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Study shows new possibilities with cardiac T-high sensitive test

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Rapid diagnosis of heart attacks can save patients and may lead to reductions in length of stay and address overcrowding in hospitals



Singapore – Results published in the International Journal of Cardiology show that the 0-hour/1-hour algorithm using the Roche cardiac Troponin T-high sensitive test is effective in the rapid diagnosis of Asian patients with suspected acute myocardial infarction (AMI), commonly known as heart attack. This follows the European Society of Cardiology (ESC) guidelines of 2015 recommending the use of high-sensitivity Troponin testing with the accelerated algorithm. The multi-centre study, which included 413 patients across three hospitals in Japan and Taiwan, is the first to demonstrate the clinical significance of the 0-hour/1-hour algorithm in Asia.

With this, doctors in the emergency department can reduce the observation time needed to rule-in or rule-out a heart attack from three to six hours to just one hour. Data shows that every 30 minutes of delay from the onset of symptoms to treatment significantly increases the risk of death in patients with AMI.

Dr Kenji Inoue, Associate Professor, Department of Cardiology, Juntendo University Nerima Hospital, Tokyo and principal investigator of the study, said, “For patients with suspected AMI, quick and accurate diagnosis can mean the difference between life and death. The study proves that the accelerated algorithm using the cardiac Troponin T–high sensitive test works in Asian settings. This can help to ensure patients with AMI get the right treatment faster, while those with chest pain caused due to other reasons can be directed to the appropriate departments, as necessary.”

Troponin is a heart muscle protein that is released into the blood stream during a heart attack. Elevated troponin levels indicate the occurrence of a heart attack. Studies have established that the cardiac Troponin T-high sensitive test is effective in providing fast and reliable diagnosis by measuring the subtle increase in troponin levels.

Growing public health challenge

With the rising burden of chronic diseases and fast-ageing populations in Asia, crowding in the emergency room (ER) is becoming a major public health concern. While this is not a problem unique to Asia, it has grave implications on patient outcomes as well as already overburdened hospital resources.

Since the publication of the study, several countries in Asia are now reviewing the adoption of the one-hour algorithm in clinical practice to enable the faster diagnosis of heart attacks.