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Titel des Beitrags: Immunological changes after ASIT in AD allergen-specific immunotherapy and their potential correlation with clinical response in patients with atopic dermatitis patients sensitized to house dust mite.

Abstract: Allergen-specific immunotherapy (ASIT) is the main treatment for inducing long-term immunological and clinical tolerance in patients with IgE-mediated allergic diseases. Recent open-label and controlled studies on the efficacy of ASIT in patients with atopic dermatitis (AD) have provided promising results. However, data about possible relationship between the improvement of clinical symptoms and changes of serum cytokines are limited. Seventy-nine patients with moderate to severe AD sensitized to house dust mite (HDM) were enrolled. Fifty-eight patients were treated with ASIT and 11 controls received only symptomatic treatment. The disease activity in AD patients was evaluated by using the patient-oriented eczema measure (POEM) system. Serum interleukin (IL)-4, IL-10, interferon (IFN)-?, transforming growth factor (TGF) ?1, total IgE, HDM-specific IgE (s-IgE) and HDM-specific IgG4 (s-IgG4) were measured before and after 2 years of therapy. The mean patient-oriented eczema measure system (POEM) score of AD patients with ASIT significantly decreased after 2 years of treatment, compared to that in patients without ASIT. After ASIT, the serum levels of IL-10, TGF-?1, IFN-? and s-IgG4 increased, while the level of IL-4 decreased. The change in the POEM score was negatively correlated with changes of serum...
concentration of TGF-β1, s-IgG4 and IFN-γ. Furthermore, s-IgG4 levels were positively correlated with changes in the IL-10 levels. No correlation between POEM score and serum IL-10 or IL-4 was observed. Clinical symptoms and the quality of life of AD with HDM sensitization could be improved after 2 years of ASIT. Changes in serum IL-10, TGF-β1, s-IgG4 and IFN-γ might be considered as biomarkers to assist clinical evaluation of the therapeutic effects of ASIT in patients with AD.