

Age no criteria for decisions on heart attack treatment, new research finds

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Elderly patients suffering the most common type of heart attack may benefit from more invasive treatment, new research has shown.

The study draws on data captured over seven years from 1500 patients aged 80 or over. It was conducted by researchers from the National



Institute of Health Research Health Informatics Collaborative (NIHR-HIC), led by Imperial College Healthcare NHS Trust and Imperial College London.

The research looks at <u>elderly patients</u> admitted to hospital with a type of <u>heart</u> attack called NSTEMI (non-ST segment elevated myocardial infarction). It found patients who underwent <u>invasive treatment</u> with a <u>coronary angiogram</u>, followed up with bypass surgery or coronary stenting as appropriate, had higher survival rates than those who were treated with medication alone. Patients who had coronary angiograms were also less likely to be re-admitted to hospital with a second heart attack or <u>heart failure</u>.

Coronary angiograms are specialist X-rays to identify blockages in the blood supply to the heart. They can help a clinician determine the cause of an NSTEMI heart attack and decide on <u>effective treatment</u>, such as increasing blood flow through a coronary stent or bypass grafting.

Previous trials have shown increased survival rates in younger patients with NSTEMI heart attacks following invasive treatment, but there has been conflicting evidence as to whether these benefits extend into patients over 80. Only 38 percent of NSTEMI patients in this older age group currently receive invasive treatment, compared to 78 percent of the under 60s.

Dr. Amit Kaura, lead author of the research, British Heart Foundation Clinical Research Fellow and NIHR Clinical Research Fellow with the National Heart and Lung Institute at Imperial College London explained: "Because there has been no clear consensus on how best to manage elderly patients with this type of heart attack, many doctors have erred on the side of caution, not wanting to risk complications in their more vulnerable patients. These results show they can now be more confident of the benefits that invasive treatment can bring for this group."



The study, funded by the NIHR Imperial Biomedical Research Centre, identified just under 2000 patients aged over 80 who were diagnosed with an NSTEMI heart attack at five hospitals between 2010 and 2017. To ensure the robustness of the study, the researchers used sophisticated statistical techniques to apply the kind of criteria used in a clinical trial, to determine which of these patients would be included in the analysis.

In total, 1500 patients were included, with just over half having invasive treatment. After five years, 31 percent of those in the invasive treatment group had died, compared to 61 percent in the non-invasive group.

The team estimate that if all patients had received invasive treatment, just 36 percent would have died, compared to 55 percent if all had received non-invasive treatment. These figures take into account over 70 variables that might have affected prognosis, such as other medical conditions.

The analysis also showed that patients were at no greater risk of stroke or bleeding if they received invasive treatment, as there were similar rates across both groups. Patients who had invasive treatment were also a third less likely to be re-admitted to hospital for heart failure or heart attack.

Dr. Kaura said: "The gold standard is to base treatment decisions on evidence from randomised control trials, but that doesn't yet exist for this group of patients. In the interim, we've done the next best thing, by looking at retrospective data gathered from these five large hospitals and using it like a clinical trial. The results are clear: clinicians should positively consider invasive management for any patients over 80 diagnosed with an NSTEMI."

Provided by Imperial College London



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