

ulation of analysing the curves is also useful to estimate clinical severity of valvular diseases.

In acquired heart diseases, decrease of peak concentration and distention of (Disappearance time + Build-up time) were seen in the dilution curve and from that clinical severity could be decided.

In aortic aneurysms, detection of the lesion was very easy on a scintiphoto just like as on

a traditional angiography and also estimate of condition of lesion could be carried out by analysis of radioisotope counts in the lesion.

Thus the scintillation camera has been used successfully to construction of the dilution curve in each part of the heart and vessel which was hard to construct from a traditional radiocardiogram. This advantage is very profitable for qualitative and quantitative analysis of heart disease.

Scintigraphic and Angiographic Findings in Patients with Tetralogy of Fallot after Blalock-Taussig's Anastomosis

M. MORI, H. MORINARI, M. IIO and S. KOIKE

The Second Department of Internal Medicine

K. KOTODA, M. TSUZUKI, and A. MIZUNO

The Second Department of Surgery, University of Tokyo, Tokyo

Pulmonary perfusion scan is a safe and effective method for the evaluation of the distribution of pulmonary blood flow in various cardio-respiratory diseases.

In this study, we performed pulmonary perfusion scans on 9 patients with Tetralogy of Fallot who had undergone Blalock-Taussig's anastomosis. Administration of ^{131}I -MAA (about 0.3mCi) and scannings were made in all patients in the supine position. The results were compared with those of pulmonary angiographies which were done in all cases one or two days apart from the day of the scanning.

In 6 out of 9 patients pulmonary perfusion was significantly decreased in the lung on the side of anastomosis and in 2 it was symmetrical, whereas in one pulmonary blood flow was rather increased in the lung on the side of anastomosis. In contrast to the scintigraphic findings, pulmonary angiography showed symmetrical pulmonary blood flow in 6 out of 9 patients and decrease of flow to the lung on

the side of anastomosis was seen in only 3 patients.

In one patient, who had markedly decreased perfusion to the left lung, the side of anastomosis, by scan, pulmonary angiography revealed near complete occlusion of the main pulmonary artery of the same side. In other patients, whose lung scans showed relative decrease of ^{131}I -MAA distribution in the lung on the side of anastomosis, angiography usually revealed functioning anastomosis.

As reported by Friedman et al, pulmonary perfusion scan is helpful for the assessment of patency of anastomosis after Blalock-Taussig's operation. Our findings are also in accord with their results, however, one has to be aware of the possibility that in some patients decrease of perfusion seen in the scan may not be due to the function anastomosis but due to other factors such as thrombotic occlusion of pulmonary trunk on the side of anastomosis as seen in our case.