

Abstract

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Title of thesis: Monitoring of sublingual allergen immunotherapy using serum cytokine levels

Keywords: allergen immunotherapy, cytokine, ELISA, grass pollen allergy

Background: The aim of this thesis was to find out whether there are detectable changes in the levels of IFN γ , IL-4 and IL-5 during allergen immunotherapy and whether these cytokines could thus serve as biomarkers of the efficiency of this treatment.

Methods: Selected cytokines were determined using Quantikine[®] HS ELISA Human IFN- γ Immunoassay, Quantikine[®] HS ELISA Human IL-4 Immunoassay and Quantikine[®] ELISA Human IL-5 Immunoassay. The monitored population consisted of 32 polinotics, 19 of which were administered allergen immunotherapy and 13 of which constituted the control group. As part of the follow-up, both groups also continuously recorded the severity of their symptoms using a visual analog scale.

Results: In the group of treated patients, a decrease in IL-4, IL-5 and IFN γ concentrations was observed during treatment, but no significant differences in the values of these cytokines were found between patients treated with Oralair and control individuals. Using a visual analog scale, a significant decrease in the severity of the symptoms of their disease was recorded in a group of treated patients during the course of treatment compared to a control group in which there were no significant changes.

Conclusions: Although the changes in levels of cytokines monitored by us were not entirely convincing, the condition of treated patients significantly improved during allergen immunotherapy. According to our results, the serum levels of cytokines IFN γ , IL-4 and IL-5 are not ideal biomarkers for monitoring the effectiveness of allergen immunotherapy.