

Radiological findings and endovascular treatment in giant deep femoral artery aneurysms

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DESCRIPTION

An 81-year-old man presented to the cardiovascular surgery clinic with right inguinal pain and swelling, which he had experienced for 1 year. A pulsatile mass that extended to the proximal femur was found in the right of the groin on physical examination. There was no sign of limb-threatening ischaemia. Blood urea nitrogen was 54 mg/dL and glucose was 168 mg/dL. The patient had unstable cardiac function. Superficial ultrasound showed an approximately 9 cm hypodense cystic lesion. Colour Doppler ultrasound (figure 1) showed that the lesion was connected to the deep femoral artery. Thrombosis was seen in the aneurysm. Additionally, deep vein thrombosis was found in the right superficial femoral vein extending to the knee. There was no flow on Power Doppler examination. Atherosclerotic intimal hyperplasia and enlargement were seen in the orifice of the superficial femoral artery. Contrast-enhanced MR angiography (figure 2) revealed a 10 cm giant aneurysm that was connected to the deep femoral artery (DFA) in the right of the groin. A 5.5 cm thrombosis was seen on the anterior wall of the aneurysm. The patient underwent conventional angiography for treatment. On angiography (figure 3), a giant aneurysm originating in the DFA was seen. Vascular continuity was established on the distal portion of the aneurysm. The distal embolisation was executed with a peripheral microcatheter. Proximal embolisation was attempted with microcatheter retraction. Peripheral coils were placed on the neck of the aneurysm. Subsequently, no blood filling was seen in the lumen of the aneurysm (figure 4).

Aneurysms of the DFA are rare clinical entities.¹ They occur in elderly men. Patients with aneurysms



Figure 2 Contrast-enhanced MR angiography showing a giant deep femoral artery aneurysm in the right of the groin.

present with ischaemic symptoms. Usually, patients with aneurysms have peripheral atherosclerotic disease.² Distal venous stasis and thrombosis related to local venous compressions are other possible complications. In our patient, thrombosis was found in the superficial femoral vein. Ultrasound, CT-MR and conventional angiography may be useful for

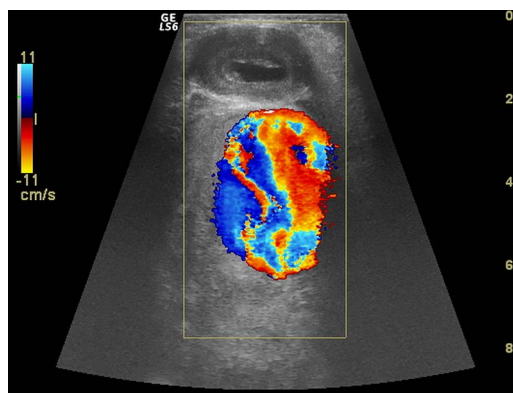


Figure 1 Colour Doppler ultrasound showing a giant deep femoral artery aneurysm with yin–yang appearance, measuring approximately 9 cm. The enlargement and intimal thickness in the main femoral artery is seen at anterior of the aneurysm.



Figure 3 Pre-embolisation digital subtraction angiography showing a giant aneurysm originating in the deep femoral artery.



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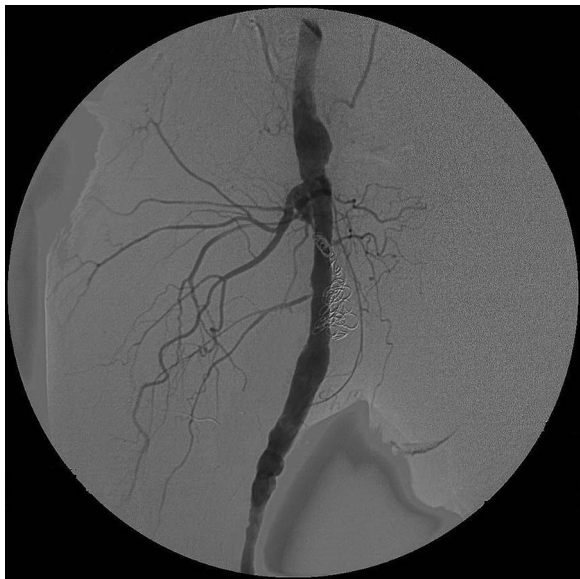


Figure 4 Postembolisation digital subtraction angiography showing absence of blood stream and availability of coils in the lumen of aneurysm.

diagnosis of a DFA aneurysm. The treatment for a DFA aneurysm is commonly surgical.³ If the patient cannot tolerate surgical repair, endovascular treatment may be a beneficial form of therapy. Three patients were treated with transcatheter coil embolisation in the literature. This method is less invasive than surgery and may be safe for patients with unstable cardiac function.

Learning points

- ▶ Deep femoral artery aneurysm is a rare vascular abnormality that may cause a variety of symptoms, such as ischaemia, venous stasis and peripheral atherosclerosis.
- ▶ Contrast-enhanced MR angiography or conventional angiography may be useful for diagnosis.
- ▶ Transcatheter coil embolisation is a less invasive treatment method in patients with unstable cardiac function.

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