

Case Report

An Extensive Warfarin-Induced Jejunal Hematoma

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ABSTRACT

The most common adverse event associated with oral anticoagulation (OAC) is bleeding in general that is seen in 5 to 48% of patients and gastrointestinal bleeding (GIB) in particular which occurs in 2–4% of patients. Intramural hematoma (IMH) is a rare variant of GIB, occurring in 1 in every 2500 patients and is treated with OACs. IMHs are rarely fatal and the current data suggest conservative medical therapy and clinical follow-up for management of IMHs. GIB and intestinal IMH is becoming a more common clinical problem because of increasing number of patients taking OACs. This report describes a 91-year-old woman who was presented with abdominal discomfort for 2 days. The patient had been under anticoagulant therapy with warfarin because of atrial fibrillation. She was found to have an inappropriately prolonged international normalized ratio level of 8.1. IMH was confirmed with abdominal ultrasound and computed tomography (CT) scan. The patient was treated conservatively with fluid resuscitation, nasogastric decompression, bowel rest and reversal of anticoagulation. Follow-up CT scans, approximately one month after medical treatment, demonstrated complete resolution of the IMH. Intestinal IMH should be considered in the differential diagnosis of acute abdomen in any anti-coagulated patient with abdominal complaints.

Key words: Oral anticoagulation, Intra-mural hematoma, Warfarin

Oral anticoagulant agents (OACs) with warfarin and direct oral anticoagulants (DOACs) (dabigatran, rivaroxaban, apixaban and edoxaban) are widely used in various clinical situations, particularly in cardiovascular diseases. The number of patients taking OACs has increased significantly in recent years, and it is estimated that around 2% of the population in developed countries are taking OACs [1-3]. Parallel to this increase, prevalence of complications due to the use of OACs is expected to increase. The most common adverse event associated with oral anticoagulation is bleeding in general that is seen in 5 to 48% of patients and gastrointestinal bleeding (GIB) in particular which occurs in 2–4% of patients [4]. Intramural hematoma (IMH) is a rare variant of GIB, occurring in 1 in every 2500 patients and is treated with OACs. GIB and intestinal IMH becoming a more

common clinical problem because of increasing number of patients taking OACs; population ageing and the introduction of new DOACs that do not require monitoring. The presented case demonstrates an extensive warfarin-induced jejunal IMH which it is presented to raise awareness to this entity, and its management.

CASE REPORT

A 91-year-old woman with a prior history of hypertension and atrial fibrillation (AF) came to the hospital for nausea and persistent abdominal discomfort more marked in the epigastric region for 2 days without change in bowel habits or infective symptoms. The patient did not have a history of trauma and she had no evidence of upper or lower gastrointestinal bleeding. The patient had been under

anticoagulant therapy with warfarin (Coumadin, Zentiva Medical) 5 mg id for 2 years because of AF. At admission, her hemodynamic parameters were normal and abdomen was distended but soft and non-tender with active bowel sounds. There was no evidence of peritonism. And also, other system examinations were unremarkable. Electrocardiogram revealed AF which was under rate control. Laboratory results showed decreased hemoglobin level of 10.4 g/l and inappropriately prolonged international normalized ratio (INR) level of 8.1. Abdominal ultrasound indicated proximal intestinal dilation and thickening involving a long segment of small bowel. Then, abdominal non-enhanced and enhanced computed tomography (CT) was performed to rule out acute abdominal disease. Non-enhanced CT scan showed homogeneous and symmetric intramural thickening with hyper dense material in the jejunum wall. Enhanced CT scan showed advanced thickening of the jejunal wall with free fluid collection adjacent to dilated segment of the jejunum (Figure 1).

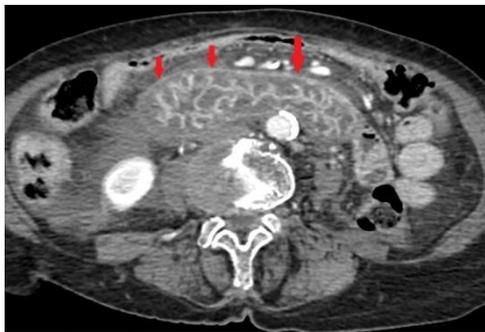


Figure 1: Enhanced CT demonstrated advanced intramural thickening of the jejunal wall with free fluid collection adjacent to dilated segment of the jejunum (narrows)

The duodenum and the stomach were also dilated with no associated transition point and the distal ileum and the colon were decompressed. Following these morphological features, the patient was diagnosed as spontaneous IMH of the jejunum caused by over anti-coagulation. Warfarin was withheld and decompression was applied with a nasogastric catheter. Intravenous fluids were administered while INR was reversed with intravenous vitamin K and three units of fresh frozen plasma. The patient remained hemodynamically stable with no evidence of active bleeding and did not require surgical intervention or erythrocyte transfusion. The nasogastric catheter was removed three days after it was inserted and diet was

progressed. The cardiologist consulted recommending a switch in anticoagulant therapy to apixaban 5 mg bid. The patient was discharged from the hospital on the sixth day with good clinical status. Follow-up CT scans approximately one month after medical treatment demonstrated complete resolution of the intramural hematoma (Figure 2).



Figure 2: Follow-up CT scan demonstrated complete resolution of the intramural hematoma of the jejunum (narrows)

DISCUSSION

Intestinal IMH is a rare variant of GIB and characterized by separation, which of the intestinal wall layers by hemorrhage caused by damage in the terminal arteries in the submucosa [5-8]. Over 90% of cases occur secondary to blunt abdominal trauma [9]. The main cause of non-traumatic 'spontaneous' IMH is over anticoagulation and has a rare occurrence i.e. occurs in 1 in 2500 patients and is treated with OACs and it is seen more in men [10].

Clinical presentation of IMH varies depending on hematoma site and grade. It may range from mild non-specific symptoms to severe obstruction and peritonitis [10, 11]. Therefore, intestinal IMH should be considered in the differential diagnosis of acute abdomen in any anticoagulated patient with abdominal complaints [4]. Abdominal ultrasound is seen to be the first imaging evaluation but non-contrast abdominal CT is more valuable imaging modality that might provide more specific diagnostic features including circumferential bowel wall thickening, intramural hyper-density and luminal narrowing and intestinal obstruction [9]. The current data suggest conservative medical therapy including early diagnosis with appropriate fluid resuscitation, nasogastric decompression, bowel rest and reversal of anticoagulation (including anticoagulant

cessation, administration of intravenous vitamin K, prothrombin complex, fresh frozen plasma or factor concentrates as required) and clinical follow-up of obstructive symptoms for management of small-bowel IMH. AF has increased 12.6% over the last 20 years and is expected to increase further [7, 12]. Additionally, DOACs do not require monitoring with INR and are taken as a fixed dose, making them more attractive compared to warfarin [13]. Due to the rapid increase in DOAC prescription rates, the risk of GIB and intestinal IMH is expected to increase.

CONCLUSION

GIB and intestinal IMH are becoming a more common clinical problem. When the source of GIB associated with OACs is not found, intestinal IMH should be considered. The importance of early and accurate diagnosis is related to the better prognosis associated with conservative therapy.

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