

SENSITIZATION TO *STAPHYLOCOCCUS AUREUS* ENTEROTOXINS IN PATIENTS WITH ALLERGIC RHINITIS: CLINICAL CASES

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Abstract. Aim: to describe clinical cases of sensitization to *Staphylococcus aureus* enterotoxins (SE) in patients with allergic rhinitis (AR) and to evaluate the dynamics of specific IgE (sIgE) to SE levels during in different therapeutic approaches, including the use of bacterial lysates (BL) and allergen-specific immunotherapy (AIT).

Materials and methods: analysis of the data from three clinical cases (medical histories, results of clinical and laboratory examinations). The levels of sIgE to SEA, SEB, SEC and TSST-1 were determined by the ImmunoCAP method (Thermo Fisher Scientific, threshold level of positivity is >0.1 kU/L). Bacteriological examination test was performed by standard cultural method with quantitative assessment. Treatment was prescribed in accordance with approved medications instructions.

Results: SE-sensitization (sIgE >0.1 kU/L to one or more enterotoxins) was detected in all three patients with persistent AR and *S. aureus* carriage colonization. Patients with a more severe persistent course, higher total IgE, and polysensitization to perennial allergens demonstrated higher levels of sIgE to individual SEs. In all cases, positive clinical dynamics and a tendency to decrease of sIgE to SE decrease were observed during BL therapy with or without AIT.

Conclusions: SE-sensitization may be detected in patients with AR with persistent carriage colonization of *S. aureus* regardless of the level of total IgE and the profile of sensitization to inhalation allergens. The positive dynamics observed during BL therapy requires further confirmation in controlled studies.

Key words: allergic rhinitis, staphylococcal enterotoxins, sensitization, bacterial lysates, *Staphylococcus aureus*.