

Spur[®] RST Achieves Limb Salvage in CLTI with Below-the-Knee Occlusion

CASE HISTORY

A 77-year-old man with chronic limb-threatening ischemia (CLTI) of the left foot presented with an active open wound of the left hallux, a necrotic fifth toe, and an open wound of the left heel (Figures 1A – 1C). His past medical history included chronic kidney disease stage III, type 2 diabetes, coronary artery disease, hypertension, hyperlipidemia, and obesity.

He previously underwent intervention via contralateral right common femoral artery (CFA) access, including orbital atherectomy, intravascular lithotripsy, drug-coated balloon angioplasty, and Supera[™] stenting of the left superficial femoral artery (SFA)/popliteal segment, with plain old balloon angioplasty to the tibial vessels and pedal loop. The left hallux wound initially improved; however, the heel wound became stagnant. Duplex imaging confirmed occlusion of the left dorsalis pedis (DP) and pedal loop, and the patient was returned to the laboratory for repeat intervention.



Figure 1A



Figure 1B



Figure 1C

PROCEDURE

Baseline

The repeat procedure was performed via ipsilateral antegrade left CFA access with a 6 Fr × 45 cm sheath. A NAVICROSS[®] support catheter and stiff GLIDEWIRE Advantage[®] wire were used to cross the lesion. Baseline angiography confirmed heavily calcified, diffuse stenoses throughout the tibial vessels (Figures 2A, 2B).

Lesion Characteristics

Heavily calcified stenoses and occlusion were identified throughout the posterior tibial (PT) artery extending into the DP.



Figure 2A

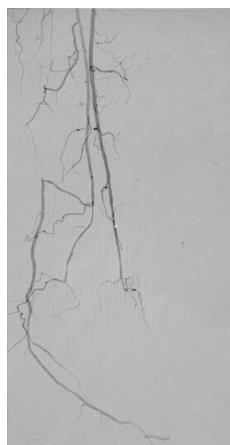
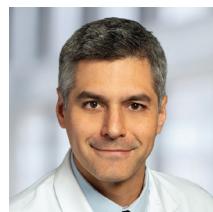


Figure 2B

PHYSICIAN



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"Achieving pedal acceleration times < 180 ms after treating this degree of calcified disease and then seeing the wounds heal, is exactly the outcome we were working toward."

Dr. Vargas received his Doctorate of Medicine at Universidad de Guayaquil in Ecuador and completed his Residency at Louisiana State University-Shreveport, LA. He completed Fellowships in Cardiovascular Medicine and Interventional Cardiology at U. of Iowa and Advanced Interventional Endovascular Disease Cardiovascular Institute of the South. Dr. Vargas currently practices at Mid America Heart Institute at Saint Luke's Hospital in Kansas City.

PRODUCTS USED



PERIPHERAL RETRIEVABLE STENT SYSTEM

Spur® RST Achieves Limb Salvage in CLTI with Below-the-Knee Occlusion

Vessel Preparation

A Shockwave Javelin catheter was used for IVL distally, followed by predilatation with a Jade® 3.0 × 240 mm balloon from the common plantar artery up to the PT ostium.

Spur Deployment

The Spur Stent 3.0 × 65 mm, a Retrievable Scaffold Therapy (RST), was deployed and recaptured sequentially from distal to proximal, advancing from the common plantar through the PT artery up to the

ostium (Figures 3A – 3C). Visible increase in luminal diameter was clearly appreciable throughout the treated segments following each deployment. Following Spur deployment, the case was completed with balloon angioplasty to the pedal loop and DP.



Figure 3A

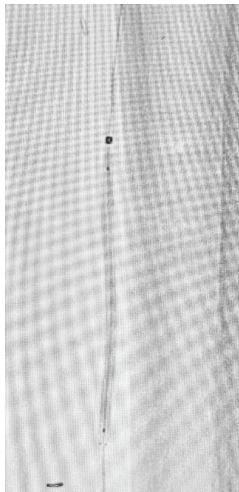


Figure 3B



Figure 3C

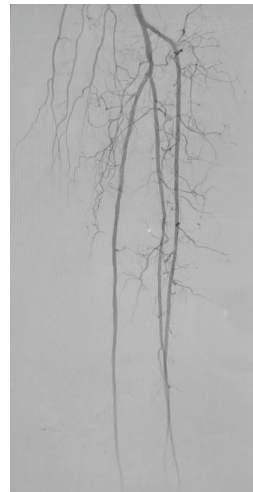


Figure 4A

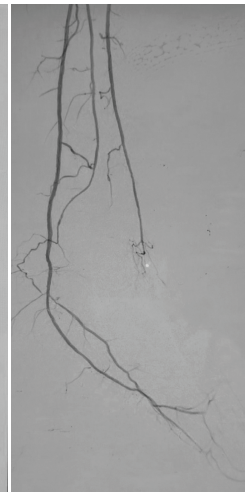


Figure 4B

RESULTS

Post-procedure angiography demonstrated restored luminal diameter throughout the tibial vessels with triple-vessel runoff to the left foot (Figures 4A, 4B). Luminal gain in the Spur-treated segments was clearly appreciable.

At one month follow-up, wound healing at the left hallux and heel (Figures 5A, 5B) was confirmed. Doppler signals were present in the DP, PT, pedal loop, and lateral plantar artery, with pedal acceleration time improved to less than 180 ms across all left-foot vessels, predictive of wound healing (Figures 6A, 6B).

CASE CONCLUSION

At one month, the patient presented with healed wounds, restored flow to the left foot, and pedal acceleration time less than 180 ms — a strong predictor of continued healing and limb preservation.



Figure 5A



Figure 5B

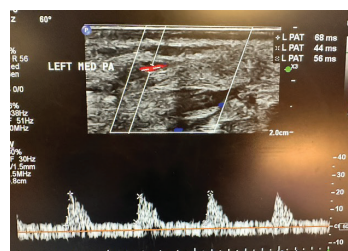


Figure 6A



Figure 6B