To evaluate the mechanisms of EX-induced ST elevation, we performed 201-TL SPECT and Radionuclide angiography in 22 patients with Old anterior myocardial infarction. EX-induced ST elevation was observed in 15 patients, not in 7. Redistribution of 201-TL was found insignificantly between these two groups. In 7 out of 15 patients with ST elevation after ISDN, 6 after Nifedipine, 11 after Propranolol, EX-induce ST elevation had improved. ISDN had decreased ESV & EDVI and Propranolol had reduced significantly pressure rate products, but no significant changes had been found between before and after Nifedipine. These findings suggest that EX-induced ST elevation could have changes in both drugs and have a relation to the changes of left ventricular geometry, in addition to EX-induce ischemia.

To assess the value of predischarge low level exercise radionuclide ventriculography (RVEF) in patients who were studied a mean of 15.7 days after acute myocardial infarction (AMI). RVEF were used to measure left ventricular ejection fraction (LVEF), and regional wall motion (RWM) at rest and peak exercise. Twelve lead ECGs were analyzed for ST-segment changes. Exercise was performed safely and its peak workload was 68 watt and mean peak heart rate (HR) was 10/fmin, in all 25 patients. Exercise were terminated due to leg fatigue in 13, target HR (120/m) in 9, and ST depression with chest pain in 2 patients. Abnormal ECG changes, abnormal exercise response of LVEF, & abnormal RWM abnormalities were noted in 2 of 16 (13%) patients with single vessel CAD (SVD) and 5 of 9 (55%) patients with multivessel CAD (MVD). 2 of 16 (13%) with SVD and 8 of 9 (89%) with MVD, 1 of 16 (6%) with SVD and 5 of 9 (55%) with MVD, respectively. Although there are limitation of low peak workload level due to leg fatigue, predischarge exercise RVEF was safe and quite useful for the evaluation of cardiac function and for the prediction of multivessel CAD patients especially in comparison with pre-ordinary stress electrocardiographic test.