New heart test to save time, money -- and lives

A new test could give doctors a head start in diagnosing those patients most likely to suffer a heart attack.

The test, developed at the University of Leeds, could result in fewer patients needlessly admitted to hospital – enabling medics to concentrate on those most needing their help.

Alistair Hall, Professor of Clinical Cardiology at Leeds, explained: “Casualty departments regularly see patients presenting with chest pains. The highest-risk patients are easy to diagnose and are admitted straight away. Those with no risk of having a heart attack are also easy to spot. It’s the group in between which is hardest to correctly diagnose. Typically patients are admitted for 24 hours while the hospital figures out the cause.”

The most commonly-used diagnostic tool is the troponin test which can detect and evaluate heart injury and separate it from chest pain due to other causes. Essentially if troponin proteins are found in the patient’s blood, then it indicates a heart problem. But Prof Hall explained that the troponin test can give both false negative and false positive results, meaning some patients are unnecessarily admitted, and others wrongly discharged.

A new test, developed at Leeds through research funded by the British Heart Foundation, searches for a heart-type fatty acid-binding protein (H-FABP) which is released into the circulation following heart injury (myocardial ischemia). Prof Hall said: "The H-FABP test is a major advance on what we had before. It appears to be able to detect milder and earlier degrees of heart injury than do current tests which detect heart cell death.”

The team’s findings are published in the American Journal of Cardiology: "Our paper shows that it is possible to be more effective in matching life-saving treatments to the patients with heart attacks who most likely to benefit from them," said Prof Hall.

The test also enables medics to identify patients whose chest pains are an indication that they are susceptible to heart attack in the weeks and months ahead. “If you can pick these problems up in advance you could have a three-month head start in putting prevention in place,” he added.

"The study was conducted in UK in the context of a national health care system that forces hard decisions to be made regard the best use of limited resources. This blood test, which will cost about £10, could be used by ambulance crews to test people on the way to hospital. This test will enable us to send the right people home earlier and make sure we aren’t admitting people who don’t need to be admitted.

"We are excited about these findings as we believe that they will help us to provide very real benefits for patients and those who care for them."

Professor Peter Weissberg, Medical Director at the British Heart Foundation (BHF), said: "Currently doctors rely on tests such as an electrocardiogram (ECG) and blood tests to know if a patient with chest pain has suffered any heart damage.

“This new blood test would appear to be able to more accurately identify patients with heart damage at an earlier course of their illness. If further research confirms its superiority over current tests, it has the potential to improve diagnosis and identify those people who require intensive investigation and treatment

to prevent further problems."

Source: University of Leeds