



# Ruptured Popliteal Artery Aneurysm

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## Abstract

Rupture of a popliteal artery aneurysm is an uncommon event in an uncommon disease. We present the case of an 88-year-old female with a ruptured popliteal artery aneurysm that was diagnosed by multidetector computed tomography and treated by an endovascular approach.

## Keywords

- ▶ popliteal artery
- ▶ aneurysm
- ▶ imaging
- ▶ aging
- ▶ endovascular

An 88-year-old female, with arterial hypertension, was admitted to our hospital for onset of acute pain and swelling behind her left knee. There was no history of trauma. Physical examination revealed a palpable and pulsatile mass in the upper popliteal fossa. Left ankle brachial index was 0.8 (normal range: 0.9–1.2). Multidetector computed tomography of left lower limb, on axial and sagittal volume rendering technique reconstruction, revealed a voluminous popliteal artery aneurysm (4.1 cm; arrowhead) with partial aneurysm sac thrombosis and signs of contained rupture (▶ **Fig. 1A, B**). She was felt to be a candidate for an urgent percutaneous endovascular approach.

Intraoperative digital subtraction angiography confirmed left popliteal artery aneurysm (▶ **Fig. 2**; arrowhead). A covered stent was deployed into the left popliteal artery segment with consequent aneurysm sac

exclusion (▶ **Fig. 3**). The patient's symptoms resolved after the procedure with an uneventful postoperative course.

Predischarge and follow-up ultrasound color Doppler confirmed thrombosis of the treated left popliteal aneurysm sac and stent lumen patency.

Ruptured popliteal artery aneurysm is an uncommon event in an uncommon disease.<sup>1</sup> Multidetector computed tomography in urgent cases is the diagnostic imaging of choice to evaluate aneurysm anatomy and possible complications, as well as for planning treatment approach.<sup>1,2</sup> In cases of ruptured popliteal artery aneurysm, as in our patient, with partial thrombosis and good run-off blood flow to the foot, an endovascular approach is indicated.<sup>2</sup> Endovascular deployment of a covered stent to exclude the popliteal artery aneurysm is a less invasive procedure compared with a conventional surgical approach.<sup>3</sup>

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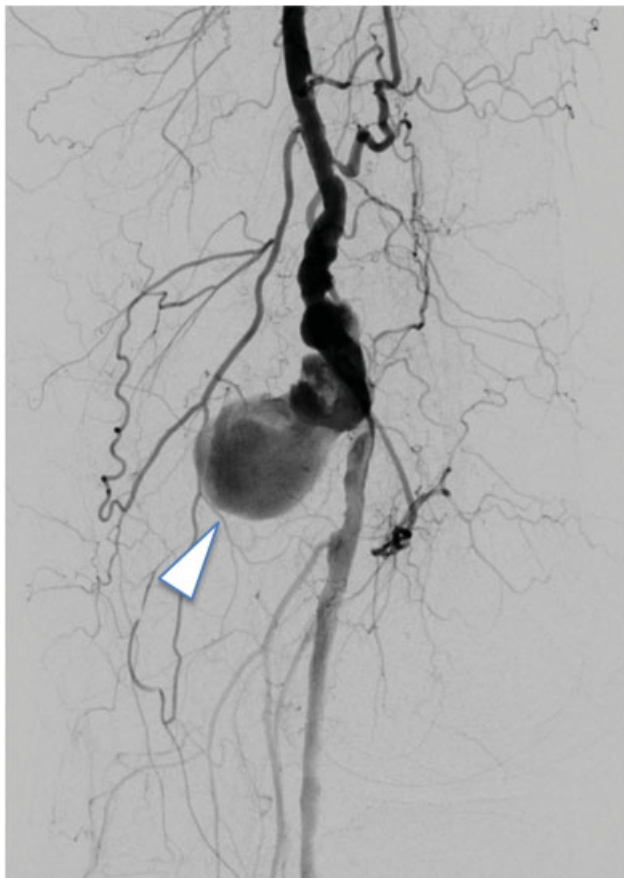
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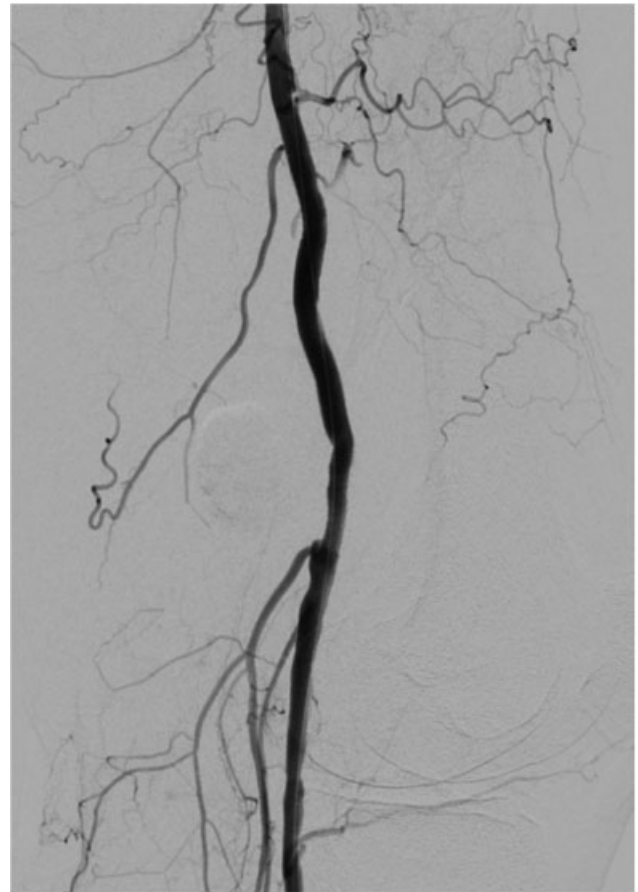
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**Fig. 1** A voluminous popliteal artery aneurysm (arrowhead) with partial aneurysm sac thrombosis and signs of contained rupture. VRT, volume rendering technique.



**Fig. 2** Intraprocedural diagnostic digital subtraction angiography confirmed left popliteal artery aneurysm (arrowhead).



**Fig. 3** A covered stent was deployed into the left popliteal artery segment with consequent aneurysm sac exclusion.

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#### Conflict of Interest

The authors declare no conflict of interest related to this article.

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