PLATO-Invasive confirms ticagrelor benefits

MedWire News: A subanalysis of the PLATO study confirms that the benefits of ticagrelor demonstrated in the overall study population also apply to those patients undergoing planned invasive procedures.

The results of PLATO-Invasive, focusing on the 13,408 (72%) of acute coronary syndrome (ACS) patients in the trial scheduled for percutaneous coronary intervention or coronary artery bypass graft (CABG) surgery, were reported at the recent Transcatheter Cardiovascular Therapeutics 2009 meeting in San Francisco, California in the USA.

As reported previously by *MedWire News*, the main findings of PLATO (PLATelet Inhibition and patients Outcomes) showed that treatment with ticagrelor was associated with a significantly lower rate of the primary outcome of cardiovascular death, myocardial infarction (MI), or stroke at 12 months compared with clopidogrel therapy, at 9.8% versus 11.7%, equating to a 16% reduction in relative risk (p=0.0003). Importantly this benefit was seen without any increase in bleeding events.

Presenting investigator Christopher Cannon (Brigham and Women's Hospital, Boston, Massachusetts, USA) reported that PLATO Invasive similarly showed a significant reduction in the primary endpoint with ticagrelor among the patients undergoing invasive treatment, at 9.02% compared with 10.65% with clopidogrel, again equating to a 16% relative risk reduction (p=0.0025).

Although patients undergoing invasive procedures are at increased risk for bleeding, there was still no increased risk for major bleeding events with ticagrelor compared with clopidogrel, at 11.5% and 11.6%, respectively.

Furthermore, the same effect of ticagrelor was seen in comparison with both the 300-mg loading dose of clopidogrel, standard at the time PLATO was designed, and the 600-mg loading dose now more commonly used in the USA.

As seen in the overall PLATO study, dyspnea was more common among patients in the ticagrelor group (15.4% vs 10.4%, p<0.0001). But still less than 1% of patients discontinued ticagrelor treatment due to dyspnea, at 0.9% compared with 0.3% of patients discontinuing clopidogrel for this reason.

Cannon explained that ticagrelor, which is not yet approved, is a reversible but more potent platelet P2Y12 inhibitor than clopidogrel, with a more rapid onset of action coupled with a faster offset of effect. Echoing comments made at the time of the presentation of the main PLATO results, Cannon noted that this fast offset of action is particularly important for invasive treatment decision making, allowing for timely CABG.

He commented: "The majority of patients rushed to the hospital with severe chest pain or heart attacks will have an invasive procedure. Doctors need to make quick decisions about antiplatelet therapy for patients who are sent for cardiac catheterization and may need angioplasty or surgery."

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