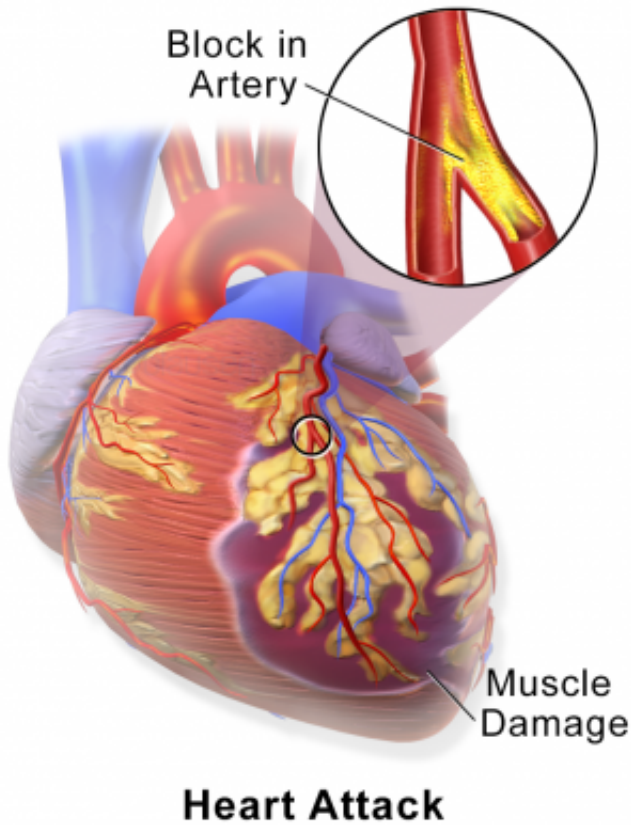


Half of STEMI heart attack patients may have additional clogged arteries

16 November 2014



Heart Attack

Myocardial Infarction or Heart Attack. Credit: Blausen Medical Communications/Wikipedia/CC-A 3.0

A blocked artery causes a deadly kind of heart attack known as STEMI, and a rapid response to clear the blockage saves lives.

But in more than half of cases studied recently by Duke Medicine researchers, one or both of the patient's other arteries were also obstructed, raising questions about whether and when additional procedures might be undertaken.

In a study published in the Nov. 19, 2014, issue of the *Journal of the American Medical Association*, Duke researchers and their colleagues report the

first large analysis of how often these secondary blockages occur, along with evidence that they lead to worse outcomes.

The findings provide fodder for additional studies to determine whether opening all the blocked arteries—either at the same time, or within a few days or weeks - should become a standard procedure.

"We assumed this was a common problem, but it has not been well understood or quantified," said senior author Manesh Patel, M.D., director of Interventional Cardiology and Cardiac Catheterization Labs at Duke University Health System. "We found that more than half of the 28,000 patient scans we analyzed showed at least one additional blocked artery, and about 19 percent had blockages in all three arteries."

In their retrospective study, Patel and colleagues analyzed eight large, international clinical trials of [patients](#) who suffered an ST segment elevation myocardial infarction, or STEMI heart attack. These serious heart attacks strike nearly 250,000 people in the United State a year, according to the American Heart Association.

The researchers analyzed angiograms for the patients to quantify how many had additional blockages in one of the other three arteries of the heart. While it has long been assumed that many patients would have additional blockages, the research team's finding that 52.8 percent of patients had more than one blockage indicates the prevalence.

Further, the research team found that additional clogged arteries were associated with a small but significant increase in death rates. Patients with more than one blocked artery had a 3.3 percent mortality rate within 30 days of the heart attack, compared to a 1.9 percent death rate among those who had a single blockage.

"The current thinking among cardiologist is that it is dangerous to treat these other blockages at the same time as treating the artery that created the [heart attack](#)," Patel said. "There has been a sense that the patient is healing and it may damage the heart. But we haven't had a good idea of the risks or the potential benefits.

"Our study has established that these additional blockages appear to be very common, and these patients seem to do worse, so we need additional studies to confirm these findings and then determine when and how best to open up the additional arteries to restore blood flow," Patel said.

More information: doi:10.1001/jama.2014.15095

Provided by Duke University Medical Center

APA citation: Half of STEMI heart attack patients may have additional clogged arteries (2014, November 16) retrieved 23 October 2020 from <https://medicalxpress.com/news/2014-11-stemi-heart-patients-additional-clogged.html>

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