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Case Report

Spontaneous intra-abdominal bleed following oral anticoagulant therapy

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Introduction

With expanding avenues of oral anti-coagulant (OAC) use, the complications associated with it are also increasing. The incidence of hemorrhagic complications following oral anti-coagulation varies between 3 and 48%.^{1,2} Spontaneous intra-abdominal hemorrhage associated with oral anticoagulant may present as an acute abdominal condition. The earliest such case was reported in 1953.³ Bleeding may occur into the lumen, wall or mesentery of the bowel, retroperitoneum, into or from solid viscera and into abdominal wall.⁴ We report a case of spontaneous mesenteric hematoma with adjacent small bowel gangrene in a patient on oral anticoagulation.

Case report

A 59 year old male patient, an old case of rheumatic heart disease with mitral stenosis and atrial fibrillation underwent successful embolectomy for acute limb ischemia twice (first on left lower limb 6 years back and then on right lower limb 3 yrs back). He was advised lifelong anticoagulation and was on Tab Acitrom 6 mg OD on 3 monthly follow up with monthly monitoring of Prothrombin Time (PT).

The patient reported to the casualty with features of acute abdominal pain of 2 days duration. He gave history of recurrent small volume blood stained vomiting with absolute constipation and abdominal distension. Examination revealed tachycardia (heart rate of 170/min), hypotension (BP 100/70 mm of Hg) and a SpO₂ of 80–90%. He had ecchymotic patches on arms and anterior abdominal wall as well as sublingual hematoma. Abdomen was distended with rebound tenderness in epigastrium and periumbilical region. Hematological investigations revealed a hemoglobin of 10.4 g% and deranged PT with an International Normalized Ratio (INR) of 6. Radiographic examination of abdomen was suggestive of small bowel obstruction. Ultrasonography (USG) of abdomen revealed a hypoechoic and thickened small bowel segment and some free fluid. Oral anticoagulant was stopped and with fresh frozen plasma transfusion along with Inj Vit K, the INR dropped to 3.0.

In view of clinical features of acute peritonitis he was taken up for emergency exploratory laparotomy. Intra operatively, he had hemoperitoneum of 300 ml and a large mesenteric hematoma (Fig. 1) measuring approximately 10 × 10 cm with multiple smaller ones in the small bowel wall. Mid ileal

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Fig. 1 – Intraoperative photograph showing hematoma at the root of the small bowel mesentery.

segmental gangrene was present necessitating a resection of about 60 cm of bowel. An end ileostomy and mucus fistula was performed.

Post-operative recovery was uneventful. Histopathological examination of the resected specimen confirmed gangrene. The patient was discharged on Low Molecular Heparin (LMWH) after reevaluation of his cardiac status and revision of his cardiac drugs. He was stable during initial follow up and is planned for restoration of bowel continuity.

Discussion

Coumarinic anti-coagulants (COAs) are 4-hydroxycoumarin compound, which exerts an anticoagulant effect by interfering with vitamin K dependant carboxylation of glutamate residues at the amino terminus of coagulation factors II, VII, IX and X. The commercially available coumarins include warfarin, acitrom, acenocoumarol and phenprocoumon.⁵ There is a direct relationship between the doses and the anticoagulant response. Though the risk of bleeding is well established with COAs, review of literature does refer to some reports of similar bleeding with anti platelet therapy as well.⁶ Acitrom or acenocoumarol is similar to Warfarin in action, but has a longer half life of 24 h with a rapid action.

Warfarin is the prototype drug, and the most commonly used COA and was found to be infrequently associated with gastro intestinal hemorrhage occurring in only 1 out of 2500 patients.⁷ The clinical presentation of such an event varies according to the location and extent of bleeding. Intramural bleed presents as melena or hematochezia. However, a predominant mesenteric bleed may present with a palpable mass. Non-specific abdominal complaints and obscure findings lead to diagnostic dilemma and delay in decision making. Jejunum, by far is the commonest site for intramural hematomas.⁸ Various named signs of indirect evidence have been documented on barium study, since the first reported case, and nowadays USG and CECT scan have emerged as essential tools in resolving the diagnostic confusion.⁹ CECT

characteristics include circumferential wall thickening, intramural hyperdensity, luminal narrowing and intestinal obstruction.⁷

Other risk factors for spontaneous bleeding include hemophilia, idiopathic thrombocytopenic purpura, leukemia, lymphoma, myeloma, chemotherapy, vasculitis, pancreatitis and pancreatic malignancies.

Cases diagnosed early or with limited bleeds can be managed with watchful expectancy. However, critical patients with significant bleed and bowel ischemia, undergo laparotomy and the affected segment excised, followed by primary anastomosis or exteriorizing, depending on status of the residual bowel loops and general condition of the patient.¹⁰

There has been advent of newer OACs like Dabigatran, Rivaroxaban, Apixaban and Edoxaban. They have been proved to be more advantageous than COAs in terms of action, safety profile (drugs and food interaction) and predictable anticoagulation. However, the cost and lack of antidote precludes their large scale usage.

Conclusion

Occurrence of intra abdominal bleeding is a rare but known complication of oral anticoagulation. Spontaneous intraperitoneal bleeding must be suspected in patients on anticoagulant therapy presenting with acute abdominal pain and peritonism. Depending on the clinical presentation, the management of a spontaneous mesenteric hematoma can vary from a watchful expectancy to an urgent laparotomy. Prompt diagnosis and decision to intervene in an appropriate setting is the key to a successful outcome. Correction of the coagulopathy is equally vital in the treatment of this condition. Though, COAs remain the mainstay in anticoagulant therapies, they require careful follow up and monitoring.

Conflicts of interest

All authors have none to declare.

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