

Endovascular management of a giant symptomatic gluteal artery aneurysm with selective arterial embolization

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A 78-year-old female presented to our department with pain and swelling in the left gluteal region. Physical examination revealed a large tender swelling in the left gluteal area simulating an abscess. However, pulsation was observed over the swelling that raised the suspicion of a vascular lesion. Therefore, contrast-enhanced computed tomography (CT) was done before trying any intervention. The scan demonstrated a large aneurysm originating from the left superior gluteal artery measuring 65 mm × 38 mm with a small intra-pelvic component and large extra-pelvic component in the gluteal area (*Figure 1*). This lesion appeared as a contrast-filled structure in

direct communication with the superior gluteal artery. An aneurysm of the hypogastric artery was also noted. Its two components were communicating in the region of greater sciatic notch. The patient was referred for endovascular treatment. Digital subtraction angiography (DSA) and transcatheter embolization were done in the same session (*Figure 2*). The aneurysm was approached by puncturing the right femoral artery and occluded by placing one Amplatzer vascular plug II (AVP) of 8 mm in size (St. Jude Medical, Zaventem, Belgium), two 0.035-inch detachable coils (Concerto, Covidien) and 1 mL of Onyx[®] (Covidien) in the feeding vessel (*Figure 3*). The patient was discharged 2 days

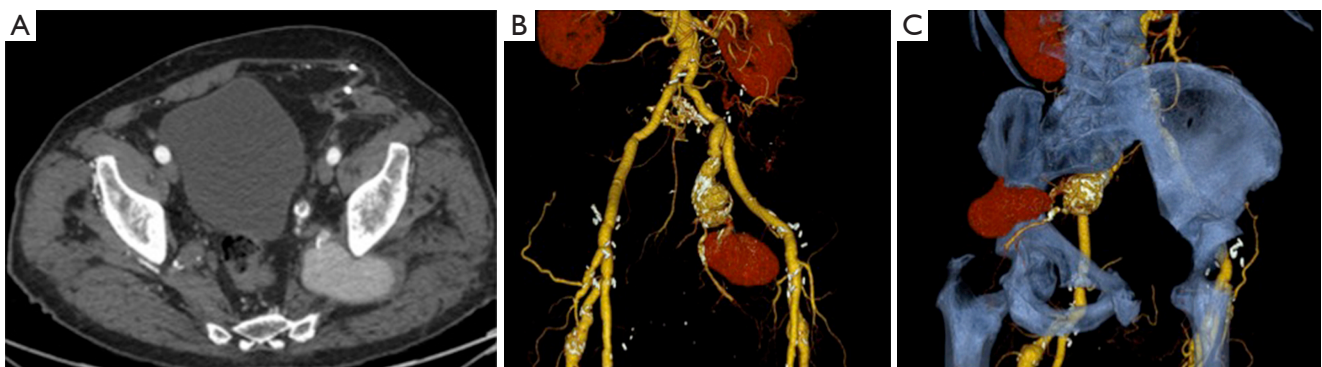


Figure 1 CT images of the pelvis. (A) Axial contrast-enhanced CT of the pelvis showing a giant aneurysm of the left Superior gluteal artery with a large extrapelvic and a small intrapelvic components; (B,C) volume rendering technique reconstructions showing aneurysm extension through the greater sciatic notch and its origin from the superior gluteal artery. CT, computed tomography.

