Abciximab Aids Only Patients With High Troponin

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ATLANTA — Treatment with a glycoprotein IIb/IIIa inhibitor cut the risk of adverse events in patients with acute coronary syndrome who underwent percutaneous coronary intervention only if they had an elevated serum level of troponin, according to results from a study with more than 2,000 patients.

But in patients without elevated troponin, treatment with the IIb/IIIa inhibitor abciximab (ReoPro) gave no added benefit when used on top of optimal antiplatelet treatment with clopidogrel and aspirin, Dr. Adnan Kastrati reported at the annual meeting of the American College of Cardiology. "The benefits of abciximab appear to be confined to patients with an elevated troponin level," said Dr. Kastrati, professor of medicine at the German Heart Center in Munich. The study findings were published online (JAMA 2006;295[doi:10.1001/jama.295.13.joc60034]), concurrent with his report at the meeting. The study had no industry funding.

In patients with high baseline troponin levels, there was a 29% drop in events linked with abciximab use.

DR. KASTRATI

The role of IIb/IIIa inhibitors during percutaneous coronary intervention (PCI) became clouded a few years ago when cardiologists began routinely using a 600-mg loading dose of clopidogrel at least 2 hours before a PCI. Researchers asked whether a IIb/IIIa inhibitor such as abciximab was still needed in patients who were already getting this optimal antiplatelet regimen. Reports from a series of controlled studies published by Dr. Kastrati and his associates in 2004 showed abciximab did not improve outcomes in patients undergoing PCI if they had a low to intermediate risk of events, target coronary arteries with a small diameter of 2.5 mm or less, or diabetes.

Until now, the issue was unresolved for high-risk patients with acute coronary syndrome (ACS), who constitute the majority of PCI patients, said Dr. Steven R. Steinhubl and Richard Charnigo, Ph.D., in an editorial accompanying the published report (JAMA 2006;295[doi:10.1001/ jama.295.13.jed60017]).

The study enrolled 2,022 patients with unstable angina and an elevated serum level of troponin T (more than 0.03 mcg/L), a new ST-segment depression of at least 0.1 mV, or new bundle-branch block. About half of the patients had an elevated troponin level. Enrollment criteria also required significant angiographic lesions in a coronary artery or bypass graft that was amenable to PCI.

The patients were treated during March 2003–December 2005 at seven centers in Germany, the Netherlands, and Brazil. They received 600 mg of oral clopidogrel at least 2 hours before PCI, as well as 500 mg of aspirin. They were randomized to treatment with abciximab plus unfractionated heparin or to heparin plus placebo.

The study's primary end point was the combined rate of death, myocardial infarction, or need for urgent revascularization within 30 days after treatment.

Overall, the incidence of primary end point events was 8.9% in patients who received abciximab and 11.9% in those who received placebo, a relative 25% drop in events associated with the active treatment, which was statistically significant.

A second analysis assessed the effect of abciximab treatment after patients were divided according to whether or not their serum level of troponin was elevated. In those without elevated troponin, the event rate was identical (4.6%, regardless of whether they received abciximab or placebo). By contrast, in patients with a high troponin level at baseline, the event rate was 13.1% in those receiving abciximab and 18.3% in those receiving placebo, a 29% drop in events linked with abciximab use, which was statistically significant, said Dr. Kastrati. A safety analysis showed no significant difference in the rates of major or minor bleeding events or in the need for transfusions between patients who received placebo or the active drug.

About a third of patients who come to a hospital with a diagnosis of ACS have an elevated troponin level, wrote Dr. Steinhubl and Dr. Charnigo, who are both at the University of Kentucky in Lexington. ■