower GI bleeding so as to increase its index of suspicion when caregivers are confronted with obscure GI bleeding.

CASE REPORT

A 40-year-old male who presented on April 2, 2016, to emergency room (ER) of the University of Benin Teaching Hospital with a complaint of bleeding per rectum and vomiting of a day's duration.

Bleeding per rectum was of altered blood and sometimes frank blood, not mixed with stool, and he had three episodes each about 400 ml before presentation and four episodes in ER. He had an episode of vomiting recently ingested meal with a streak of altered blood before presentation, associated weakness and dizziness, but no fever. There was no anorexia, weight loss or alteration in bowel habit.

There is a history of consumption of over 21 units of alcohol weekly for about 15 years and chronic abuse of non-steroidal anti-inflammatory drugs (diclofenac and ibuprofen) for body pain for over 6 months.

He was a known hypertensive on atenolol but not a known peptic ulcer disease patient. There was no prior history of GI bleeding or bleeding diathesis.

At presentation, he was pale, dehydrated, pulse was 110 bpm regular, bounding, blood pressure was 110/80 mmHg, respiratory rate was 22 cpm and temperature was 36.6°C. Abdomen was full, soft, non-tender, with no masses, organomegaly or ascites. Bowel sound was normoactive.

Digital rectal examination revealed altered blood in rectum.

He had fluid resuscitation, placed on nothing by month, passed nasogastric tube with drainage of non-bilious and non-bloody effluent and commenced on intravenous proton pump inhibitor and antibiotics. He had strict monitoring of fluid input and output.

Full blood count revealed haemoglobin (Hb) 8 g/dl, packed cell volume (PCV) 24% and other parameters normal.

Serial PCV dropped to 14% over the next 24 h necessitating transfusion of 6 units of whole blood over 48 h.

Urea and electrolytes, clotting profile and liver function test were within normal limits. Following adequate resuscitation, he had colonoscopy with findings of altered blood obscuring the field of view at the sigmoid and made further examination difficult. Oesophagogastroduodenoscopy (OGD) revealed 5 cm long ulcer in the oesophagogastric junction with no evidence of recent bleed.

Patient, however, had a recurrence of bleeding 24 h later with passage of over 1.5 L of altered and clotted blood with worsening tachycardia and tachypnoea, with PCV of 19% necessitating further transfusion of 3 units and emergency laparotomy.

Findings were bleeding from small bowel tumour into the lumen, located in the antimesenteric border, 200 cm from the ligament of Treitz. He had a resection of the segment harbouring the tumour and ileoileal anastomosis and transfusion of 3 units of blood perioperatively.

Post-operative period was uneventful. Hb was optimised to 11.6 g/dl by further transfusion of 3 units of blood. He was discharged on the 10th post-operation day.

Histopathology revealed GIST, benign, with a paucity of mitosis and resection margin free of lesion [Figure 1].

Intraoperative finding: Ileal tumour with extraluminal growth.

DISCUSSION

The small bowel is the least common site of GI bleeding with approximately 5% occurring from the small bowel defined as the region between the ligament of Treitz and ileocaecal valve.[7] Small bowel tumour has been reported to be the second most common cause of small bowel bleeding (after vascular lesions) accounting for only 5%–10% of the cases,[8] with GIST being the least common of the small bowel tumours, constituting about 10%–15%.[4]

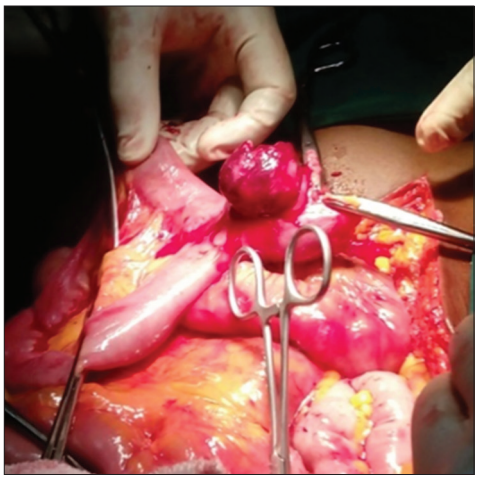

Figure 1: Ileal tumour with extraluminal growth

Small bowel stromal tumour commonly presents as acute abdomen and small bowel bleed,[9] and GI bleeding reported to be the most common presentation, with the jejunum being the most common site (17.4%), followed by the ileum (6.6%) and duodenum 3.3% in a study by Vij *et al*.[10] The index patient presented with the most common presentation of GI bleeding with a less common ileal location of the tumour.

Massive lower GI bleeding is, however, a rare and unusual presentation of small bowel stromal tumour. Literature search by PubMed and Ovid revealed only seven reported cases of small bowel stromal tumour causing massive lower GI bleeding.[5,11-16]

The common causes of massive lower GI bleeding are diverticulosis and angiodysplasia. Other causes include infectious and non-infectious colitis, other vascular lesions, neoplasm and benign anorectal conditions such as haemorrhoids. Ileal stromal tumour seen as a cause in this case is rare.

Small bowel stromal tumour may present as obscure GI bleed which is not accessible to OGD or colonoscopy, owing to the intraperitoneal location, extreme mobility and long length of the small bowel,[17] thereby reducing diagnostic yield as demonstrated in our case and others reported.[11,12]

Newer modalities such as capsule endoscopy, push enteroscopy, computed tomography (CT)-angiography and radionuclide red blood cell scan, which are not readily available in some centres like ours, improve diagnostic yield.

In this report, ileal stromal tumour was diagnosed intraoperatively due to the limitations of available routine GI endoscopy and clinical deterioration of the patient necessitating emergent laparotomy. Magnuszewska *et al*. and Moujahid *et al*. similarly made intra-operative diagnosis for the same reasons in their cases reported.[11,12]

Ultrasonography was able to detect large enough tumour in two cases,[11,13] while computed tomography scan identified the lesion in three cases[11,13,14] where OGD and colonoscopy were negative. Diagnosis was made in two cases by CT angiography,[15,16] and capsule endoscopy was diagnostic in a case of recurrent lower GI bleed from ileal GIST.[18]

Treatment of GIST depends on the histologic type. Surgical resection for the benign and resection with neoadjuvant and/or adjuvant imatinib therapy for the malignant variants depending on the stage suffices.

Surgical intervention should be considered early enough in a patient with massive lower GI bleed where OGD and colonoscopy are negative, and newer modalities either not available or are not diagnostic. This may be life-saving for surgically amenable causes such as small bowel stromal tumour as seen in our patient.

CONCLUSION

In a case of obscure massive lower GI bleeding, it is important to consider small bowel tumour such as GIST as a cause. Where colonoscopy and OGD fail to localise cause of massive lower GI bleeding and newer investigative modalities not available, emergent laparotomy is advised, as it may be diagnostic as well as therapeutic.

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Conflicts of interest
There are no conflicts of interest.

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