Atopy and multisensitizations in patients with severe asthma.

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Introduction

Asthma is a chronic inflammatory airway disease. With prevalence estimated at 8% in European adults asthma is an important society problem. Fortunately, with modern inhalation drugs it affects mostly quality of life with low risk of death. Still, 6% of patients experience severe asthma. These patients with high symptom intensity and frequent exacerbations present a challenge for allergologists. They allergic vs. non-allergic profile might be different from standard asthmatic group.

Material and methods

Twenty patients (age 22– 67) with severe asthma according to GINA were enrolled. They experienced at least 2 exacerbations during past year and had uncontrolled asthma despite high inhaled steroid use. Microarray serum Alex test (allergen-specific IgE to 295 extracts and components) has been performed together with Complete Blood count. Total IgE concentration detection threshold was 20 U/ml.

Results

The most prevalent allergen was grass pollen (30%). Food sensitizations were discovered in 25% of patients. Interestingly, in 5 out of 20 patients sensitization to insect venom was observed, with only one reporting allergy. In total, 12 (60%) patients had allergic asthma. Microarrays were able to detect additional inhaled alergen sensitization in 8 (40%) patients. The most prevalent new detection were grass pollen and fungi. Fifty-five percent of patients had increased blood eosinophilia (over 0.35 G/l). According to polish guidelines, 30% of patients would not qualify to biological treatment (lack of perennial allergen, low eosinophilia)

Conclusions

Allergen microarrays is a useful tool in thorough diagnosis of inhaled allergen sensitizations in patients with severe asthma. High presence of insect venom sensitizations might show danger of post-stinging anaphylaxis in severe asthma. Also, the results point out a need of new biologicals development, since high number of patients cannot receive currently available therapies.