lead electrocardiography and serial serum enzyme determinations were performed after admission and diagnosis of anteroseptal myocardial infarction was made in 21 patients, inferior myocardial infarction in 5 patients. Myocardial scintigraphies were performed approximately 5, 30, 180 and 360 minutes after the intravenous injection of 12 mCi (0.2 mCi/kg) ^{99m}Tc-PYP, and on the other day, 5,40 and 120 minutes after the intravenous injection of 1.5 mCi ^{201}Tl-Cl. Myocardial scintigrams were obtained in three or four different views, using scintillation camera (Picker Inc. Dyna Camera 3 C).

Thirty seven ^{99m}-PYP myocardial scintigraphies were performed from 2 to 42 days after myocardial infarcion in 22 patients.

The myocardial scintigrams were graded as positive, questionable and negative. The data obtained in this study showed that the optimal time for ^{99m}Tc-PYP scintigraphy was from 3 to 6 hours after the administration. ^{99m}Tc-PYP imaging was visualized within 14 days after the onset of myocardial infarction, and then returned to normal. The patients with positive, questionable ^{99m}Tc-PYP myocardial scintigrams had peaked serum enzyme 2 times as much as negative group. The optimal time for ^{201}Tl-Cl scintigraphy was from 40 minutes to 2 hours after the administration. ^{201}Tl-Cl scintigraphy had the high degree detection of acute or old myocardial infarction.

^{99m}Tc-PYP scintigrams are visualized as positive images only in acute phase and ^{201}Tl-Cl scintigrams as negative both in acute and old myocardial infarction.

^{201}Tl Scintigraphy of Heart Diseases

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Eleven cases without myocardial infarction and 15 with myocardial infarction were given intravenous injection of 1.5–2.0 mCi of ^{201}Tl, and the images were taken with a PHO/gamma HP camera connected to the color display apparatus CDP-1. Regions of interest corresponding to the myocardial and non myocardial regions were selected with CDP-1. In the anterior view of the scintiphotos in non infarction cases, the left ventricular wall appeared as U or O or solidovoid in shape, indicating a decrease of the activity at the apex. In the cases of suspected cardiac amyloidosis, atrial septal defect and mitral with tricuspid insufficiency, the right ventricular wall as well as the left ventricular wall was delineated. The anterior wall infarction revealed decreased activity in the anterior, left anterior oblique and lateral views. The posteroinferior infarction was displayed in the anterior and left lateral views. The ratio of activity of normal region to infarcted region was 1.46 and that of normal to the lung and that to the ventricular cavity were 3.12 and 1.50 respectively. The ratio of the infarcted region to the lung and that to the ventricular cavity were 2.21 and 1.05 respectively. Hence in evaluating the myocardial imaging subjectively, more accurate findings can be attained from the ratios of cardiac muscle to lung.