

Below the Knee Angiography

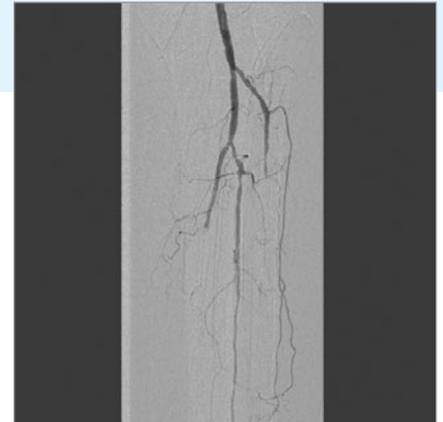
Peripheral arterial disease (PAD) is a prevalent disease estimated to be present in 12 to 20% of Americans age 65 or older. Although intermittent claudication is the most common symptom, a subgroup of patients may present with Critical Limb Ischemia (CLI), which is described as patients presenting with symptoms including rest pain, skin ulcers, gangrene or other ischemic lesions. The most common risk factors include smoking and diabetes. The underlying process in CLI is progressive atherosclerosis which causes severe narrowing or occlusion of the arteries, reducing blood flow and perfusion to the distal circulation and the foot. This condition is often complicated by thrombosis which further compromises arterial flow to the distal extremity. History and physical exam typically shows rest pain occurring at night time and localized to the distal part of the foot. Patients obtain partial relief by hanging the affected limb down over the side of the bed. The skin feels cool and may show cyanosis.

Pedal pulses are typically not palpable. Ulcer or gangrene may be present in the foot depending on the duration of ischemia. Non-invasive arterial imaging shows ankle-brachial index (ABI) of less than 0.5 with Computer Tomography Angiography (CTA), Duplex or Magnetic Resonance Angiography (MRA) showing multi-segmental arterial stenosis and/or occlusion. Because detailed anatomy of the arterial tree is required to plan intervention, angiography remains the imaging of choice in most cases of CLI. Selective catheterization and angiography is the corner stone of endovascular therapy to obtain limb salvage in these patients. The 130 cm or 150 cm Berenstein Mariner* catheter system with a 4F radio-opaque tip allows selective catheterization of the branch vessels involving femoral, popliteal and tibial arteries. The low profile angled tip combined with a long braided shaft allows easy cannulation of the tibial arteries from a contralateral approach.

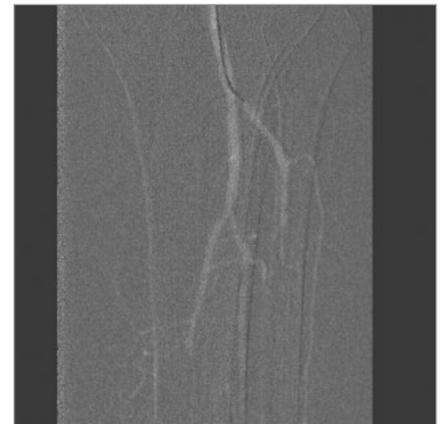
CASE PRESENTATION

Patient is a 64 year old male with history of renal failure, diabetes, hypertension and coronary artery disease. He presented with ulceration and gangrene of the left toes. The duplex scan showed an ABI of 0.3, patent superficial femoral and popliteal arteries with significant tibial disease. The posterior tibial artery was occluded (Figure 1). The peroneal and anterior tibial arteries had segments of occlusion. A 4F, 150 cm Berenstein Mariner catheter and a guidewire were used to access both the peroneal and anterior tibial arteries (Figures 2 & 3). This was followed by angioplasty of both arteries utilizing a long 2.5 mm balloon. Final angiographic picture showed patency of both vessels down to the foot.

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(Figure 1) Occlusion of the posterior tibial artery, long segment occlusion of the anterior tibial artery and segmental focal stenoses of the peroneal artery.



(Figure 2) 150 cm Berenstein Mariner catheter located at the left anterior tibial artery.



(Figure 3) 150 cm Berenstein Mariner catheter and guidewire access to the left anterior tibial artery.

Mariner Hydrophilic-Coated Angiographic Catheter

The Mariner hydrophilic-coated angiographic catheter is designed to deliver contrast media to areas of vascular anatomy. The Mariner angiographic catheter features AngioDynamics' patented Soft-Vu* catheter technology—an atraumatic SUPER-RADIOPAQUE* tip, which is highly visible under fluoroscopy—combined with Duration* coating technology. The Duration hydrophilic coating technology significantly reduces catheter surface friction, permitting smoother navigation through challenging vasculature with optimal handling and control.

The Mariner catheter is available in:

- More than 50 shapes of flush and selective catheters
- Lengths ranging from 40 cm to 150 cm
- 4F, 5F and 6F
- .035" and .038" diameters
- Comprehensive specials program is available



IMPORTANT RISK INFORMATION

INDICATION FOR USE: AngioDynamics Angiographic Catheters are designed for use where angiographic diagnosis is indicated. CAUTION: Federal (USA) law restricts these devices to sale by or on the order of a physician.

WARNINGS AND PRECAUTIONS: Reuse of single-use devices creates a potential risk of patient or user infections. Contamination of the device may lead to injury, illness or death of the patient. Reprocessing may compromise the integrity of the device and/or lead to device failure. Contents sterile in unopened,

undamaged package. Do not use if opened or any sign of product damage is visible. AngioDynamics Angiographic Catheters should be used only by physicians with a thorough understanding of angiography and percutaneous interventional procedures. Do not insert catheters directly through synthetic vascular grafts. Insert through a sheath introducer. AngioDynamics Angiographic Catheters are designed for use with specific guidewire diameters. The recommended maximum guidewire diameter is specified on the catheter label. Optimal guidewire size

and judicious use are recommended. Please see package insert for complete list of warnings and precautions.

POTENTIAL COMPLICATIONS: The following adverse reactions have been reported and are associated with the use of angiographic catheters: Thrombus formation, emboli, arterial wall damage, plaque dislodgment, hematoma, cardiac arrhythmias, myocardial infarction, stroke, and death.



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