

Spur® Delivers a Stent-Like Result in a Heavily Calcified BTK Lesion Without Leaving Anything Behind

CASE HISTORY

An 88-year-old male presented with a non-healing right toe ulcer, plantar ulcer, and rest pain. Duplex imaging identified a high-grade stenosis of the distal right popliteal artery. The proximal femoropopliteal arteries were diffusely calcified without additional significant stenosis and demonstrated multiphasic flow. Pedal Doppler waveforms were monophasic. Ankle brachial index (ABI) could not be obtained due to non-compressible tibial arteries, and toe brachial index (TBI) could not be obtained due to dressings covering the great toe (Figure 1).

Diagnostic angiography confirmed a diffuse popliteal lesion and a 95% focal, heavily calcified, de novo stenosis of the proximal posterior tibial (PT) artery, approximately 40 mm in length with TASC II B characteristics. The anterior tibial (AT) and peroneal arteries were distally occluded, with no visible dorsalis pedis artery, while the PT provided run-off to the foot (Figure 2).

PROCEDURE

Access was obtained via a contralateral common femoral approach, with a 6 Fr × 90 cm sheath placed. The popliteal lesion was treated first with Auryon laser atherectomy and Shockwave IVL, after which attention turned to the heavily calcified, below-the-knee PT stenosis that would be the target for Spur Stent System (Figure 3).



Figure 1

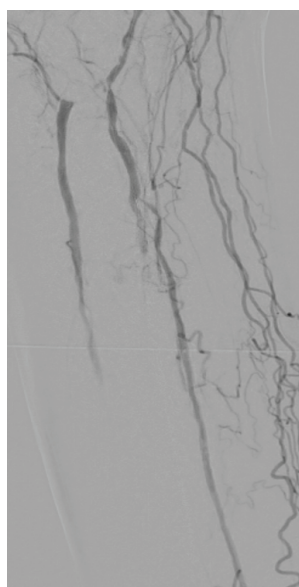


Figure 2

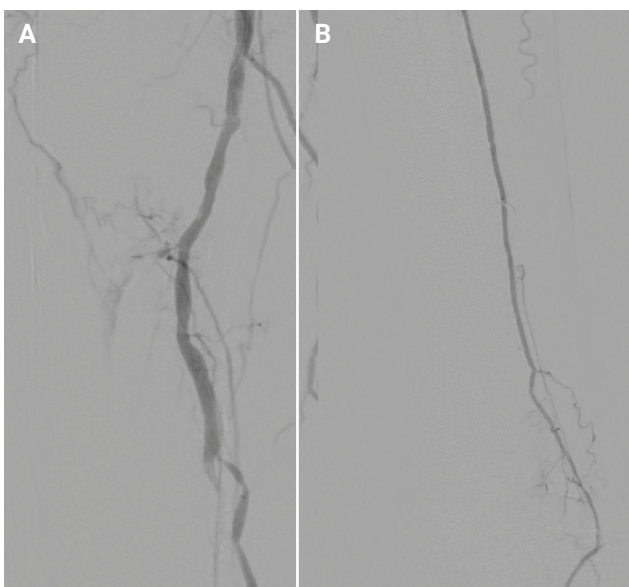


Figure 3

PHYSICIAN



Karthikeshwar Kasirajan, MD (Dr. Kasi)

Stanford Health Care Tri-Valley; Clinical Professor of Surgery, Stanford University School of Medicine; Member, Society for Vascular Surgery (2003–Present)

"I was pleased with the result—Spur was easy to use, and we were able to get a stent-like outcome in the PT without leaving anything behind."

Dr. Kasirajan received his medical degree from Madras Medical College in India. He completed his residency in surgery at Westchester Medical Center and Western Reserve Health Education/NEOMED, followed by a fellowship in vascular surgery at Cleveland Clinic Foundation. Dr. Kasirajan currently practices at Stanford Health Care Tri-Valley and is a clinical professor of surgery at Stanford University School of Medicine.

PRODUCTS USED



Spur®

PERIPHERAL RETRIEVABLE STENT SYSTEM



Spex® LP

SHAPEABLE SUPPORT MICROCATHETER

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A Spex LP 14 microcatheter and a Progreate® microcatheter were used to cross the PT stenosis (Figure 4). Given the density of the calcium, a 3.0 × 80 mm Shockwave balloon angioplasty catheter was used to prepare the lesion for treatment with the Spur Stent System (Figure 5).

Additional vessel prep was performed with a 3.0 × 80 mm Nanocross balloon at the PT stenosis. Following this additional vessel preparation, Spur passed the lesion without difficulty and was deployed at the target site (Figure 6). The system was then recaptured and withdrawn, providing temporary scaffolding of the vessel with nothing left behind (Figure 7).

CASE CONCLUSION

Final imaging showed less than 20% residual stenosis of the PT at the treatment site, down from the original 95% stenosis, with restored flow to the foot (Figure 8). No permanent implant remained in the vessel following recapture of the Spur Stent System. Despite a heavily calcified, TASC II B, below-the-knee lesion, the device ultimately delivered a stent-like angiographic result, without a permanent implant left in a below-the-knee vessel where long-term stent patency and fracture risk are ongoing clinical concerns.



Figure 4

Figure 5

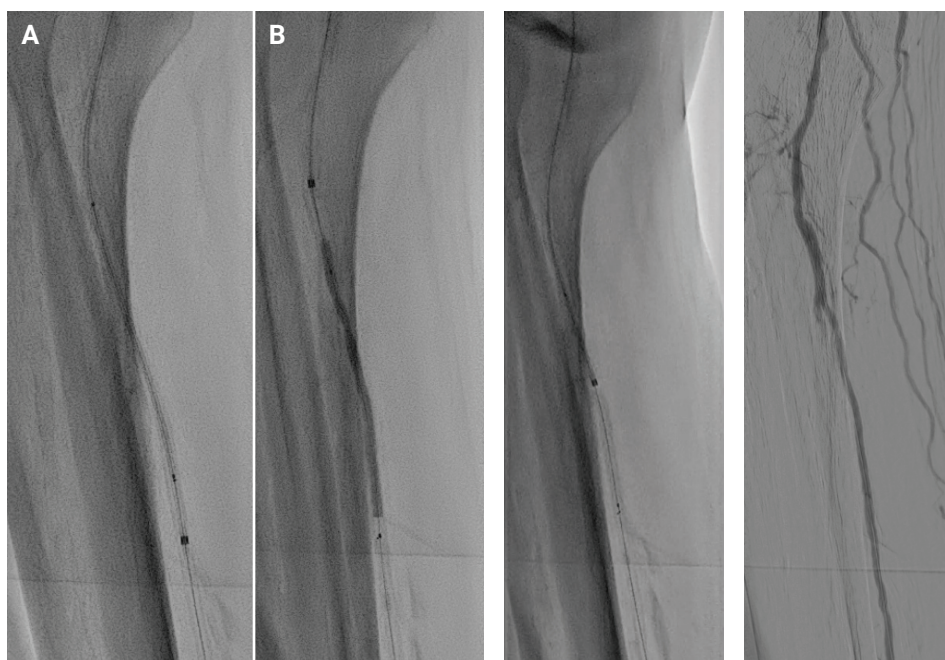


Figure 6

Figure 7

Figure 8