

Spontaneous Retroperitoneal Hemorrhage with Psoas Hematoma in an Elderly Patient: A Diagnostic and Therapeutic Challenge

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Abstract

Spontaneous retroperitoneal hemorrhage (SRH) is a rare and potentially life-threatening condition, often challenging to diagnose and manage, especially in elderly patients with multiple comorbidities. Psoas hematoma is a known complication that can be associated with anticoagulation therapy. A 93-year-old male patient with a history of atrial fibrillation, chronic heart failure, and anticoagulant use (apixaban) presented with complaints of dizziness following a fall in the bathroom. He was initially assessed in the neurology clinic for potential cognitive symptoms; however, while awaiting assessment, he experienced a syncopal episode, resulting in his transfer to the emergency room. The patient had a significant reduction in hemoglobin levels, necessitating additional examination. Imaging revealed an 8 cm left psoas hematoma with active extravasation. The patient received a blood transfusion, vitamin K, and therapeutic interventions, including interventional radiology, which effectively halted the hemorrhage. This case highlights the diagnostic complexity and therapeutic challenges posed by spontaneous retroperitoneal hemorrhage in elderly patients, especially those on anticoagulant therapy. Early recognition and appropriate intervention are crucial for patient recovery.

Keywords: Anticoagulant therapy, psoas hematoma, spontaneous retroperitoneal hemorrhage, transarterial embolization

Introduction

Spontaneous retroperitoneal hemorrhage (SRH) is a rare and potentially fatal disease, especially in geriatric people. It may result from trauma, anticoagulant therapy, or other underlying vascular disorders. Psoas hematoma, a blood collection within the psoas muscle, is a common presentation in these cases. The risk of bleeding in elderly adults is heightened by anticoagulants, such as direct oral anticoagulants (DOACs) utilized for atrial fibrillation. Timely diagnosis and intervention are essential to avert morbidity and mortality. Previous studies highlight the role of early imaging and multidisciplinary management in addressing such cases effectively (1, 2). Moreover, new publications highlight that transarterial embolization and cautious therapy are crucial depending on the severity and evolution of the hematoma (3, 4).

Case Report

A 93-year-old male patient was admitted to the emergency department after experiencing a syncopal episode. The patient

had a history of atrial fibrillation and chronic heart failure and was receiving anticoagulant medication (apixaban). He presented to the neurology clinic the previous day with symptoms indicative of dementia, such as confusion and forgetfulness. While awaiting his neurology consultation, he suffered vertigo and subsequently lost consciousness. Upon assessment at the emergency department, his Glasgow Coma Scale (GCS) was 15, and his vital signs indicated hypotension and tachycardia (Blood pressure: 70/40 mmHg, Pulse: 110bpm, SaO₂: 90, Temperature: 36.2°C).

Following the recent fall in the restroom, a head computer tomography (CT) imaging was conducted, revealing no acute intracranial abnormalities. Nevertheless, more examination was necessary owing to his hypotension and tachycardia. His hemoglobin level declined by 5 g/dL since the last medical visit (The initial hemoglobin (Hb) value was 16.3g/dL, followed by 11.3g/dL). A CT scan of the abdomen revealed that the left psoas muscle enlarged compared to its symmetry, measuring 78x60 mm at its widest point in the axial plane. There is a heterogeneous appearance suggestive of hematoma within it, and active contrast extravasation is also observed in the left psoas muscle (Figure-1 and Figure-2).

