More potent anti-clotting drugs with angiography may benefit patients with acute chest pain

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Current methods to treat acute coronary syndrome conditions, such as heart attack, include artery-clearing procedures (e.g., percutaneous coronary intervention or coronary artery bypass grafting) with medications, or medications alone for those that do not undergo procedures.

In a new report from the TRILOGY ACS trial from Brigham and Women's Hospital (BWH) and Duke Clinical Research Institute (DCRI), in patients without artery-clearing procedures, those who had an angiography (a type of x-ray to view the inside of blood vessels) followed by prasugrel (Effient) had fewer heart attacks and strokes compared to those who had an angiography followed by clopidogrel (Plavix). Prasugel is a stronger blocker of blood-clotting cells called platelets compared to clopidogrel. This benefit of prasugrel was not seen in patients who did not have angiography.

The study will be published in the August 17, 2013 issue of *The Lancet.*

"These data may have implications for patient care, since the patients who seem to benefit most from intensified anti-platelet treatment are those with confirmed coronary artery disease. However, these data would need to be verified in another study before making such a recommendation," said Stephen Wiviott, MD, BWH Cardiovascular Division, lead study author.

"These results are one of the more important observations from the TRILOGYACS trial, which was set up to address the long-term use of dual anti-platelet therapy for patients managed medically after acute coronary syndrome," said E. Magnus Ohman, MD, senior investigator at the DCRI and chairman of the TRILOGY ACS trial.

There were 7,243 patients (younger than 75 years old) included in the randomized, controlled trial, which was done at more than 800 sites worldwide. Patients were randomly assigned to take clopidogrel or prasugrel. Forty-three percent of the patients enrolled in the study were given the drug after angiography, while fifty-seven percent were given the drug without having undergone angiography.

Researchers wanted to assess cardiovascular health outcomes based on angiography status and whether the effects of drug treatment on these health outcomes differed between patients who had angiography versus those who had not before enrolling in the study.

Researchers followed the patients to track cardiovascular health outcomes—cardiovascular death, heart attack or stroke—at 30 months.

The group of patients who had angiography and took prasugrel had fewer cardiovascular deaths, heart attacks or strokes compared to those who had angiography and took clopidogrel. However, for patients whose condition was managed first with medicines only and no angiography, there was no clear benefit of one drug over the other.

"This study supports the potential benefit of strong anti-platelet medications in patients with heart attacks where there are known blockages in heart arteries demonstrated by angiography, and reaffirms the value of cardiac catheterization in the management and triage of patients with acute chest pain," said Deepak L. Bhatt, MD, MPH, VA Boston Healthcare System and BWH Cardiovascular Division, senior

study author.

Similarly, Wiviott added, "Patients should discuss with their doctors whether heart procedures such as angiography are right for them and which medications they should use to help reduce the chance of recurrent events."

Provided by Brigham and Women's Hospital

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