197

THE RELATIONSHIP OF EXERCISE TOLERANCE, GLOBAL/REGIONAL EJECTION FRACTION AND QRS SCORE IN ACUTE MYOCARDIAL INFARCTION.

E.Kinoshita,N.Kanemoto,C.Imaoka,M.Ide,Y.Goto and Y.Suzuki. Tokai University,Isehara.

We studied relationship between exercise tolerance measured by treadmill exercise test(TEX) and left ventricular function obtained from radionuclide ventriculography (RNV) and QRS score(Palmeri et al) by 12 leads electrocardiography(ECG) in acute myocardial infarction(AMI).

The subjects were 27 patients with AMI (mean age of 59 years). The global EF(GEF) and regional EF(REF) which was infarct lesion were measured by RNV at modified LAO view.

The correlation between QRS score and GEF, REF were -0.67($p<0.01$) and -0.70 ($p<0.01$), respectively. The correlation between QRS score and REF was more closely ralated than GEF. Exercise duration of TEX correlated with QRS score and GEF, significantly. Double product did not correlate with GEF. Significantly more patients with QRS score more than 5 were in left ventricular failure, and GEF<40% REF<30% compared with patients those QRS score of less than 5.

We conclude that QRS score reflected global and regional left ventricular function fairly well and was used as the bed side indicator of prognosis and rehabilitation in AMI.

198

THE EFFECT OF THE FIRST MAJOR SEPTAL BRANCH IN PATIENTS WITH ANTERIOR MYOCARDIAL INFARCTION.-A STUDY BY MYOCARDIAL IMAGING AND ECG GATED BLOOD POOL IMAGING.-

Y.Kobayashi,S.Abe,A.Hirai,T.Ochiai,S.Fujii, S.Kiyomi,H.Takahashi,T.Abe,F.Nakazawa, K.Miyauchi,K.Umeda.Tokyo Medical College Kasumigaura Hospital,Ibaraki.
Y.Nagai,C.Ibukiyama.Tokyo Medical College, Tokyo.

To determine the effect of the first major septal branch on septal function,12 old anterior myocardial infarction patients with coronary narrowing in segment6(A) and 6 old anterior myocardial infarction patients with coronary narrowing in segment 7(B) underwent Thallium-201 scintigraphy and ECG gated blood pool imaging.

There were no significant differences between A and B in terms of the septal uptake indices,global ejection fraction(G-EF),regional ejection fraction(R-EF) and R-EF/G-EF.

Perfusion from the first major septal branch probably does not significantly affect septal function.

199

THE CLINICAL USEFULNESS OF GATED BLOOD POOL SCAN IN THE PATIENTS WITH MYOCARDIAL INFARCTION: COMPARISON WITH AUTOPSY

J.Nagashima,A.Yamagata,H.Toyama,M.tanno, K.Chiba,H.Yamada,K.Chida*,S.Ohkawa*and M.Sugiura*.Devision of nuclear medicine,Devision of cardiology*. Tokyo Metropolitan Geriatric Hospital.

Segmental wall motion abnormality(WMA) and LVEF had been assessed by gated blood pool scan during life in 48 autopsy cases who had been also studied with Tl-201 myocardial scintigram.Thirty six cases had 56 myocardial infarctions(MI)at autopsy,and 12 cases had not.WMA showed agreement to detect MI at 87.5%.Five cases could not be diagnosed because of non-trasnmural or scattered MI.The half of non-MI cases showed WMA with normal Tl-201 scintigram and 5 cases had even generalized wall motion abnormality. In cases with generalized WMA multiple MI,cardiac amyloidosis, dilated cardiomyopathy and others were included.Gated blood pool scan for diagnosis of MI showed sensitivity of 84.4%,specificity of 58.8% and diagnostic accuracy of 70.1%. The reason for low specificity was considered due to a small numbar of normal control and cardiac diseases other than MI included with WMA in non-MI cases. Eleven cases had LV aneurysma.Dyskinesis at apical region was demonstrated in only 3 cases,and akinesis was at 8 cases.The relationship between LVEF and prognosis was also evaluated.The survival of cases with low degree of LVEF(less than 30%) showed mean survival time of 9.3 months and most of them died of cardiac death.

200

LEFT VENTRICULAR FUNCTION IN HYPERTROPHIC CARDIOMYOPATHY.---EVALUATION OF PARAMETERS IN SYSTOLE AND DIASTOLE---.

K.Ono,K.Owada, M.Komatsu,H.Takahata,M.Takezawa,Y.Miyazaki, N.Awano,T.Uchida and S.Kariyone. Fukushima Medical College, Fukushima.

There are good left ventricular functions in HCM patients. But frequently, diastolic functions were disturbed from early stage.

Multi-gated method was examined in nine patients with HCM and five normal controles. Left ventricular functions were measured at rest, on ergometer stress test and after intravenous administration of Diltiazem. The parameters of left ventricle were obtained from left ventricular volume curves which computed with Foulier's analysis. Eight parameters were used such as; peak ejection rate(PER), time to peak ejection (TPE) and ejection fraction(EF) as the indecies of systolic functions, peak filling rate(PFR), time to peak filling(TPF) and filling fraction(FF) as of diastolic functions, PFR/PER and TPF/TPE as of ratio of systolic and diastolic functions.

At rest, there were increased value of PER, EF, PFR, TPF and TPF/TPE in HCM patients. On exercise, TPF and TPF/TPE were further increased, but %PFR and PFR/PER were not increased so much compared with normal response. Diltiazem improved TPF at rest and PFR/PER on exercise.

We concluded that parameters of time factors were useful at rest and of index of velocity were useful on exercise in HCM function analysis.

Presented by Medical*Online