

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Vascular Diseases Quiz – Case 29

A 31-year-old male, athlete was transferred from a regional hospital to the Vascular Department after he presented with a pale and cold right foot two hours earlier. The patient reported he has felt a sudden pain just before the onset of symptoms. Prior medical history was free and the patient was otherwise fit and well, although in great pain. Pulses were palpable on the left foot, but absent on the right. A large pulsatile mass was palpable in the right popliteal fossa. No sensory or motor dysfunction was present. Electrocardiogram (ECG) and abdominal ultrasound scan, both performed in the referring hospital, were normal.

What is the most probable diagnosis?

Comment

A popliteal artery aneurysm (PAA) is a 1.5 fold increase in the diameter the popliteal artery compared to an adjacent normal artery segment, which usually translates into a diameter of 1.5 to 2 cm (fig. 1). PAAs are quite rare with a reported incidence in hospitalized patients of 7.4 per 100,000 men and 1 per 100,000 women. Incidence in the general population is unknown, but estimated at approximately 0.1%. Males represent the vast majority of PAA cases, reaching 97% according to some authors.³ Eight per cent of patients with an abdominal aortic aneurysm (AAA) could also have a PAA. Patients with PAA appear to simultaneously have an AAA or a contralateral PAA in 36% and 50%, respectively.

PAAs are caused by atherosclerosis, trauma, congenital popliteal aneurysm, mycotic aneurysm, inflammatory arteritis, or popliteal entrapment. PAAs can be either asymptomatic or symptomatic. Asymptomatic PAAs are usually smaller in diameter and free of intraluminal thrombus. PAAs are symptomatic when thrombosed, distally embolising or ruptured; with the latter being rare. Large PAAs may compress the peroneal nerve or the popliteal vein, causing drop foot and pain, or deep vein thrombosis, respectively. Both PAA thrombosis and embolisation present with acute ischemia of the lower extremity, but thrombosed PAA presents as a firm not-pulsating popliteal mass. As a rule, duplex ultrasonography is considered superior to physical examination. More detailed information can be obtained through computed tomography angiography (CTA) or magnetic resonance imaging (MRI).

Acute ischemia due to PAA is a medical emergency. The patient should receive anticoagulation and a limb-salvaging repair should be undertaken. Open repair with an interpositioned vein graft should be performed if a patent outflow vessel is present. If the limb is not in jeopardy, ultrasound-guided thrombolysis is an alternative

method of treatment. Asymptomatic PAA can be treated by open or endovascular repair, based on anatomical characteristics of the popliteal fossa and the PAA. No consensus exists on the treatment of asymptomatic PAAs, but a diameter of 2.5–3 cm considered by many as a threshold to proceed with surgical repair.

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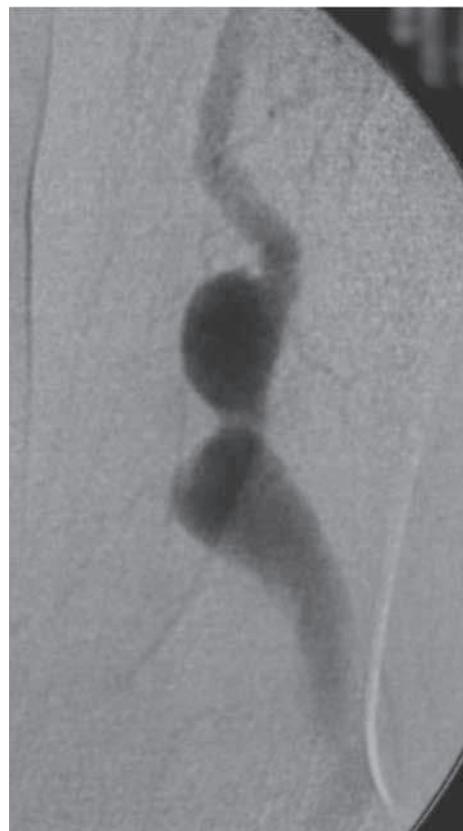


Figure 1. Popliteal artery aneurysm as seen during digital subtraction angiography.

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