

# Cath Lab Digest

A product, news & clinical update for the cardiac catheterization laboratory specialist



## CATH LAB SPOTLIGHT

### UW Health University Hospital

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#### Tell us about your cath lab and facility.

UW Health University Hospital is a 505-bed facility affiliated with the University of Wisconsin School of Medicine and Public Health in Madison, Wisconsin, in the south central part of the state. University Hospital has been ranked as the top hospital in Wisconsin for the past 11 years and recently received its fourth Magnet designation. The cath lab is part of the Heart and Vascular Procedure Center (HVPC), which includes adult and pediatric invasive cardiology and electrophysiology (EP), along with a prep and recovery area for those patients. The 111-bed pediatric hospital, American Family Children's Hospital (AFCH), is connected to University Hospital by a sky bridge and houses one hybrid lab used for pediatric and adult congenital cath and EP cases.

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## In This Issue

### Competence, Capacity, Consent – Part of a Successful Pre-Cath Assessment

Morton J. Kern, MD, MSCAI, FACC, FAHA



We teach the fellows that before each cath procedure, we need to review the patient's electrocardiogram (ECG), chest x-ray, and lab data. We discuss the indications for the procedure which, at times, may not always correspond to the referring physician's or nurse practitioner's history. The fellow then completes the assessment and obtains a signature on the informed consent. We recently had a patient who presented us with a challenge to know whether the informed consent was valid, something I thought we'd address in this editor's page.

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## CUTTING-EDGE PERSPECTIVES

### Selected Proceedings From the 2024 International Andreas Gruentzig Society (IAGS) Clinical Conference

Featuring presentations from J. Dawn Abbott, MD; David Wood, MD; William O'Neill, MD; Jimmy Kerrigan, MD; Toby Rogers, MD; Dmitriy Feldman, MD  
Compiled and edited by Gary Rowbury; Laurie Onopa; H. V. ('Skip') Anderson, MD

The International Andreas Gruentzig Society meets biennially to discuss the latest topics in interventional cardiology and related fields. The 17th Biennial IAGS meeting was held from January 30 to February 2, 2024, in Chiang Rai, Thailand. IAGS is an international educational society of physicians and scientists. Society members cooperate in the advancement of knowledge and education through research, publication, study, and teaching in the fields of cardiology and vascular disease. Conference proceedings are published in the *Journal of Invasive Cardiology*, the official journal of the IAGS, and selected presentations are shared herein.

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## CHRONIC LIMB-THREATENING ISCHEMIA (CLTI)

### Treating a CTO of the SFA Using Auryon Laser Atherectomy in a CLTI Patient

Nader Chadda, MD, FACC, FSCAI; Ilyas Chadda

#### History

The patient is a 77-year-old man with diabetes mellitus, congestive heart failure, and abdominal aortic aneurysm status post repair with stent graft placement, who has been suffering from bilateral foot wounds that have been nonhealing. The wounds have been present for more than six months. The patient has also been experiencing lifestyle-limiting bilateral leg and foot pain occurring at rest and with minimal ambulation for more than six months.

A recent arterial duplex ultrasound of the lower extremities was abnormal, demonstrating monophasic waveforms indicative of a total occlusion of the right superficial femoral artery (SFA). In addition, the arterial duplex ultrasound demonstrated a significant distal left SFA stenosis. The decision was made to proceed with lower extremity angiography and possible intervention.



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Continued from cover

## Treating a CTO of the SFA Using Auryon Laser Atherectomy in a CLTI Patient

Nader Chadda, MD, FACC; Iiyas Chadda

### Interventional Procedure

After injecting 2% lidocaine solution into the left groin, a micropuncture system was used in a modified Salinger technique to obtain intravenous-arterial access. A J-wire was inserted through the micropuncture sheath and advanced up to the lower aorta. The micropuncture sheath was removed and replaced by a 5 French (F) sheath. A universal flush catheter was advanced to the level of L1. Abdominal angiography with nonselective renal imaging was performed. After reviewing the images, the catheter was withdrawn to the level of L3. Abdominal angiography with bilateral lower extremity runoff was performed. Due to the aortic stent graft, we were unable to cross over the aortoiliac bifurcation. We obtained right common femoral arterial access, using ultrasound to place a 5F sheath in an antegrade manner. We advanced a Supra Core wire (Abbott) into the total occlusion and the upsized sheath over the Supra Core wire to a 6F, 45 cm Cook sheath. A Glidewire glide catheter

(Terumo Interventional Systems) technique was used to traverse the occluded right SFA. The true lumen was reentered distally. Selective angiography confirmed an intraluminal wire position. We exchanged for an .014-inch wire. Laser atherectomy using the 1.5 mm Auryon system (AngioDynamics) was performed in the proximal, mid, and distal right SFA. Several passes were made with the atherectomy catheter on fluency levels of both 50 and 60 mJ/mm<sup>2</sup>, followed by balloon angioplasty with a 6 mm x 150 mm balloon.

