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## CLINICAL IMPORTANCE OF EMBRYONIC R WAVES ON CHEST LEADS IN OLD ANTEROSEPTAL MYOCARDIAL INFARCTION

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Standard 12 leads ECG, radionuclide angiocardiographic (RA) and Tl myocardial scintigraphic (Tl) evaluations were performed in 18 patients (pts) with antero-septal myocardial infarction (ant.MI) during acute and chronic phase, in order to clarify the importance of the developing embryonic r waves (DERW) on chest leads. Coronary angiography was also performed in 14 pts of them, to evaluate the collateral circulation (CC) and recanalization (RC) of the affected vessels. Left ventricular (LV) ejection fraction and wall motion evaluated by RA improved in 7 pts with DERW in more than two chest leads. The improvement of myocardial perfusion by Tl related with the interval between the onset of MI and appearing of DERW. The good CC or RC were found in 5 pts with DERW in more than two chest leads. The DERW was considered to be dependent on CC or RC of coronary arteries. In conclusion, the presence of DERW was very important finding in order to evaluate the LV function and myocardial perfusion in pts with old ant.MI.

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EVALUATION OF THE EFFECTIVENESS OF THE PTCR TECHNIQUE FOR CORONARY THROMBOLYSIS BY THE FIRST PASS (FP) METHOD. T.Goto, S.Abe, N.Akaba, K.Taya, B.Kyu, N.Honda, M.Kurihara, A.Hirai, T.Ochiai, S.Fujii and T.Abe. Dept. of Cardiology, Kasumigaura Hospital, Tokyo Medical College. K.Miyauchi and K.Umeda. Department of Radiology, Kasumigaura Hosp., Tokyo Medical College. Y.Nagai and C.Ibukiyama. Second Department of Internal Medicine Tokyo Medical College.

The effectiveness of PTCR was evaluated by FP in 10 male patients (mean age: 54.3±7.1 years) with acute myocardial infarction (AMI). Eight had anterior infarction, 2 had inferior infarction. PTCR was performed at an average of 5.34±2.38 hours after the onset of symptoms. FP was carried out immediately before PTCR and during the chronic stage and the global EF (GEF), regional EF (REF) and wall motion scores (WMS) were compared. The GEF tended to increase somewhat, rising from 45.8±8.8% before treatment to 50.8±10.4% after treatment; this difference, however, was not significant. The REF value rose significantly ( $p < 0.01$ ) from 0.81±31.60% before treatment to 22.3±33.7% after treatment. The WMS showed tendencies to improve ( $p < 0.01$ ), falling from 4.89±2.21 before treatment to 3.11±2.80 after treatment.

Therefore, FP is a simple, noninvasive and useful method for the evaluation of the effectiveness of PTCR. In addition, the peak CPK and the time to peak CPK values were also compared between patients treated by PTCR and those not treated by PTCR.

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CHANGES OF ST SEGMENT DEVIATION IN ECG AND LEFT VENTRICULAR WALL MOTION AFTER EXERCISE STRESS TEST IN PATIENTS WITH ANGINA PECTORIS. A.Karaki, Y.Yamazaki, Y.Furukawa, T.Fukuda, M.Shimizu, H.Tomiya, K.Takeda, A.Nakayama, T.Saito, Y.Inagaki. The Third Department of Internal Med. Chiba University School of Medicine.

We studied changes of ECG, left ventricular ejection fraction (EF) and left ventricular wall motion after exercise stress test in patients with angina pectoris (AP). 10 normal subjects and 14 patients with effort angina pectoris, which had the significant stenosis of coronary artery, were studied with symptom limited multi-stage exercise test using bicycle ergometer in supine position. We measured ECG, ECG gated blood pool scintigraphy using Tc-99m labeled RBC and cardiac output by dye dilution method. In AP, EF decreased at peak exercise but increased more than at resting level after exercise. Left ventricular wall motion was asynergic during exercise and became hyperkinetic after exercise. On the other hand, ischemic ST segment deviation, appeared during exercise, were still remaining even after exercise. It was suggested that the difference between the recovery of ST segment deviation and the recovery of EF and left ventricular wall motion after exercise test in patients with AP.

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THE EFFECT OF AORTO-CORONARY BYPASS GRAFT SURGERY ON GLOBAL AND REGIONAL LV FUNCTION AT REST AND DURING EXERCISE. -ASSESSMENT BY FIRST PASS RADIONUCLIDE ANGIOGRAPHY-. T.Yoshino, R.Matsumura, T.Kobayashi AND Y.Fudemoto. The Center for Adult Diseases, Osaka.

To evaluation the effect of aorto-coronary bypass graft surgery (ACBG) on LV function at rest and during exercise, we assessed LVEF, systolic pressure/end systolic volume index (P/ESVI) and regional EF (REF) before and after ACBG by radionuclide angiography (RNA). The study group consisted of 14 patients with angina pectoris (G-A) and 16 patients with myocardial infarction (G-M). REF was calculated in anterior, apical and inferior region which were divided into ischemic and infarcted region. In both groups, EF and P/ESVI increased significantly during exercise before ACBG, but P/ESVI increased significantly after ACBG. In G-A, EF at rest decreased significantly after ACBG, but EF at rest in G-M remained unchanged after ACBG.  $\Delta$ EF and  $\Delta$ P/ESVI (differences of EF and P/ESVI during exercise respectively at rest) increased significantly after ACBG in both groups. REFs in all three ischemic regions decreased significantly during exercise before ACBG, but these abnormalities were mitigated after ACBG. REF in infarcted region remained unchanged by ACBG. Thus, we concluded that RNA during exercise was useful to evaluate the effect of ACBG on global and regional LV function.