Abstract:

Background: There are various ways that coronary artery disease (CAD) might present itself. Individual risk stratification for non ST- elevation-acute coronary syndrome (NSTE-ACS) patients should determine whether invasive coronary angiography and revascularization should be scheduled. **Aim of work**: To assess the possible utility of left ventricular global longitudinal strain in
the risk stratifying process of NSTE-ACS. **Subjects and methods:** The cardiology department of Zagazig University in Egypt organized and oversaw this cross-sectional study. The practical portion
was carried out on 90 patients with NSTE-ACS based on European society of cardiology (ESC) guidelines (and they agreed for invasive strategy) between May 2019 and December 2020 at Salalah
Heart Center in Sultanate of Oman. All patients underwent a full clinical examination, 12-Lead ECG,
and serial high-sensitivity troponin T (hs-TnT) in addition to a thorough history taking process. On
patient's admission, the GRACE risk score was assessed. All patients who were suspected of having
NSTE-ACS upon admission underwent transthoracic echocardiography, including 2 dimensional speckle tracking (2D-ST). Left ventricular global longitudinal strain (LV-GLS %) was measured and
3
analyzed using 2D speckle tracking. SYNTAX Score was determined for all patients. **Results**: By analysis of the performance of LV-GLS% in prediction of high risk by GRACE score, we found that
with Cutoff (≥-13.8), the AUC was (0.944) with sensitivity, specificity, PPV, NPV and accuracy (0.944,
93.3%, 84%, 53.8%, 98.4%, 85.6%) respectively. **Conclusion:** Global longitudinal strain can predict
accurately high risk NSTE-ACS patients by GRACE score.