

# ADAPTATION DISTURBANCES AS A RISK FACTOR OF MODERATE AND SEVERE FORMS OF ASTHMA IN CHILDREN

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## *Abstract*

**Aim:** to determine possible relationship between the development of severe asthma in children and the level of adaptive capability in children.

**Materials and methods.** 261 patients with asthma 3 to 18 years old were enrolled into the study. Allergy history was collected using questionnaires, administered to children and their parents. Medical records were reviewed and both clinical and instrumental examinations were conducted. A level of functional adaptation of the organism (adaptation potential, the index of functional changes) was evaluated. The condition of the autonomic nervous system using Kerdo index as risk factor of severe asthma in children was assessed.

**Results and discussion.** The level of adaptation capacity in children is a risk factor for the development of moderate to severe asthma. Adaptive stress is a risk factor for the development of moderate asthma in children (46.9 %). Severe asthma is 1.9 times more prevalent in children with lower adaptation capacity and unsatisfactory adaptation (70.0 %). Severe asthma develops on the background of failure of adaptation and disregulatory changes in the autonomic nervous system in form of vagotonia (based on Kerdo index).

**Conclusions.** Failure of adaptation and disregulatory changes in the autonomic nervous system in form of vagotonia (according to Kerdo index) are the risk factors of moderate and severe asthma in children. Kerdo Index may be used as one of the prognostic criteria of severe asthma in children.

**Key words:** asthma in children, risk factors of severe asthma, adaptation condition.

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