

Mixed connective tissue iliac artery aneurysm with arteriovenous fistula

Ryan Alexander, DO; Magda Rizer, DO; and Robert Beasley, MD

CASE SUMMARY

A 66-year-old man with a past medical history significant for mixed connective tissue disease who initially presented to the emergency department with left lower extremity edema and erythema of one-month duration that worsened over the last day. There was no history of trauma. He was hemodynamically stable with bilateral palpable lower extremity pulses. There was an abdominal bruit and pulsatile abdominal mass on physical examination. He had chronic unilateral sensorineural deafness. Complete blood count, electrolytes, lactic acid and lipid panel were within normal limits. He had a pertinent family history for a mother who died of a ruptured abdominal aortic aneurysm at 70 years old.

IMAGING FINDINGS

A lower extremity venous Doppler examination demonstrated arterialization of the venous system from a fistulous connection (Figure 1). Arterial phase computed tomography showed a large contained rupture of a left common iliac artery aneurysm with fistulous connection to the left common

iliac vein (Figure 2). The left internal iliac artery was coil embolized (Figure 3). An endovascular stent was placed from the ostium of the left common iliac artery and required extension to the distal aspect of the left external iliac artery to treat a Type I endoleak. The post-angiogram demonstrated successful stenting of the aneurysm without evidence for endoleak (Figure 4).

DIAGNOSIS

Mixed connective tissue iliac artery aneurysm with arteriovenous fistula

DISCUSSION

Isolated Iliac artery aneurysms are rare at < 1%.¹ Iliac artery aneurysms are seen in 10-20% of patients with abdominal aortic aneurysms.² The risk of rupture increases with aneurysm size and repair is recommended for aneurysms > 3 cm in diameter.³ The presentation can be neurologic, genitourologic or gastrointestinal due to external compression. Abdominal pain is commonly present in symptomatic patients.

Conventional open surgery is appropriate for iliac artery aneurysms with compressive symptoms (neurologic

or urologic).⁴ Endovascular treatment cannot rapidly reduce aneurysm size. Aortoiliac EVAR is necessary if the common iliac artery origin is aneurysmal.⁵ A proximal landing zone in aorta is required for graft seal and endoleak prevention. A common iliac artery aneurysm involving the iliac bifurcation requires graft extension into external iliac artery and concurrent embolization of internal iliac artery to prevent retrograde endoleak. Internal iliac artery coil embolization is performed prior to EVAR if the stent graft extends beyond the iliac bifurcation. Embolization prevents retrograde perfusion of the aneurysm sac following EVAR. There is a risk of buttock claudication and impotence with internal iliac artery embolization.⁵

CONCLUSION

Isolated iliac artery aneurysms are rare entities that can be treated with an endovascular approach. The risk of rupture increases with aneurysm size and repair is recommended for aneurysms > 3 cm in diameter.³ There is a risk of buttock claudication and impotence with internal iliac artery embolization.

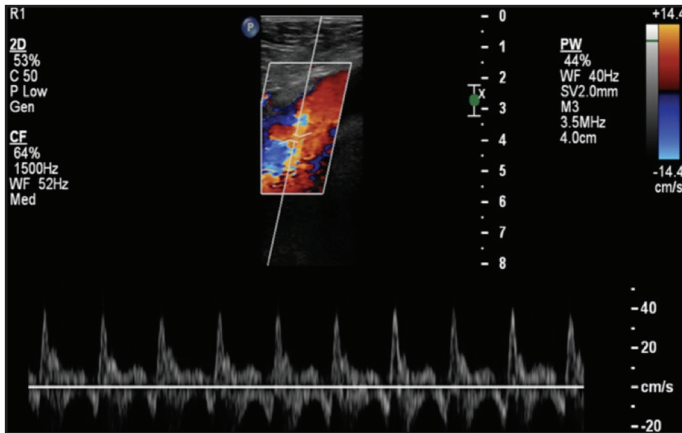


FIGURE 1. Arterialization of the left common iliac vein.



