

Preventive PCI results in better outcomes than culprit artery PCI alone in ST elevation MI

September 1 2013

Heart attack patients with ST elevation who undergo a preventive procedure to unblock additional coronary arteries have significantly better outcomes than those whose treatment is confined to the culprit blockage only, according to the results of the Preventive Angioplasty in Myocardial Infarction (PRAMI) Trial.

The findings, presented today at the ESC and published simultaneously in the *New England Journal of Medicine*, provide information that will help guide clinical practice and resolve uncertainty over how to approach percutaneous [coronary intervention](#) (PCI) for ST elevation myocardial infarction (MI).

"When a patient is admitted with an [acute myocardial infarction](#), it is known that PCI to the blocked culprit artery is life-saving, but there is uncertainty as to whether doctors should undertake preventive PCI in vessels that are partially blocked but did not cause the myocardial infarction. This is a common clinical dilemma," said the study's lead investigator David Wald, MD, from the Wolfson Institute of Preventive Medicine, Barts and The London School of Medicine, Queen Mary University of London and the London Chest Hospital.

The PRAMI trial was stopped early by the Data Monitoring Committee when a planned interim analysis showed a clear benefit in favor of preventive PCI that was evident within 6 months of the procedure and

maintained thereafter.

"The results of this trial show that in this situation preventive PCI, in this situation, reduces the risk of cardiac death, a subsequent myocardial infarction or angina resistant to medical therapy, by about two-thirds."

With this new evidence, "consideration can be given to revising current guidelines," he added.

Current guidelines recommend culprit-only PCI for patients with ST elevation myocardial infarction and multivessel disease, because until now there was a lack of evidence in favor of preventive PCI.

In the trial, patients undergoing emergency PCI for acute ST elevation (462) or left bundle branch block (3) myocardial infarction and multivessel [coronary artery](#) disease were randomized while in the catheterization laboratory to either preventive PCI (234), or culprit-only PCI (231).

Patients were eligible for the preventive procedure if their culprit artery had been treated successfully and they had a blockage (stenosis) of 50% or more that was treatable by PCI in another or several other coronary arteries.

After a mean follow-up of 23 months (67% of patients had at least one year, and 46% at least 2 years, of follow-up) a total of 21 patients in the preventive PCI group and 53 in the culprit-only group had experienced a primary outcome event (cardiac death, nonfatal [myocardial infarction](#) or refractory angina) showing an absolute risk reduction of 14 per hundred [patients](#) in the preventive PCI group [hazard ratio 0.35 (95% CI 0.21-0.58), p

Citation: Preventive PCI results in better outcomes than culprit artery PCI alone in ST elevation MI (2013, September 1) retrieved 10 May 2024 from <https://medicalxpress.com/news/2013-09-pci-results-outcomes-culprit-artery.html>

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