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## The correlation between speckle tracking echocardiography and coronary artery disease in patients with suspected stable angina pectoris

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**Introduction:** Myocardial deformation assessed by two dimensional speckle tracking echocardiography (2D-STE) allows accurate evaluation of regional and global left ventricular (LV) function and is sensitive to detect abnormalities induced by ischemia. Objective: To examine the value of speckle tracking echocardiography to detect the presence, extent and severity of coronary artery affection in patients with suspected stable angina pectoris.

**Methods:** 200 candidates with suspected stable angina pectoris and normal resting conventional echocardiography were subjected to 2D-STE and coronary angiography. Global longitudinal peak systolic (GLPSS) and the most affected segment was calculated and were correlated to the results of coronary angiography for each patient.

**Results:** There was a statistically significant difference in the mean of global longitudinal peak systolic strain between normal coronaries and different degrees of CAD (-20.11± 0.8 for normal, -18.34± 2.52 for single vessel, -16.14± 2.85 for two vessel, -14.81± 2.12 for three vessel, -13.01± 2.92 for left main disease). Global longitudinal peak systolic strain showed high sensitivity for the diagnosis of single vessel CAD (90%, specificity 95.1%, cutoff value: -18.44, AUC: 0.954); two vessels disease (90%, sensitivity 88.9%, cutoff value -17.35, AUC: 0.906) and for three vessels CAD (cutoff value -15.33, sensitivity 63% & specificity 72.2% AUC 0.681) GLPSS also showed statistical significance for localization of the affected vessel for LAD, LCX and RCA(P= 0.001) and significant correlation with syntax score (P= 0.001)  .

**Conclusion:** 2D-STE has good sensitivity and specificity to assess the presence, extent and severity of CAD.

### Biography

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