Treating ISR With the GORE® VIABAHN® Endoprosthesis After Bilateral SFA CTO Interventions

BY ROBERT M. BERSIN, MD, FACC, FSCAI

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A 64-year-old man presented with Rutherford category 3 bilateral lower extremity claudication symptoms. The patient's past medical history included hypertension, diabetes mellitus, hypercholesterolemia, and mild carotid artery disease.

Lower extremity angiography in August 2012 showed bilateral mild to moderate disease in the common iliac arteries, bilateral occlusions of the internal iliac arteries, and bilateral chronic total occlusions (CTOs) of the superficial femoral artery (SFA) at the ostium, reconstituting above the knee distally via profunda collaterals.

In October 2012, the patient underwent a right SFA CTO recanalization using the Crosser catheter (Bard Peripheral Vascular) and the Pioneer Plus reentry catheter (Volcano Corporation) with placement of three GORE VIABAHN Devices (two 6-mm stent-grafts and one 7-mm) and a 7- X 60-mm self-expanding stent in the right external iliac artery.

A month later, the left SFA and above-knee popliteal CTO were recanalized using the Pioneer Plus reentry catheter, directional atherectomy, and placement of three 6-mm self-expanding stents.

The patient returned in June 2014 with recurrent lower left extremity symptoms. His ankle-brachial index was 0.91 on the right side and 0.48 on the left. Vascular ultrasound showed reocclusion of the left SFA. Angiography confirmed reocclusion of the left SFA stents, but the GORE VIABAHN Devices in the right SFA remained widely patent (Figure 1). The runoff remained normal in both lower extremities (Figure 2).

PROCEDURAL DESCRIPTION

The patient then underwent a repeat endovascular intervention to the left SFA, initially a 2.3-mm laser atherectomy (Figure 3A), followed by AngioJet™ Solent thrombectomy (Boston Scientific Corporation) (Figure 3B), followed by EkoSonic® lysis (Ekos Corporation, a BTG International

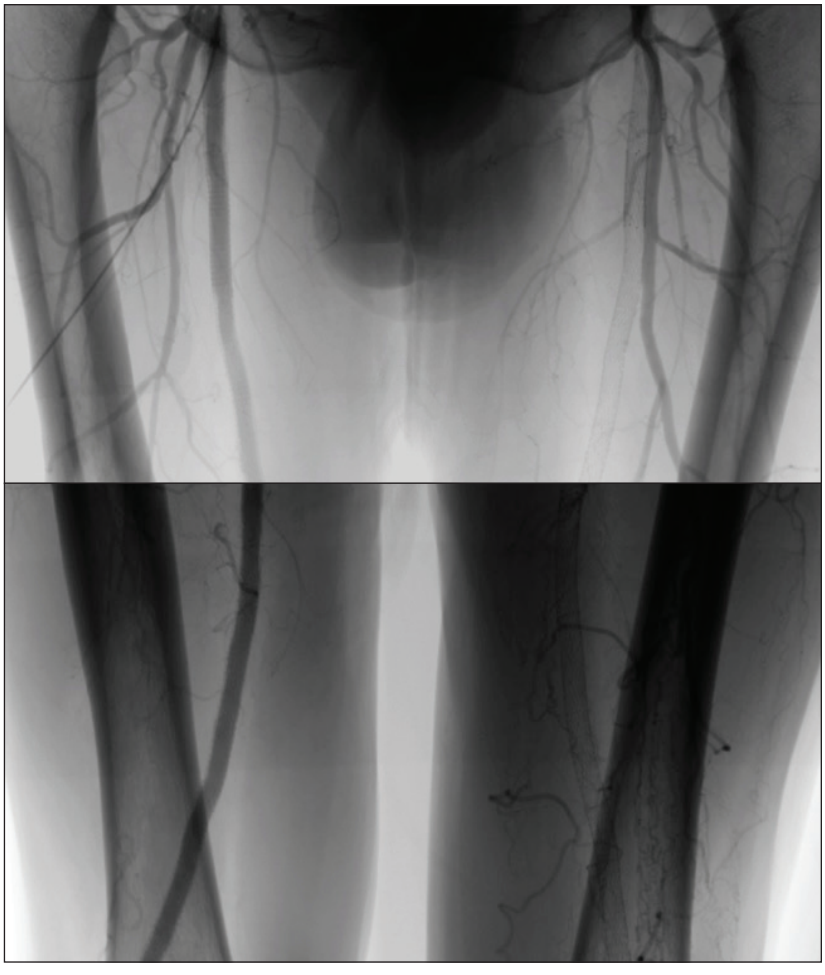

Figure 1. Angiograms of the left SFA showed in-stent occlusion.

