

Final 3 year results from the landmark HORIZONS-AMI trial published in the Lancet

June 13 2011

Data from the landmark HORIZONS-AMI clinical trial demonstrated that the administration of the anticoagulant medication bivalirudin enhanced survival compared to the use of heparin plus a glycoprotein (GP) IIb/IIIa inhibitor in heart attack patients undergoing angioplasty after 3 years. Use of a drug-eluting stent (paclitaxel) was also shown to be more effective than a bare-metal stent, with equivalent safety. Final 3-year results of the trial were published in the June 13, 2011, issue of *The Lancet*.

After 3 years, treatment with bivalirudin alone compared to [heparin](#) plus a GP IIb/IIIa inhibitor resulted in significantly reduced rates of all-cause mortality (5.9% vs. 7.7%), [cardiac mortality](#) (2.9% vs. 5.1%), reinfarction (6.2% vs. 8.2%) and major bleeding not related to bypass [graft surgery](#) (6.9% vs. 10.5%). There were no significant differences in the incidence of ischemia-driven target vessel revascularization, stent thrombosis, stroke, or composite adverse events.

In addition, at 3 years, the implantation of a paclitaxel-eluting stent compared to a bare-metal stent resulted in significantly lower rates of ischemia-driven target lesion revascularization (9.4% vs. 15.1%) with no significant differences in the rates of death, reinfarction, stroke, or stent thrombosis.

"The results at 3 years demonstrate that use of bivalirudin alone, as

opposed to a combination of heparin and a GP IIb/IIIa inhibitor, can save lives. The reported reduction in all-cause mortality seen in the trial equates to 18 lives saved per 1,000 [patients](#) treated with bivalirudin," said Gregg W. Stone, MD, Professor of Medicine at Columbia University College of Physicians and Surgeons, Director of Cardiovascular Research and Education at the Center for Interventional Vascular Therapy at NewYork-Presbyterian Hospital/Columbia University Medical Center and Co-Director of the Medical Research and Education Division at the Cardiovascular Research Foundation (CRF). Dr. Stone is the principal investigator of the HORIZONS-AMI trial.

"Additionally, results of the trial showed that patients who received a paclitaxel-eluting stent had a 40% reduction in risk of ischemia-driven target lesion revascularization after 3 years compared with those patients given a bare-metal stent," Dr. Stone said.

While previous studies of drug-eluting stents have often focused on their use in patients with stable or unstable chest pain, this is the largest study to focus on the appropriate use of anticoagulation medications and drug-eluting stents in patients experiencing the most dangerous form of heart attack (ST-elevation myocardial infarction).

Sponsored by the Cardiovascular Research Foundation, with research grant support from Boston Scientific Corporation and The Medicines Company, the HORIZONS AMI (Harmonizing Outcomes with RevascularIZatiON and Stents in Acute Myocardial Infarction) trial enrolled 3,602 patients presenting with a [heart attack](#) to hospitals in 11 countries. More than 120 national and international interventional cardiology centers participated in the trial.

Three-year results of the trial were first reported at the 2010 Transcatheter Cardiovascular Therapeutics (TCT) annual scientific symposium, sponsored by CRF.

Provided by Cardiovascular Research Foundation

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