

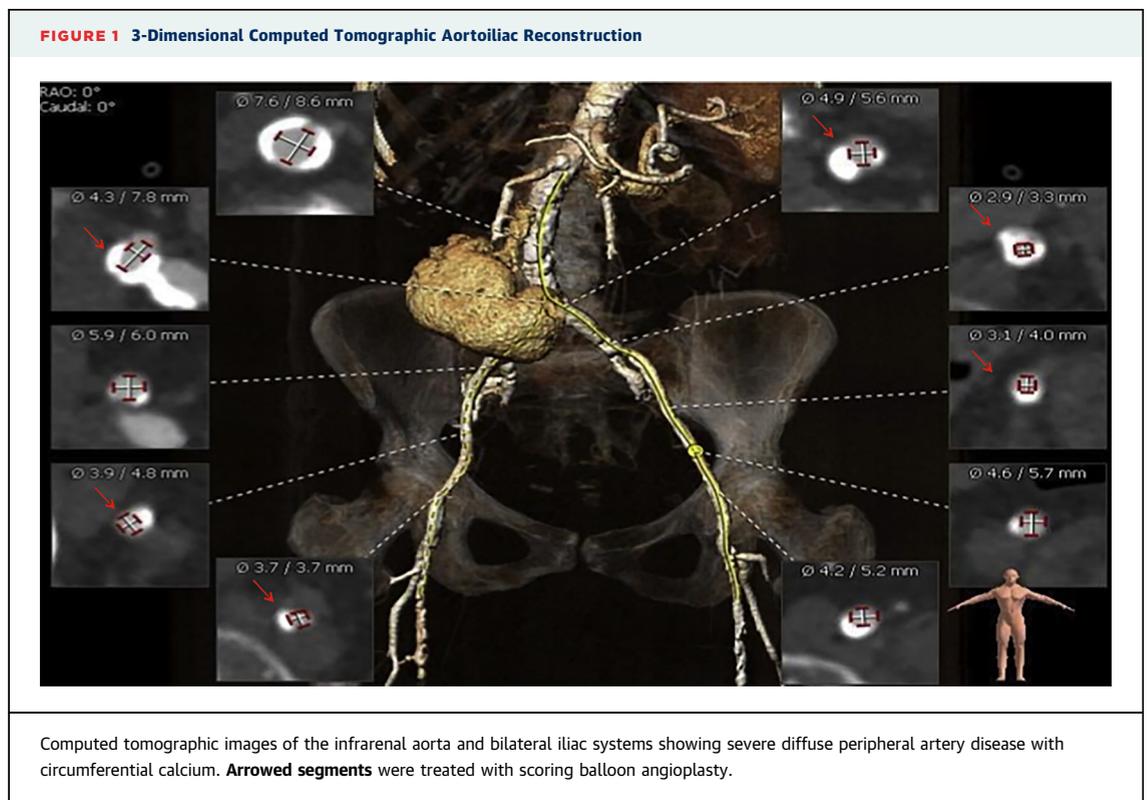
IMAGES IN INTERVENTION

Intervention of Prohibitive Aortic and Iliac Atherosclerotic Stenosis to Allow Successful Transfemoral Transcatheter Aortic Valve Replacement



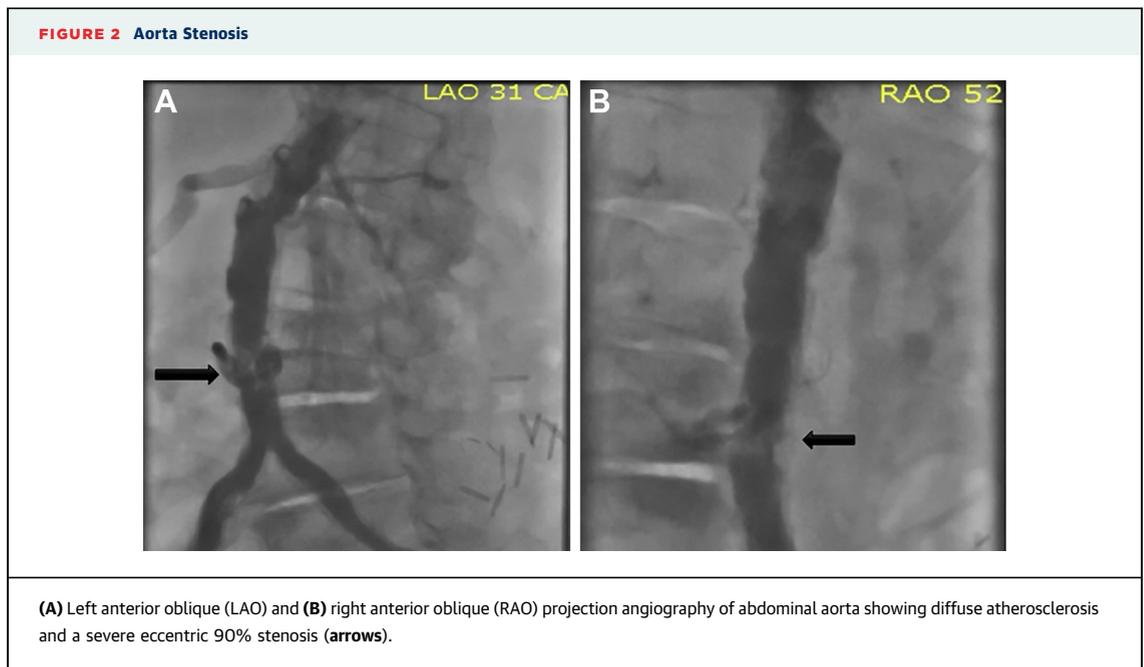
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We present a case of a 91-year-old woman who presented with symptomatic severe aortic stenosis with an aortic valve area of 0.4 cm² and mean gradient of 41 mm on echocardiography. She had undergone a thorough evaluation at an outside facility. She was deemed high risk with an STS risk score of >11% and better suited for transcatheter aortic valve



