EVALUATION OF LONG TERM PROGNOSIS IN PATIENTS WITH MYOCARDIAL INFARCTION USING RADIONUCLIDE METHOD.

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Recently onset age of myocardial infarction is distributed widely accompanied with prolongation of expectation of life and multiplicity of coronary risk factor. We divided into two subgroups (A:60Y and B:60Y>) and evaluated long term prognosis in each group by measuring cardiac function and myocardial viability from onset to 5 years after using non-invasive radionuclide method.

Cardiac function (L.V.E.F., R.V.E.F., C.I.) obtained by Tc-99m cardiac pooling image are more remarkably reduced in group B than in group A. But there is no significant difference of changes of myocardial viability obtained by Tl-201 myocardial image between group A and group B.

CAG studies were performed in 38 cases. In cases with 3 vessel disease cardiac function and myocardial viability were remarkably getting worse than in cases with 1 vessel disease.

Effect of variable coronary risk factors on long term prognosis in patients with myocardial infarction were assessed. Non-invasive radionuclide examination is useful for observation of long term prognosis of cardiac function and myocardial damage.

ANEW COMPUTERIZED CARDIAC DYNAMIC PHANTOM FOR EASY REPRESENTATION OF THE WALL MOTION ABNORMALITY.


We had been investigating many cardiac regional contraction parameters derived from nuclear image of a multicrystal gamma camera to improve the quantitative assessment of the left ventricular wall movement. For this purpose, we made a computerized cardiac dynamic phantom, a tracer-filled balloon was periodically contracted by a piston controlled by a microcomputer. However, regional wall motion abnormality could not be generated easily, because abnormality had been made changing the elasticity of the part of the balloon wall, and dyskinesis could not be generated.

This time, we have made a further developed version of the cardiac dynamic phantom which is easy to represent the regional wall motion abnormality. The new phantom has a duplex structure consisting a large outer and a small inner balloon. Each balloon is driven by two independent pistons controlled by a microcomputer. To generate regional contraction abnormality, an inner balloon contraction interfere in an outer balloon contraction. Using this new phantom, various age cardiac parameters have been compared with the values derived from the phantom video image.