

Case Report

Paralytic sciatica revealing a thigh hematoma: a case report

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ABSTRACT

Authors report the case of a 27-year-old man, on fondaparinux for prophylaxis, who presented to the emergency department with acute, paralyzing, painful sciatica of the left lower limb, following minor trauma. Clinical examination, combined with angio-computed tomography (angio-CT), revealed a voluminous compressive hematoma in the posterior compartment of the thigh, probably of muscular origin. The patient underwent emergency surgical evacuation, during which approximately one liter of hematoma was removed. The postoperative course was favorable, and appropriate rehabilitation led to full neurological recovery within 12 months. This case highlights the importance of considering a compressive hematoma in the differential diagnosis of sciatic paralysis following trauma, however minimal, particularly in patients on anticoagulants. It also highlights the crucial role of early diagnosis and multidisciplinary management.

Keywords: Hematoma, Thigh, Sciatic nerve, Compression

INTRODUCTION

Sciatica is a common condition, most often of radicular origin.¹ However, extra-spinal causes, such as compressive hematomas, although rare, are clinically significant, particularly in patients on anticoagulant therapy.² We present a case of severe sciatic nerve compression caused by a voluminous thigh hematoma, occurring after minor trauma in a patient receiving fondaparinux for prophylaxis. This case highlights the importance of including compressive hematoma in the differential diagnosis of sciatic nerve palsy in anticoagulated patients.

CASE REPORT

A 27-year-old male with no notable medical history, except for a recent left ankle sprain, was placed on prophylactic fondaparinux following orthopedic management of the injury in accordance with

thromboprophylaxis guidelines. He presented with severe pain and swelling in the posteromedial aspect of the left thigh after a minor trauma during air travel, which likely triggered localized bleeding exacerbated by anticoagulation. Initially small, the hematoma rapidly enlarged, resulting in symptomatic compression of the sciatic nerve.

Neurological symptoms included pronounced L5-predominant sciatica, hypoesthesia, and paresthesias on the dorsum of the left foot. The patient also reported total functional impairment of the left lower limb, suggestive of significant motor deficit. He was afebrile, with preserved general condition, ruling out systemic infection or immediate major complications. Clinical examination revealed extensive ecchymosis over the posteromedial thigh. Neurological exam showed marked weakness in the hamstrings, impaired knee flexion, and deficits in foot dorsiflexion and hallux extension. No signs of distal vascular compromise (pulses, skin coloration, extremity

temperature) were observed. Coagulation studies (INR, aPTT) were within normal limits, as expected with fondaparinux, which is not reflected in standard coagulation tests. An angio-CT scan of the aorta and lower limbs was performed to characterize the hematoma and assess sciatic nerve involvement.

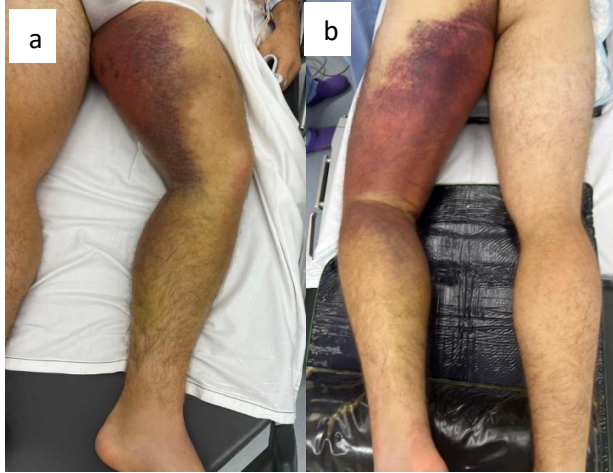


Figure 1 (a and b): Clinical presentation of the patient.

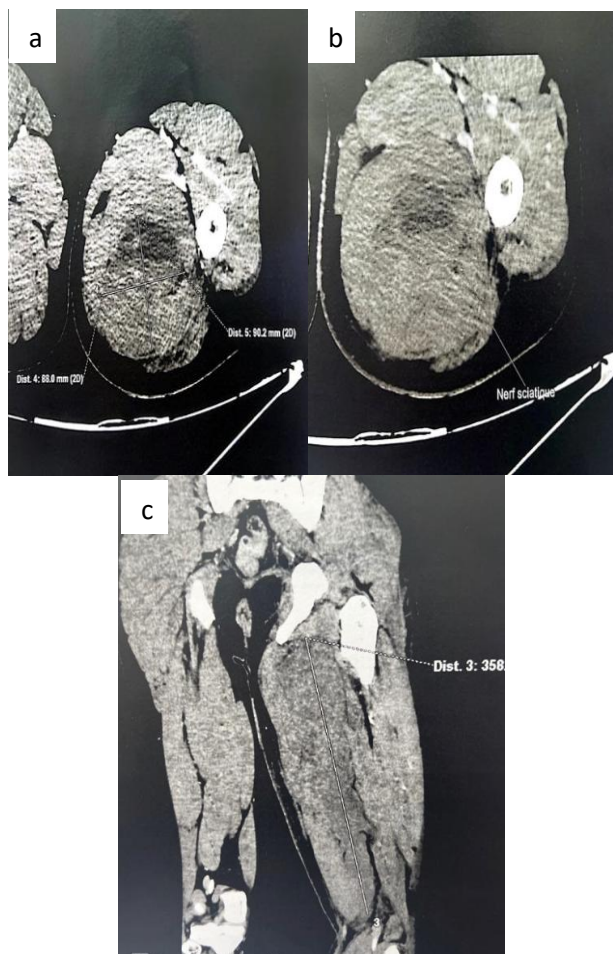


Figure 2 (a-c): Angio-CT scan of the lower limb showing thigh hematoma.

