A Rare Case of Spontaneous Intramural Small-bowel Hematoma: A Case Report

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Abstract: Anticoagulant therapy is widely employed as a prophylactic measure and for the treatment of a variety of thromboembolic and coagulation disorders. Due to the numerous potential complications associated with anticoagulants, patients are required to undergo frequent monitoring. Spontaneous intramural small-bowel hematoma (SISBH) is a rare complication of anticoagulation therapy, which may result in intestinal obstruction, ischemia, perforation, and hemorrhagic shock. It is characterized by slow bleeding from the terminal arteries of the submucosa. Through the clinical diagnosis and treatment of a rare case of spontaneous intramural small-bowel hematoma induced by excessive using anticoagulants, our report offers valuable insights for clinicians to prevent severe sequelae of similar conditions.

***Keywords*:** Warfarin; Spontaneous intramural small-bowel hematoma; Anticoagulant

1. Introduction

Spontaneous intramural small bowel hematoma (SISBH), a rare condition, is primarily attributed to the excessive administration of warfarin[1]. Its clinical presentation includes abdominal pain, nausea, vomiting, melena, and hematochezia[2]. Furthermore, SISBH poses a significant risk of progressing to intestinal obstruction, ischemia, perforation, and ultimately hemorrhagic shock, necessitating prompt medical attention[3]. Here we report a unique case of clinical diagnosis and subsequent management of SISBH

2. Case report

A 71-year-old woman presented to our hospital with abdominal pain for six days, accompanied by bloody stool for three days. She has a history of hypertension and is treated with antihypertensive medication. Moreover, the patient once received mechanical valve replacement for rheumatic heart disease and has been taking warfarin for 10 years. Physical examination showed abdominal distension, tenderness, and rebounded tenderness in the lower abdomen. Laboratory tests showed a white blood cell count of: 12.01×10^9/L, a hemoglobin level of 94 g/L, and a platelet count of 162×10^9/L. Coagulation routine tests revealed a prothrombin time of 11.1 s, an activated partial thromboplastin time of 24.8s, an international normalised ratio (INR) of 1.93, and a D-dimer quantification of 28.35 mg/L. Positive results were observed in fecal occult blood test. Computed tomography (CT) revealed segmental and uniform thickening of the proximal wall of the jejunum, which was significantly enhanced after injecting contrast agent. No abnormalities were found in the stomach, duodenum, ileum, and rectum (Figure 1). According to clinical manifestations and CT images, the patient was definitely diagnosed with jejunal obstruction, secondary peritonitis, and abdominal fluid accumulation. After further analysis of the patient information, tumors, intestinal adhesions, intussusception, and inflammatory bowel diseases were excluded. We repeatedly inquired about her medical history and found that the patient had taken an overdose of warfarin. Then, we established a preliminary diagnosis of SISBH. The patient was treated with gastrointestinal decompression, cessation of oral anticoagulation, and most importantly, infusion of vitamin K1. No transfusion of blood products was require. A few days later, CT imaging revealed that the obstruction disappeared and the effusion decreased (Figure 2). The natural evolution of the hematoma further confirmed our initial judgment. Thus, the patient was finally diagnosed with warfarin-induced SISBH.

3. Discussion

SISBH is a rare but probably life-threatening disease that can lead to intestinal obstruction, ischemia, perforation, and hemorrhagic shock[3]. It is characterized by slow bleeding from the terminal arteries of the submucosa[4]. CT signs include circumferential wall thickening, lumen narrowing, hyper-density, and obstruction. More than 90% of SISBH is caused by abdominal trauma, while non-traumatic SISBH is more commonly associated with over-anticoagulation therapy using warfarin[1, 5]. Warfarin is a vitamin K antagonist primarily used to treat and prevent thromboembolic events[6]. A

