

The Left Ventricular Function in Patients with Various Forms of Ischemic Heart Disease Using Velocity Vector Imaging

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Abstract

The aim of this study was to evaluate the functional parameters of the left ventricle (LV) in patients with various forms of ischemic heart disease using velocity vector imaging. The study included 61 patients with ischemic heart disease. Depending on the form of coronary heart disease allocated to 4 groups: group 1 – non-Q-wave myocardial infarction in history (11 (18 %)); group 2 – Q-wave myocardial infarction in history (26 (43 %)); group 3 – ischemic heart disease without prior myocardial infarction (15 (24 %)); group 4 – patients with post-infarction aneurysm of the LV (9 (15 %)). The application velocity vector imaging give an objective assessment of left ventricular function. Assessed systolic strain, strain rate, longitudinal, radial and circular fibers of the myocardium were analyzed indicators rotation basal, medium and apical divisions of the LV. The results demonstrated a change of deformation properties of the myocardium in all groups, with the most reliable violation in the group with post-infarction aneurysm of the LV. The decline of LV rotation and change the mechanics of the rotation observed in all analyzed groups.

Key words: Coronary Heart Disease, Velocity Vector Imaging, Rotation.

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