

Left Main and Bifurcation Disease

Treating left main and bifurcation lesions remains challenging for interventional cardiologists, but recent advances in percutaneous coronary interventions have led to a dramatic increase in the number of successfully treated patients. When compared with nonbifurcation interventions, treatment of bifurcation lesions has a lower rate of procedural success, higher procedure costs, longer hospitalization, and higher clinical and angiographic restenosis rates. The frequency of bifurcation stenosis in the left main location is largely responsible for these limitations. Although it is clear that left main stenting is technically feasible, surgical bypass remains the standard for patients well suited for bypass.

Cardiac Interventions Today has called on the experts who regularly face this challenging anatomy to shed some light on the current state of the art.

Introducing our featured content this month, Masahiko Ochiai, MD, describes his percutaneous interventional strategy for left main trunk lesions in patients who have a high risk of developing complications related to coronary artery bypass grafting. Drs. John A. Ormiston and Mark A. Turco explain why treating bifurcation disease remains a clinical challenge for the interventional cardiologist, with many limitations to current techniques with conventional stents for the treatment of bifurcations. The authors present a case report of a patient with bifurcation disease successfully treated with the Axxess drug-eluting stent. Seung-Jung Park, MD, PhD, and Young-Hak Kim, MD, PhD, follow with a discussion of current evidence for drug-eluting stent placement in unprotected left main coronary disease. They state that percutaneous intervention with a drug-eluting stent for the left main coronary artery will progressively increase, and in their practice, is recommended as a reliable alternative to bypass surgery for patients with unprotected left main coronary artery stenosis, especially as the first-line therapy for ostial or shaft stenosis. The recent achievements in bifurcation interventions are outlined by Samin K. Sharma, MD, FACC, who provides a suggested algorithm for treatment of bifurcation coronary lesions. In their review of the current techniques and future technologies for treating bifurcation disease, Gerald Yong, MBBS (Hons), FRACP, and Timothy A. Sanborn, MD, submit a table of current devices dedicated to treat bifurcation disease



and point to improved outcomes with drug-eluting dedicated devices that suggest potential for further improvement.

In the first of our department articles this month, Carlo A. Dall'Olmo, MD, and coauthors delve into the coexistence of acute aortic aneurysm, peripheral arterial disease, and cerebrovascular disease in patients with coronary artery disease. They provide data that reinforce the concept of the global nature of vascular disease and the importance of ascertaining an individual's vascular profile.

Our Imaging & Diagnostics department this month consists of two articles that illuminate the latest improvements in multidetector computerized tomography and optical coherence tomography. The case studies provided by Jason T. Bradley, MD, and coauthors demonstrate the utility of multidetector computerized tomography in coronary artery bypass graft patients, focusing on the information that this imaging modality adds to diagnosis and management. Dat Do, MD; Thomas E. Milner, PhD; and Marc D. Feldman, MD, highlight optical coherence tomography as an imaging modality with excellent potential in detecting vulnerable plaque, an issue of distinct importance because

plaque rupture leading to myocardial infarction, cerebral vascular accident, and progression of peripheral artery disease remains the leading cause of death in the world. In this month's Tips & Tricks column, Gerald Yong and I describe a technique for right heart catheterization from the femoral route. I hope that many of our readers will submit Tips & Tricks suggestions for future issues.

This issue of *Cardiac Interventions Today* concludes with a featured interview with Ziyad M. Hijazi, MD, a forerunner in pediatric cardiology, who discusses his early influences, the importance of developing child-sized devices, and what to expect at PICS 2008.

I hope you find our latest issue of *Cardiac Interventions Today* to be as insightful and thought provoking as our inaugural issue. Look for a compelling review of the latest information on chronic total occlusions in our next issue. ■

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Chief Medical Editor