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replacement (TAVR). Because of severe calcified peripheral artery disease (PAD) involving aortoiliac distribution (Figure 1) and bilateral subclavian arteries, a transfemoral approach was advised. She presented to us for a second opinion because she

refused the transapical approach and any surgical intervention. She was not a candidate for a transcaval approach due to PAD extending throughout the entire abdominal aorta (AA) (Figure 2).

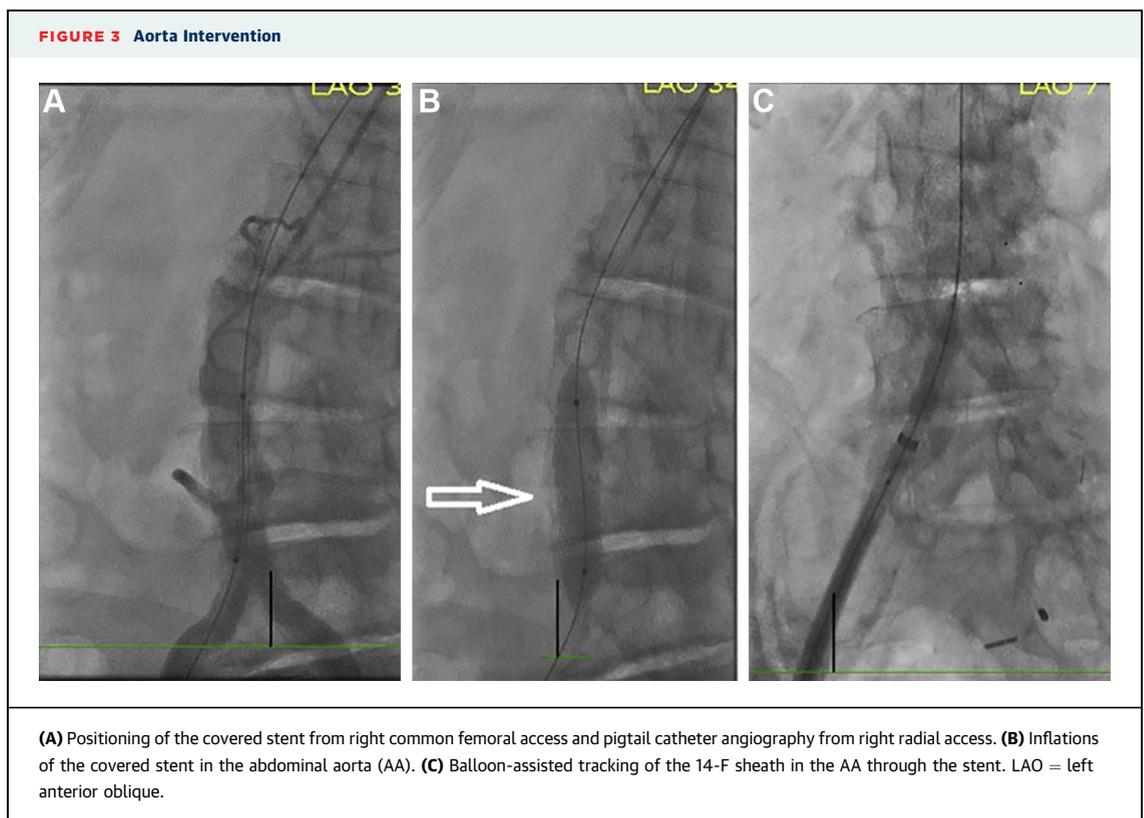
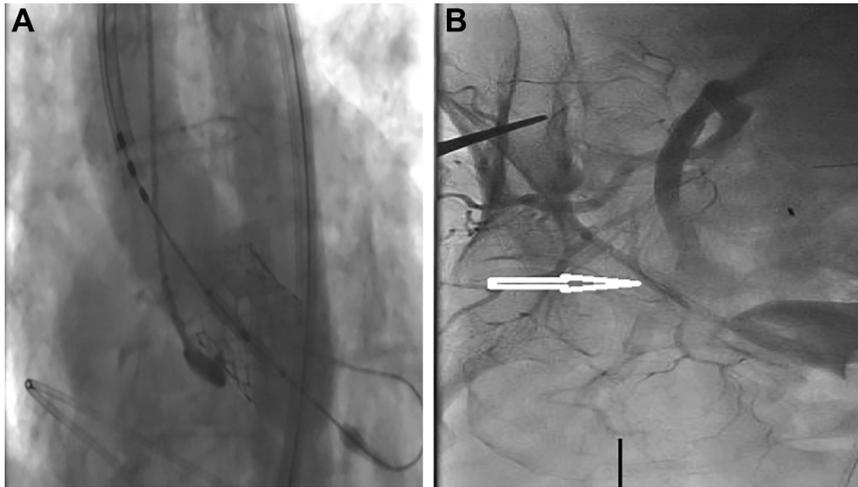


