Accuracy of Speckle Tracking Echocardiography in Detection of Coronary Artery Disease Severity

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ABSTRACT

Objectives: The purpose of the present study was to assess the accuracy of Speckle Tracking Echocardiography (STE) to detect the disease severity of coronary arteries. Design: This study is a prospective study.

Settings: This study enrolled 143 patients with symptoms suggesting ischemic heart disease consulting Ibn Al-Baitar Center for Cardiology and Cardiac Surgery from September 2019 to March 2021.

Methods: Examinations involved assessment of the abnormality of regional wall motion and left ventricular function and speckle tracking strain by obtaining 2D grey scale harmonic images in the apical long - axis three chamber, four-chamber, and two-chamber views for the global and segmental analysis of global longitudinal strain (GLS).

Results: The results revealed that 46 patients (32.2%) had no significant coronary lesion and 97 patients (67.7%) had significant coronary artery disease (CAD). Furthermore, the results of GLS were abnormal and statistically significant in patients with one and two-vessel disease (p-value = 0.02 and 0.001 respectively) and more significant in patients with three vessels disease (p-value = 0.0001), all patients with left main stem disease have abnormal GLS.

Conclusion: The STE could be considered one of the most accurate methods used for the uncovering of coronary disease severity.

Keywords: Cardiac diseases, Coronary artery disease, Echocardiography, Speckle tracking echocardiography.

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