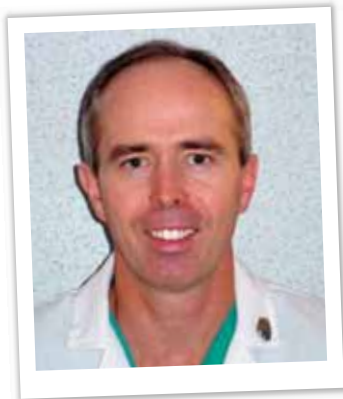


John R. Laird, Jr, MD

Our Chief Medical Editor for cardiology discusses what led him into the periphery, his experiences as a PI, and VIVA.



How did your years at the US Military Academy at West Point, Madigan, and Walter Reed impact your career in medicine? The biggest benefit of those years was that they taught me the concept of duty, which I think has evolved into a sense of duty with regards to the care of my patients and a sense of obligation to provide the very best for them. It also helped me develop discipline, which has allowed me over the years to put in the work and the long hours necessary to achieve excellence in our field. This is a profession that requires a lot of hard work, both from a physical and mental standpoint. We all spend many hours in the cath lab or operating room doing procedures under difficult and stressful conditions. Tremendous concentration is required to avoid making mistakes or causing complications, and this requires discipline and strength, both mental and physical. I think my years at the military academy and in the military helped me in that regard.

What led you to have such significant interest in performing procedures in the peripheral arteries? When I was initially trained as an interventional cardiologist, my focus was only on coronary angioplasty and coronary interventional procedures. But when I was at Walter Reed Army Medical Center, we developed an interest in new devices, like stents, lasers, and atherectomy devices. At that time, the way to get exposure to those new devices was in the peripheral circulation; we had access to them for peripheral vascular interventions before we could use them in the coronaries, so it started out as a way to get involved with some of the new devices. But over time, I realized how gratifying it was to treat peripheral arterial disease and to manage that aspect of my patients' care. I think we've all learned over the years that some of the most grateful patients are the peripheral vascular disease patients. They've often had years and years of

lifestyle-limiting claudication or other problems, and we can, with a relatively simple procedure, dramatically impact on their quality of life. That gratifying impact, combined with what I consider to be many intellectual challenges, resulted in my making peripheral interventions my primary focus.

Today, cardiologists on the whole are performing an increasing amount of peripheral interventions. What will the future role of the cardiologist be in the treatment of vascular disease? It's pretty much a given that cardiologists are going to be playing more of a role. This movement has been ongoing over the last 5 to 10 years as more cardiologists attend live demonstration courses and get trained in peripheral interventions in a variety of different settings. I think the motivations for cardiologists to become involved are varied, but the primary motivation is to be able to provide more complete vascular care for our patients. It's not as satisfying to only treat coronary artery disease and ignore the fact that your patient has claudication, poorly controlled hypertension, renal artery disease, or significant carotid artery stenosis. It's great to be able to manage all of these problems in one setting and not have to outsource that aspect of a patient's care to another vascular specialist.

That's the main reason cardiologists are getting involved, and the degree of involvement of an individual cardiologist will depend on his/her training. Some may focus primarily on renal or iliac artery intervention—areas that are a little bit more straightforward for an interventional cardiologist working in a typical cardiac cath lab. Others will seek more complete and thorough training and become involved in more complex procedures to include carotid intervention, infrainguinal work, limb salvage, acute limb ischemia, and even endovascular aneurysm repair.

How do you see the roles of each of the specialties evolving in terms of carotid stenosis treatment, particularly vascular surgeons? The vascular surgeon has been the primary caregiver with regard to carotid disease over the years. Clearly, vascular surgeons want to remain involved in this area, and we need them to be involved. Carotid endarterectomy has been one of their primary focuses over the years. This is their most popular and most successful operation, and it has some of the strongest data in support of its use because of the important randomized trials that have been completed. However, with the growing acceptance of carotid stenting as a viable alternative to carotid endarterectomy, it will be crucial for vascular surgeons to embrace

(Continued on page 81)

(Continued from page 82)

carotid stenting and to get proper training in the performance of this procedure. Many have done so already, but it will be very important for the practicing vascular surgeon to gain the skill sets that will allow him or her to offer the same level of quality with regard to these procedures that other endovascular specialists can. A fully trained endovascular surgeon who can offer both procedures with the same level of quality will be a force to be reckoned with.

