

Complex BTK CTO Recanalization

BY TONY S. DAS, MD, FACC

The patient was a diabetic man who presented with a nonhealing amputation and Rutherford class 6 peripheral arterial disease. He had occluded distal posterior tibial and anterior tibial arteries, which were unrecognized on a previous angiogram from an outside institution. Persistent non-healing led to further investigation and selective distal angiography. The findings led to complex chronic total occlusion intervention to revascularize specific angiosomes for wound healing.

DISCUSSION

A distal foot ulcer resulted due to embolization from a prior iliac artery intervention at an outside institution, and the patient required transmetatarsal amputation (Figure 1). Imaging showed totally occluded anterior tibial and distal posterior tibial (Figure 2) arteries. A ViperWire (Cardiovascular Systems Inc., St. Paul, MN) was used in the distal foot (Figure 3). The anterior tibial artery was crossed, and a 1.5-mm Diamondback 360° atherectomy device (Cardiovascular Systems Inc.) was used to



Figure 1.

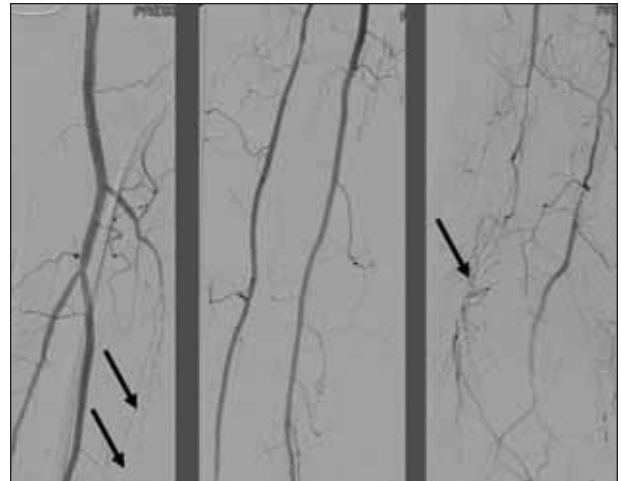


Figure 2.

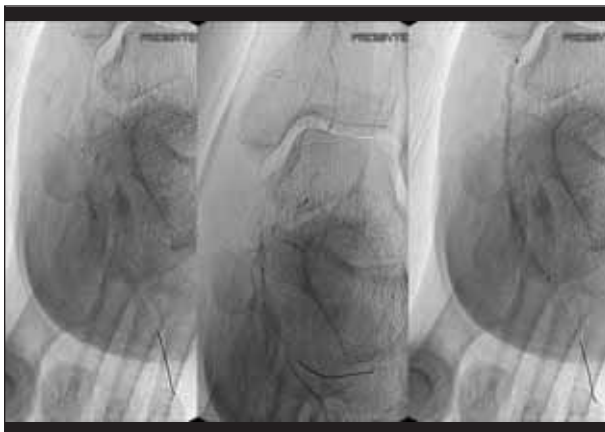


Figure 3.

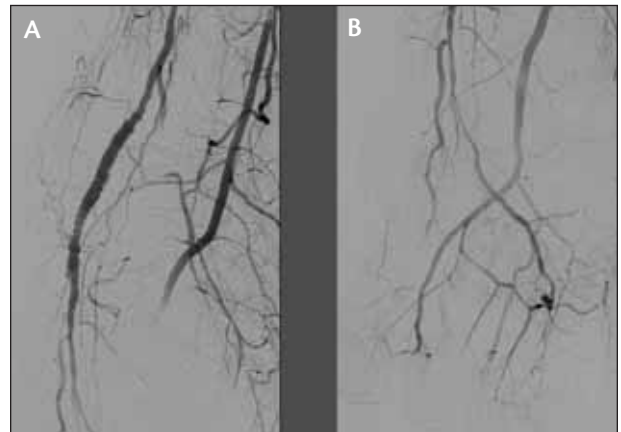


Figure 4.



Figure 5.