Several prolonged balloon inflations of the proximal, mid, and distal right SFA were performed. There was a residual, >50% stenosis and flow-limiting dissection, so a 6 mm x 200 mm nitinol stent was deployed in the distal right SFA. A 6 mm x 120 mm nitinol stent was deployed proximal to the first stent. The stents were post-dilated with a 6 mm x 100 mm balloon. Selective angiography showed an excellent result. There was no dissection, no thrombus, and improved distal runoff. At

Laser atherectomy using the 1.5 mm Auryon system (AngioDynamics) was performed in the proximal, mid, and distal right SFA. Several passes were made with the atherectomy catheter on fluency levels of both 50 and 60 mJ/mm<sup>2</sup>, followed by balloon angioplasty with a 6 mm x 150 mm balloon.

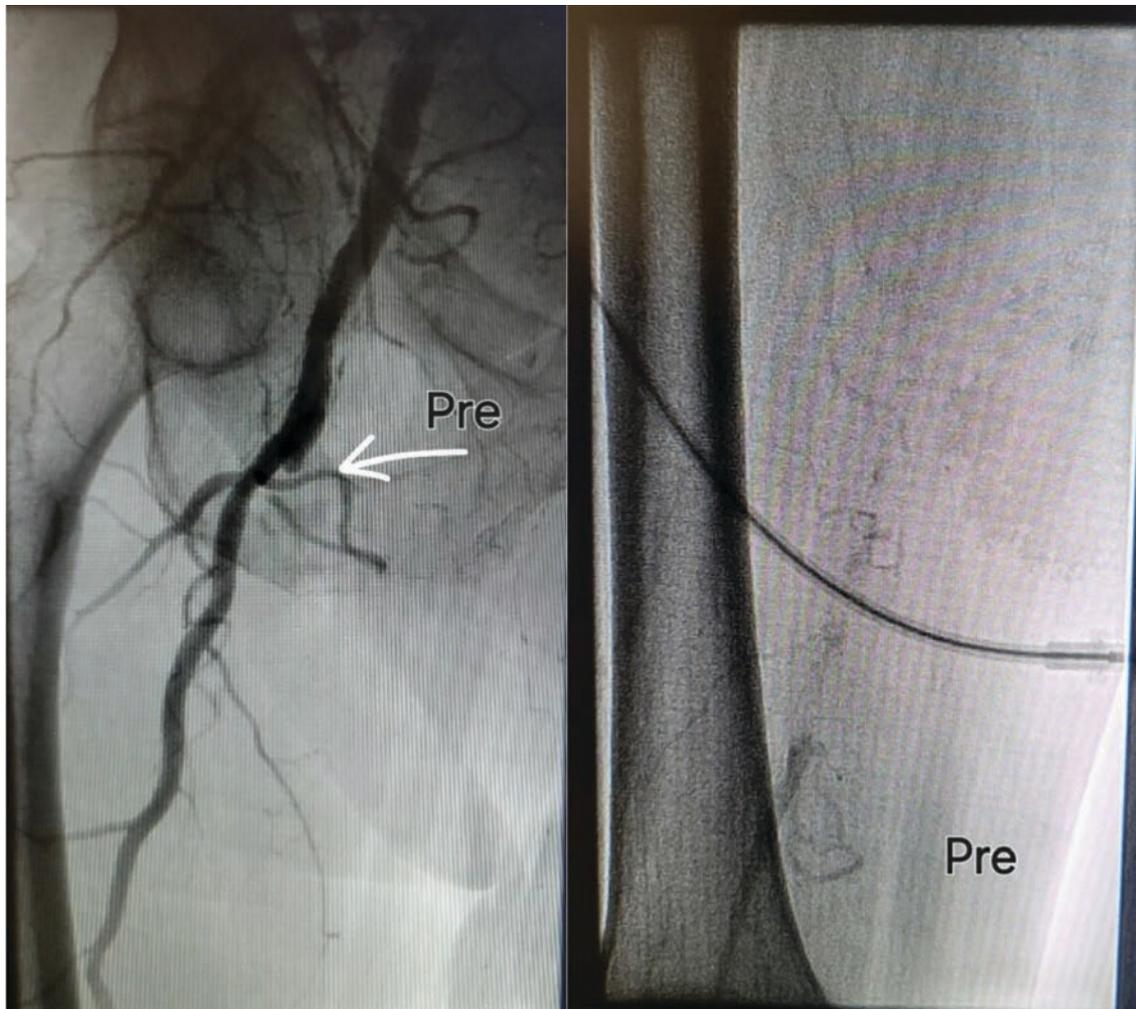


Figure 1. Proximal and distal cap.

