CLI: Where We Stand

Interventional techniques to treat critical limb ischemia (CLI) have come a remarkably long way in a short period of time. Pioneering physicians in the field have seen an endless line of patients who were told their only option was amputation. In an era characterized by rapid technological advancements and evolving technical skills, physicians are seeing the absurdity of hundreds of thousands of patients treated with primary major amputation.

Not only are these interventionists forward-thinking, but they are also talented, bringing technical skills from a variety of specialty backgrounds and practice types. The movement toward limb salvage intervention is as fine an example of the endovascular revolution as there is in the field. There is tremendous multispecialty collaboration, including more than just the primary vascular specialties; wound care, podiatry, and primary care are partners in each patient's continuum. Experts representing many countries and profound, diverse schools of training now regularly meet to share successful cases in which advanced techniques enabled patients to walk from their hospital beds and return to full-time work and fulfilling weekends with their children and grandchildren.

We know these procedures are effective. We see it every day in our facilities, in our colleagues' shared experiences, and most clearly in the responses from our grateful patients. And yet, knowing certain options work is simply not enough. In a changing health care environment that increasingly values cost-effectiveness and quality of life, we must be able to prove value to third parties ranging from insurance carriers to hospital administrators and our respective government bodies. The momentum is on our side, and enthusiasm for limb salvage continues to grow. In order to continue to build on previous successes, we must work to clearly report our results while incrementally improving them along the way, and endeavor to provide each patient's long-term care as efficiently as possible.

In this annual issue on CLI, my colleagues and I open with our single-center experience building a multidisciplinary amputation prevention program. We also share an all-too-familiar case of a patient who had previously undergone a left BTK amputation without a single angiogram obtained. Through our efforts, we were able to save this patient's right leg. Although successes such as these resonate with us, the data are limited on how cost-effective CLI treatments actually are. Firas F. Mussa, MD, MS, along with commentary from Mary L. Yost, MBA, examine how we measure clinical benefit for these procedures. We then look at angiosome mapping with international expert Marianne Brodmann, MD, who concludes that we must recognize that reopening occluded vessels will only lead to successful outcomes if dedicated wound care is applied during follow-up. Desmond Bell, DPM, CWS, shows us how this is done, followed by a review by Matthew Sevensma, DO; Larry J. Diaz-Sandoval, MD; and Fadi Saab, MD, and myself on ultrasound mapping.

A wave of innovation is bringing improved and novel techniques and devices for CLI therapies. New devices, such as those with lower profiles, described in this issue by George L. Adams, MD, MHS, FACC, and Michael J. Pompliano, BS, are enabling us to refine our techniques and treat more patients with this life-threatening disease. Articles from Craig Walker, MD, on guidewire selection; Thomas P. Davis, MD, and James Torey, PA-C, on CTO devices; Thomas Zeller, MD, and Lawrence Garcia, MD, on atherectomy; and my group on drug-eluting technologies, review what we have and what is on the horizon so that we are able to save as many limbs—and lives—as possible.

With continuing advancements in technology, along with increased awareness and the development of amputation prevention programs and limb salvage clinics, it is my hope that a trend will follow that brings the patient with advanced peripheral arterial disease to the vascular specialist sooner, allowing earlier treatment and prevention of CLI. ■

Jihad A. Mustapha, MD
Guest Chief Medical Editor