The Evolving Algorithm Concerning Higher-Risk PCI (TEACH-PCI)

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Chest pain and its related symptoms are the second most frequent reason for emergency room visits in the United States annually, amounting to over 6 million patient contacts. Although only a small portion of these patients are discharged with a diagnosis of an acute myocardial infarction, a vast majority are evaluated for possible unstable angina or non–ST-segment elevation acute coronary syndrome (ACS). The almost overwhelming amount of clinical trial data to help guide the management of these patients is highlighted by the recently released American College of Cardiology/American Heart Association Guidelines for the Management of Patients with Unstable Angina/Non-ST Segment Elevation Myocardial Infarction.[1]

The articles presented in this supplement represent a synthesis and distillation of some of the huge quantity of clinical trial data addressing the more

complicated issues facing the practitioner in deciding how to best treat the patient with a possible ACS. We begin with my discussion on how choosing optimal treatment for these patients remains a dilemma for many practitioners due to subjectivity, delayed diagnoses, and widely variable mechanisms with similar clinical presentations. Following aspirin, choosing the optimal antithrombotic regimen is often the next decision facing the practitioner. Tied in with decisions regarding anticoagulant and antiplatelet therapies is always the question of benefit versus risk. A perspective focusing on "treatable risk" for the NSTEMI/unstable angina patient is also presented.

Whereas in the past unfractionated heparin was a clear-cut choice, today there are many other options, including low-molecular-weight heparin; fondaparinux; or the direct thrombin inhibitor, bivalirudin; and the choice is rarely straightforward. To help clarify these issues for our readers, Norman E. Lepor, MD, FACC, FAHA, FSCAI walks us through the history of anticoagulants in patients with ACS to the state-of-the-art data available today.

In terms of risk, only recently have we gained an appreciation for the long-term risk associated with bleeding events occurring in the hospital during the treatment of the ACS patient. Sunil V. Rao, MD, reviews the implications of bleeding and blood transfusion in patients with percutaneous coronary intervention.

Choosing the optimal antiplatelet therapy is always another important concern. Central to this are the questions of when to initiate clopidogrel, in whom, and then for how long? Christopher P. Cannon, MD, provides an excellent overview of this subject in his article.

Finally, in his article, David J. Schneider, MD, addresses the challenging issues surrounding the treatment of subgroups of ACS patients known to be at high risk including those with diabetes, chronic renal disease, and the elderly. There is a paucity of clinical trial data to help optimally guide decision making for those patients, and Dr. Schneider aims to clarify those issues.

These articles represent the current state-of-the-art in a very dynamic and rapidly changing field. No single patient presenting with a possible ACS can be treated in a straightforward, algorithmic manner, and some patient groups and therapeutic options prove to be particularly challenging in the application of evidence-based therapies. We hope that this series of articles will help diminish some of these challenges and provide guidance for our fellow practitioners. ■

Reference

1. Anderson JL, Adams CD, Antman EM, et al. ACC/AHA 2007 Guidelines for the Management of Patients With Unstable Angina/Non ST-Elevation Myocardial Infarction. A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Committee to Revise the 2002 Guidelines for the Management of Patients With Unstable Angina/Non ST-Elevation Myocardial Infarction). *Circulation*. 2007;116: e148-304.