Posterior Tibial Artery Aneurysm

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True posterior tibial artery aneurysm is an extremely rare pathology. A fifty-three-year-old Bahraini female presented with a pulsatile mass behind the left medial malleolus for one year duration. Arterial duplex and angiogram revealed a true saccular aneurysm of the posterior tibial artery. The aneurysm was resected and the posterior tibial artery was reconstructed with end-to-end anastomosis.


An aneurysm is a permanent, localized dilatation of a blood vessel with at least 50% increase of its expected normal diameter. Aneurysms are considered either true or false based upon the involvement of blood vessel wall layers. Pseudoaneurysms are more common and usually secondary to trauma. The infrarenal aorta is the most common site of the arterial aneurysms. The incidence of infrapopliteal aneurysms is very rare. The most serious complication of the aneurysms is rupture, which could lead to death. Other complications include thrombosis, embolism and compression of adjacent structures. We present an extremely rare case of a true posterior tibial artery aneurysm, which to the best of our knowledge is the twenty-first case report in the English literature.

The aim of presenting this case is to increase awareness of posterior tibial artery aneurysm and its management.

THE CASE

A fifty-three-year-old female presented with a history of a painful pulsatile mass in the medial aspect of the left leg for one year. In the last four months, it increased in size and had become painful. There was no history of trauma, and the patient’s past history is not significant. On examination, there was a 5x3 cm size pulsatile mass behind the left medial malleolus. Pedal pulses were palpable. There was no evidence of any other aneurysm on clinical examination. Ultrasound of the left lower limb revealed a posterior tibial artery (PTA) aneurysm. An angiogram was performed which confirmed a saccular PTA aneurysm with patent pedal arteries. An aortoiliac aneurysm was excluded by abdominal ultrasound. Laboratory investigations including erythrocyte sedimentation rate (ESR) were normal.

The patient was symptomatic and the aneurysm was large; because of that, the patient was scheduled for surgical intervention. The aneurysm was resected and primary end-to-end anastomosis was performed, see figures 1 to 3.

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Figure 1: Exposed Posterior Tibial Artery Aneurysm

Figure 2A

Figure 2B

Figures 2 A and B: Resected Posterior Tibial Artery Aneurysm Occupied with a Thrombus