

## CLINICAL EVALUATION OF VARICAM SHUNT PROGRAM

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Angiocardiograms were obtained from 40 patients including 6 with left to right intracardiac shunt (ASD

or VSD) and 34 without intracardiac shunt, using 10 mCi  $^{99m}\text{Tc}$ -RBC and gamma camera (PHO-GAMMA-LFOV).

The angiogram data was recorded with incremental mode, 0.3 second at one frame into the Varicam data system.

In the Varicam program, gamma function is used for extrapolation of time activity curve on the pulmonary ROI. The gamma function formula is  $y = kt^a e^{-t/b}$ . A shunt is estimated on  $QP/QS$  computed by gamma function,  $QP$ : pulmonary blood flow,  $QS$ : systemic flow.

On some cases,  $C2/C1$  ratios were obtained following Folsie's method.

A tentative conclusion is as follows:

This computer analysis can separate left-right shunt cases with  $QP/QS$  greater than 1.2 from no shunt cases with  $QP/QS$  less than 1.2.

In no shunt group, however, here are a few cases with  $QP/QS$  greater than 1.2, because second approximate curve can be varied artificially.

## CARDIOVASCULAR IMAGE BY THE USE OF SCINTILLATION CAMERA OF HIGHER RESOLVING POWER

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Morphological utility of RI-angiography is in noninvasiveness, possibility of repeating tests and simple and easiness of the test-operation. However, it has so far been only playing a role for screening test, and its accuracy of the diagnosis is far lower than X-ray cardioangiography. On the other hand, in some cases, it is impossible to take X-ray cardioangiography because of the danger for catheterization. Thus the appearance of RI-angiography with its higher resolving power has been looked for.

In the present study, we have prepared RI-angiography due to gamma-view, RI-IC-1635LD Scintillation Camera made by Hitachi Medico Co., having higher resolution power, and reviewed its morphological utility from clinical viewpoints.

## MATERIALS AND METHODS

Utilized nuclear types were  $^{99m}\text{Tc}$ -HSA and  $^{99m}\text{Tc}$ -labelled erythrocytes.

The subjected materials were healthy normal subjects and patients with aortic aneurism and dissociated aortic aneurism as well as those operated on the mammary cancer. The test-positions were standing and supine in parallel or aslant the gamma-scintillation camera.

## RESULT

RI-cardiography has enabled the description of the cardioventricular septum which has been indistinct on its image. While RI-angiography has enabled the differential diagnosis of arterial phase and venous phase, and also, abdominal RI-angiography has enabled the detection of renal artery to some extent.