CASE REPORT

True Aneurysm of the Profunda Femoris Artery

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Introduction

True aneurysms of the profunda femoris artery are rare, recent reports suggest an increase in the incidence of femoral and profunda femoris aneurysms. We report a true profunda femoris aneurysm illustrating the commonest presentation as a pulsatile swelling of the thigh and the effectiveness of simple ligation as treatment.

Case Report

An 82-year-old man presented with a 24-h history of acute onset of painful swelling of his right thigh. There was no precipitating factor. Associated was weakness of the right leg and paraesthesia of the right foot, which had been present for the past 6 months. There was no history of claudication of the leg. The patient was a known hypertensive.

On examination the patient was comfortable and cardiovascularly stable. Examination revealed a diffuse tense pulsatile swelling of the anteromedial aspect of the right thigh with a bruit over the swelling. All pulses were palpable in both lower limbs. The right foot was distinctly warmer than the left and capillary refill was the same on both sides.

CT scan of the thigh showed a large $9 \times 6$ cm oval aneurysm of the profunda femoris, in the region of the adductor canal. Aneurysms were also noted in both common femoral and popliteal arteries.

Under general anaesthetic the right thigh was explored via a medial longitudinal incision. The findings at operation were of aneurysms of the common femoral and profunda femoris, the superficial femoral artery being normal. The profunda femoris was fully exposed, revealing the neck of the ruptured aneurysm, which was clamped, this controlled the pulsation of the thigh. After a period of observation it was clear that the distal circulation was being maintained via the superficial femoral artery so ligation of the profunda femoris was performed.

Post-operatively the patient made a smooth recovery with relief of pain and leg pulsation and was discharged 10 days later. Swelling of the leg gradually resolved over the following weeks and on review at 3 months the patient was well.

Discussion

The lower limb is the commonest site of peripheral artery aneurysms, popliteal and common femoral arteries accounting for most of the cases. Thirty-four cases of true aneurysms of the profunda femoris are reported. False aneurysms of the profunda femoris due to trauma have been described more commonly. Of the cases reported the average age at presentation has been 68.8 years with 98% of cases being male.

The commonest presentation is rupture, causing a pulsatile swelling of the thigh (34.5% of cases), the size of aneurysms at presentation ranging 3–9 cm. Fifty-three per cent of cases present as complications, i.e. rupture, thrombosis or embolism.

Femoral artery aneurysms are attributed to atherosclerosis; arterial wall vibration and recurrent thigh flexion. The profunda femoris is protected from dilatation, by a muscular tunnel formed by the Adductor magnus, this may account for their rarity. Profunda

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femoris aneurysms are associated with aneurysmal disease in other vessels, commonly the aortic, femoral and popliteal, in up to 50% of cases. Diagnosis with CT or ultrasound can be difficult and the defect is commonly only discovered at surgery. Treatment options include reconstruction using autologous vein or PTFE and simple ligation if the superficial femoral artery is patent. Transcatheter embolization has also been successfully described as a treatment option. 

References