

## Endovascular repair of giant bilateral iliac artery aneurysm

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Isolated iliac artery aneurysms (IAA) are rare with estimated incidence of 2% to 7% of all intra-abdominal aneurysms. It is generally accepted that untreated IAA will expand in size and eventually rupture.<sup>1</sup> Mortality associated with rupture is high, approaching 70%.<sup>2</sup> Most IAAs are asymptomatic and diagnosed incidentally while imaging other pathologies. Thromboses, embolic, and compressive symptoms of IAA, although rare, have been described.

We present a case of a 49-year-old man with hypertension and previous ascending thoracic aortic aneurysm repair who was found to have asymptomatic 7.9 cm left and 7.4 cm right common IAAs (CIAA) on follow-up computed tomography angiogram (A) that extended from the aorta to common iliac artery bifurcation (A, arrows). Initially, the patient underwent an aortoiliac angiogram to detail the anatomy and assess feasibility of endovascular approach. This was followed by percutaneous endovascular repair of bilateral CIAA with preservation of flow to both internal iliac arteries (IIA) using an iliac branch device. Because the IIA ostia were aneurysmal, we prepared the distal IIA landing zone by embolization of the superior gluteal artery on the right side and the inferior gluteal artery on the left while ensuring adequate blood supply between the two sides. The patient did well and was discharged home 2 days after surgery. At 8 weeks, a computed tomography angiogram showed patent stent grafts (B) with excluded aneurysm sac, preserved bilateral IIA flow and no evidence of endoleak (C).

Open, endovascular, or hybrid repairs of CIAA have been described and should be considered when their diameter exceeds 3.5 cm.<sup>3</sup> Choice of surgery depends on anatomy, surgeon expertise, and patient preference. The presence of compressive symptom skews the management toward open surgery, because endovascular treatment does not provide immediate decompression. Preservation of IIA flow is generally preferred, especially in bilateral aneurysms, to diminish the rate of buttock claudication and gluteal necrosis, sexual dysfunction, spinal cord ischemia, and colonic infarction that have been described with occlusion of IIA.<sup>4,5</sup> Endovascular repair seems to afford excellent surgical outcomes and early results with low mortality and blood loss, short hospital stay, and low 30-day morbidity.<sup>3</sup>

The patient agreed to publication of his clinical details and images.

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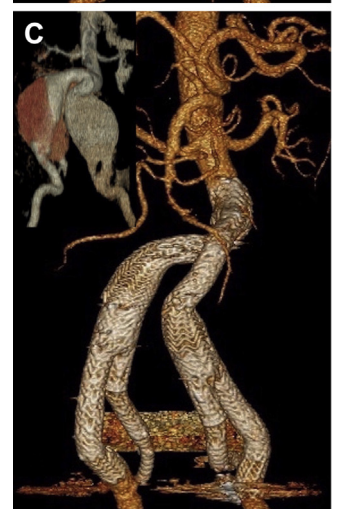
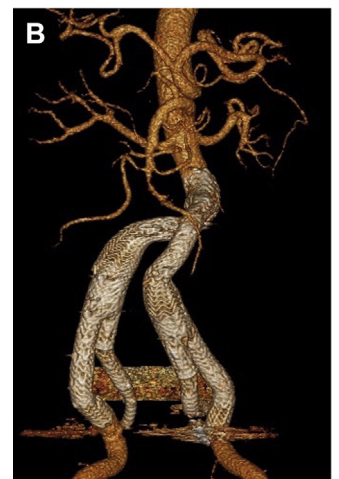
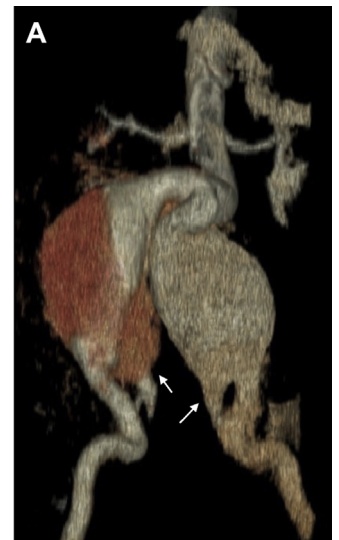
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