**DYNAMICS OF MYOCARDIAL PERFUSION IN PATIENTS WITH CORONARY HEART DISEASE AND POST INFARCTION CARDIOSCLEROSIS AFTER STEM CELL THERAPY**

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Objective: to study efficacy and safety of autologous bone marrow stem cell therapy for the tissue genesis and neoangiogenesis in ischemic parts of heart in patients with coronary heart disease (CHD) and post-infarction cardiosclerosis.

Materials and methods: 30 patients with a diagnosis of ischemic heart diseases were selected. 15 of them were treated with the standard protocol of treatment (control groupe), the 15 others were transplanted with their bone marrow stem cells. Stem cells CD133 were isolated from mononuclear cells and were injected in intra-arterial into the coronary arteries under angiography in the average dose of 5 ml of suspension containing 0,8-1,5 million cells. All patients were treated with 0.75 mg/day of estradiol for two months. Clinical examination and current tests such as ECG, EFLV (ejection fraction of the left ventricle), ESV (ventricular extra systoles), EDV (end diastolic volume) Myocardial scintigraphy using Tc99m with the ligand methoxyisobutylisonitrile in order to evaluate the dynamics of myocardial perfusion in all patients before and after cell therapy were performed.

Results: It was also shown that one-time transplantation of autologous mononuclear cells of bone marrow has a positive effect on dynamics of stable and transient perfusion defect according to scintigraphic diagnostics with T&#1089;-99m in patients with CHD and post-infarction cardiosclerosis during a 3 and 6 month monitoring periods following cell therapy.

Conclusions: Our method of stem cell transplantation is safe and does not increase mortality as a consequence of heart disease. Treatment of autologous stem cells significantly improved key indicators of heart hemodynamic.