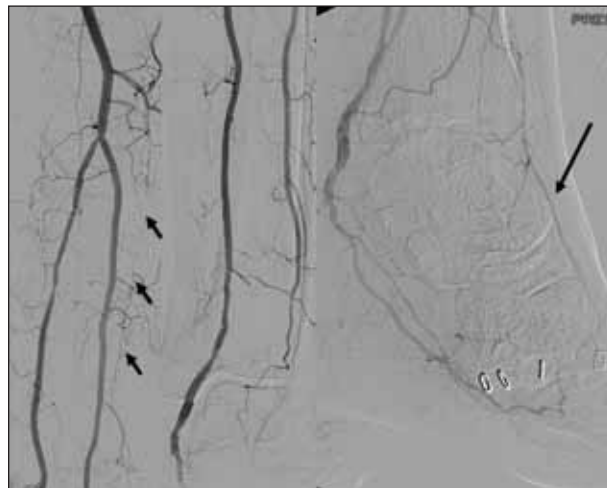


Figure 6.

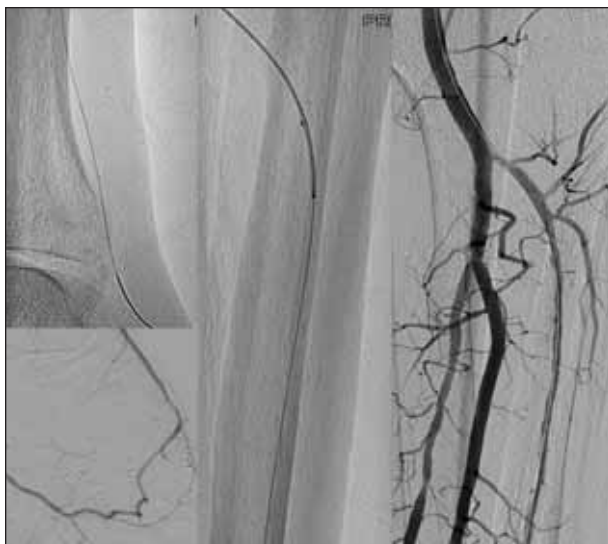


Figure 7.

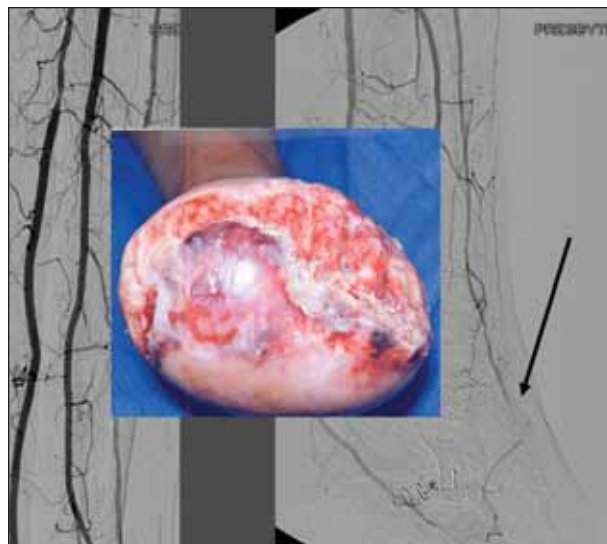


Figure 8.



Figure 9.

recanalize the occluded vessel followed by angioplasty with a 3-mm X 15-cm balloon (Figure 4A). The distal pedal arch was successfully reconstituted (Figure 4B).

The lateral portion of the amputation healed with

recanalization of the posterior tibial artery, but the medial portion was still nonhealing, requiring anterior tibial artery reconstitution (Figure 5). The anterior tibial artery occlusion was then crossed with a 0.014-inch wire, and the anterior tibial artery was opened with a 1.5-mm Classic Diamondback CSI crown (Cardiovascular Systems Inc.) and dilated with a 3-mm X 150-cm balloon (Figures 6 and 7). The total case time was 68 minutes. The ulcer healed well at 1 month (Figure 8). The final result was successful 1 year after intervention (Figure 9). ■

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