Progress in Amputation Prevention

Gone are the days when the presence of critical limb ischemia (CLI) generated an automatic referral for amputation. Advancements in technology are helping us achieve success in peripheral vascular interventional cases that were previously deemed impossible. We are seeing declining rates of amputation nationwide, and this is having a momentous impact on our patients' quality of life. However, the need to spread the word, increase training opportunities, and continue the advancement of biomedical technologies remains evident.

Our CLI focus opens with an overview of the issue by Alvaro Alonso, MD, and Lawrence A. Garcia, MD. They provide a look at the risk factors and presentation of CLI, a brief review of patient outcomes, and the economic impact of this disease. Steve J. Gardner, BA; Chenchen Huang, BS; Hardy Singh, MD; and George L. Adams, MD, MHS, FACC, provide a decision tree for treating arterial-insufficient CLI wounds and knowing when amputation may be deemed necessary.

Along with Carmen M. Heaney, RN, BSN, CCRC; Fadi A. Saab, MD; and Marilyn Devries, BSN, I have described our institution's screening and referral protocols, offering examples for building a successful program to avoid amputation when possible. James F. McKinsey, MD, FACS; Thomas P. Davis, MD; and Gautam V. Shrikhande, MD, offer their expertise on the benefits of medical centers having dedicated PAD and limb preservation programs. They describe the various aspects of a multispeciality team and how a CLI program can help physicians and their centers.

There has been an increase in the amount of interventional CLI procedures performed to treat CLI and avoid amputation—particularly in the last 5 years. Nilesh N. Balar, MD; Ranjith Dodla, MD; Parind Oza, MD; Parth N. Patel; and Mayank Patel, MD, review their center's 12-year data, noting an overall improvement in revascularization and limb salvage rates with a decrease in the rate of major lower extremity amputation.

Andrew Feiring, MD, then discusses one of the treatment options for CLI–drug-eluting stent (DES) placement. Data support the use of this option as a primary treatment for below-the-knee (BTK) CLI. In addition, Dr. Feiring provides a detailed case report showing the utility of DES BTK. We have also included cases from Craig Walker, MD, and Tony Das, MD, FACC, which describe other techniques such as percutaneous transluminal angioplasty and laser for CLI treatment.

Finally, Catalina Sanchez; Carlos Mena-Hurtado, MD; Robert S. Dieter, MD, RVT; Aravinda Nanjundappa, MD, RVT, MBA, and I provide a look at what we know so far about angiogenesis and what we need to do to further understand its potential for CLI treatment.

In addition to our focus on CLI, Pooya Heiraty, BS; Marc Casasanta, MD; Mojtaba Gashti, DO, FACOS; and John Wang, MD, detail a case in which an IVC filter was percutaneously retrieved after migrating to a patient's heart. We have also included an article on the utility of IVUS in renal artery fibromuscular dysplasia treatment by Albeir Y. Mousa, MD; Aravinda Nanjundappa, MD, RVT, MBA; Patrick A. Stone, MD; and John E. Campbell, MD.

In our featured interview, Kenneth R. Thomson, MD, discusses differences between the United States and Australian health care systems, as well as the training and credentialing of physicians.

These are exciting times in the treatment of advanced CLI. I hope you find the articles in this issue of *Endovascular Today* stimulating and that you are able to apply knowledge gained to your everyday practice. ■

Jihad A. Mustapha, MD, FACC, FSCAI
Guest Chief Medical Editor