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NO INCREASED STENT THROMBOSIS WITH DRUG-ELUTING STENTS, NEW ANALYSIS FINDS

HORIZONS-AMI Reveals Identical Rates with Drug-Eluting and Bare-Metal Stents

Orlando, FL – A new analysis of the HORIZONS-AMI trial is revealing important clues to patient characteristics and treatment strategies that influence the risk for developing stent thrombosis—both shortly after percutaneous coronary intervention (PCI) and as much as a year later, according to research presented during the i2 Summit the American College of Cardiology’s 58th annual scientific session.

Stent thrombosis is the formation of a blood clot on the inside surface of a stent. The blood clot can block blood flow through the stent and cause another heart attack or even death. There has been some concern that late stent thrombosis might be more common with drug-eluting stents than bare-metal stents. In patients who undergo PCI because of a heart attack, or acute myocardial infarction (MI), the overall risk of late stent thrombosis is just over 3 percent, but it does not appear to be higher with drug-eluting stents, nor is it influenced by the choice of anticoagulants evaluated in the trial.

“The present study, the largest comparative trial of different stent types and anticoagulant regimens in patients with acute myocardial infarction, documents a considerably high rate of stent thrombosis within one year after primary angioplasty,” said George Dangas, M.D., Ph.D., an associate professor of medicine at Columbia University Medical Center and director of academic affairs and investigational pharmacology at the Cardiovascular Research Foundation, both in New York City. “However, the rates were comparable between drug-eluting and bare-metal stents, and between bivalirudin and heparin plus glycoprotein IIb/IIIa inhibitors.”

For the study, researchers analyzed data from 3,202 patients who were treated with stenting in the main HORIZONS-AMI trial. Within one year, stent thrombosis occurred in 107 pts (3.4 percent). Of these, 0.9 percent of cases were acute (<24 hour after stent implantation), 1.6

percent were subacute (1 to 30 days), and 1.0 percent were late (1 to 12 months). The one-year rate of stent thrombosis was identical among patients treated with either drug-eluting or bare-metal stents. Among patients who received the blood thinner bivalirudin, the rate of one-year stent thrombosis was 3.6 percent, as compared to 3.2 percent among patients who received heparin plus glycoprotein IIb/IIIa inhibitors, a statistically nonsignificant difference. There were, however, fluctuations in the rates over time: patients treated with bivalirudin had a higher rate of acute stent thrombosis, but there was a catch-up stent thrombosis in the other group by one month.

Researchers also collected data on a large number of variables that might influence the risk of stent thrombosis. Characteristics that independently predicted the risk of stent thrombosis during the year following stent implantation included ongoing cigarette smoking, insulin-treated diabetes, use of a high number of stents, treatment of ulcerated lesions, and complete blockage of the artery responsible for the heart attack upon initial x-ray angiography. Use of a high loading dose of the anti-clotting drug clopidogrel (600mg) was a protective factor.

Dr. Dangas will present "Predictors of Stent Thrombosis After Primary Angioplasty in Acute Myocardial Infarction: The HORIZONS-AMI Trial" on Sunday, March 29, at 8:20 a.m. in the Valencia Ballroom.

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The American of Cardiology's Innovation in Intervention: i2 Summit 2009 features the latest in interventional science and is the leading forum and exposition for interventional cardiology. A platform for the world's leading interventional cardiologists to share knowledge, discuss new ideas and discover new innovations, the i2 Summit 2009, in partnership with the Cardiovascular Research Foundation, is being held in conjunction with ACC.09, the American College of Cardiology's 58th annual scientific meeting. The American College of Cardiology (www.acc.org) works to influence health care policy and represents the majority of board certified cardiovascular care specialists through education, research, promotion, and the development and application of standards and guidelines.