

## Heart attack patients treated at heart centres fare better



New research from the UK shows heart attack patients brought directly to heart centres for lifesaving treatment have better long-term survival than those transferred from another hospital. Directly admitted patients were older, suggesting that heart attacks in young adults, and particularly women, go unrecognised by paramedics and patients, according to the study presented at Acute Cardiovascular Care 2019, a European Society of Cardiology (ESC) congress.

The study from the London Heart Attack Group covered 25,315 patients with ST-elevation myocardial infarction (STEMI), a serious type of heart attack where a major artery supplying blood to the heart is blocked. Rapid opening of the artery with a stent using primary percutaneous coronary intervention (PCI) improves survival. Current guidelines recommend taking STEMI patients directly to a primary PCI centre.

"All patients with STEMI should be admitted directly to a primary PCI centre within 90 minutes of diagnosis by electrocardiogram (ECG), which is done by ambulance teams," said study author Dr. Krishnaraj Rathod, of Barts Health NHS Trust in London. In this study, however, about one-third of patients were taken to another hospital first, indicating that a STEMI diagnosis was not made until patients reached that hospital, and they then had to be transferred.

By comparison, patients taken directly to PCI centres were sicker but they were also older, indicating that paramedics may think heart attack is unlikely in younger adults. As Dr. Rathod noted, "The age of first heart attacks is getting younger, one of the reasons is because of lifestyle habits. The average age in our cohort is no longer 60, but around 40 years and we even see patients in their 30s." His advice to paramedics: "in cases of doubt, repeat the 12 lead ECG and consider speaking to the heart attack centre."

Dr. Rathod also advised people in their 30s and 40s should not ignore heart attack symptoms, particularly women who often have atypical symptoms. "Younger patients likely wait longer to call for help because if they have chest pain, heart attack is not the first thing they think of. If you are in any doubt, phone an ambulance," he said.

The UK study compared characteristics, time to primary PCI, and long-term outcomes of STEMI patients taken directly to a primary PCI hospital versus those transferred from another hospital. Patients with STEMI were treated with primary PCI between 2005 and 2015 at the eight primary PCI centres in London. Patient details were recorded at the time of the procedure in the British Cardiovascular Intervention Society dataset. Data on all-cause mortality were obtained from the Office for National Statistics.

A total of 17,580 (69%) patients were admitted directly to primary PCI centres and 7,735 (31%) were transferred from other hospitals. The time between call for help and first hospital admission was similar between the two groups. However, the median time from call for help to opening the blocked artery with primary PCI was 52 minutes longer in transferred patients compared to those admitted directly.

After a median follow-up of three years, patients admitted directly to a primary PCI centre were significantly less likely to have died than those transferred from another hospital (17.4% versus 18.7%). After adjusting for factors that could influence the risk of death including age, previous heart attack and diabetes, direct admission to a primary PCI hospital was associated with a 20% lower risk of all-cause death.

"Our findings indicate that the superior survival in patients admitted directly to a primary PCI hospital was because there was a shorter gap between calling for help and receiving treatment," according to Dr. Rathod.

Source: [European Society of Cardiology](#)

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