

NEW POSSIBILITIES IN DIAGNOSIS OF ASPIRIN HYPERSENSITIVITY IN PATIENTS WITH ASTHMA AND NASAL POLYPOSIS

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Abstract

Routine diagnosing of aspirin triad (rhinosinusitis, asthma and aspirin hypersensitivity) is based on clinical evidence, since available laboratory tests for acetylsalicylic acid intolerance are of low diagnostic value. This is explained by the fact that all these tests use to detect allergy, while aspirin hypersensitivity is currently considered to be caused by non-immune mechanisms, associated with arachidonic acid metabolism disturbances.

Aim was to study the diagnostic possibilities of aspirin hypersensitivity detection in patients with chronic sinusitis and concomitant asthma, based on detection of arachidonic acid in exhaled air condensate.

Materials and methods. 45 patients 25 to 65 years old with diagnosis of aspirin triad and 10 healthy subjects were enrolled into study. All patients were tested for arachidonic level in exhaled air condensate, using ECoScreen device (Erich JAEGER GmbH, Germany). To reveal differences between study groups a single factor dispersion analysis, using Tukey criterion, was used.

Results. A significant differences of arachidonic acid concentration in fatty acid spectrum of exhaled air concentrate were revealed between study and control groups.

Conclusion. Data, generated in current study, open new possibilities in development of diagnostic method for aspirin hypersensitivity detection in patients with chronic polypous rhinosinusitis and asthma, based on determination of arachidonic acid in exhaled air condensate. In contrast to provocation aspirin test this method would be absolutely safe without any contraindications.

Key words: aspirin hypersensitivity, asthma, nasal polyposis, exhaled air condensate, arachidonic acid.

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