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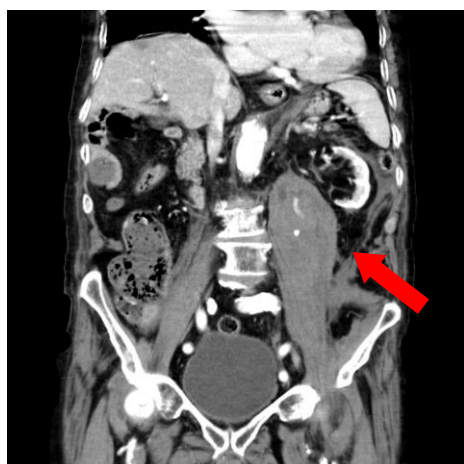


Figure 1. A CT scan of the abdomen showing an active contrast extravasation (marked with the arrow) on left psoas muscle, suggestive of ongoing bleeding

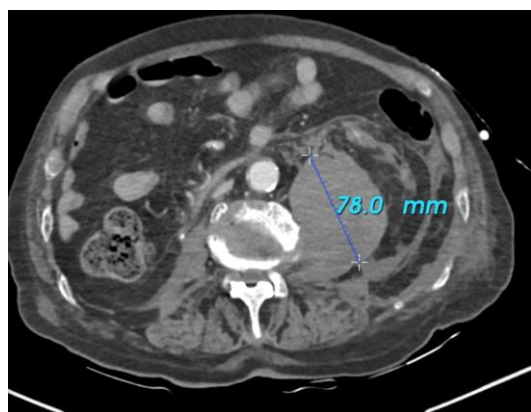


Figure 2. A coronal CT scan of the abdomen showing the left psoas muscle enlarged compared to its symmetry, measuring 78x60 mm at its widest point in the axial plane

Given the patient's anticoagulation therapy and the severity of the bleeding, the patient was administered 2 units of packed red blood cells, Vitamin K, and transferred to the intensive care unit (ICU) for closer monitoring and further management. He underwent interventional radiology, which confirmed cessation of the bleeding without requiring additional procedures.

Post-procedure, the patient developed Grey Turner's sign, an indication of retroperitoneal bleeding. He continued to receive supportive care, including blood transfusions and medical management. On day 2, his hemoglobin remained stable (The Hb trend was 12.7g/dL, 11.8g/dL, 10.8g/dL, 10.4g/dL, 10.8g/dL), and the patient was transferred to the general ward. The patient was then initiated on low-molecular-weight heparin and discharged after five days without any further problems.

Discussion

A rare clinical condition known as spontaneous retroperitoneal hemorrhage (SRH) can cause nonspecific symptoms like tachycardia, hypotension, and abdominal pain, which sometimes causes delays in diagnosis. SRH is a condition that is difficult to diagnose due to nonspecific symptoms and can be fatal if early diagnosis and intervention are not achieved (5). The use of anticoagulant drugs, which raise the risk of bleeding, may make SRH in older individuals even more difficult. Because of its vascularity, the psoas muscle, which is situated in the retroperitoneal region, frequently becomes the location of hematoma formation. Recent research indicates that interventional radiology plays a critical role in limiting surgical intervention and attaining hemostasis (4, 6). Furthermore, a high rate of technical and clinical success has been demonstrated by transarterial embolization in the management of such instances (4).

This patient's anticoagulant treatment with apixaban (Eliquis®) most certainly contributed significantly to his vulnerability to bleeding. Initial abdominal CT imaging was essential for detecting the psoas hematoma and assessing the necessity for intervention. Interventional radiology has emerged as a crucial modality in the management of these situations, facilitating non-surgical hemostasis. The hazards linked to anticoagulant medication, encompassing dual antiplatelet therapy and Vitamin K antagonist therapy, are emphasized in earlier reports and reflect the findings in this instance (2, 7).

This case emphasizes the importance of considering SRH in elderly patients presenting with nonspecific symptoms and the need for prompt imaging and management. The development of Grey Turner's sign post-procedure is a classic but rare indicator of retroperitoneal bleeding. Close monitoring and appropriate blood product replacement are key components of treatment (1, 6).

Conclusion

This case demonstrates the difficulty in identifying and managing spontaneous retroperitoneal hemorrhage in older patients, especially those receiving anticoagulation medication. To maximize patient outcomes, early detection via imaging and prompt interventions, such as blood transfusions and interventional radiology, are crucial. Additionally, this case emphasizes the significance of tailored management plans for senior citizens with numerous comorbidities. Further research into risk mitigation strategies, including novel anticoagulants with reduced bleeding profiles, could advance care standards for such patients.

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