FIGURE 2. There is a large left common iliac artery aneurysm with fistulous connection (arrowhead) to the left common iliac vein (arrow).

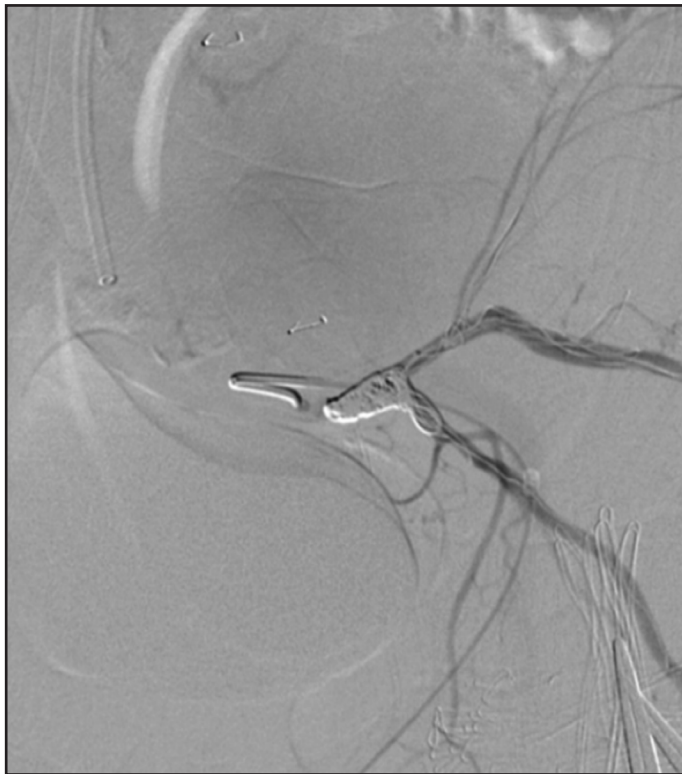


FIGURE 3. Coil embolization of the left internal iliac artery.

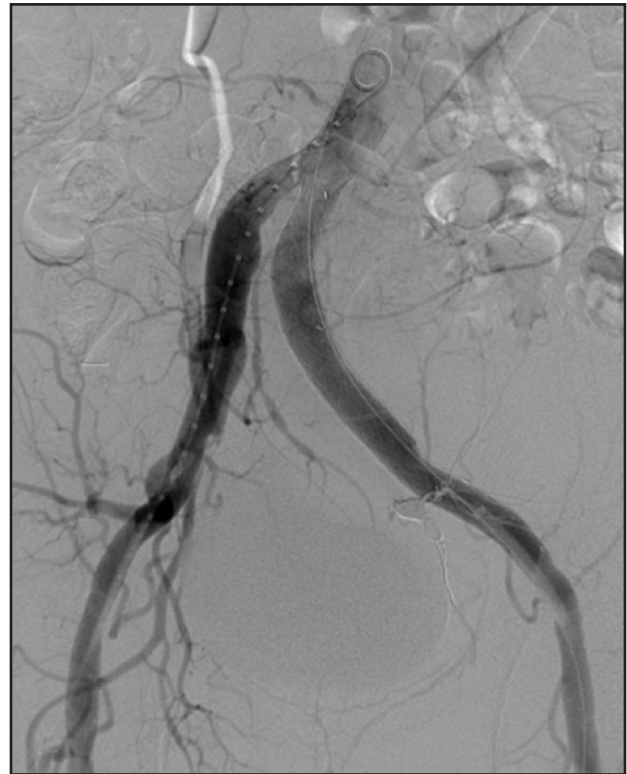


FIGURE 4. Endograft placement excluding a left common iliac artery aneurysm and fistula without endoleak.

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Prepared by Dr. Alexander and Dr. Rizer while Radiology Residents in the Department of Diagnostic Radiology, and Dr. Beasley while serving as Chief of Vascular and Interventional Radiology and Director of the Vascular Center at Mount Sinai Medical Center, Miami Beach, FL.