DOES SUBLINGUAL IMMUNOTHERAPY (SLIT) IN ATOPIC ASTHMA INFLUENCE SENSITIVITY OF LYMPHOCYTES TO FAS STIMULATION: A PRELIMINARY STUDY

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The resistance of lymphocytes T to Fas mediated apoptosis is one of the features of the atopic asthma. The only effective causative treatment of atopic diseases is immunotherapy. Clinical efficacy of sublingual immunotherapy has been already proven, but there is still limited number of studies about its influence on lymphocytes function. The aim of the study is to evaluate if SLIT could restore sensitivity of asthmatic T cell to undergo Fas mediated apoptosis. The peripheral blood from 12 patients aged 8 ? 2,4 years old suffering from atopic asthma shortlisted for sublingual specific immunotherapy was collected. To evaluate sensitivity to Fas mediated apoptosis peripheral blood was transmitted to sterile tubes and mixed with purified monoclonal antibody antiCD95 (Beckman Coulter). Samples were incubated for 24 hours. After incubation leukocytes were stained with Annexin V, propidium iodide (Becton Dickinson) and monoclonal antibody against CD2 conjugated with phycoerythrin-cyanin 5.1, then analyzed with flow cytometer (Beckman Coulter). The procedure was repeated for each patient after 12 months of SLIT. Results are presented as ratio of Annexin V positive T cell's percentage after CD95 stimulation to Annexin V positive T cell's percentage before incubation with anti Fas antibody. Stimulation with anti CD95 of T lymphocytes from patients with atopic asthma before treatment increased number of early apoptotic cells (19,51? 16,73 % before stimulation and 26,61?16,70 % Annexin V positive cells after stimulation). After one year of SLIT anti CD95 still caused increase of early apoptotic cells ratio in the lymphocytes' population (12,42? 7,36% before stimulation and 24,68?15,34 % Annexin V positive T cells after CD95 stimulation). Even though the increasing trend could be observed, differences between analyzed groups are not statistically significant, p=0,2. It seems that one year SLIT do not influence on sensitivity of T lymphocytes from peripheral blood of children suffering from atopic asthma to Fas mediated apoptosis.