Repair of a Bilobed Descending Aortic Aneurysm

BY DANIEL J. TORRENT, MD, AND MICHAEL C. STONER, MD, RVT, FACS

An 80-year-old woman with multiple medical comorbidities, including chronic obstructive pulmonary disease requiring home oxygen, was being followed for a bilobed descending aortic aneurysm. The thoracic portion was saccular and increased in size on serial imaging to 6 cm. Her comorbidities prohibited open repair, and on CT scan, it was noted that her iliac arteries were very bilaterally tortuous, making access difficult.

The patient was admitted for elective repair and taken to the operating room. Percutaneous access was achieved through the right common femoral artery. A left common femoral artery cutdown was performed for access on that side. Catheters were advanced through the femoral arteries into the aortic arch, and systemic heparin was administered. Angiography was performed to show the saccular aneurysm (Figure 1). A 42 X 150 mm Relay device (Bolton Medical, Inc., Sunrise, FL) was selected based on prior measurements. Initially, attempts were made to pass the graft up a Lunderquist wire through the left common femoral artery. Because of her very tortuous iliac artery (Figure 2), the graft could not be passed even after using an Amplatz buddy wire to help straighten the course.

A right femoral cutdown around the 5 F sheath was then performed, and the device was passed through the femoral artery and a very tortuous right iliac artery over a wire. With the device in place, a thoracic aortic angiogram showed that the graft was in a good location, and the stent was deployed. Completion angiography showed appropriate deployment and opposition against the aortic wall with exclusion of the aneurysm sac (Figure 3). The catheters, wires, and sheaths were removed with fluoro-

Figure 1. Intraoperative angiogram showing the aneurysm.

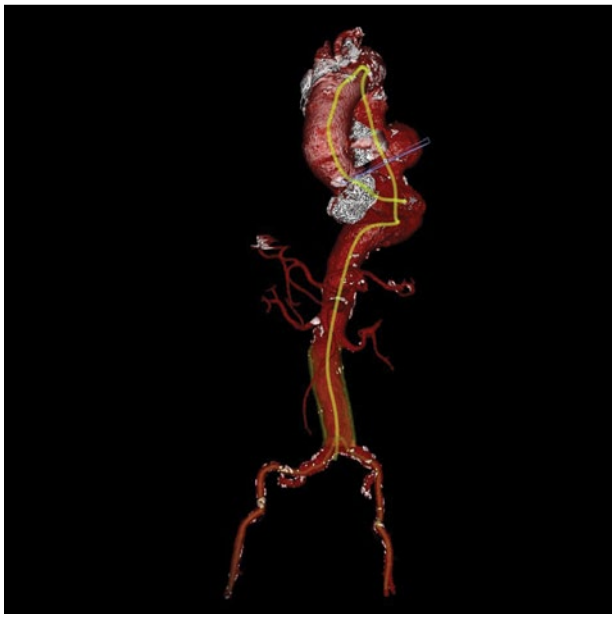

Figure 2. Preoperative CTA showing the tortuous course of the bilateral iliac arteries.

Figure 3. Completion intraoperative angiography after stent deployment.

scopic guidance. The arteriotomies were repaired, and the groins were closed in layers.

She was discharged to home on postoperative day 3 after weaning back to her home oxygen requirements.

At 1-year follow-up, the patient was doing well. She was eating and getting exercise. A CT of her chest showed that the stent was in position and patent without endoleak. The aneurysm shrank to 4.6 cm with a 37 mm neck proximally (46 mm distally).

The design of the Relay graft facilitates advancement through tortuous iliac arteries. Device trackability was key in facilitation of endovascular repair. ■

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