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## DIPYRIDAMOLE-LOADING MYOCARDIAL SCINTIGRAPHY IN THE DIAGNOSIS OF ISCHEMIC HEART DISEASE; ITS VALUE AND LIMITATION.

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116 patients with chest pain were studied by dipyridamole-loading scintigraphy with stepping, and the results were compared with the data of treadmill ECG and CAG.

In 67 patients without transmural MI, sensitivity and specificity of scintigraphy for the detection of coronary stenosis ( $\geq 75\%$ ) were 89% and 94% respectively, superior to that of treadmill ECG. But 3 patients with 75% stenosis showed false negative results. And it was not satisfactory to estimate the number of vessels involved from defect area in many patients with multi-vessel disease.

In 59 patients with transmural MI, fixed defect was present in 56 (95%) and reversible defect in 16 (27%). Scintigraphy was superior to treadmill ECG in the detection of residual ischemia in the infarcted area (D 27%, T 14%). Conversely, treadmill ECG was superior to scintigraphy in the detection of ischemia in the non-infarcted area in 21 patients with coronary lesion in the opposite site (T 76%, D 19%).

Thus, by adding mild exercise, dipyridamole scintigraphy showed excellent results in the diagnosis of coronary stenosis, although there are some limitations in the detection of moderate stenosis and ischemic lesion opposite to MI and in the estimation of the number of vessels involved.

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## DIPYRIDAMOLE-LOADING MYOCARDIAL SCINTIGRAPHY FOR THE EVALUATION OF PATIENTS AFTER AORTO-CORONARY BYPASS SURGERY.

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Eighteen patients were studied before and early after AC bypass surgery by dipyridamole-loading myocardial scintigraphy.

Fixed defect was detected in 7 patients (39%) preoperatively, and in 9 (50%) postoperatively. Newly developed postoperative fixed defect, suggestive of perioperative myocardial infarction, was observed in 5 patients (28%), 3 of them were not diagnosed by ECG.

Reversible defect was detected in 13 patients (72%) preoperatively, and in 4 (22%) postoperatively. These postoperative reversible defects were due to either graft occlusion or incomplete revascularization. Comparison between pre- and postoperative circumferential profile curve at identical load was useful to evaluate the change of myocardial perfusion in each segment.

Thus, dipyridamole-loading myocardial scintigraphy seems to be a safe and useful method for the detection of perioperative myocardial infarction and residual myocardial ischemia, particularly in early postoperative patients in whom exercise ECG or exercise scintigraphy is limited.

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## USEFULNESS OF DIPYRIDAMOLE Tl-201 SPECT FOR EVALUATING ISCHEMIC HEART DISEASE.

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Dipyridamole Tl-201 scintigraphy is useful method to evaluate ischemic heart disease. However, the reports have been limited in planar imaging. To evaluate the usefulness of this method, we recorded DP Tl-201 SPECT in 23 patients (angina pectoris; 10, myocardial infarction; 6, others; 7) by using I.V. DP, 0.56mg/kg/4min. We evaluated these cases by the re-distribution image and reduced washout ratio. Of the 10 with angina pectoris, 5 had re-distribution image and reduced washout ratio was found in 6 of them. In combination of re-distribution image and reduced washout ratio as a positive finding, the sensitivity of this method was 70%, specificity of this method was 77%. Positive ST-T findings in ECG was only 30%, ischemic symptom was in 50%, one of them progressed impending infarction. In contrast to CAG, 90% narrowing had both re-distribution and reduced washout ratio, 50% narrowing had one of them, 25% narrowing had none of them. So, this method is useful non-invasive diagnostic one for evaluating ischemic heart disease.