

THE USE OF COMPONENT DIAGNOSTICS TO CLARIFY THE STRUCTURE OF SENSITIZATION IN PATIENTS WITH BRONCHIAL ASTHMA AND ALLERGIC RHINITIS LIVING IN THE SOUTH OF RUSSIA

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Background

The patients, who have asthma (As) accompanied with allergic rhinitis (AR), oftener suffer from As exacerbations and more frequently have to go to polyclinics and hospitals because of As than asthmatic patients without AR, as a rule, the more severe rhinitis, the more severe the course of As itself.

Aim

Identification of the level of sensitization to cause-significant allergens in patients with a combination of As and AR living in the South of Russia.

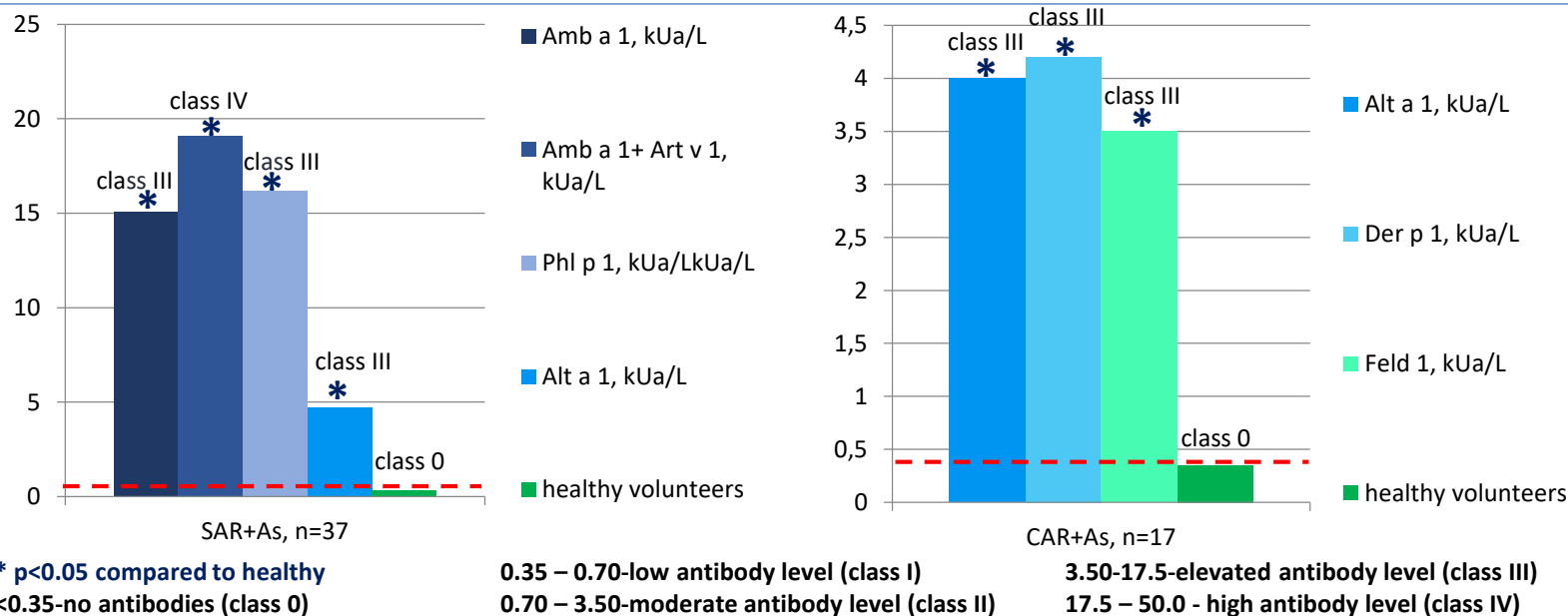
Methodology

A complex study of 54 patients – 33 (61,1 %) females and 21 (38,9 %) males - with AR: seasonal (SAR) n=37 (68,52%) and chronic (CAR) n=17 (31,48%) and moderately severe asthma at the age of 19-54; healthy volunteers (control group, n=30). The methods were as follows: physical methods of examination, spirometry («SPIROSFT-3000»), asthma control questionnaire (ACQ-5), endoscopic study of the nasal mucosa, molecular diagnostics of allergen extracts by Phadia IDM «ImmunoCAP-100». For statistical analysis of the obtained data MS Office Excel software was used.

Tab. Clinical characteristics of patients (n=54)

Clinical characteristics, %	
Itching in mucosal coatings of eyes and nose	100
Nasal watery discharge	100
Periodical nasal stuffiness	100
Difficulty breathing	100
Oral allergy syndrome	12,96
Partial control of asthma*	100
Burdened with a hereditary background of allergic diseases	38,88
SAR	68,5
CAR	31,48
Dryness of the nasal mucosa	31,48
Hyposmia	31,48
Hyperplasia of the lower nasal conch	31,48

***partial control of asthma:** ACQ-5: 2,75±0,5 points; FEV1 (69,0±3,2%); number of exacerbations (>1 / year); relieving asthma attack more than 2 times a week



Results of molecular diagnostics were as follows: high titres of Amb a 1 were found out in 12 patients with SAR (32,4%) (15,1±2,5 kUa/L), 8 cases (21,6%) had a combination of Amb a 1 + Art v 1 (19,1±1,92 kUa/L and 17,1±0,76 kUa/L), respectively, 5 cases (13,5%) - Phl p 1 (16,2±2,44 kUa/L) and Alt a 1 (4,7±1,42 kUa/L) - the main allergen of Alternaria associated with the development of asthma. 17 patients with CAR underwent endoscopic of their nasal mucosa that dryness, hyposmia, hyperplasia of the inferior nasal concha as well as high values of Derp 1 (4,2±1,4 kUa/L) in 6 cases (35,3%), Alt a 1, n=4 (23,5%) (3,8±1,6 kUa/L) and of Feld 1 (3,5±1,4 kUa/L) in 3 (17,6%) ones.

Conclusion

Molecular diagnostic procedures along with standard methods of study of AR and As make it possible to understand the structure of sensitization, improve control over As, alleviate signs and symptoms of AR as well as reduce the necessity of provocative testing and make it possible to provide ASIT on a reasonable basis.