

# EFFECTIVENESS OF ALLERGEN-SPECIFIC IMMUNOTHERAPY IN PATIENTS WITH ALLERGIC RHINITIS AND/OR BRONCHIAL ASTHMA WITH HYPERSENSITIVITY TO DOG ALLERGENS. DATA OF THE FIRST YEAR OF OBSERVATION

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**Abstract.** Allergen-specific immunotherapy (ASIT) is the only available treatment method aimed at the pathophysiology of allergic diseases, which can modify the course of the disease. However, in the case of hypersensitivity to dog allergens, data on the effectiveness of ASIT are contradictory.

**The aim of the study:** to study the effectiveness of ASIT in patients with allergic rhinitis (AR) and/or bronchial asthma (BA) and hypersensitivity to dog allergens.

**Materials and methods.** The level of specific IgG4 (sIgG4) to dog extract allergens was determined before and one year after the start of treatment, and the results of a questionnaire on symptom control were analyzed in 15 patients with RA, 3 patients with BA, and 5 patients with a combination of RA with BA

**The results.** After 1 year of treatment with ASIT with a dog dander allergen, 9 out of 15 (60 %) patients with AR reported the absence of symptoms. In addition, these individuals had an increase in the level of sIgG4 to the extract of the corresponding allergen. Only 4 (26.6 %) patients with AR noted the onset of rhinitis symptoms only during long-term contact with dogs and controlled these symptoms with the help of antihistamines. In 2 patients, positive dynamics of symptoms were not observed and the level of sIgG did not change relative to the initial level. In all patients with BA, symptoms were well controlled against the background of basic therapy, and a slight increase in sIgG4-antibodies was registered in all examined patients. Among 5 people with a combination of AR and BA, 3 (60 %) patients noted the absence of rhinitis symptoms and good control of BA with the help of basic therapy, and in 2 (40 %) of the examined, the severity of symptoms of both rhinitis and asthma did not change significantly after undergoing therapy. The average increase in the level of sIgG4 was 2.5 mg/l. The majority of patients with positive test results for sIgG4 were monosensitized to the main component of canine lipocalin Can f1 (8 of 15 patients). As for the patients in whom ASIT was insufficiently effective, all of them (4 persons) were sensitized to both the main dog allergens Can f1 and Can f5.

**Conclusions.** ASIT with dog allergens against the background of basic pharmacotherapy allows to reduce the severity of AR and BA symptoms in 65 % of patients already 1 year after the start of its implementation. Sensitization to the major canine allergen Can f1 is accompanied by better results in controlling the symptoms of these diseases. The level of sIgG4-antibodies is a reliable diagnostic marker of the effectiveness of ASIT with dog allergens already 1 year after the start of treatment. The question of the effectiveness of ASIT with dog allergens requires further study with an analysis of its results 3-5 years after the start of treatment.

**Key words:** allergic rhinitis, bronchial asthma, hypersensitivity, dog allergens, allergen-specific immunotherapy.