CLINICAL CHARACTERISTICS OF PATIENTS WITH ALLERGIC RHINITIS AND SENSITIZATION TO ALT A 1

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Abstract

Allergic rhinitis is one of the most common chronic atopic diseases in the world. Depending on the region, according to ARIA 2019, the incidence of AR varies from 10 to 40 % of the adult population. Among the numerous factors that provoke its manifestation, mold fungi of the genus *Alternaria* occupy a special place. Diagnosis of sensitization to *A. alternata* traditionally comes down to the initial skin prick test or molecular allergy diagnostics, which allows determining the level of sensitization and identifying associations with clinical manifestations.

Objective. To determine the clinical profile of sensitization in patients with allergic rhinitis and confirmed sensitivity to the major allergen *A. alternata.*

Materials and methods. A prospective study was conducted with the participation of 80 patients aged 18 to 70 years, who were divided into 2 groups according to the type of treatment (symptomatic or ASIT). All patients were examined clinically and also underwent skin prick tests and molecular allergy diagnostics. The levels of sensitization and their associations with comorbid conditions and clinical manifestations of allergic rhinitis were determined. Statistical analysis was performed in software R version 4.4.2.

Results. Among all patients in the study sample, 51 were male (63,7 %) and 29 were female (36,3 %). The median age was 24.0 [21.0–28.0] years. Most patients (45 patients, 56, 2%) had mild AR, moderate AR was detected in 31 patients (38, 8 %), severe - in 4 (5,0 %). The median Alt a 1 level in the entire sample was 16.3 [6.6-28.7] kU/L. When analyzing the classes of sensitization to Alternaria, 13 patients (16 %) had class 2, 26 (32 %) had class 3, and 41 (51 %) had class 4+.

Conclusions. Patients with moderate and severe AR require screening for comorbid atopic conditions, since the frequency of concomitant asthma in these subgroups reaches 32,3 % and 50,0 %, respectively. Separately, the diagnostic limitations of SPT with extracts should be taken into account, because according to the results obtained, the prick test gave a false negative result in 12,5 % of sensitized patients, and therefore, molecular allergy diagnostics in such cases, especially when sensitization to Alt a 1 is suspected, is mandatory. At the same time, the level of specific IgE to Alt a 1 according to molecular diagnostics has a high prognostic value — the higher its class, the more severe the course of AR and the higher the probability of comorbid atopic pathology.

Keywords: allergic rhinitis, Alternaria, Alt a1, fungi, allergy, molecular allergy diagnostics, skin prick test.

Ukr. Pulmonol. J. 2026;34(3):27–34.

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