Секция «Тезисы на английском языке»

Influence of atorvastatin therapy on lymphocyte and monocyte subpopulations in blood of patients with stable angina

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Background. Atherosclerosis is chronic disease of arteries occurred because of lipid disorders and having significant inflammatory component. Immune response in atherosclerosis includes cell and humoral immunity, adhesion molecules, chemokines and other. Statins are main lipid-lowering drugs used for atherosclerosis treatment. Their pleiotropic effects are still actively elucidated.

Aim. To evaluate different lymphocyte and monocyte levels in patients taking atorvastatin 20mg or not taking statins; to investigate influence of short-term high-dose atorvastatin therapy on different cell subpopulations and their expression of chemokine receptors CCR2, CCR5 and CX3CR1.

Materials and methods. 42 male patients with I-III angina functional class were enrolled in our study. 29 patients were taking atorvastatin 20mg during at least 6 month before enrollment, 13 patients were statin-naïve. Levels of blood lymphocytes and monocytes and their chemokine receptors expression were analyzed during flow cytometry.

Results. Treg levels were significantly higher in patients taking atorvastatin 20mg during at least 6 month compared to statin-naïve patients. Increasing atorvastatin dose from 20 to 80 mg causes increasing of Treg levels, decreasing of expression of chemokine receptors CCR5 on lymphocytes and monocytes and decreasing of hsCRP level in blood of patients with stable angina. No differences between other cell subpopulations were observed in our study.

Conclusions. Statins have anti-inflammatory effect which may be explained by immuno-modulating mechanisms involved chemokine receptors expression by lymphocytes and monocytes.