

# Successful endovascular treatment of iatrogenic pseudoaneurysm with a relatively long neck

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## DESCRIPTION

A 63-year-old man was admitted to our emergency medical centre due to suspected myocardial infarction; coronary angiography was performed via the left common femoral artery. Following cardiac intervention, colour doppler ultrasonography demonstrated left common femoral artery pseudoaneurysm. (CT) revealed a pseudoaneurysm sac (maximum size, 54 mm) with a relatively long neck (length, 27 mm; figure 1).

After failed ultrasound-guided compression, left external iliac arteriogram confirmed that the pseudoaneurysm sac communicates via a neck with the left common femoral artery (figure 2A). A 2 Fr-microcatheter was superselectively catheterised into the pseudoaneurysm neck (figure 2B), followed by embolisation by injecting a 1:1 mixture of n-butyl cyanoacrylate (NBCA) and lipiodol to enable fluoroscopic visualisation. Left external iliac arteriogram confirmed complete absence of the pseudoaneurysm immediately after embolisation (figure 2C). Follow-up CT imaging 12 days later revealed no traces of the pseudoaneurysm. Moreover, there were no complications associated with transcatheter embolisation.

Femoral artery pseudoaneurysms occur in 0.2–7.7% of patients undergoing angiographic procedures.<sup>1</sup> In general, coil embolisation is an effective treatment at sites both distal and proximal to the pseudoaneurysm.<sup>2</sup> However, in the present case, the technique may have caused lower limb

ischaemia. Treatment options for pseudoaneurysm include ultrasound-guided compression and direct percutaneous thrombin injection.<sup>3</sup> NBCA is a liquid embolic material, and the adhesion time can be flexibly adjusted according to the rate of mixed lipiodol. A distinct advantage of NBCA in lipiodol is its dense radiopacity; as the exact site of occlusion can be observed during the embolisation procedure. NBCA undergoes rapid polymerisation and solidification and provides permanent embolisation; hence, migration of the embolic material can be prevented. The present technique demonstrated that superselective embolisation of the pseudoaneurysm neck was possible without the need for direct percutaneous embolisation.

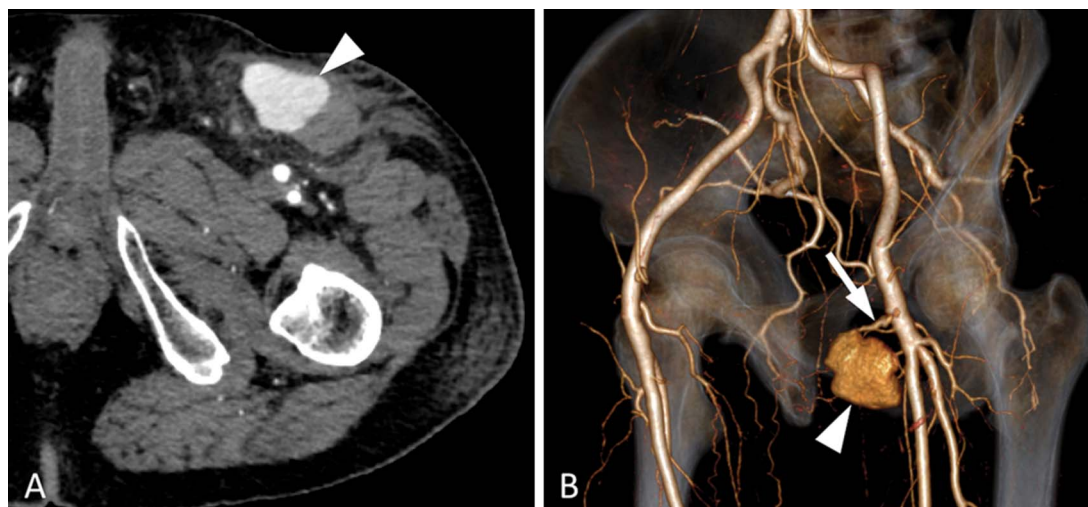
## Learning points

- ▶ Iatrogenic pseudoaneurysm is an undesirable complication of angiography.
- ▶ Endovascular treatment for pseudoaneurysm should be effective, particularly with a relatively long neck.

**Competing interests** None.

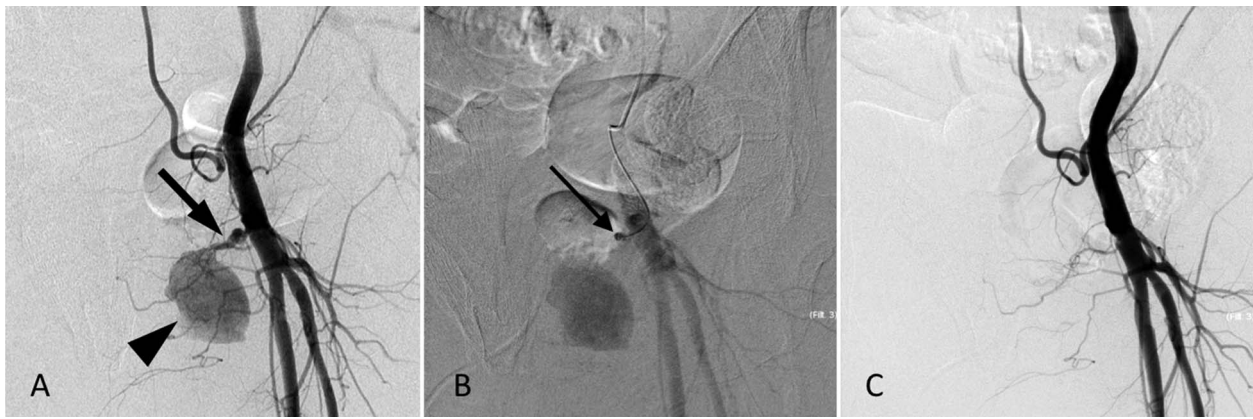
**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.



**Figure 1** Contrast-enhanced CT in the arterial phase revealed a well-enhanced area (arrowhead) in the left inguinal region (A). Three-dimensional CT revealed a common femoral artery pseudoaneurysm (arrowhead) with a relatively long neck (arrow) (B).

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**Figure 2** Left external angiogram revealed a pseudoaneurysm sac (arrowhead) and neck (arrow) (A). A microcatheter was superselectively catheterised into the pseudoaneurysm neck (thin arrow), followed by embolisation injecting a mixture of n-butyl cyanoacrylate and lipiodol (B). Left external iliac arteriogram immediately after embolisation confirmed complete absence of the pseudoaneurysm (C).

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