Revascularization of an Extensive Superficial Femoral Artery Chronic Total Occlusion and Associated Tibial Vessel Reconstruction

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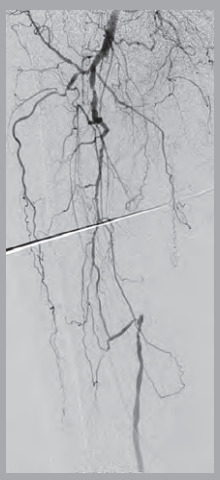

Figure 1a

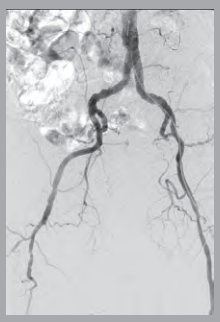

Figure 1b

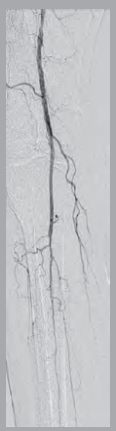

Figure 1c

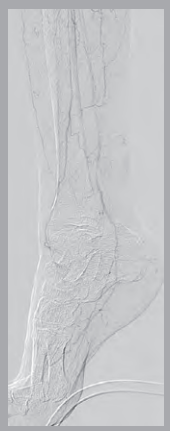

Figure 1d

CLINICAL CASE

The patient is a 68-year-old man with severe peripheral arterial disease. The patient presented with foot ulcerations and rest pain on the right side. Angiographic findings are demonstrated (Fig. 1a - 1d). He is a former smoker, having quit in 2005. He has hypertension and received anti-hypertensive drugs and aspirin 100 mg / day.

Arterial duplex showed obstructions of the superficial femoral artery (SFA), tibial trunk, and a tight stenosis of the posterior tibial artery with reduction of distal flow (maximum peak systolic velocity was 20 cm / s in the plantar arch).

PROCEDURE

The patient underwent angiography via a left femoral approach. The angiogram confirmed the duplex data of SFA chronic total occlusion (CTO), 25 cm in length, in the absence of a blind pouch (Fig. 1a). Additionally, angiography showed an unfavorable aortoiliac bifurcation, a tight stenosis of the main branch of the profunda femoris artery (Fig. 1b), an anterior tibial artery CTO, and a tight stenosis along the tibial trunk, peroneal artery and posterior tibial artery (Fig. 1c – 1d).

Previously the patient received percutaneous transluminal angioplasty (PTA) in the main branch of the profunda to rescue flow. Subsequently, after crossing the SFA CTO with a 0.035" GLIDEX straight tip guidewire and a vertebral 4 Fr GLIDEX catheter (Terumo Medical Corporation), two (6 mm x 150 mm) GORE® VIABAHN® Endoprostheses with PROPATEN Bioactive Surface were

GORE VIABAHN ENDOPROSTHESIS
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Continued on back

PERFORMANCE through experience

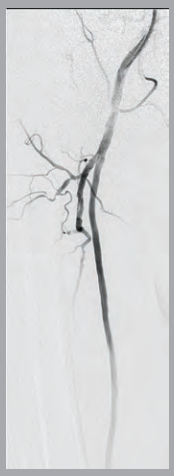

Figure 2a

Figure 2b

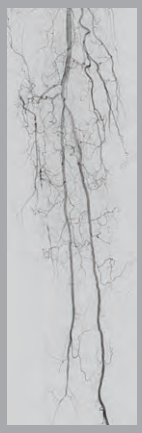

Figure 2c

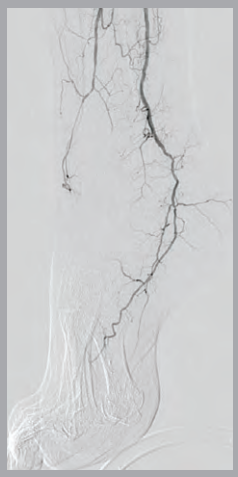

Figure 2d

implanted in the SFA. To establish good run-off, simultaneous treatment of the tibial trunk, postostial peroneal artery and posterior tibial artery was performed with a kissing balloon technique two (2 mm x 120 mm AMPHIRION DEEP PTA balloons by Invatec).

RESULTS

Final angiography (Fig. 2a – 2d), demonstrates patency of the SFA, tibial trunk, peroneal, and posterior tibial arteries, without residual stenoses and improvement of distal run-off with excellent opacization of the plantar arch. The immediate duplex scan control showed a flow improvement with a distal posterior peak systolic velocity of 80 cm / s.

Patient received a dual antiplatelet regime for one month followed by a single anti-platelet regime thereafter. Six month duplex scan follow-up showed patency of all treated vessels.

PHYSICIAN COMMENTS

The GORE® VIABAHN® Endoprosthesis with PROPATEN Bioactive Surface offers the combination of flexibility and heparin-bonding technology particularly suitable for the treatment of chronic occlusions of the SFA and offers a good cost-benefit ratio, particularly for extensive obstructions. The device has excellent pushability through a narrow aortoiliac bifurcation. In cases such as this, the tibial vessel reconstruction is mandatory to warrant a durable primary patency.

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