Research finds preventive angioplasty does not improve prognosis

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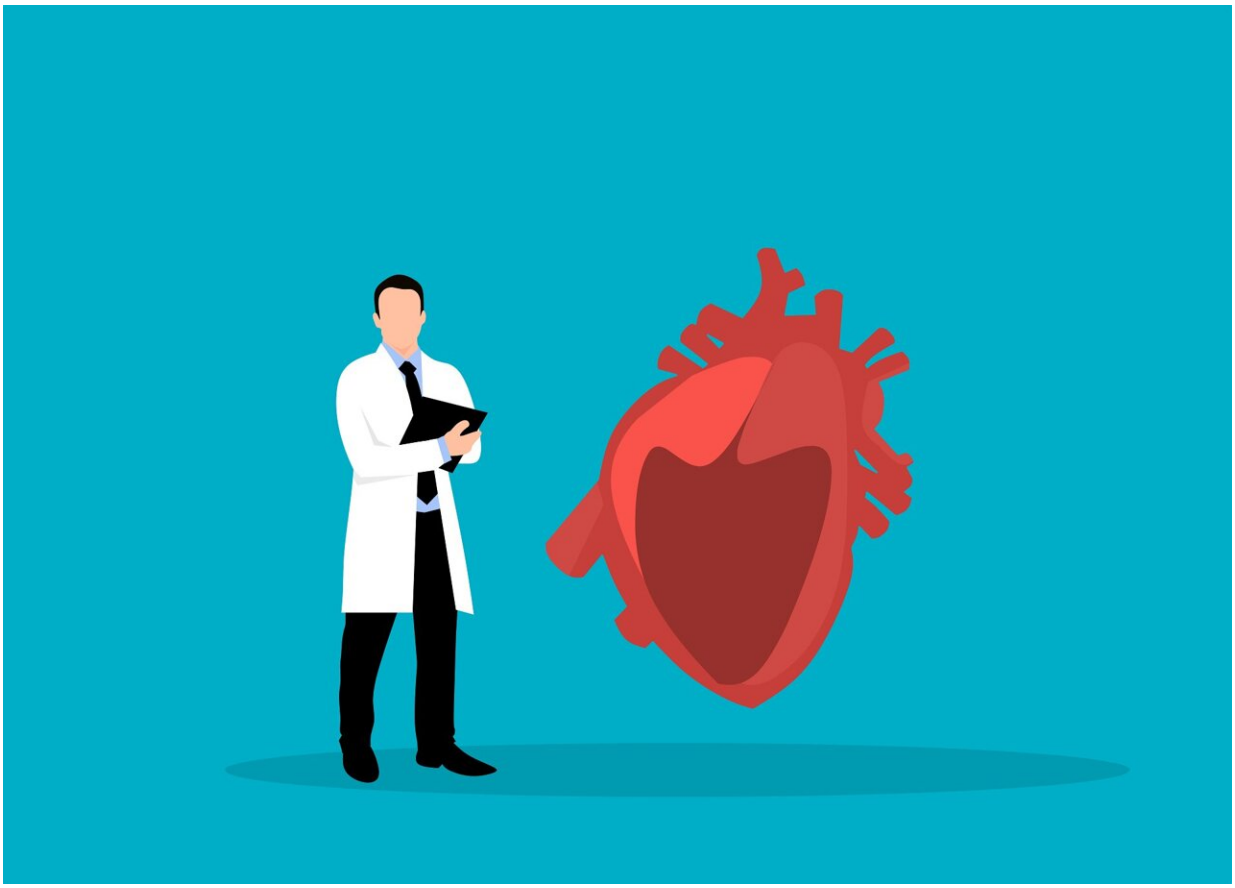

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For heart attack patients, treating only the coronary artery that caused the infarction works just as well as preventive balloon dilation of the other coronary arteries, according to a new large study by researchers at Karolinska Institutet and others. The results are published in the *New England Journal of Medicine.*

Heart attack is a common disease with risks of serious complications. It has long been unclear what the best strategy is for treating narrowing in coronary arteries separate from the specific vessel that caused the infarction.

A new large Swedish study has investigated whether it is sufficient to treat only the coronary artery that caused the infarction, or whether long-term results are better if other narrowed vessels are also treated with balloon dilation as a preventive measure.

The clinical randomized study included 1542 patients from 32 hospitals in 7 countries. In the Swedish part, the SWEDEHEART registry was used to conduct the randomization and collect data. Patients were followed up for five years after the procedure.

The results show no difference between the groups in terms of new heart attacks, new unplanned balloon dilations or the total number of all-cause deaths.

"This is somewhat surprising. Our hypothesis was that it would be beneficial to do preventive angioplasty," says Felix Böhm, a senior physician at the Department of Clinical Sciences, Danderyd Hospital at Karolinska Institutet, who led the study.

However, when it comes to problems with angina, the study shows that it

is possible to avoid patients coming back for new balloon dilations through preventive treatment. According to Felix Böhm, this suggests that we should still aim for complete treatment of all vessels.

"But for those patients where there is some circumstance that makes a complete revascularization complicated, one might choose to wait, since there was no difference in the most serious complications—new heart attack and death," says Böhm.

If problems with angina occur, these patients can then come back later for a new treatment, according to Felix Böhm.

A positive finding of the study was that most patients do not come back with new problems, regardless of the treatment strategy chosen. "Nowadays, heart attack patients are so well treated with drugs that it is difficult to find other interventions that provide further significant risk reduction," says Böhm.

The researchers will now go on to investigate how angina and other quality of life parameters in the patients were affected by the different treatment strategies, as well as health economic aspects of the chosen strategy.

The research was conducted by Uppsala Clinical Research Center (UCR) at Uppala University.

More information: Felix Böhm, FFR-Guided Complete or Culprit-Only PCI in Patients with Myocardial Infarction, *New England Journal of Medicine* (2024). DOI: 10.1056/NEJMoa2314149

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