

Heart attack patients could be treated more quickly

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Clinical judgement, combined with an electrocardiogram (ECG) and blood test on arrival, is effective in reducing unnecessary hospital admissions for chest pain, a new study shows.

The findings of a research group in Manchester, published in the *Emergency Medicine Journal*, could potentially make a huge difference to a large number of patients.

Chest pain is the most common reason for emergency hospital admission. In Manchester, the incidence of premature death due to heart disease and stroke is amongst the highest in England.

Previous research has shown that typical symptoms in patients presenting to emergency departments have not been useful in differentiating between heart conditions requiring immediate hospital admission (acute coronary syndromes; ACS), and non-cardiac conditions. This is because the symptoms of patients with heart disease can be similar to those experienced by patients with non-cardiac conditions, such as indigestion. However, the role of overall [clinical judgement](#) has not been extensively studied.

The latest research, led by Dr Richard Body, Consultant in Emergency Medicine at Manchester Royal Infirmary, assessed the diagnostic accuracy of emergency doctors' clinical judgement for [acute coronary syndromes](#) – both alone and in combination with the tests available on arrival – ECG and a blood test which detects a protein called troponin.

The study was undertaken at Stockport NHS Foundation Trust, where doctors in the emergency department recorded their overall clinical judgement for ACS using a five-point Likert scale (from 'definitely ACS' to 'definitely not' ACS). This data was then compared with patients' outcomes, including heart attack or the occurrence of major adverse cardiac events within 30 days.

The results showed that for patients who are suspected to have an ACS, clinical judgement cannot be relied upon by itself to rule out or rule in that diagnosis. However, when combined with an ECG and troponin test clinical judgement appeared to be an effective tool and the results suggest that at least 25 per cent of patient admissions could have avoided. The study also suggested that this was the case regardless of whether the clinician was a consultant or junior doctor.

Dr Rick Body, who is also National Institute for Health Research Postdoctoral Research Fellow and Honorary Lecturer in Cardiovascular Medicine at The University of Manchester, said: "I think the beauty of this technique is its simplicity. For years we've been working hard to improve our technology and our tests for heart attacks. This research suggests that, if the initial tests are normal and the doctor thinks that the diagnosis of a heart attack is unlikely, it may be perfectly safe to reassure patients that they do not have a [heart attack](#) without relying on further tests and observation in hospital.

"It is still early days but the study, which was funded through an NIHR Clinical Lecturer grant and a College of Emergency Medicine Research Grant, could potentially make a huge difference to large numbers of patients.

"In order to ensure the safety of patients, further research is still vital to ensure that our findings can be repeated with different groups of doctors and patients. We will also need to know if doctors would be confident

enough in their judgement to use the technique in practice."

Provided by University of Manchester

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