

Cytokine Profile of Patients with Allergic Rhinitis Caused by Pollen, Mite, and Microbial Allergen Sensitization

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Abstract

© 2017 Yury A. Tyurin et al. Allergic rhinitis (AR) is especially prevalent among the population of large cities. Immunologically, the airway epithelium is a region where the population of allergen-presenting cells concentrates. These cells actively express a group of receptors of the innate immune system. A specific cytokine profile is its representation. The study was aimed at evaluating the cytokine profile in patients with seasonal and perennial allergic rhinitis. The cytokine profile of nasal secretion and blood serum of 44 patients with AR was studied. 24 of them had seasonal allergic rhinitis (SAR), and 20 patients suffered from perennial allergic rhinitis (PAR). The patients' age ranged from 4 to 60 years. It was determined in our study that the activation of the GM-CSF production retained in patients with PAR sensitized to mite allergen components (*Dermatophagoides pteronyssinus*). There was a higher production profile of TNF- α and TSLP in nasal secretion in the patients with perennial allergic rhinitis and additional high sensitization to SEs. Sensitization to mold fungal allergen components significantly increases in patients with seasonal allergic rhinitis. They demonstrated high level of sensitization to the *Aspergillus fumigatus* component m3. Thus, along with other clinical trials, the study performed would clarify some aspects of molecular pathogenesis of human allergic rhinitis.

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