RI Pool Scanning in Diagnosis of Abnormal Mediastinal Shadow

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We studied RI pool scanning in 76 cases with abnormal mediastinal shadows on X-ray film.

(Pericardial effusion 39 cases, mediastinal tumor 10 cases, vascular abnormality 4 cases, pleural effusion 6 cases and vulvar heart disease 17 cases)

Examinee were injected 1.5–5 m Ci of 99mTc-Albumin and in some cases 250–500 mCi of R.I.H.S.A and scanned with R.D.A 1061 scanner by Toshiba.

In pericardial effusion, we put the scintigrams upon X-ray chest films that exposed by four quadrant exposure technic and measured the following numerical values.

a; Distance of the transvers length of the heart between the X-ray film and the scintigram in the right.
b; The same in the left.
c; Distance from the heart and the liver in the scintigrams.
d; The ratio of the transvers length of the heart on the scintigram to the X-ray film.

Result

1) a b c d

Pericardial effusion 12–44 18–62 10–40 0.83–0.54
Control 3–15 5–30 0–5 0.93–0.82 in min

2) In differential diagnosis of mediastinal tumor and vascular abnormality, RI pool scanning are effective and convenient even in cases of serious cases.

3) In the cases of pleural effusion, heart figure was visualized clearly on scintigram.

4) In differential diagnosis of cardiac hypertrophy pericardian effusion, RI pool scanning were effective.

Parameters of Left Ventricular Performance Measured with Scintiphotocardiogram in Comparison with other Non-invasive Technics.

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Left ventricular end-diastolic volume (EDV), end-systolic volume (ESV), ejection fraction (EF), stroke volume (SV) and cardiac output (CO) are some of the important parameters of the left ventricular performance.

We measured these parameters with pulse-synchronized scintiphotocardiogram. SV measured from scintiphotocardiogram was compared with that measured from left precordial dilution curves recorded with proper setting of the area of interest (AOI). And EF was compared with systolic time intervals (STI), which were meas-