

SPECTRUM OF SENSITIZATION TO THE MOLECULAR COMPONENTS OF DOG ALLERGENS IN PATIENTS WITH RESPIRATORY ALLERGOPATHOLOGY

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Abstract. The aim of study: to analyze the dependence of the severity of the course of allergic rhinitis (AR) and/or bronchial asthma (BA) in patients with hypersensitivity to dog allergens from sensitization to individual dog allergenic proteins.

Research materials and methods. Blood serum obtained from the venous blood of 102 patients (37 women and 65 men) with a confirmed diagnosis of persistent AR and/or BA and hypersensitivity to dog allergens was used for the study of dog allergenic proteins. Serum was analyzed for the presence of the major dog allergen proteins Can f1 and Can f5 and the minor (cross-linking) protein Can f3 using ImmunoCAP technology (*Thermo Fisher Scientific, Uppsala, Sweden*).

Results. The vast majority of patients with a mild form of persistent AR were monosensitized to one of the main dog allergen proteins Can f1 (50 %) or Can f5 (33 %). Whereas sensitization to 2 proteins occurred in this category of patients much less frequently, as only 12 % of patients were sensitized to Can f1 and Can f5, and 5 % to Can f1 and Can f3 simultaneously. In patients with a moderate and severe form of persistent AR, the sensitization profile was dominated by hypersensitivity to several allergenic components (Can f1 and Can f5), which occurred in 40 % of the examined, and sensitization to 3 components (Can f1, Can f5 and Can f3) of allergens dogs — in 50 % of patients. Among the examined patients with BA, the most frequent proteins in the form of mono- or co-sensitization were the main dog allergens Can f1 and Can f5. Monosensitization to the minor component of Can f3 was not detected in any patient from both groups of subjects.

Conclusions. The vast majority of patients with AR and/or BA and hypersensitivity to dog allergens were sensitized to one or both of the major dog allergens Can f1 and Can f5. As a rule, sensitization to 2 or more allergenic proteins was associated with a more severe course of respiratory allergy pathology. At the same time, special attention should be paid to monosensitization to Can f5 dog urinary kallikrein, which occurred in the examined subjects, because this component is often absent in allergen extracts for skin prick tests and in allergen extracts for allergen-specific immunotherapy (AIT), which can lead to before receiving false-negative test results and ineffective AIT.

Key words: hypersensitivity, sensitization, component resolved diagnostics, animal allergens, allergic rhinitis, bronchial asthma.