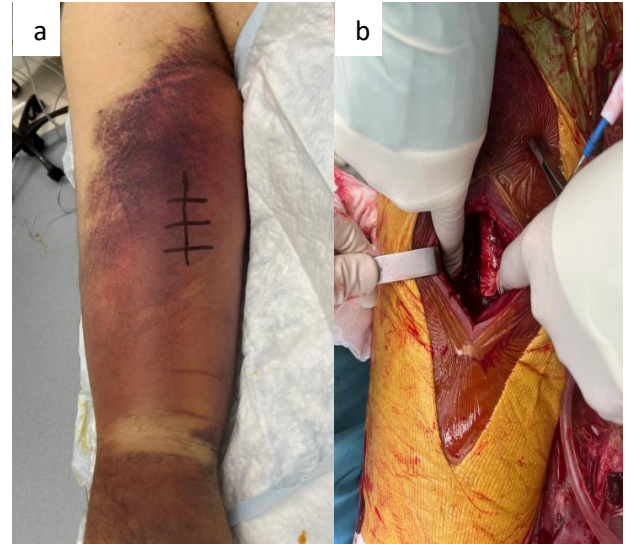


Figure 3 (a and b): Surgical evacuation of the hematoma via a posteromedial approach under general anesthesia.

Imaging revealed a large hematoma occupying the posterior compartment of the left thigh, measuring approximately 240 mm longitudinally and 90 mm transversely. Soft tissue infiltration of adjacent subcutaneous tissues was also observed, indicating hematoma extension. No arterial injury or active bleeding was identified. Surgical evacuation was performed under general anesthesia with the patient in the prone position. A posteromedial approach at the mid-thigh level allowed effective access to the collection. Approximately one liter of hematoma was removed. Postoperative recovery was uneventful, with no recurrence. The patient underwent an intensive rehabilitation program focused on restoring muscle strength and sensory function. A complete neurological recovery was achieved within 12 months.

DISCUSSION

Muscle hematomas are frequently encountered in patients with bleeding tendencies due to hemophilia or anticoagulant therapy and may occur spontaneously or following trauma.^{3,4} In this case, sciatic nerve compression resulted from an intramuscular hematoma in the adductor compartment of the thigh in an anticoagulated patient. While sciatica is typically radicular in origin,¹ our case underscores the importance of considering extraspinal causes, especially in patients with bleeding risk factors such as anticoagulation therapy. Fondaparinux has been reported to cause spontaneous hematomas, including in the central nervous system, such as spontaneous acute subdural hematomas.⁵ Its anticoagulant effect is not reflected in routine coagulation tests (INR, aPTT), and thus a normal coagulation profile should not exclude a diagnosis of anticoagulant-induced bleeding. In this patient, the hematoma likely developed due to minor trauma. The posterior thigh compartment, containing the hamstring muscles and the sciatic nerve, as well as the

medial (adductor) compartment, are potential bleeding sites. In this case, the hematoma originated in the adductor compartment but expanded to compress adjacent posterior structures, resulting in paralytic sciatica.

Literature review indicates hematomas may occur in various locations including the posterior thigh, the iliopsoas muscle, and others, with resulting sciatic nerve palsy due to compression. Diagnosis of sciatic nerve compression by hematoma is based on strong clinical suspicion, particularly in patients on anticoagulants presenting with sciatica accompanied by local signs such as hematoma or ecchymosis.^{3,6} MRI is the gold standard for accurately assessing the size and location of the hematoma, as well as the degree of nerve damage.⁷ However, when MRI is not available on an emergency basis, angioscan may provide sufficient information to guide management.⁸ In our case, angioscan alone helped guide the therapeutic approach, thus avoiding irreversible nerve damage.

Management of sciatic nerve compression due to hematoma in anticoagulated patients is a medical and surgical emergency. It requires a multidisciplinary approach involving surgeons, hematologists, and rehabilitation specialists. Initial management includes temporary suspension of anticoagulation therapy. In our case, prophylactic fondaparinux did not necessitate reversal, but withholding the drug was appropriate in the context of symptomatic hemorrhage. Resumption of anticoagulation should be based on individual thrombotic risk assessment.⁹ Surgical evacuation is indicated in cases of progressive or severe neurological deficit, or in the presence of large haematomas, as in our patient.¹⁰ The aim is rapid nerve decompression to prevent irreversible damage. The surgical approach must be adapted to the location of the hematoma; in our case, the posteromedial approach enabled effective decompression.

Functional prognosis depends on the severity and duration of compression.¹¹ Early surgical intervention, combined with appropriate rehabilitation, generally leads to significant, often complete, functional recovery, as illustrated by our observation with total neurological restoration in 12 months.¹² On the other hand, delayed management can result in persistent neurological sequelae due to axonal damage.

CONCLUSION

Compression of the sciatic nerve by an intramuscular hematoma should be considered in any patient on anticoagulants presenting with acute sciatica, even after minor trauma. Imaging, particularly MRI or angioscan in emergency situations, enables rapid and accurate diagnosis. Early management, combining temporary discontinuation of anticoagulation, surgical evacuation if

necessary, and appropriate rehabilitation, is essential to prevent neurological sequelae. In our case, this strategy enabled full recovery within 12 months.

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