

(HOCM), 6 cases of hypertrophic non-obstructive type (HCM) and 9 cases of congestive type (CCM) and 5 normal healthy subjects, were chosen for this study.

On 30°LAO view, thickness of septal and LV free wall were assessed by two methods, i.e. direct measurement on Polaroid film and calculation from profile through the mid point of LV long axis. Relative myocardial activity (RMA) was calculated by following equation,

$$RMA = \frac{Au(LV) - Au(Lung)}{Au(Lung)}$$

A Basic Study on Clinical Use of Tl-201 Myocardial Scintigraphy

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Myocardial imaging with Tl-201 and a scintillation camera was studied experimentally using specially designed phantoms and clinically in 23 patients with myocardial infarction or other heart diseases. Then, the following results were obtained:

1. Images of the converging collimator at the 75-keV photopeak revealed considerably higher accumulative count-rate and relatively higher quality than those of the other detecting conditions.
2. It was necessary to take images as many as possible in various projection, in order to detect the location and size of the myocardial ischemic lesion, because the lesion was demonstrated as defect clearly only in profile.
3. On the basis of observation of serial images after injection, it was evident that the images

where, Au indicated mean counts per unit area.

In summary, 1) RMA was higher in ICM group as compared to normal subjects. In one case of CCM group with recurrent history of congestive heart failure, RMA did show definitely lower value. 2) Septum to LV free wall thickness ratio was higher in HOCM group than other types of ICM and normal subjects, but not as much higher as reported by others.

taken between about 25 min. and about 90 min delineated the myocardium more clearly than those in the other period.

4. Normal images taken in 8 patients without ischemic heart disease appeared in the shape of doughnut or horseshoe, demonstrating mainly the left ventricular myocardium. In addition, the image was faint in the region of the aortic or mitral valve and thin in the region of the apical wall. On the other hand, the image of the right ventricular wall was sometimes recognized faintly.

5. In 11 of 12 patients with old myocardial infarction, the location and size of the lesion was detected sufficiently by this examination, compared with the findings of the electrocardiogram.

Study on Scintigraphy in Myocardial Infarction with ^{99m}Tc-PYP and ²⁰¹Tl-Cl

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We examined myocardial infarction with ^{99m}technetium stannus pyrophosphate (^{99m}Tc-PYP) scintigraphy and thallium-201 (²⁰¹Tl-Cl) scinti-

graphy. Twenty six patients (4 women, 22 men) were examined. The age range was from 42 to 72 years old (mean: 58 years old.) Standard 12-