
Background: Many protocols have been established to rule out acute coronary syndrome in low- to intermediate-risk patients presenting with chest pain to emergency departments. Our tertiary care hospital developed an observation-stay chest pain service, run by cardiology fellows and teaching faculty, to provide better and more effective care of these patients. The goal of this study was to identify the appropriateness of stress echocardiograms (echos) ordered by our cardiology service using the ACCF/ASE/AHA/ASNC/HFSA/HRS/SCAI/SCCM/SCCT/SCMR 2011 Appropriateness Comparison of New and Old Appropriate Use Criteria for Patients Presenting with Acute Chest Pain.

Methods: We retrospectively reviewed 459 consecutive patients admitted to our chest pain service. Baseline patient characteristics, pretest probability of coronary artery disease (CAD) and length of stay were recorded. The 2008 and 2011 AUC were used to assess appropriateness of the stress echoes ordered using the “Detection of CAD/Risk Assessment: Symptomatic or Ischemic Equivalent” category for patients with acute chest pain.

Results: Stress echo was performed in 65% (n=300) of the patients, myocardial perfusion imaging in 15% (n=67). Of patients with stress echo, 83.5% had Thrombolysis in Myocardial Infarction (TIMI) risk scores of zero or one. Stress echoes were ordered appropriately in 64.7% and 100% of the cases using 2008 and 2011 criteria, respectively. A significant amount of studies were unclassified (24.7%) using the 2008 criteria because of low pretest probability of CAD. There were no inappropriate stress echoes ordered using the 2011 AUC.

Conclusions: In a cardiology chest pain service designed to quickly and efficiently rule out acute coronary syndrome, more stress echoes are classified as appropriate using the new 2011 AUC than with the more stringent 2008 criteria. Further evaluation of the 2011 AUC is recommended, as stress echo for all patients presenting with acute chest pain but without definite acute coronary syndrome is now considered appropriate, regardless of risk or pretest probability of CAD.