PROFILE OF SENSITIZATION TO ALLERGENIC COMPONENTS IN PATIENTS WITH RESPIRATORY ALLERGIC PATHOLOGY

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Abstract. Respiratory allergic diseases, which include allergic rhinitis and bronchial asthma, are a serious medical and social problem worldwide due to their high prevalence and negative impact on the quality of life of the relevant category of patients. The development of respiratory allergy pathology is usually caused by inhaled allergens, which are divided into seasonal: tree, grass or weed pollen, as well as year-round — house dust mites, mold, pet epithelium.

But at the same time, respiratory manifestations of allergic pathology are often combined with its non-respiratory manifestations, which affects the profile of sensitization of patients to various allergens and requires a personalized approach to specific allergy diagnostics and immunotherapy.

The aim of this study was to study the profile of sensitization to the components of various allergens in patients with respiratory allergic pathology.

Materials and methods. The results of a multiplex study (determination of specific IgE to 112 allergenic proteins using the ImmunoCap ISAC test system) in 291 patients who applied to the Clinic of Allergology and Immunology "Forpost" with signs of respiratory allergic pathology were analyzed.

Results. Among the seasonal allergens, the most frequent causes of sensitization were spring tree proteins (PR10) — Bet v1, timothy and meadow grasses Phl p1, and ragweed Amb a1. Among year-round allergens, sensitization to the major allergenic component of cats — uteroglobin Fel d1, major components of house dust mites and mold fungi *Alternaria alternata* was most often detected. Among the allergenic proteins of dogs, sensitization to urinary kallikrein Can f5 was most common. The vast majority of examined patients also had sensitization to food allergens of three main groups of proteins — thermolabile proteins (PR10), lipid transport proteins (LTP), or tropomyosin.

Conclusions. In the structure of sensitization among adult patients, the main components of pollen allergens of spring trees (Bet v1), meadow grasses (Phl p1) and ragweed (Amb a1) play an important role. Year-round allergens include cat allergens (Fel d1), house dust mites (Der p1, Der f1, Der p2, Der f2) and *Alternaria alternata* mold (Alt a1). In patients with hypersensitivity to dog and house dust mite allergens, it is necessary to determine the presence of antibodies to such important components as Can f5 and Der p23. Sensitization to minor components of allergens was detected much less often, however, the appropriate determination of antibodies to them is also important, as it affects the choice of patient treatment tactics. Sensitization to food products in persons with respiratory allergic diseases is due to cross-properties of inhaled and food allergens due to PR10, LTP and tropomyosin molecules.

Key words: hypersensitivity, sensitization profile, allergenic components, cross-sensitization, respiratory allergic diseases.