

Inferior gluteal artery aneurysm with arteriovenous fistula

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A 78-year-old woman was referred with a pulsatile mass in the left buttock and pain in the left leg. She also complained of numbness from the left buttock to the posterior thigh. She had a history of pelvic fracture as the result of a traffic accident 2 years earlier.

A computed tomography (CT) scan demonstrated a 35-mm × 33-mm aneurysm under the gluteus maximus muscle (A), in a location that could cause compression of the sciatic nerve. An arteriogram showed an aneurysm arising from the distal inferior gluteal artery with rapid visualization of the associated vein, indicating an arteriovenous (AV) fistula (B). These findings were confirmed by three-dimensional CT angiography and demonstrated that the AV fistula perfused the left iliac vein and sacral venous plexus (Cover).

We judged that surgical resection of the aneurysm and concomitant AV fistula carried a high risk of massive intraoperative bleeding or injury to the adjacent neurologic structures; therefore, we performed an endovascular intervention. A contralateral transfemoral sheath was placed into the left internal iliac artery with selective catheterization of the left inferior gluteal artery. Coil embolization of the inferior gluteal artery was performed via a microcatheter using four 5-mm Vortex coils (Boston Scientific Corp, Natick, Mass).

After the artery was successfully embolized and complete angiographic exclusion of the aneurysm was achieved (C), intraoperative duplex scanning showed loss of flow within the aneurysm. Postoperative CT scan confirmed complete thrombosis of the aneurysm. The patient's postoperative course was uneventful, and her leg symptoms resolved.

DISCUSSION

Gluteal artery aneurysms are uncommon, and inferior gluteal artery aneurysms are particularly rare entities.¹ To our knowledge, this is the first case reported of a traumatic aneurysm with AV fistula in this location. Pseudoaneurysms have been reported after pelvic fractures, presenting either as rupture or compression of the sciatic nerve.^{1,2} Therefore, this rare complication must be considered in patients with a history of pelvic trauma who later present with suggestive symptoms. Embolization appears to be a safe and reliable procedure to manage such aneurysms that might otherwise require surgical ligation of the feeding artery with risk of bleeding or nerve injury, or both.

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