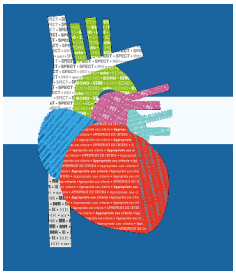

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# Evaluation of Myocardial Perfusion in Patients with Systemic Lupus Erythematosus by Using 99mTc-Sestamibi Gated-SPECT

Background: Systemic lupus erythematosus (SLE) is a multisystem autoimmune disease that is associated with high risk for cardiovascular disease (CVD). Main cause of long term morbidity and mortality in patients with SLE is CVD. Accelerated atherosclerosis and adverse cardiac events in this population are due to the combined effect of traditional as well as SLE-specific inflammatory and immunologic risk factors. By means of 99mTc-sestamibi gated-SPECT myocardial imaging, presence of coronary artery disease (CAD) in SLE patients can be noninvasively detected with extent and severity of disease evaluated, as well as its impact on LV function assessed.

Methodology: Both reversible and fixed perfusion defects have been found in as many as 20-40% of SLE patients. Gated-SPECT imaging can be especially useful tool in identifying CAD in a subset of high-risk patients that are asymptomatic. Confirmation of significant myocardial ischemia would lead further to elective invasive coronary angiography and coronary revascularization if necessary, which along with intensified and optimized medical treatment can improve cardiovascular prognosis in this group of patients. In some individuals abnormal myocardial perfusion on gated-SPECT imaging without angiographically significant coronary stenosis can be found. Severe endothelial dysfunction that is usually present in patients with multiple risk factors has been blamed for this finding.

Results: We examined 12 asymptomatic patients with SLE (11 women, 1 man), age 26-62years (mean 45y±13), all diagnosed >5years and on therapy with corticosteroids. 99mTc-Sestamibi gated-SPECT imaging was performed with one day rest-stress protocol by using dipyridamole as stressor. Stress induced ischemia was detected in 5/12pts (42%), enlarged left and right ventricle were found in 4/14pts(33%) and 6/12pts(50%) respectively. In one patient lower LVEF was found.

Conclusion: In conclusion, myocardial perfusion 99mTc-Sestamibi gated-SPECT imaging can be used for screening purposes in patients with SLE who are at high risk for future adverse cardiac events, such as patients with multiple risk factors, women with SLE and patients with longstanding disease.

## Country/Organization invited to participate

Republic of Macedonia

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