

# Improving CLI Patient Care

For many vascular specialists, care of patients with critical limb ischemia (CLI) constitutes an ever-increasing percentage of their clinical practice. With the aging of our population, the growing diabetes epidemic, and the rising number of patients with end-stage renal disease whose lives are being prolonged by dialysis, this trend is likely to continue.

Significant advances have been made in the endovascular treatment of CLI, and in many centers, an “endovascular first” strategy has been adopted. The development of specialized angioplasty balloons (long, cutting/scoring, cold, drug eluting, etc.), novel atherectomy devices, improved chronic total occlusion devices, and better stents have all contributed to improved outcomes with endovascular approaches to CLI. Despite these advances, there is still considerable room for improvement with regard to the evaluation and management of patients with infrainguinal occlusive disease. In this issue of *Endovascular Today*, we will review the current state of the art regarding CLI treatment and discuss areas of future investigation.

To begin our feature, J. A. Mustapha, MD, FACC, FSCAI, and C. M. Heaney, RN, BSN, CCRC, CIP, explain the scoring system developed by Dr. Mustapha for accurately diagnosing and treating complex CLI cases. This system stresses that it is not the number of patent tibial runoff vessels but patency of the specific tibial vessel to the foot supplying an ischemic area that ensures resolution. In a related discussion, Osamu Iida, MD; Masaaki Uematsu, MD, PhD; and Hiroto Terashi, MD, PhD, provide an overview of the angiosome concept and its potential role in limb salvage procedures.

There is a great interest in drug-eluting balloons and the potential for this technology to improve the durability of below-the-knee (BTK) interventions. Although years away from FDA approval in the United States, drug-eluting balloons are now commercially available in Europe. Jos C. van den Berg, MD, PhD, reviews for us his experience with drug-eluting balloons and the potential benefits of this approach to BTK intervention.

Next, Nipun Arora, MD, and Lawrence A. Garcia, MD, provide an overview of excisional atherectomy in BTK interventions, and Robert S. Dieter, MD, RVT, and Aravinda

Nanjundappa, MD, RVT, MBA, discuss how embolic capture angioplasty combines standard angioplasty and embolic debris containment to create a feasible treatment option for lesions in the lower extremities and prevent the consequences of postprocedural embolization.

Prakash Makam, MD, FACC, FSCAI, describes how BTK stenting in CLI patients may have a place as a first-line treatment in addition to its role as a bailout option. Grayson H. Wheatley III, MD, then discusses the use of dual-action atherectomy and thrombectomy for treating CLI.

Although calcified infrapopliteal disease can present a challenge to interventionists, Raymond Dattilo, MD, FACC, reviews the available treatment techniques and highlights the therapeutic benefit of orbital atherectomy. John H. Rundback, MD, FAHA, FSVM, FSIR; Chaim Herman, MD; and Marcelo Mendez, BA, relate their center's

experience with subintimal balloon angioplasty and stenting in patients with chronic total occlusions. Raghav Gupta, MD, and Thomas A. Hennebry, MB BCh, BAO, FACC, FSCAI, detail the current and future trends in treating acute limb ischemia.

In addition, this month, James F. McGuckin, MD, provides a case report of long-term IVC filter retrieval and Frank R. Arko, MD; Abraham F. Hashmi, BS; Erin H. Murphy, MD; Mitchell Plummer, MD; and Gregory Stanley, MD, present a challenging case in which a combination of agents—liquid embolics, detachable coils, and plugs—were used to repair an enlarging aneurysm 5 years after its initial repair.

We round out this issue with our featured interview with Jose I. Almeida, MD, FACS, RVT. He shares his experience with office-based venous procedures and his work developing new technology at home and abroad.

As you can see, this issue is packed full of interesting information that you will hopefully find useful in your daily practice. Together we can work to improve the care of patients with CLI and reduce the number of unnecessary amputations. ■



John R. Laird Jr, MD,  
Chief Medical Editor