# MYOCARDIAL PERFUSION TOMOGRAPHY AND THE AUTOMATED SCORING SYSTEM IN PATIENTS WITH LEFT BUNDLE BRANCH BLOCK

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Dipyridamole stress myocardial perfusion imaging has been established as the procedure of choice in patients with left bundle branch block (LBBB).

**AIM:** We performed MIBI myocardial perfusion tomography in order to evaluate 12 patients with LBBB.

**MATERIAL AND METHODS**: To evaluate myocardial perfusion and function we performed 2-day dipyridamole stress and rest protocol and ECG-gated acquisition after MIBI administration. Left ventricular volumes (LVEDV and LVESV) and left ventricular ejection fraction (EF) were calculated from the gated SPECT data by commercially available software 4D-MSPECT. Myocardial perfusion was scored visually by use of 17 segment, 4-point scoring method and septal wall thickening as well as motion abnormalities by use of 3-point and 4-point scoring, respectively. There were 6 normal control subjects and 12 patients with LBBB who underwent 1-7 days before to Doppler dipyridamole stress echocardiography to which coronary vasodilatory flow ratio was measured.

**RESULTS:** The mean LVEDV and LVESV was grater than in control subjects (110±52ml vs. 83±24 (stress), 106±48 vs. 82±28 (rest) and 52±47 vs. 18±6 (stress), 48±43 ml vs. 22±11 (rest), respectively, $p < 0.05$. The mean LVEF was lower in LBBB pts than in control group (59±18% vs. 78±6 for stress and 61±14 vs. 76±8% for rest, $p<0.05$). Dipyridamole echocardiography showed septal ischemia in 2/12 pts and flow velocity in left anterior descending artery decreased during stress in 3/12 pts. Septal ischemia on MIBI scintigraphy was found in 2 patients but all other pts had septal hypoperfusion at rest. The findings between two methods were concordant in 10/12 pts. The summed septal wall motion score was normal in 2 pts and in other 10 pts the mean summed motion score was 12±4 (stress), vs 9±4 (rest), $p>0,05$. There was no wall thickening in septal quadrant in 7 pts (summed mean score was 9±2 for stress vs 9±3 for rest, $p>0,05$ ).

**CONCLUSION:** In 2 out of 12 patients with LBBB perfusion scintigraphy showed septal ischemia, septal wall motion score was abnormal in 10 patients and there was no septal wall thickening in 7 patients. The findings between MIBI scintigraphy and dipyridamole stress echo-cardiography were concordant in 10/12 patients.