Chronic Obstructive Coronary Artery Disease

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Chronic obstructive coronary artery disease contributes significantly to premature mortality as well as to morbidity due to angina and reduced quality of life. Management strategies include medical therapy, percutaneous coronary intervention, and surgical coronary revascularization. Recent studies, such as the Clinical Outcomes Utilizing Revascularization and Aggressive Drug Evaluation (COURAGE) trial, the Synergy between Percutaneous Coronary Intervention with TAXUS and Cardiac Surgery (SYNTAX) trial, and the Bypass Angioplasty Revascularization Investigation 2 Diabetes (BARI 2D) study, have examined these treatment options in patients with chronic obstructive coronary artery disease. It is appropriate at this time to review these trials as well as their clinical implications, and to provide recommendations for patient care.

Drs. Amit P. Amin and David J. Cohen examine the financial aspects and relative cost-efficacy of different treatment strategies for chronic obstructive coronary artery disease. They review the general concepts of cost-effectiveness and analyze relevant data from studies such as COURAGE and BARI 2D. They conclude that "the cost-effectiveness of coronary revascularization varies with a number of patient-related factors, including age, symptom level, extent of coronary artery disease, and degree of underlying ischemia."

Important gender differences in response to treatments for chronic coronary artery disease are identified by Drs. Molly Szerlip and Cindy L. Grines. Remarkably, more women than men die of coronary artery disease each year, and various medications, including antiplatelet agents, anticoagulants, β-blockers, and antithrombin agents, may have variable effects in women compared with men. Furthermore, women are less likely to undergo diagnostic angiography or percutaneous coronary intervention than men, and they are more likely to experience delays in their treatment.

Historically, coronary artery bypass grafting had been considered to be the standard of care for left main and multivessel coronary artery disease. However, advances in technology for percutaneous coronary intervention, as well as improvements in adjunctive pharmacotherapy, have made drug-eluting stent deployment a viable alternative to surgical revascularization in many patients with left main coronary obstruction. Drs. Vivian G. Ng and Alexandra J. Lansky review contemporary treatment of left main and multivessel disease in the drug-eluting stent era.

Our final two articles provide different perspectives on the COURAGE trial, which was designed to determine whether an initial treatment strategy of percutaneous coronary intervention combined with optimal medical therapy reduces the risk of death or nonfatal myocardial infarction in patients with stable coronary artery disease as compared with optimal medical therapy alone. Dr. William E. Boden provides a non-interventionalist's perspective, and provides support for his belief that "COURAGE will reorient our decision-making 'set point' away from what has been a largely routine procedural approach to initial patient management for stable CAD." Conversely, I offer an interventionalist's perspective of the COURAGE trial data, and provide data that objective myocardial ischemia is both qualitatively and quantitatively correlated with the occurrence of adverse clinical outcomes (death or nonfatal myocardial infarction) on medical therapy, and that the magnitude of ischemia is directly proportional to the degree of relative clinical benefit provided by revascularization. Objective evidence of ischemia is a key determinant of revascularization benefit.

It is hoped that this supplement will provide insights that may help you optimize treatment strategies for your patients with chronic obstructive coronary artery disease ■

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