Spontaneous Rupture of Mesenteric Hematoma with Hemorrhagic Shock as a Complication of Oral Anticoagulant Treatment

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The recent trend to expand the indications for long-term ambulatory anticoagulant treatment has revealed an increasing number of patients at risk for developing treatment-related complications. The reported incidence varies between 3 and 48% [1–3]. Significant abdominal complications include intraluminal gastrointestinal bleeding, mesenterial and intramural hematoma, retroperitoneal bleeding, and abdominal wall hematoma. The

management of these complications is usually conservative, and should be based on correction of the defective clotting mechanism. Surgical emergency is infrequent. Despite the success of conservative treatment in most cases [4,5], these complications should be recognized promptly to avoid a possible life-threatening situation. We present a rare case of spontaneously ruptured hematoma of the small bowel mesentery, leading to massive intra-peritoneal bleeding and hemorrhagic shock, due to warfarin treatment. Emergency laparotomy and small bowel resection were performed and the patient was discharged following a prolonged postoperative course.

Case Description

A 47-year-old woman suffering from morbid obesity, primary pulmonary hypertension, cardiomyopathy and sleep apnea was admitted to the emergency department because of diffuse abdominal pain of 48 hours duration. There was no vomiting, nausea, or history of recent trauma. The patient had been taking warfarin 5 mg/day for 4 years with no ill effects.

On admission, the physical examination revealed diffuse abdominal tenderness without peritoneal irritation; blood pressure was 140/70 mmHg and pulse 72 beats/min. The blood count, chemistry and chest X-ray were within normal limits; prothrombin time was unmeasurable. An infusion of fresh frozen plasma was started and vitamin K was given. The patient's blood pressure suddenly dropped to systolic 60 mmHg and the pulse rose to 116/min. Neither rectal examination nor nasogastric tube drainage revealed blood. Due to the hemodynamic instability an immediate peritoneal lavage was performed, which confirmed the suspected diagnosis of intraperitoneal bleeding. The patient was promptly transferred to the operating room.

Laparotomy identified a large ruptured hematoma of mesentery of the small bowel with approximately 2,000 ml of blood within the peritoneal cavity. A segmental small bowel resection with primary end-to-end anastomosis was undertaken to contain the continuous bleeding from the hematoma site. Histology of the resected specimen showed extensive mucosal, submucosal and mesenteric hemorrhage. After a slow recovery due to respiratory failure the patient was eventually discharged in good condition.

Comment

Hemorrhagic complications associated with oral anticoagulant therapy have been well documented. Hematuria, cutaneous ecchymoses, epistaxis and gingival bleeding are common but mild; more serious bleeding events involving the gastrointestinal tract, adrenal glands, brain, epidural space and pericardium occur much less frequently [2]. Intramural hematoma of the small intestine induced by oral anticoagulant therapy is relatively uncommon, with the duodenum and proximal jejunum being the most frequently involved sites [5].

In a comprehensive study of 2,012 patients on oral anticoagulant treatment [1], the incidence of major hemorrhagic complications was 3.1% per 5,445 years of treatment. Among these only a few represented life-threatening complications, including gastrointestinal bleeding in 36 cases, cerebral hemorrhage in 16, pericardial hemorrhage in 5, and one case each of hemothorax, ovarian follicular hemorrhage, spontaneous retroperitoneal hemorrhage, and intraperitoneal bleeding.

The useful diagnostic modalities are ultrasonography and computerized tomography [3]. Most of the reported cases deal with confined hematomas, presenting a relatively benign and slowly progressive self-limiting course. In this clinical context the preferred management should be expectant, together with correction of clotting function [4]. The dramatic evolution of massive intraperitoneal bleeding without previous trauma, as presented in our case, is unusual. With the aid of diagnostic peritoneal lavage and emergency laparotomy we were able to arrest the sudden deterioration and restore hemodynamic stability.

We contend that the physician should suspect occult hemorrhage in a patient on oral anticoagulant therapy. In the appropriate clinical setting, awareness of this possibility will lead to prompt diagnostic and therapeutic intervention, which may be lifesaving in these patients.

References

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The happiness of the bee and the dolphin is to exist. For man it is to know that and to wonder at it.

Jacques Cousteau