You have served as principal investigator in a number of significant clinical trials. What is one lesson you have learned that would be helpful to physicians who have not yet served in this role? Not surprisingly, one lesson from being a principal investigator is that it always takes longer to complete a given trial than you originally think. The selection of co-investigators for these trials is crucial. You really have to pick investigators that are truly committed to the study design, dedicated to enrolling patients, and dedicated to performing the high-quality data collection that is necessary to obtain meaningful data. You also have to pick sites that will have the clinical volume to get the cases done in an expeditious manner.

One of the most important things we have to be aware of is that all of our assumptions about a given treatment may prove to be false, which can sometimes be a difficult thing to accept. I know one of my strong biases over the years was that excimer laser angioplasty would reduce restenosis and increase technical success rates when used to treat long SFA occlusions. However, when this assumption was put to the test in the randomized PELA trial, we could not demonstrate any significant benefit for the laser with regard to improved crossing success or reduced restenosis rates compared to balloon angioplasty alone. And that, for me, was both surprising and personally disappointing. So, we can never be totally comfortable that what may seem to make sense will actually be borne out to be true.

One of the recent trials for which you are serving as PI is the RESILIENT trial. What are its goals, and how is the progress so far? Barry Katzen and I are the co-Principal Investigators for this trial, and I'm really excited about it, because it's a trial designed to answer a very important question: Are nitinol stents really superior to balloon angioplasty for femoropopliteal disease? To date, despite all of the talk about femoropopliteal stenting, there have been no level I data to support the superiority of this approach over plain old balloon angioplasty. The only randomized trial comparing stenting and balloon angioplasty was the IntraCoil trial, which really showed no difference in outcomes between patients who received stents versus those who received balloon angioplasty. There have been a number of registry trials

and single-center experiences that seem to indicate that nitinol stents may actually work better than angioplasty or previous stent designs, but level I data is lacking.

The RESILIENT trial is a randomized trial that will compare balloon angioplasty with a nitinol stent—the Edwards Lifesciences LifeStent NT, which appears to be a very well-suited device for this application. There will be a 2:1 randomization between stenting and balloon angioplasty. Crossover to stenting will only be performed if there is a severe flow-limiting dissection or significant elastic recoil at the balloon angioplasty site. And, if that patient should crossover to a stent, he will be deemed a procedural failure/target vessel revascularization. Thus, the trial design will allow for factoring in the benefits of stenting with regard to treating the acute technical failures of balloon angioplasty. A trial design with an intention-to-treat analysis (where crossovers are analyzed as if they received only balloon angioplasty) obscures one of the major benefits of stenting. We have completed the 20-patient phase I feasibility arm of the trial, in which all patients were treated with a LifeStent NT stent. We are about to begin the pivotal, randomized portion of the trial that will enroll 225 patients. The primary endpoint will be target vessel revascularization at 6 months.

As one of the organizers of the VIVA conference, what would you say are some of the distinguishing factors of this meeting? I can't say enough about the VIVA meeting. I think the quality of the educational experience overall is really remarkable and surpasses that of many of the meetings of this type. A very strong multidisciplinary faculty from vascular surgery, interventional radiology, interventional cardiology, and vascular medicine is the framework behind this meeting, and the use of technology to its utmost makes VIVA unique. A computer at every attendee's desk provides an incredible means for the faculty and attendees to interact. It allows review of all of the slides presented over the entire course of the meeting at any time. It also allows review of a very extensive reference library of materials and a multitude of different cases and complications, and the attendees have the ability to view the live cases on their computer in real time through streaming video.

We also have the live case demonstrations, and this year, I was fortunate to be one of the live case operators from the Washington Hospital Center, along with Michael Dake and his colleagues from Stanford University Medical Center. A wide variety of cases were demonstrated, including abdominal and thoracic endografts, carotid stenting, renal stenting, and lower extremity revascularization. The combination of the extremely strong multidisciplinary faculty, the use of modern technology, excellent live case demonstrations, a great venue, and multidisciplinary attendees combined to provide a superb and unique educational experience. ■