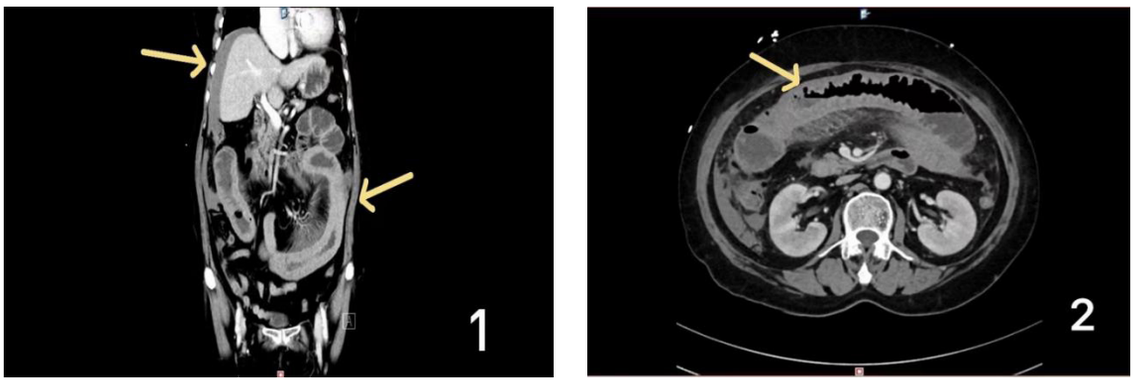

Figure 1. Computed tomography (CT) revealed segmental and uniform thickening of the proximal wall of the jejunum, which was significantly enhanced after enhancement.

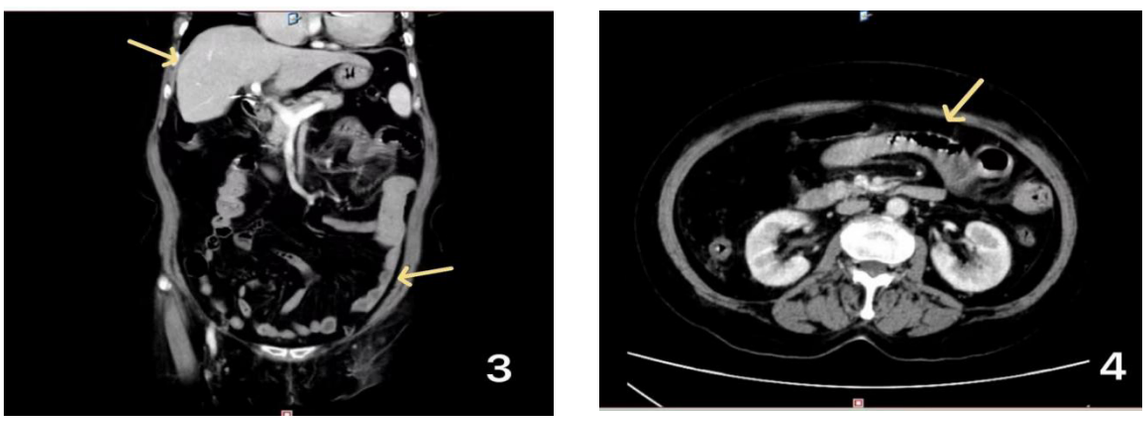

Figure 2. CT imaging revealed that the obstruction disappeared and the effusion decreased.

study reported an incidence of small bowel hematomas is 1:2500 patients on anticoagulation per year[7]. There is still lack of research regarding standard treatment due to its rare clinical presentation. SISBH is commonly treated with conservative therapy and has shown good outcomes. In almost all reported cases of SISHBH, symptoms usually improve within 4 to 6 days, and the hematoma resolves within 2 months[8]. The conservative treatment includes fasting, gastrointestinal decompression, blood component transfusion, and vitamin K injection[2]. When conservative management is ineffective, further incision and drainage may be undertaken using an endoscope[8]. Surgical laparotomy is only recommended when active bleeding, perforation, or ischemia occurs[3].

4. Conclusion

Overdosage of warfarin, circumferential wall thickening, and intestinal obstruction are the primary features of SISBH. Our patient was managed conservatively with vitamin K injection, and her symptoms were improved significantly. Thus, Early diagnosis and proper treatment are vital for better outcomes.

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