

Traumatic peroneal artery pseudoaneurysm: Use of preoperative coil embolization

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A 35-yr-old man was referred after developing a large painful left lateral calf mass 31 months after a gunshot wound. At the time of his injury he had sustained a fibula fracture, and required fasciotomies with split-thickness skin grafting. On examination his left midcalf was enlarged to nearly twice the circumference of the contralateral calf (A). The laterally displaced calf mass was tense, pulsatile, and associated with a thrill and a bruit loudest at the ankle. Pedal pulses and ankle-brachial indexes were normal. Magnetic resonance angiography confirmed that a $7 \times 5 \times 4$ -cm pseudoaneurysm of the mid-left peroneal artery was present (Cover). Associated findings included an arteriovenous fistula between the distal peroneal veins and the greater saphenous at the ankle (B, *white arrow*).

To minimize operative blood loss and limit the risk of damage to surrounding nerves and vessels during repair, we used preoperative coil embolization of the feeding vessels before decompression. One day prior to surgery, selective angiography and coil embolization of the proximal and distal peroneal artery with multiple 4-mm and 5-mm coils was performed successfully (C, *black arrows*). Collaterals from the anterior tibial artery were individually embolized as well. On the following day the patient underwent surgical decompression of the pseudoaneurysm through a 14-cm incision. The thrombus was removed, and back-bleeding from feeding vessels was absent. The wound was irrigated and closed over closed-suction drainage. The wound healed well and the patient returned to normal activities with no adverse sequelae at 9 months of follow-up.

Pseudoaneurysms are well-known complications resulting from trauma, surgery, infection, or interventional procedures. Civilian injuries leading to crural artery pseudoaneurysms are relatively rare. These aneurysms tend to enlarge over time and generally require operative repair. We present a novel staged approach to a large pseudoaneurysm of the peroneal artery, which required obliteration and decompression. Preoperative coil embolization allowed surgical decompression with minimal blood loss, and minimal risk of incidental nerve and blood vessel damage.

REFERENCES

1. Rich NM, Hobson RW, Collins GJ. Traumatic arteriovenous fistulas and false aneurysms: a review of 558 lesions. *Surgery* 1975;78:817-28.
2. Edwards H, Martin E, Nowygrod R. Nonoperative management of a traumatic peroneal artery false aneurysm. *J Trauma* 1982;22:323-6.

From the Medical College of Virginia.

J Vasc Surg 2004;39:912.

0741-5214/\$30.00

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doi:10.1016/S0741-5214(03)00928-5