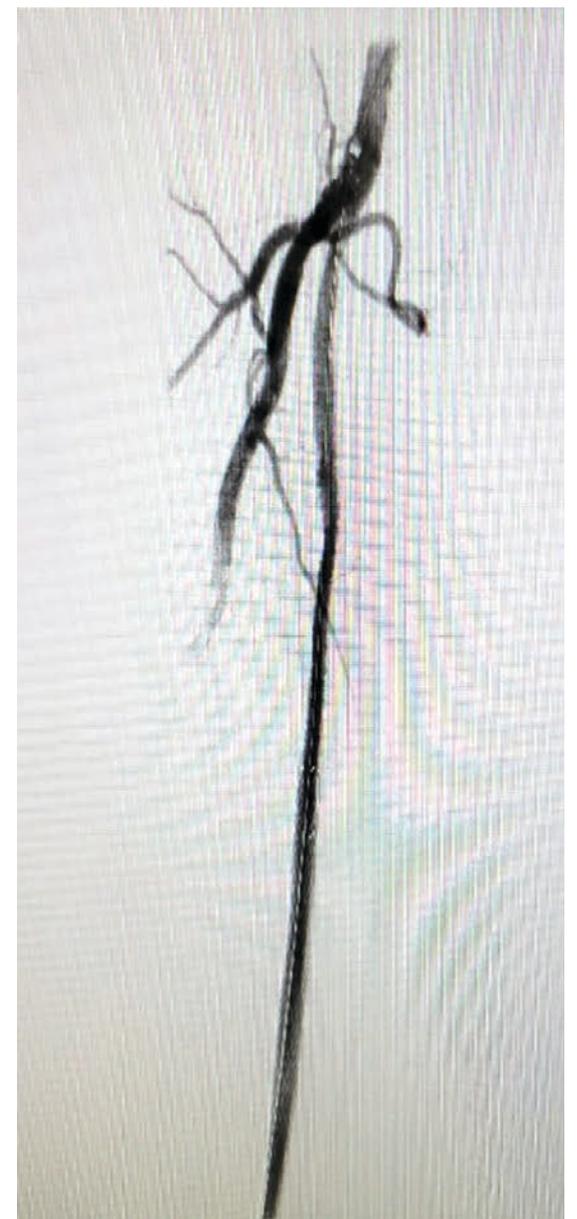
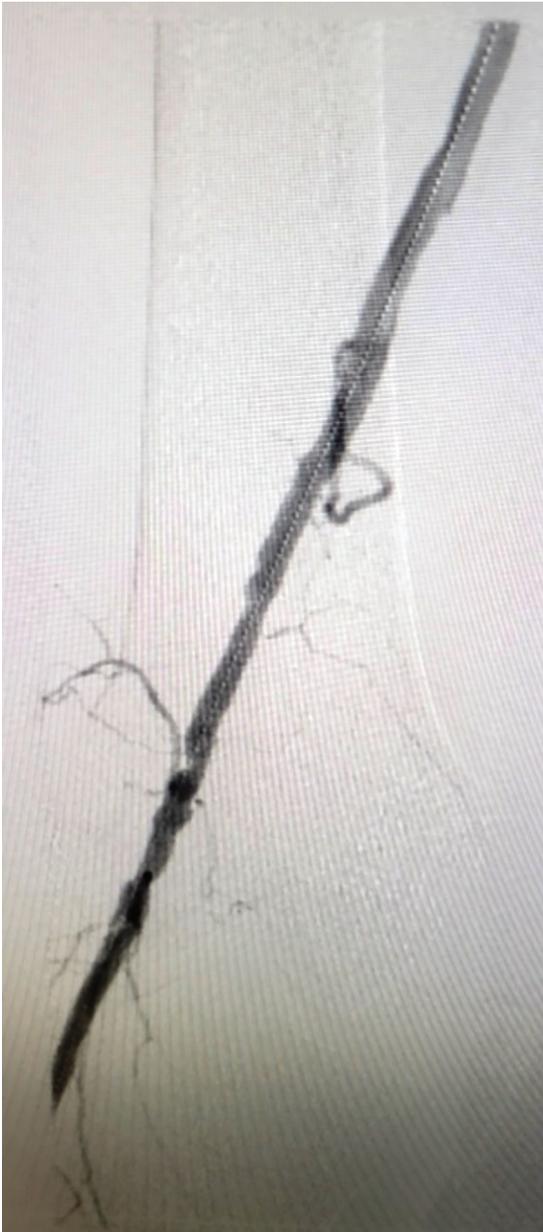


Figure 2. Post 1.5 mm Auryon (AngioDynamics), percutaneous transluminal angioplasty and stent.



**Figure 3.** Distal superficial femoral and popliteal artery.

that point, all catheters and wires were removed. An Angio-Seal device (Terumo Interventional Systems) was used for closure of the right common femoral arteriotomy site. A ProGlide device (Abbott) was used for closure of the left common femoral arteriotomy site.

The patient followed up with podiatry and underwent hyperbaric therapy for the right foot wound. After several months, he demonstrated complete wound healing. ■



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*Disclosure: Dr. Chadda and Ilyas Chadda report no conflicts of interest regarding the content herein.*

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**Figure 4.** Distal runoff.

**Selective angiography showed an excellent result. There was no dissection, no thrombus, and improved distal runoff. The patient followed up with podiatry and underwent hyperbaric therapy for the right foot wound. After several months, he demonstrated complete wound healing.**



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