

COMPARATIVE STUDY OF SKIN TESTING WITH EXTRACTS OF MITE ALLERGENS FROM DIFFERENT MANUFACTURERS FOR SPECIFIC ALLERGY DIAGNOSTICS IN PATIENTS WITH RESPIRATORY ALLERGIC DISEASES

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Abstract. The aim of our study was to evaluate component composition of domestic diagnostic allergens and the effectiveness of skin prick testing with allergenic extracts from different manufacturers to determine the sensitization to the mite- allergens in patients with respiratory allergic diseases — allergic rhinitis and bronchial asthma. *Materials and methods.* During our study, 40 patients with bronchial asthma and / or allergic rhinitis were examined with two different commercial allergen extracts using skin testing and thermographic evaluation of prick test. The study was prospective, comparative. For skin testing, we used mixed allergens manufactured by MP «Immunolog» (mixed allergen household No. 5) and «Sevapharma» (D-AL prick-test diagnostic «Mixture of mites»). In addition, we evaluated the component composition of allergens produced by MP "Immunologist", in which allergens *Dermatophagoides farinae*, *Dermatophagoides pteronyssinus*, epidermal allergens dogs, cats and pollen allergens rye, birch, ollypredel weights polyacrylamide gel. The obtained electrophoregrams were evaluated using GelAnalyzer 19.1 software. *Results and discussion.* In the main phase of the study 40 people aged 19–42 years were selected, the average age of the group was 31.6 years (95 % CI: 26.6; 41.6), gender distribution — 60.0 % of men and 40.0 % of women. The analysis of the results revealed that the average size of the papules 20 minutes after testing with domestic mixed allergens was 7.20 (95 % CI: 6.73; 7.67) mm (minimum — 5.0 mm, maximum — 11.0 mm), after testing with mixed allergens of Czech production — 6.00 (95 % CI: 5.54; 6.54) mm (minimum — 4.0 mm, maximum — 10.0 mm). Two commercial extracts of mixed-allergen of mite group (produced by «Sevapharma» and «Immunolog») are reproducible and correlate well (directly proportional positive strong correlation, Spearman correlation coefficient value 0.88). Both extracts can be used to diagnose patients' sensitization to mite allergens. However, there is a systematic mean difference of 1.2 mm between the results of the 'Sevapharma' and the 'Immunolog' allergens in the direction of increasing the diameter of the papule after testing with allergens of national production. This should be taken into account when evaluating samples in patients with questionable test results for Sevapharma mite mixed allergens (D = 1–2 mm). As a result of the analysis of the component composition of the allergens it is determined that the allergen *Dermatophagoides farinae* contains a major component Der f1, *Dermatophagoides pteronyssinus* — Der p1, epidermal allergens of the dog — proteins Can f1, Can f2, Can f3, cats — Fel d1, Fel d2, Fel d3, Fel d3 d4, in the pollen allergens of rye there are proteins Sec c5, Sec c8, Sec c38, birch — Bet v1, Bet v2, Bet v3, alder — Aln g1, wormwood — Art ab1. The results of testing with commercial allergen extracts from different manufacturers are inappropriate to compare in any other way than a categorical assessment, as the only requirements for standardization of such extracts are unavailable not only in Ukraine but worldwide. Standardization of allergenic extracts for both diagnosis and allergen-specific immunotherapy is an important component of the progress of modern allergology and the process of developing common approaches to it must be actively continued.

Key words: allergy, allergen extracts, prick test.

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