



# **Femoral Neuropathy Secondary to Iliopsoas Spontaneous Haematoma**

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## **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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**Case Study**

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## **ABSTRACT**

We report a case of a 51-year-old male patient under Acénocoumarol medication, he developed a severe right hip and femoral neuropathy with no history of trauma. Laboratory data revealed prolonged international normalized ratio level of 8 and imaging studies showed a large haematoma surrounding the right iliopsoas muscle (16 cm x 8 cm x 3 cm). The patient was treated conservatively with discontinuation of his anticoagulation remedy and vitamin K administration and he was discharged well without complication. Iliopsoas haematoma or spontaneous retroperitoneal haemorrhage is an uncommon complication that needs to be considered in the differential diagnosis of a patient on Acénocoumarol therapy with abdominal, flank or groin pain.

*Keywords: Femoral neuropathy; retroperitoneal hematoma; oral anticoagulants; vitamin K antagonist.*

## 1. INTRODUCTION

Femoral neuropathy due to retroperitoneal haemorrhage is an unusual complication [1]. The incidence is unknown of reported cases, the diagnosis is often delayed as symptoms and signs are nonspecific. Therefore, retroperitoneal hematoma should be suspected in patients with significant groin, flank. In the majority of cases, abdominal, and back pain, partial loss of quadriceps functions, or haemodynamic instability in patients who are anticoagulated. Rarely, it can cause flexion contracture of the hip due to compressive femoral palsy as in the present case [2,3].

Treatment approach to these patients remains controversial [4,5]. We present a case of a male patient who was under Acénocoumarol 3mg for prosthetic mitral valve replacement and developed right femoral neuropathy, caused by a spontaneous non-traumatic right iliopsoas haematoma. The patient was treated conservatively demonstrating almost full recovery.

## 2. CASE PRESENTATION

A 51-year-old man presented to the hospital suffering from right hip flexion contracture and severe groin pain. He had been complaining of progressive lower abdomen and groin pain, paraesthesia, and weakness in his upper right thigh for 10 days. He had a history of prosthetic

mitral valve replacement 9 years ago and was taking Acénocoumarol 3mg per day.

On physical examination revealed thigh bruising surrounding the right groin and tenderness on the right side of the abdomen. He reported paraesthesia over the anterior thigh. On neurological examination, right crural monoparesis with pain was revealed. The kidneys were not ballotable and there was no loin tenderness. Vital signs were normal. Both lower extremity pulses were symmetric and equal. Laboratory tests revealed anaemia with a haemoglobin value of 9.1 g/L.

His international normalised ratio (INR) was 2.6 one month ago. There was no recent adjustment to the compliance to his medications. However the INR in the emergency room was markedly elevated to 8.09. Ultrasonography detected 10 × 8 × 8 cm right iliopsoas hematoma, and was confirmed by CT scan (16 cm x 8 cm x 3 cm). (Figs. 1, 2).

## 3. DISCUSSION

Spontaneous haemorrhage of the iliopsoas muscle followed by femoral nerve neuropathy is a rare complication frequently seen in patients receiving anticoagulant agents or suffering from clotting disorder. The neuropathy is a result of the decreased blood flow to the surrounding epineurium or it can befall secondary to the pressure-related ischaemia [1].



Fig. 1. Hematoma at the iliopsoas muscle on ultrasonography (white circle)



**Fig. 2. CT scan revealing a right iliopsoas haematoma (white circle)**

Iliopsoas hematoma usually manifests with sudden onset of inguinal, hip, thigh or low back pain. In the differential diagnosis, ureteric stones, aortic dissection, hip pathologies, and radiculopathies originating from lumbar region should be considered first.

The diagnosis should be suspected by a good anamnesis and a careful physical examination, and is confirmed by complementary imaging tests. In all patients, a complete blood workup is essential, including hemostasis parameters that help to verify the patient's coagulation status. Abdominal ultrasound can provide much can provide a great deal of information [6]

The treatment can be conservative, transarterial embolization or surgery. Surgical decompression should be considered in trauma patients and in patients with large hematomas and neurological progression [7]. Conservative management of

this includes discontinuation of the anticoagulation therapy and reversal of any coagulopathy [2]. In our case, the patient was on warfarin treatment. The most common complication of Acénocoumarol is bleeding, and INR is recommended that should be monitored regularly [4,8]. The INR of our patient was prolonged at time of admission (INR 4.5). Several medications and various dietary products can affect INR levels [8]. Medication adverse effects may be reversed with phytomenadione (vitamin K1), fresh-frozen plasma, and prothrombin complex concentrate [8]

Patients should be included in the rehabilitation program, regardless of the treatment approach. Prognosis is usually good, and most patients, treated operatively or not, recover and return to their previous functionality [3]. Our patient recovered 5 months post-discharge.

#### 4. CONCLUSION

Femoral neuropathy secondary to iliopsoas non-traumatic haematoma should be considered in all cases. History and full neurological examination are imperative to suspect the diagnosis. Conservative management can provide a good outcome; it requires, however, a long period of rehabilitation.

#### CONSENT AND ETHICAL APPROVAL

As per international standard or university standard guideline patients consent and ethical approval has been collected and preserved by the authors.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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