

## ***Diagnostic utility of point of care high sensitive troponin-i assay for early diagnosis of acute myocardial infarction in patients presenting with acute onset chest pain in emergency departments.***

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### ***Abstract***

**Background:** An early diagnosis of myocardial infarction is highly important in the emergency department (ED). It facilitates rapid decision making and treatment and therefore improves the outcome in patients presenting with symptoms of chest pain.

**Aims and Objectives:** To study diagnostic utility of new point of care high sensitive troponin-I assay in early diagnosis of acute myocardial infarction in patients presenting with acute chest pain.

**Material and Methods:** Forty six consecutive patients of acute onset chest pain who presented to our cardiac emergency department within three hours of symptom onset were enrolled for study. POC Hs Trop-I test was done on admission (0 hour), and after 3 hours if initial test result was negative. Quantitative troponin I (Q-Trop I) lab assay was done on admission (0 hour), 3 hours and 6 hours after admission. Six hour Q-Trop I assay was taken as gold standard for the initial diagnosis of AMI. The final adjudicated diagnosis of AMI was based on a composite of ECG changes (new ST segment or T wave changes, new onset LBBB), Troponin results, Echocardiography (new wall motion abnormality), angiographic findings (detection of a culprit lesion) and final chart review of observations made.

**Results:** Comparing the results of POC Hs Trop I results at 0 hour with the gold standard test we found the sensitivity of 97%, specificity of 100%, positive predictive value (PPV) of 100% and negative predictive value (NPV) of 92.3%. Sensitivity of POC Hs Trop I at 3 hours was better than POC Hs Trop I at 0 hour (97 vs. 100%) and equal to gold standard i.e. 100 %. Specificity, PPV and NPV are 100% for POC Hs Trop I at 1 hour.

### ***Biography:***

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