Myocardial Imaging with 201 Thallium in Myocardial Ischemic Cases with Complete Left Bundle Branch Block and Pacemaker Rhythm

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Three patients with complete left bundle branch block and six patients with pacemaker rhythm were studied.

In CLBBB group, one patient had a episode of transmural myocardial infarction. We found a localized decrease of radioisotope uptake in all patients.

In pacemaker rhythm group, two patients had a episode of transmural myocardial infarction, one had a episode of subendo-cardial infarction and three patients had a anginal chest pain, which were diagnosed by ECG before pacemaker implantation.

To detect a transmural myocardial infarction in patients with the presence of abnormal electrical activation, such as CLBBB, WPW syndrom and pacemaker rhythm, many electrocardiographic criteria have been described. Although these criteria are very troublesome. We discuss the relationship between myocardial imaging and ECG. It is concluded that myocardial imaging is helpfull to diagnose a transmural myocardial infarction in patient with the presence of abnormal electrical activation.

Study on Myocardial Scintigraphy in Patients with Myocardial Infarction. (V) Comparison of Regional Myocardial Detection by Thallium-201 with Left Ventricular Motion by Biplane Cineangiography

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Myocardial scintigraphy was performed after intravenous injection of Thallium-201 at rest in 31 patients with myocardial infarction and the results were comapred with left ventricular cineangiographic findings. Each finding was interpreted independently by each observer. In 31 patients, 18 patients had anteroseptal myocardial infarction and 13 patients had inferior myocardial infarction.

In the patients with anteroseptal myocardial infarction, 18 patients had anterior image defects, 18 patients septal image defects, 14 patients apical image defects, 3 patients lateral image defects and 3 patients apico-inferior image defects. On the other hand, 15 patients had anterior abnormal motion in the left ventriculography, 6 patients septal abnormal motion, 17 patients apical abnormal motion, 3 patients lateral abnormal motion and 4 patients inferior abnormal motion.

In patients with inferior myocardial infarction, 12 patients had inferior and posterior image defects. On the other hand, 11 patients had inferior abnormal motion in the left ventriculography, 4 patients posterior abnormal motion and 5 patients apical abnormal motion.

The area of Thallium-201 image defect in anterior, lateral and inferior region corresponded with the area of left ventriculographic abnormal motion in 83 percent, 93 percent, 67 percent and 87 percent, respectively.

However, the area of septal and posterior image defects corresponded with the area of ventriculographic abnormality in only 33 percent.

Of the 16 patients without apical image defect, 9 patients had apical abnormal motion.

Thus, our studies suggest that regions of anterior, apical, lateral and inferior image defects correspond with the regions of left ventricular abnormal motions.

Study on Myocardial Scintigraphy in Patients with Myocardial Infarction (VI) Comparison of Regional Myocardial Detection by Thallium-201 with Coronary Angiography

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Myocardial scintigraphy was performed after intravenous injection of Thallium-201 at rest in 31 patients with myocardial infarction and the results were comapred with coronary angiographic findings. Each finding was interpreted independently by each observer.

All 18 patients with anteroseptal myocardial infarction had image defects and more than 75 percent stenosis of the left anterior descending artery. Of the 4 patients with anteroseptal image defects, 3 patients revealed 90 percent stenosis of the left anterior descending artery. Of the 11 patients with from anteroseptal to apical image defects, 6 patients had 90 percent stenosis, 3 patients had complete occlusion of the left anterior descending artery. Of the 3 patients with from anteroseptal, apical, lateral to apico-inferior image defects, one patient had 90 percent stenosis, 2 patients had complete occlusion of the left anterior descending artery.

In 13 patients with inferior myocardial infarction, of the 4 patients with mainly posterior image defects, one patient had not significant stenosis, two patients had more than 75 percent stenosis and one patient had complete occlusion of the circumflex artery. And 2 patients had no significant stenosis 2 patients had 90 percent stenosis of the right coronary artery. Of the 9 patients with posteroinferior image defects, 4 patients had no significant stenosis, 5 patients had more than 75 percent stenosis of the circumflex artery. And only one patient had no signigicant stenosis, 8 patients had more than 75 percent stenosis of the right coronary artery.

Thus, our studies suggest that when the image defects of the patients with anteroseptal myocardial infarction were larger, the degree of the stenosis of the left anterior descending artery was severer. In the patients with inferior myocardial infarction posterior image defects were usually associated with the circumflex artery stenosis and posteroinferior image defects associated with the right coronary artery stenosis.

^{201}TlCl Myocardial Scintigraphy for the Patients of Myocardial Infarction

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Object; The myocardial scintigraphy with ^{201}Tl Cl is practised in the cases of myocardial infarction. The scintigrams are compared with ECG, coronary angiography and left ventricule graphy.

Subject and method; 42 cases were studied of myocardial scintigraphy in our department from