
The purpose of the present study was to evaluate the clinical usefulness of Tc-99m PYP myocardial ECT (PYP-ECT) in diagnosing the site and size of acute myocardial infarction (AMI). PYP-planar and ECT images were obtained on 35 patients suspected of AMI in the acute stage, and TI-201 myocardial ECT(Tl-ECT) and Tc-99m gated blood-pool imaging were performed in the chronic stage. Diagnostic sensitivity for detection of the infarct site determined with TI-ECT was better in ECT than in planar PYP images (83-87% vs 77-83%). PYP-infarct size significantly correlated with TI-infarct size and LVEF(r=0.79 and -0.67, respectively) and also with peak enzyme levels(CPK, LDH and a-HBD) (r=0.75, 0.72 and 0.66, respectively). It was concluded that PYP-ECT imaging was useful for diagnosing the site and size of AMI.

EVALUATION OF 631 CASES OF TI-201 MYOCARDIAL SCINTIGRAMS AND RADIONUCLIDEVENTRICULOGRAMS AFTER DIPYRIDAMOLE INFUSION.

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To investigate relationship between transient defect(TD) on TI myocardial scintigram(TMS) and wall motion abnormality on radionuclide ventriculogram(RNV), we performed dipyridamole(DP)-infusion stress test on 6 pts without and 22 pts with coronary artery disease(CAD). Serial tomographic TMS was obtained initially and 3hrs after iv-DP, using a rotating bilateral collimator. First-pass RNV was performed to estimate global ejection fraction(GEF) and regional EF(REF) at rest and after iv-DP. DP was infused at -15mg/kg/min for 4 minutes. Tracers were infused 6 minutes after iv-DP, excepting when angina or ischemic ST depression occured. All of the pts without CAD showed 5% or more increase in GEF compared to rest, and no TD on TMS. Fourteen pts with CAD, though, had angina and/or ST depression, and showed significant decrease in GEF after iv-DP. The site where REF showed decrease after DP was in accord with the site of TD on TMS. But, in the remained 8 pts, TD were detected on TMS in spite of no evidence of wall motion abnormality. Our results suggest that imbalance of myocardial perfusion induced by iv-DP dose not always produce regional wall motion abnormality.

EVALUATION OF DIFFUSE CARDIAC UPTAKE IN THE PLANAR IMAGING BY Tc-99m PYROPHOSPHATE MYOCARDIAL ECT IMAGING.


To assess the diffuse cardiac uptake of Tc-99m PYP with conventional planar imaging, we performed emission computed tomography (ECT) in 38 cases with acute myocardial infarction(AMI) and 27 cases without AMI (DCM,Old MI,Angina pectoris,Valvular disease, Amyloidosis). The intensity of the TC-99m PYP uptake was graded from to +4 according to the method of Parkey et al. In 39 cases who showed +1 or +2 activity, 32 cases(82%) showed residual blood-pool activity on ECT imaging. In 26 cases who showed +3 or +4 activity, 25 cases(96%) showed focal pattern of myocardial uptake on ECT imaging.