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Iliopsoas Haematoma Presenting with Femoral Neuropathy during Anticoagulation Therapy with Warfarin

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Abstract

Iliopsoas haematoma is a rare complication of anticoagulation therapy, presents with sudden onset of groin or flank pain, with or without neurological manifestation of the lower extremity due to femoral neuropathy. Computed Tomography of abdomen and pelvis is the most useful tool for diagnosis. Treatment options are conservative therapy, surgical decompression, ultrasound guided percutaneous drainage or trans-catheter arterial embolisation. We report a case of iliopsoas haematoma, in a 28 years old male, post aortic valve replacement on oral anticoagulation therapy, presenting with right groin and flank pain with paraesthesia of right lower limb.

Keywords: ***Iliopsoas haematoma, Femoral neuropathy, Anticoagulation therapy.***

Introduction

Ilio Psoas Haematoma (IPH) is a uncommon complication of anticoagulation therapy with warfarin. It needs to be considered in the differential diagnosis, in a patient on anticoagulation therapy.[1] who present with acute onset of groin and/or flank pain with or without paraesthesia or paresis of the lower limb. Compression of the femoral nerve which runs along the iliacus muscle can lead to femoral neuropathy.[3] causing paraesthesia or paresis of the lower limb.

Case of IPH with femoral neuropathy was reported in a patient on warfarin therapy, who underwent Aortic Valve Replacement (AVR) 2 years back. His coagulation profile was deranged, computed tomography of the abdomen and pelvis confirmed the diagnosis. He was managed conservatively.

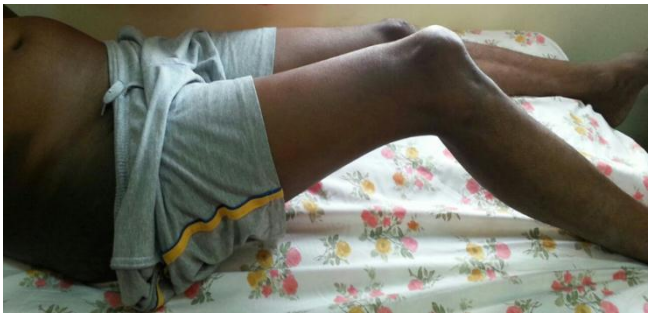

Figure 1: Ecchymosis over the right flank (Grey Turner sign) and right hip is flexed, passive extension elicits pain (Psoas sign).

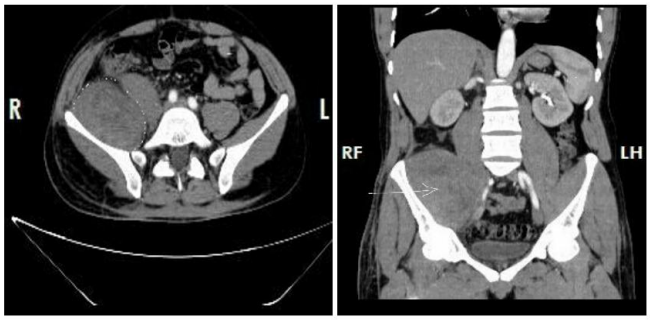

Figure 2: Computed Tomoghraphy of abdomen and pelvis, (A) axial view (white dotted line) (B) coronal view (white arrow) showing iliopsoas haematoma measuring 10cm X 8cm X 8cm.

Case Report

28years old male, who underwent AVR with mecahanical valve 2 years back, on warfarin 3 mg /day, presented to us with sudden onset of pain in right groin subsequently he developed parasthesia over the right thigh also noticed discolouration over the flank. There was no history of trauma. On examination, he was afebrile with stable haemodynamics with ecchymosis over right flank extending upto the right thigh (Grey Turner sign) and right hip was flexed, passive extension elicited pain, Psoas sign (Figure 1), with hyperasthessia over anterior thigh and anteromedial aspect of leg (L2 –L4 dermatome).

Blood investigations were as follows: Hb% - 8.4 gm%; platelet count - 2.6 lakhs/cu.mm; INR-9.66; ECG, sinus rhythm with heart rate of 90/min. Echo cardiogram:

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Normally functioning aortic disc prosthesis with normal left ventricular function. Ultra sonography of abdomen: Mixed echogenic mass lesion in the right iliac fossa, suggestive of ? appendicular mass, ? iliopsoas haematoma. Computed tomography of abdomen and pelvis showed right iliopsoas haematoma measuring 10cm X8cm X8cm with inferior extension up to right hip joint (Figure 2A, 2B). He was managed conservatively with bed rest, blood and fresh frozen plasma transfusion. INR returned to therapeutic range after 3 days, and he was discharged after 7 days.

At the time of discharge he was asymptomatic except for the hyperasthesia over the anterior aspect of the thigh and anteromedial aspect of the leg which also subsided gradually during subsequent follow ups.

Discussion

IPH present with sudden onset of groin and/or flank or lower back pain with or without neurological symptoms in the lower limb. Differential diagnosis include ureteric colic, lumbar spondylosis, aortic dissection. IPH rarely occur due to trauma as it is deeply seated. IlPH can be unilateral or bilateral.[1] Spontaneous IPH even though uncommon, but occur in patients on warfarin, heparin and antiplatelet therapy.

Also seen in patients with bleeding disorder, haemophilia,[2] thrombocytopenia. IPH causes compressive femoral neuropathy.[3] This is due to long course of femoral nerve. The nerve can be compressed anywhere along its course but susceptible to compression within the body of the psoas muscle, at iliopsoas groove and at the inguinal ligament. Its motor branches innervate iliopsoas and quadriceps, sensory branch (saphenous nerve) innervate the skin on the anterior thigh and anteromedial aspect of the leg. IPH may also present with acute lower extremity paraesthesia and in severe cases with paresis. Typically hip is flexed on the affected side, and pain is elicited on passive extension (Psoas sign)

Warfarin is the most commonly used oral anticoagulant. Major complications include intracranial, gastrointestinal, retroperitoneal or rectus sheath haematomas. Warfarin is known to interact with many drugs, which interfere with its metabolism and enhances its anticoagulation effect. Also certain factors like malnutrition, mal-absorption, prolonged antibiotic therapy, liver disease, chronic alcoholism enhances its anticoagulation effect.

Ultrasonography has been used to diagnose iliopsoas haematoma, but its sensitivity and specificity are user dependent, also diagnosis is technically difficult due to deep seated location of the muscle. Magnetic Resonance Imaging is the investigation of choice. Computed Tomography is cost effective, easily available and adequate for diagnosis. Management in this case was conservative with bed rest, blood and fresh frozen plasma transfusion. Surgical decompression is indicated in cases with severe compressive femoral neuropathy, not responding to conservative therapy.

Ultrasound guided percutaneous drainage[4] is indicated if the patient is poor surgical candidate. Transcatheter arterial embolisation[5] is indicated in cases with on going bleeding, as it prevents further bleeding and compression. Spontaneous IPH in patients who are on anticoagulant therapy even through rare, described in literature. Suspect iliopsoas haematoma and retroperitoneal haemorrhage in patients on anticoagulation therapy, who present with acute groin and/or flank or lower back pain with or without ipsilateral paraesthesia or paresis of the lower extremity.

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