REGIONAL WALL MOTION ABNORMALITY IN PATIENTS WITH DILATED CARDIOMYOPATHY.-BY MEAN OF COMPARISON WITH THAT IN PATIENTS WITH OLD MYOCARDIAL INFARCTION.-

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This study evaluated a characteristic regional wall motion (RWM) abnormality in patients with dilated cardiomyopathy (DCM) by mean of comparison with that in patients with old myocardial infarction (OMI). Materials were 7 patients with DCM, 26 patients with OMI and 8 healthy controls. By use of the gated RI angiogram, we divided the left ventricular LAD 45° image into 8 sections, and analysed from 2 aspects: 1) wall movement and 2) phase abnormality. We classified the regional wall motion into 5 typical forms as follows: Normal, I: The wall movement decreased, but no phase delay was recognized. II: The wall movement did not decrease, but phase delay was recognized. IV: The wall movement decreased and phase delay was recognized. 5 types were recognized in patients with OMI. But N,III and IV types were less frequency. In patients with DCM, and IV types were more common in patients with DCM than in patients with OMI. And following results were obtained.
1) Few patients with DCM had sections of normal RWM.
2) Mainly RWM abnormality in patients with DCM were small wall movement, and few sections of phase delay were recognized.
3) Low LV function in patients with DCM were not due to asynergy but small movement of entire LV wall.

EVALUATION OF RIGHT VENTRICULAR PERFORMANCE
BY ECG-GATED CARDIAC BLOOD POOL SCINTIGRAPHY IN PATIENTS WITH TETRALOGY OF FALLOT AFTER RADICAL OPERATION.

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In order to evaluate right ventricular performance in patients with Tetralogy of Fallot (TOF) following radical operation, we studied 10 patients by means of ECG-gated cardiac blood pool scintigraphy before and after operation.

Using global time-activity curves, the phase angle at fundamental frequency were calculated, and emptying patterns of the right and left ventricle (RV, LV) were evaluated by phase difference (D(phase)=RV(phase minus LV(phase)). D(phase) with normal cardiac function was minimal (mean 1.7±5.8), whereas D(phase) with TOF before operation was large (mean 25.0±8.5).

Following radical operation, the RV/LV pressure ratio correlated well with D(phase). The linear correlation coefficient is 0.831. It is acceptable that D(phase) represent the right ventricular performance after radical operation. In poor correction group (RV/LV=0.65), D(phase) was unchanged after operation (24.0±5.6%±21.8±5.8). In good correction group (RV/LV=0.65), D(phase) was remarkably decreased after operation (27.8±11.9±9.0±6.1).

Patients whose D(phase) was not so much decreased after operation have a tendency to fall into right ventricular failure.

RVEF BY E.C.G.GATED FIRST PASS METHOD.
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E.C.G. gated first pass method was used for calculating RVEF, and compared with the conventional first pass and pool method. The results were as follows.
1. RV was well differentiated.
2. Back ground was low enough.
3. Higer R.I. count was taken than by conventional first pass method.
4. Higher RVEF was calculated then by the other two methods.
5. RVEF calculated by E.C.G. gated first pass method was 61±7% in normal control.

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