FIGURE 4 Dissection of EIA

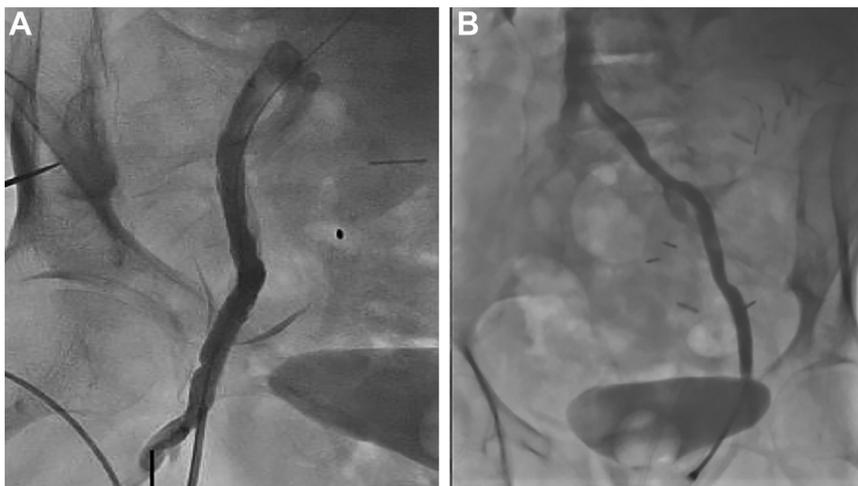


(A) Deployment of a 26-mm Sapien 3 valve. **(B)** Right external iliac (EIA) angiography performed via contralateral femoral access (**arrow**) showing the flow-limiting dissection of the right EIA at the disease segment.

A transfemoral procedure was performed with moderate sedation as follows. Using bilateral common femoral access (CFA) and right radial access, bilateral iliac (IA) and external iliac (EIA) lesions (Figure 1) were treated with prolonged scoring balloon angioplasty using a 6 × 40-mm Chocolate balloon (TriReme Medical, Pleasanton, California).

Subsequently, the severe, calcified, 90% stenosis of the AA was revascularized with an 11 × 39 mm Gore Viabahn VBX covered stent (W. L. Gore & Associates, Flagstaff, Arizona) (Figure 3), which allowed advancing of the 14-F sheath (Figure 3C). Transfemoral TAVR was performed successfully using 26-mm Sapien 3 valve (Edward Lifesciences, Irvine,

FIGURE 5 Final Angiography



(A) Final right femoral angiography after deploying a self-expanding stent in the right external iliac artery dissection from the new distal right common femoral access (CFA). **(B)** Final left iliac angiography from the left CFA sheath.

California) (**Figure 4A**), and the delivery system was then removed. After deploying the sutures of the Prostar closure device (Abbott Vascular, Abbott Park, Illinois) at the right CFA arteriotomy, right IA angiography showed flow-limiting dissection of the right EIA (**Figure 4B**), which was revascularized by obtaining a new ipsilateral distal CFA and deploying a 8 × 60-mm EverFlex self-expanding stent (Medtronic, Minneapolis, Minnesota) (**Figure 5A**). Final left CFA angiography showed a good angiographic result without any complications (**Figure 5B**).

For this patient, a carefully planned, distinctive PAD intervention of severely calcified aortoiliac disease allowed transfemoral TAVR despite prohibitive

PAD and the nonavailability of an alternate access. A scoring (Chocolate) balloon was used because it provides larger immediate luminal gain, and risk of dissection and bailout stenting is low, because the only goal of PAD intervention was to facilitate transfemoral TAVR.

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