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AIRWAY HYPERRESPONSIVENESS AND LABILITY IN CHILDREN WITH ATOPIC AND NONATOPIC PHENOTYPES OF BRONCHIAL ASTHMA

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Relevance. One of the important aspects of low asthma control is determined by its phenotypic heterogeneity. The question of differentiation asthma phenotypes in childhood, what determined the particular aspects of the disease and individual treatment approaches, is a major controversial problems in allergology.

Aim: to evaluate the diagnostic value of the indicies of bronchial hyperresponsiveness and lability in school-age children to confirm atopic asthma phenotypes to nonatopic variant.

Tasks:

1 To evaluate the indicies of bronchial hyperresponsiveness and lability in school-age children with atopic and nonatopic asthma phenotypes.

2 To evaluate the diagnostic value of bronchial hyperresponsiveness and lability indicies due to positions of clinical epidemiology.

Material and methods. It was examined 64 children with atopic (38 patients) and nonatopic (26 schoolchildren) phenotypes of bronchial asthma. To identify the degree of atopy has been used anamnestic atopic status and skin allergic tests. Bronchial lability was determined according to recommendations by assessing their response to dosed physical load and short-acting β2-agonists inhalation. Investigation of bronchial hyperresponsiveness was performed using standardized spirometric inhalation histamine test.

Results. It was found that children with atopic asthma is characterized by a tendency to expressive bronchial lability (23,2±2,7% versus 18,1±2,8%, $p<0,05$), mostly due to dilation response to short acting β2-agonists (11,8±1,9% versus 7,6±1,9%, $p<0,05$), and expressive airway hyperresponsiveness to histamine (1,3±0,3 mg/ml in patients of the first group versus 2,2±0,8 mg/ml of the representatives of the comparison group, $p<0,05$).

However, in the verification of atopic asthma phenotype in children, bronchial lability index (>20%) and the bronchodilation index (>30%) were specific (84% and 96%, respectively) with low sensitivity (26% и 42% respectively).

Conclusions. Markers of nonspecific bronchial hyperreactivity in confirmation the atopic phenotype relative nonatopic asthma can use only in complex with other clinical, laboratory and instrumental indicators that reflect the main characteristics of the disease.