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## 5-Hour EKOS® Lysis Of An Occluded Arterial Graft Below The Knee

### Patient History

- 61 year-old male had been treated successfully (6 months prior) for occlusion of the right superficial femoral artery (SFA) and chronic total occlusion (CTO) of the right popliteal artery with angioplasty and stenting (with covered stents)
- Patient recently presented with a 4-day history of pain in the treated leg and foot, consistent with acute ischemia with thrombotic occlusion
- Physical examination revealed absence of popliteal and pedal pulses
- Doppler flow signals were absent distal to the mid-thigh
- Capillary filling of the foot was sluggish and no flow signals detected in the dorsalis pedis or posterior tibial arteries

### Treatment

- Patient was anticoagulated on IV heparin upon admission
- Angiography showed patency of the proximal stented SFA stent graft, but distal occlusion beyond a prominent collateral, and poor filling in the right lower leg vessels (Fig. 1)
- EkoSonic® Endovascular Device (24 cm treatment zone, 106 cm working length) was placed across the occluded segment
- rtPA infused using the EkoSonic® device at 2.0 mg/hr for the first 4 hours, reduced to 1.0 mg/hr thereafter

### Results

After 4 hours, 48 minutes of rtPA infusion:

- Follow-up angiography showed near-complete reduction of thrombus with free flow of contrast into the lower leg (Fig. 2)
- Pre-occlusive stenosis was identified in the distal SFA beyond the proximal stent graft, and treated with angioplasty and stent extension using 6mm x 4cm self expanding Nitinol stent
- Final result was excellent with 2 vessel runoff (Fig 3) and resolution of distal ischemia
- Patient was continued on heparin, transitioned to warfarin anticoagulation and returned home free of claudication

### Conclusion

- Accelerated lysis facilitated by EKOS® allowed same-day therapy without overnight stay in the ICU and scheduling hassles of waiting until the next day

"The accelerated thrombolysis allowed us to achieve successful thrombolysis with lower therapeutic doses of Alteplase and a reduced risk of procedural hemorrhage."

- Jeffrey D. Bernstein, MD

Figure 1. Pre-EKOS® angiography.



Figure 2. Post-EKOS® angiography.

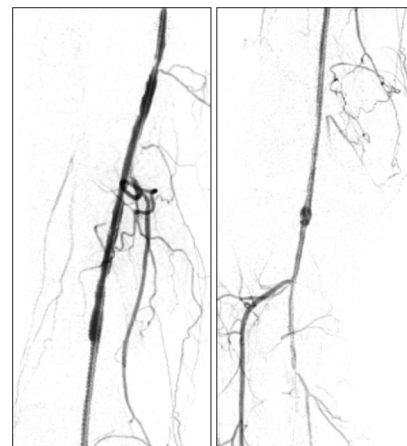


Figure 3. Completion angiography.

