
Left ventricular function were evaluated noninvasively by 12 leads electrocardiography (ECG) and radionuclide ventriculography (RNVG) from 7 to 21 days after the initial attack in 83 patients(pts) with acute myocardial infarction (AMI). The subjects were devided into 2 groups: anterior(group I) and inferior(group II) and further with and without heart failure. Left ventricular ejection fraction(RIEF) was calculated by ECG gated RNVG at 45° anterolateral oblique projection in supine position at rest. ECG score was obtained by ECG scoring system proposed by Palmeri et al(SCEP, New Eng J Med 1982). Significant negative relationship was noted between RIEF and ECG score(r=-0.73, p<0.001). Significant correlation was noted between RIEF and ECG score in group I (r=-0.61) and in group II (r=-0.71, each p<0.001). But in heart failure group, no relationship was noted compared with and without heart failure. RIEF in group I without heart failure decreased significantly compared with group II (p<0.001). However, there was no statistical difference between group I and II with heart failure.

In conclusion, ECG score obtained from 12 leads ECG in acute myocardial infarction was fairly accurate clue for the evaluation of left ventricular function and prognosis detection.

PROGNOSIS OF ABNORMAL CONTRACTING SEGMENT AFTER ACUTE MYOCARDIAL INFARCTION. T. NISHIMURA and H.W. STRAUSS*. National Cardiovascular Center, Suita and Massachusetts General Hospital, U.S.A.*

To determine the outcome of abnormal segments, we investigated 18 anterior and 24 inferior myocardial infarction (AMI, IMI) by gated blood pool scan at admission (AD) and 10 days (D10). Regional wall motion was computed in 6 zones as the average fractional changes of 6 radii/zones from end-diastole to end-systole. An abnormal segment was defined as <30% of chord shortening. Segment was defined as improved or deteriorated if chord shortening increased or decreased by more than 10% at D10. Normalization was considered if abnormal segment returned to normal (>30%). As results, 25% of AMI and 40% of IMI segments improved and 29% of abnormal segments in IMI normalized, in contrast 11% of AMI segment did so. More than 50% segments remained as unchanged and 10% showed deterioration. In conclusion, these changes in wall motion following acute myocardial infarction should be considered in the evaluation of interventional trials.


The effect of Ca²-antagonists, as Nifedipine (N) & Diltiazem (D), were evaluated in 20 patients with myocardial infarction. The stress data were acquired at 30 minutes after chewable administration of 10 mg on N (n=10) and intravenous injection of 10 mg of D (n=10), followed by the control study, as was obtained by conventional equilibrium method of multigated blood pool scan (MPPS) using phase analysis. The left ventricular ejection fraction (LVEF) and the fluctuation of phase (SD), as indicates cardiac performance, were compared.

Result:1) The systolic blood pressure (BP) decreased significantly in the N group (P<0.01), but the heart rate in the both group did not change significantly. After administration of Ca²-antagonists, the value of LVEF & SD in patients with lower value of SD (21°) did not significantly changed. 2) Three of 4 cases with the value of SD over 21°, which was defines as a massive myocardial infarction, indicated downward shift of LVEF & SD. 3) This 3 cases includes 1 suspected RV infarction and 2 extended myocardial infarction with LV anwrrysmal formation. We concluded that a caution should be pointed out on administration of Ca²-antagonists in such patients.