Single Troponin T Result Could Safely Rule Out MI in the ED

High-sensitivity assays for cardiac troponin T can quickly and safely rule out myocardial infarction (MI) in patients presenting to emergency departments (ED) with possible emergency acute coronary syndrome, according to a meta-analysis published in Annals of Internal Medicine.

A single troponin T concentration below the limit of detection in combination with a nonischaemic electrocardiogram (EKG) means that MI is unlikely and patients can be safely discharged, researchers explained.

See Also: 5 Tests for Better Heart-Disease Risk Prediction

Data show that only 10 to 20 percent of patients who present to EDs with suspected cardiac-related chest pain are diagnosed with acute MI. Although high-sensitivity assays for cardiac troponin T have been used to rapidly rule out acute MI, studies advocating this approach have several limitations, thus preventing widespread use. If findings can be validated across multiple studies that are free of these limitations, then this approach could enable safe discharge of many more patients than is achieved in current practice.

Researchers at Christchurch Hospital in Christchurch, New Zealand reviewed published data to test the utility of a single high-sensitivity cardiac troponin T measurement combined with an ECG to safely identify patients at low risk for MI on presentation to the ED. To address limitations of previous studies, the researchers included 11 clinically and geographically diverse cohorts in their review.

Analysis of data revealed that in most, but not all settings, patients assessed for acute coronary syndrome with the cardiac troponin T assay had very low risk for acute MI or for major adverse cardiac events within 30 days. Therefore, according to researchers, MI could be ruled out in a substantial proportion of patients after only one blood draw, allowing for safe, early discharge to outpatient management.

Source: Annals of Internal Medicine
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