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COMPARISON OF THALLIUM MYOCARDIAL IMAGING AND CORONARY ARTERIOGRAPHY-DIFFERENTIAL DIAGNOSIS OF MYOCARDIAL NECROSIS, FIBROSIS AND ISCHEMIA.

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Combined use of thallium myocardial imaging and coronary arteriography were studied in 259 cases of various heart diseases. 1. Ischemic heart disease (MI, AP) 2. MCLS with RCA, LCA aneurym. 3. Valvular heart diseases (MSR, ASR) 4. Primary myocardial diseases(HCM, CCM) 5. Secondary myocardial disease (Sarcoidosis, SLE ete).

In generally, thallium perfusion defects owing to necrotic mass were observed in MI cases, corresponding to the obstruction or stenosis of coronary artesis. And in AP cases, new perfusion defects were observed in more than 75 percent stenosis of coronary arteries. In MCLS cases, thallium perfusion defects were observed only in the case of RCA,LCA obstruction with aneurym of coronary arteries.

However, thallium perfusion defects due to fibrosis were seen in cardiomyopathy including CCM, HCM, Sarcoidosis etc, while no angiographic stenosis of coronary artery were demostrated in these cases. The same findings were observed in valvular heart diseases including MSR, ASR.

In conclusion, thallium perfusion imaging were useful tool to evaluatetissue characterization of myocardial fibrosis, necrosis and ischema.

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EVALUATION OF ISCHEMIC HEART DISEASE BY QUANTITATIVE ANALYSIS OF Tl-201 MYOCARDIAL SCINTIGRAPHYAND REGIONAL WALL MOTION IN RADIONUCLIDE VENTRICULOGRAPHY.

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In oder to assess the Tl-201 uptake, the coronary circulation and regional wall motion, we performed quantitative analysis of Tl-201 myocardial scintigram and regional wall motion in radionuclide ventriculography. The patient included 30 with ischemic heart disease, 5 with other heart disease and 5 control subjects. These patients were given intravenous injection of Tl-201, Tc-99m-HSA and myocardial scintigram, RI-angiogram were obtained. The data was processed by an online mini-computer system. Our study suggested that the Tl-uptake in myocardial scintigram, reflected collateral circulation and the change of the left ventricular wall motion corresponded with the degree of Tl-uptake in myocardial scintigram.

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A COMPARISON OF THALLIUM- 201 SCINTIGRAPHY IN THE EARLY AND THE LATE PHASE OF MYOCARDIAL INFARCTION.

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We examined the diagnostic usefulness of Thallium-201 scintigraphy during both early (average 18 days after onset of symptoms) and late phase (average 12 months). In diagnosis of localization of myocardial infarction, correlation between scintisc an and ECG was high, but the former was preferred to the latter in lateral and posterior infarction. Score of the defect size by Kelly et al. was useful in detection of infarct size. Fifteen of twenty-five patients (60 percent) showed decrease ($p < 0.001$), six patients (24 percent) increase and four patients (16 percent) similar of the defect size in repeat scans. Thallium-201 repeat scintigraphy gives optimum prognostic information when performed in early and late phase.

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RADIONUCLIDE DIAGNOSIS OF RIGHT VENTRICULAR INFARCTION.

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13 cases of right ventricular myocardial infarction (RVMI) associated with inferoporterior infarction were studied using myocardial perfusion imaging(MPI) and radionuclide cardioangiography (RNA).

By RNA, dilated RV chamber and decreased RVEF wereobserved in RVMI cases in comparison with anterior inferior infarction. The average values of RV, LVEF inRVMI cases were 36.5, 44.6% while in normal cases, 54, 62% respectively.

By MPI, in RVMI cases, infero-porterior and postero-septal perfusion defect were observed by slant hole collimator and seven pin hole collimator.

In conclusion, radionuclide study of RVMI were characteristic by RNA and MPI in addition to the hot uptake of TC-PYP.

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