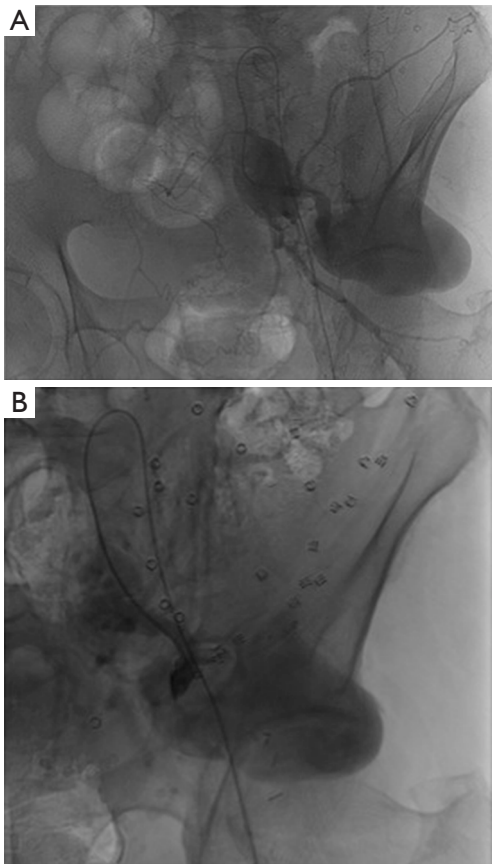


Figure 2 DSA images before embolization. (A) DSA selective catheterization of internal iliac artery; and (B) superior gluteal artery demonstrating the pseudoaneurysm. An aneurysm of the hypogastric artery was also noted and left in place. DSA, digital subtraction angiography.

after the procedure. Repeated CT angiography after 1 week confirmed exclusion of the aneurysm with only a residual hematoma in the area (*Figure 4*). Patient had an uneventful recovery with the pain disappearing. We are not aware of previous cases of high flow superior gluteal artery aneurysm treated with a combination of mechanical and liquid embolic agents to ensure a complete occlusion of the parent vessel. Gluteal artery aneurysms are found to be more common on the left side with a male predominance (1). These lesions are considered as an emergency as they are liable to rupture at any time with life threatening hemorrhage. In spite of being rare, gluteal arteries aneurysms should be considered in the work up of a patient with an acutely expanding gluteal mass

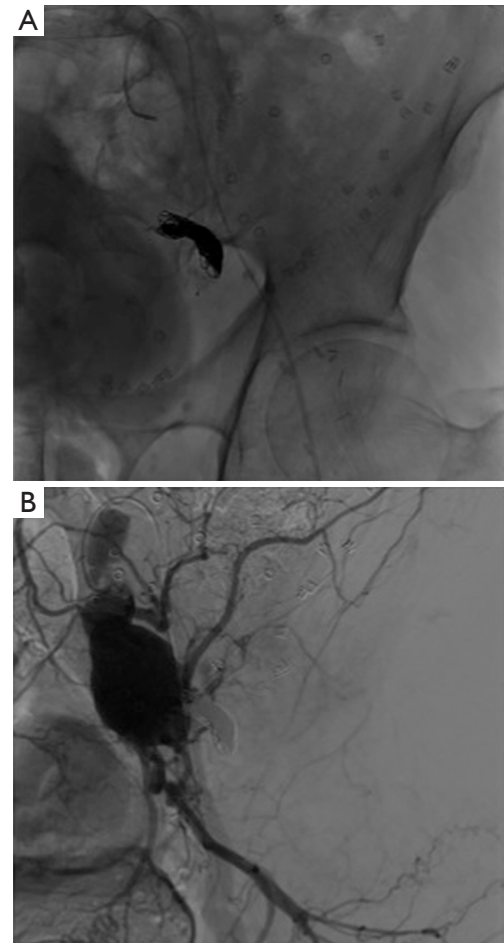


Figure 3 DSA images after embolization. (A) Selective embolization of the superior gluteal artery with AVP, coils and Onyx; (B) DSA following successful embolization showing occlusion of the aneurysm neck with complete cessation of blood flow inside the aneurysm. DSA, digital subtraction angiography; AVP, Amplatzer vascular plug.



Figure 4 Post-operative CT scan showing complete exclusion of the aneurysm and residual hematoma. CT, computed tomography.

or sciatic pain (1). CT plays a useful role in early diagnosis of these lesions and allows prompt treatment. Endovascular techniques are a safe and effective alternative to surgical repair (2,3).

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Informed Consent: Written informed consent was obtained

from the patient for publication of this Letter to the Editor and any accompanying images.

References

1. Taif S, Derweesh A, Talib M. Superior gluteal artery pseudoaneurysm presenting as a gluteal mass: case report and review of literature. *J Clin Imaging Sci* 2013;3:49.
2. Schorn B, Reitmeier F, Falk V, Oestmann JW, Dalichau H, Mohr FW. True aneurysm of the superior gluteal artery: case report and review of the literature. *J Vasc Surg* 1995;21:851-4.
3. Johnson SP, Wang WS, Peyton BD, Whitehill T. Endovascular therapy of superior gluteal artery aneurysms: case report and review of literature. *Semin Intervent Radiol* 2007;24:29-33.

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