Surveying the CAS Landscape

After a decade of studying carotid artery stenting (CAS) in the United States and European Union, the therapy is in the midst of a 3-year watershed. Last year, the results of the National Institutes of Health analysis of the CREST trial, showing equivalency between CAS and carotid endarterectomy (CEA), were published in the *New England Journal of Medicine*. This January, a US Food and Drug Administration (FDA) advisory panel voted to recommend approval of a stent and embolic protection system (Acculink/Accunet, Abbott Vascular, Santa Clara, CA) as a safe and effective alternative to CEA based on a separate, yet concordant, analysis of the study. Subsequent to this, the Abbott devices received FDA approval in May for treating standard-risk patients with carotid stenosis requiring treatment.

Also this year, guidelines in the United States and elsewhere recognized CAS as a reasonable alternative to CEA based on available data. In the next year, it is anticipated that the outcome of all of these results will prompt another look at the national coverage decision for CAS by the Centers for Medicare & Medicaid Services, hopefully with expanded coverage that is in line with FDA device approvals.

Accordingly, we have endeavored to cover the many developments in CAS in this edition of *Endovascular Today*. A group of leading physicians who are well versed in carotid intervention shed light on the current issues facing this procedure. First, Dr. Macdonald analyzes the differences between the results of CAS trials from the European Union versus the United States and the impact of operator experience on these data. Simon K. Neequaye, BSc, MSc, MRCS; Alison W. Halliday, MS, FRCS; and Dr. Macdonald then summarize and compare CAS guidelines from the European Society for Vascular Surgery, the American Heart Association, and the UK National Institute for Clinical Excellence and explain how trial data showing the growing acceptance of CAS as a safe and effective alternative to CEA either matches these guidelines or suggests the need for updates to be made.

Next, CREST Principal Investigator Thomas G. Brott, MD, and Project Director Alice Sheffet, PhD, address some of the frequently asked questions following the publication of data from this landmark trial.

Chuck Simonton, MD, and Patrick Verta, MD, provide an update on the FDA's decision to expand the indication for CAS as a therapeutic option for standard-surgical-risk patients. Randel Richner, MPH, and Daniel Tuden, PhD, follow with an overview of the possible impact of CREST on future reimbursement for CAS from the Centers for Medicare & Medicaid Services, including a look at how reimbursement for CAS has progressed over time.

Higher periprocedural myocardial infarction rates with CEA versus CAS, as seen in the CREST trial, has been a controversial topic within the interventional community—some saying that it is an important finding and others asserting that it does not affect quality of life as much as the higher periprocedural stroke rates that were seen with CAS. Peter Kan, MD, MPH; Travis M. Dumont, MD; Adib A. Abla, MD; Adnan H. Siddiqui, MD, PhD; Elad I. Levy, MD; and L. Nelson Hopkins, MD, describe the significance of myocardial infarction and why it should be a studied endpoint in future carotid intervention trials.

This is our second year as coeditors of the CAS edition of *Endovascular Today*, and we would like to thank our contributing authors for their expertise and excellent efforts to communicate the important events surrounding CAS today. We sincerely hope you will enjoy reading it as much as we enjoyed editing it. ■

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