Bret N. Wiechmann, MD

A program coordinator of the SIR's LEARN meeting discusses technology, techniques, and upcoming trial data for lower extremity arterial disease.

What are the origins of the SIR holding the multispecialty Lower Extremity Arterial Revascularization (LEARN) course, and what are its goals?

The idea for the LEARN meeting came from the SIR's Peripheral Arterial Disease service line, with a focus on the many technical aspects of peripheral arterial intervention. Considering the technological advances we have seen over the last few years, my fellow program coordinators, Dr. Sanjay Misra and Dr. Rob Lookstein, and I believed that the best way to educate vascular interventionists on these advances was through a meeting that is focused on gaining device experience in an intimate setting with a low attendee-to-faculty ratio. Although the LEARN meeting also includes comprehensive didactic information from a multidisciplinary faculty, the hands-on workshops are where the attendees really have a chance to "test drive" some of the unique devices that are a part of everyday practice. The course evaluations from last year's inaugural meeting were overwhelmingly supportive of this format, and we look forward to this year's meeting.

Which sessions do you believe will be the most beneficial to the younger physicians?

The practice development sessions are extremely important to all physicians, whether they are recent graduates or physicians who may be looking to expand their existing practices. Also, LEARN is a great venue to gain valuable experience with equipment and devices using flow models and device-specific simulators in the hands-on breakout sessions. An added benefit of these workshops is that this format benefits both physicians and industry. The attendees can focus on the educational experience without all of the usual distractions of a busy lab, and the industry representatives appreciate the ability to have the focused attention of an interested physician.

How did the topic of EVAR for AAA find its way into a meeting that is primarily focused on lower extremity disease and intervention? What is the common thread that ties these topics?

We felt that including EVAR was a logical extension of the LEARN agenda given the "miniaturization" of the latest generation of devices and the trend toward EVAR becoming a totally percutaneous procedure. The PEVAR trial supports this notion as well. The common thread is really the technical skills in lower extremity intervention that are necessary to successfully perform EVAR. Finally, we thought it would be a good idea to add a featured topic each year to the curriculum, and with EVAR receiving so much attention, we thought this was a good fit for LEARN 2012.

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As low-profile EVAR devices begin to arrive on the market, what larger implications do you think this will have in the treatment of AAA patients and the dissemination of the procedure?

I believe that the movement toward lower-profile devices will mean that EVAR has the potential to be an outpatient procedure in appropriate patients in the future, but we are currently a long way from that. In fact, in my own practice, I have no doubt that we could send certain patients home on the same day as the procedure, but we have elected to observe all patients overnight.

I think the dissemination of the procedure and the enthusiasm over a totally percutaneous procedure needs to be tempered by appropriateness criteria and safety data. My concern is that we will see smaller aneurysms being treated with a PEVAR/EVAR procedure when we clearly have not shown any data to indicate that our threshold for treating AAA needs to be adjusted downward. Finally, to repeat what many have said over the last few years on the evolution of EVAR devices, profile doesn't necessarily need to be the ultimate goal, given the outstanding results of preclosure techniques with current device profiles; sacrificing device/endograft integrity and solid long-term outcomes for device profile would be a mistake.

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Do you have any tips or tricks you could share regarding use of the SAFARI technique?

My technique has evolved somewhat during the time that I have used a combined antegrade-retrograde approach for complex intervention, and it varies depending on whether it is a femoropopliteal or infrapopliteal case. Currently, for failed antegrade SFA recanalization, provided the anatomy and distal reconstitution point allows, I will actually access the distal SFA/above-the-knee popliteal artery under ultrasound and/or road mapping guidance with the patient still supine, the knee slightly flexed, and the hip externally rotated. A 30-cm, 3/4 F coaxial micropuncture system is used to recanalize from as far below as possible followed by a stiff hydrophilic guidewire using a standard subintimal technique. Once recanalization is achieved, my preference is to complete the intervention from an antegrade approach. This technique allows the patient to remain in a comfortable position without having to flip the patient prone, accessing the popliteal artery, and perhaps flipping back again to complete the case.

I detailed my tibial SAFARI technique in the January 2012 issue of *Endovascular Today,* but briefly, the pedal access vessel is chosen according to the angiosome concept, if possible. Only 0.014- or 0.018-inch systems are used for recanalization, and some of the dedicated CTO wires can be extremely helpful in these challenging lesion subsets. As in femoropopliteal cases, once "through-and-through" access is achieved, the definitive intervention is performed from an antegrade approach. These techniques are really based on the "feel" of the lesion and the equipment used, and there are numerous other techniques that others have described that are very successful as well.

Do you employ any particular methods for preventing neointimal hyperplasia after PAD treatment?

I wish I had the perfect answer for this vexing problem that continues to haunt all interventionists. The solution to this is certainly unknown at this time despite numerous preliminary studies; the pendulum continues to swing. My personal belief is that, at least for the SFA, there will need to be an antiproliferative agent used in conjunction (but not necessarily integrated into a device [ie, drug-eluting stents]) with whatever intervention is performed, or an endograft will need to be placed. There is also increasing interest in systemic pharmacotherapy as an adjunct to percutaneous intervention that may hold promise for reducing stenosis.

We were involved with an interesting study a few years ago, which showed a lot of potential. The protocol was developed by a friend and colleague of mine, John H. Rundback, MD, using paclitaxel nanoparticles as an intra-arterial "dwell" postintervention as well as an intravenous follow-up dose. Only four patients were enrolled prior to the study being closed for financial reasons by the company, but no patients showed any restenosis at midterm follow-up. On the endograft side, even though we do not have definitive evidence that they are the clear answer, it seems that they have the most promise if we can achieve full expansion of the endograft. Although this can often be a challenge and may indeed be one of its failure modes. Endograft design, with the ideal stent architecture and graft material is a growing interest of mine.

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Which data from a current ongoing trial data are you most anticipating?

I am interested in the longer-term follow-up data on patients involved in the DEFINITIVE LE study, because this study design will help us determine the role of atherectomy in lower extremity intervention. In addition, I think many people are awaiting the results of the SYMPLICITY and other renal denervation trials to see how this may affect the interventional treatment of poorly controlled hypertension. Finally, the many studies evaluating the application of drug-coated balloons in peripheral intervention may also further define how we manage patients with peripheral arterial disease.

Did your experience playing in the University of Florida's storied football program in any way shape your approach to medicine?

I had the great fortune of playing for the college team that I watched growing up as a kid and had a phenomenal experience. Certainly, there are plenty of life lessons learned from athletics, but if I had to pinpoint one area that carries over to my practice, it is the patience and persistence needed in a competitive environment. After my second year in medical school, I thought I wanted to get out of medicine and become a football coach, but reflecting back, I clearly made the correct decision and am happy that I stayed with it. Seeing the impact of interventional radiology on a daily basis makes that persistence worth it. ■

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