How quickly venom wasp immunotherapy influences of cytokines IL-10, IL-21, TGF-β1 synthesis?

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The creation of tolerance during stinging insect, venom immunotherapy (VIT) is a complex process associated with the simultaneous launch of several mechanisms both at the level of regulating the function of T and B lymphocytes and the activation of effector cells and the reactivity of the effector organs. The literature describes the influence of VIT on the synthesis of IL-10, IL-21, TGF-β1 as well as many other cytokines at various times after immunotherapy. The aim of our study was to assess changes in peripheral blood and serum concentrations of IL-10, IL-21 and TGF-β1 in the early stages of VIT. The study included 18 patients who are allergic to wasp venom and who in the past underwent systemic anaphylactic reaction after stinging, meeting the criteria to qualify for VIT. The enzyme-linked immunosorbent assay (ELISA) method was used to assess of concentrations of cytokines IL-10, IL-21, TGF-β1 in time 0 (before VIT) and after 2.5 and 24 hours from the VIT starting point. A 24-hour activation assessment of serum concentrations of cytokines IL-10, IL-21 and TGF-β1 during the first day of the hymenoptera venom immunotherapy by ultra-rush protocol does not show the significant dynamics of change of the examined parameters.

Biography

Aleksander Zakrzewski has completed his Master’s degree in 2002. Since 1995, he has been working in the Department of Infectious Diseases and Allergology in Military Institute of Medicine in Warsaw. He actively participates in different research projects presenting their results in Polish and international medical journals as well as during international conferences.

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