Exercise stress echocardiography with cardiac function parameters in coronary artery bypass grafting function assessment

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Introduction: A more quantitative method for evaluation of stress echocardiography is introduced by measuring deformation.1-3

Case report: A 69-year old woman, formerly fitted with a double CABG, presents to the Polyclinic as a result of a new chest pain and shortness of breath on exertion. Exercise stress echocardiography with cardiac function parameters is performed: during the exercise, no cardiac arrhythmias and ECG signs of myocardial ischemia are shown, but testing is interrupted due to the leg pain at 71% of the theoretical maximum frequency. Immediate postpeak color Doppler derived long-axis systolic strain rate significantly decreases in midanteroseptal and basal posterior segment and insignificantly decreases in midinferior segment. Immediate postpeak parameters of diastolic function are borderline. MSCT coronary angiography: LIMA-LAD is flowing smoothly, with adequate flow through the distal LAD and collateral opacification of PD and PL. Long-lasting plaques with abundant calcifications are evident in the proximal segment ACx, therefore it is impossible to determine the degree of stenosis. The venous graft (VSM-RCA) is occluded. Coronary angiography: LAD at the beginning of the middle segment is suboccluded (99%), and then the competitive flow from the LIMA-LAD is seen. LIMA-LAD is in good condition and connection. After the attachment of the LIMA-LAD, LAD is diffusely altered with long, borderline (70%) stenosis. Borderline (50%) stenosis in the middle ACx segment is followed by a series of marginal changes. RCA is occluded at the end of the proximal segment. VSM-RCA bypass is of the proper flow and connection.

Conclusion: Exercise stress echocardiography with the cardiac function parameters may reveal the alterations in the CABG function.

**LITERATURE**