CASE REPORT

Managing an Infrarenal AAA With Significant Iliac Tortuosity

BY PROF. IAN SPARK, MD, FRACS, FRCS

A 79-year-old man originally from Burma presented to the outpatient clinic with a tender abdominal aortic aneurysm. A CT scan showed a 4.3 cm infrarenal aortic aneurysm with dilated common iliac arteries (left, 2.3 cm; right, 2.3 cm; Figure 1). There was significant iliac tortuosity, with the external iliac arteries measuring only 8 mm (Figures 2 and 3).

As he was an active man and sole caretaker for his wife, who was wheelchair bound, an endovascular option with preservation of both hypogastric arteries was considered.

Due to the iliac tortuosity, the GORE® EXCLUDER® Iliac Branch Endoprosthesis (IBE) with a standard GORE® EXCLUDER® Device was selected due to the high conformability of the iliac limbs, which allow good adaptation and avoidance of flow-limiting kinking.

The procedure was performed with a percutaneous approach. The bifemoral up-and-over through wire was introduced via the right groin and captured with a snare from the contralateral groin. The right IBE was deployed first followed by the left. The first IBE was implanted on the right side for no particular reason in this case. However, factors to consider when determining which side to treat first when placing devices bilaterally can include anatomy and case complexity. If the IBE will land above the aortic bifurcation, it can be easier to implant that device second to avoid potential challenges associated with working through the first implanted IBE. Additionally, case complexity due to tortuosity, vessel

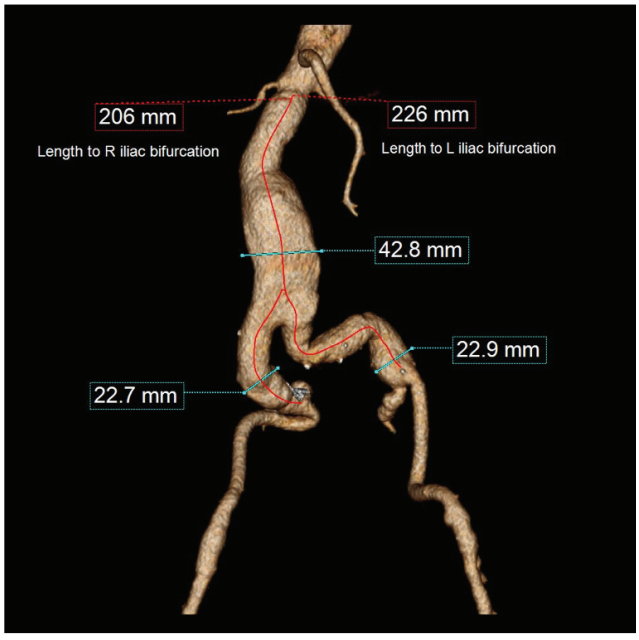

Figure 1. Pre-operative image showing key anatomic measurements.

Figure 2. Pre-operative image showing the tortuosity of the left iliac arteries.

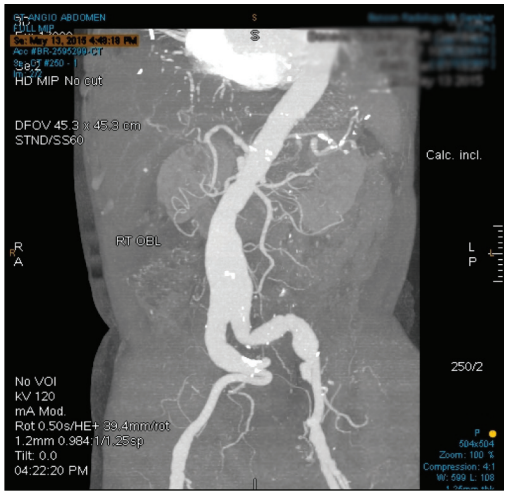

Figure 3. Pre-operative image showing the vessel tortuosity, as well as the narrow and calcified iliac bifurcation of the right iliac arteries.

Figure 4. Deployment of the left GORE® EXCLUDER® Iliac Branch Endoprosthesis.

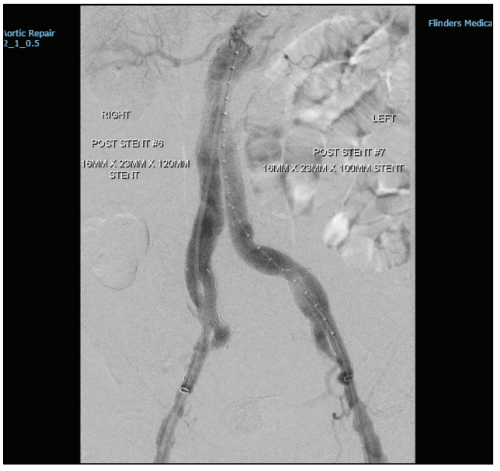

Figure 5. Completion angiogram of the bilateral GORE® EXCLUDER® Iliac Branch Endoprosthesis implants.

diameter, or hypogastric cannulation may impact this decision because deployment of the second IBE can be impacted by the first IBE.

Briefly, the right Gore Iliac Branch Component was implanted first, followed by deployment of the right Internal Iliac Component. Deployment and ballooning of the Iliac Branch Component and Internal Iliac Component overlap was completed before moving on to the next IBE. Next, the left Iliac Branch Component was deployed, followed by deployment of the left Internal Iliac Component. Ballooning was performed on the left Iliac Branch Component and Internal Iliac Component overlap. After completion of all IBE components on both sides, the GORE EXCLUDER Device trunk was introduced and deployed (Figure 4). Last, a bridge component was introduced on each side to bridge the IBE components to the GORE EXCLUDER Device trunk via the contralateral and ipsilateral legs to complete the repair (Figure 5).

He was discharged home 2 days later without complications. At 2-year follow-up, he had no endoleaks or claudication and all vessels remained patent on ultrasound. ■

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Disclosures: None.