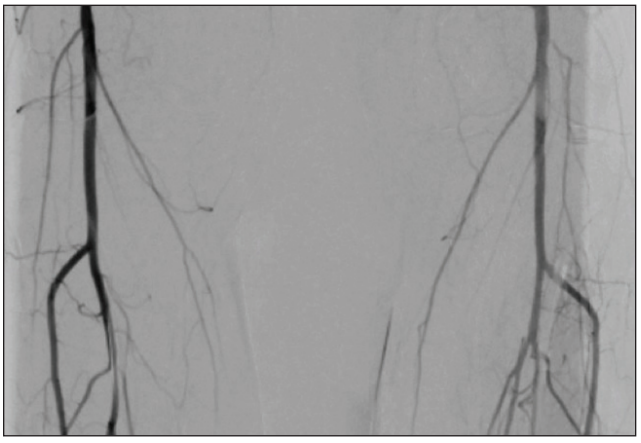

Figure 2. Runoff was normal in both lower extremities.

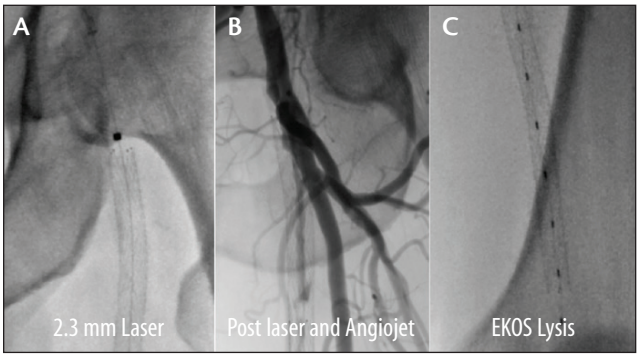

Figure 3. The left SFA was persistently occluded following laser atherectomy (A) and thrombectomy with the AngioJet Solent system (B), so EkoSonic thrombolysis with tenecteplase was initiated.

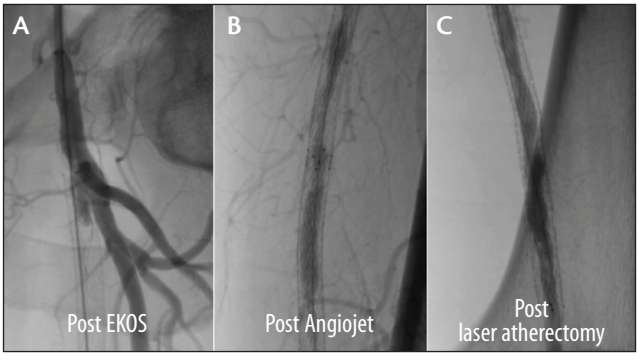

Figure 4. Angiogram following overnight EkoSonic thrombolysis with tenecteplase showed a persistent occlusion (A). Additional thrombectomy with the AngioJet Solent restored antegrade flow (B). Additional atherectomy debulking of the ISR tissue was then performed using laser atherectomy (C) before stent placement.

group company) (Figure 3C). The next day, repeat angiography after the overnight thrombolysis showed a persistent occlusion (Figure 4). This was treated with additional thrombectomy with the AngioJet Solent, laser atherectomy, followed by implantation of two 6-mm GORE VIABAHN Devices (Figure 5). Completion angiography revealed an excellent result with 0% to 10% residual stenosis throughout and no distal emboli. Based on the RELINE trial data and my clinical experience, the GORE VIABAHN Device is an excellent choice for treating long-segment de novo as well as in-stent restenotic occlusions. ■

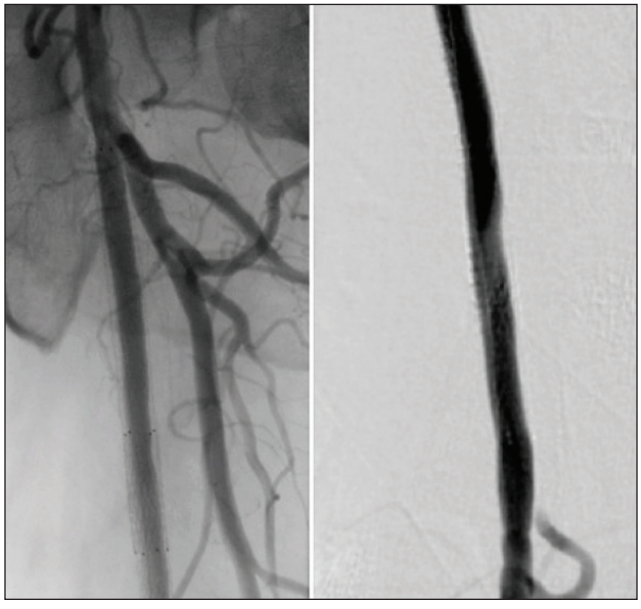

Figure 5. Final result after implantation of two 6-mm GORE VIABAHN Devices were placed.

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