



Complex on the basis of the gastroenterology department of the regional children's clinical hospital (Chernivtsi) examined 162 patients with inflammatory diseases of upper gastrointestinal tract (IDUGIT) children aged 7-18 years, which are divided into three clinical groups: Group I - 44 children with IDUGIT associated with CagA (+) H.pylori and FA, group II - 90 children with IDUGIT associated with CagA (+) H.pylori without HA, III group - 28 children with IDUGIT, not associated with CagA (-) H.pylori and FA.

The results of the study of genealogical anamnesis showed that family burden of IDUGIT in general occurred in 65.9% of children in group I, which is probably more common compared with group III (39.3%,  $\chi^2 = 4.91$ ,  $p = 0.027$ ), but somewhat less frequently than in group II (76.7%,  $\chi^2 = 1.74$ ,  $p = 0.188$ ). Statistical probability was found between the indicators of groups II and III ( $\chi^2 = 13.67$ ,  $p < 0.001$ ).

An analysis of the nature of family burden conducted in relation to IDUGIT in children of comparison groups by line of inheritance. It was found that both in group I (58.6% vs. 27.6%,  $\chi^2 = 4.99$ ,  $p = 0.034$ ) and in group II (52.2% vs. 31.9%,  $\chi^2 = 5.83$ ,  $p = 0.016$ ) prevailed in the maternal line than the paternal. In the third group, the probable difference between the indicators was not found, both maternally and paternally. In the analysis of the genealogical anamnesis for gastrointestinal diseases among the comparison groups, the genealogical burden index for IDUGIT (GI IDUGIT) was calculated. It was found that in children of group I with a burdened hereditary history was probably less likely to register low (up to 0.1 um.units) - in 10.3% of cases and high ( $\geq 0.4$  um.od.) - in 24.1% persons GI IDUGIT in contrast to the frequency of the average level of the indicator ( $> 0.1 - < 0.4$  um.od.) - in 65.5% of patients,  $p < 0,05$ ). In children of group II, the high GI IDUGIT index occurred probably more often (50.7%) than the average (33.3%) and low (15.9%),  $p < 0.05$ . Regarding the GI IDUGIT indicator in children of the III group, among them only 1 (9.1%) person had a high GI, medium - in 27.3% of children and low - in other patients (63.6%). Comparison of the frequency of GI IDUGIT between groups of subjects revealed a probable predominance in children of group I relative to groups II and III of persons with a medium genealogical index ( $p < 0,05$ ), in group II - with a high ( $p < 0,05$ ), in group III - with low ( $p < 0.05$ ).

Thus, the analysis of family burden for FA by the line of inheritance showed predominance in all groups of comparison of burden on the maternal line. Thus, in group I in 52.9% of respondents FA was found in relatives of the mother, which is probably higher than in the paternal line (17.7%),  $pf < 0.05$ ; both lines of FA were diagnosed in 29.4% of cases. In 58.8% of group II children, maternal relatives indicated the presence of HA, 29.4% - on the paternal line and 11.8% - on both ( $pf > 0.05$ ). In children of group III with the same frequency, FA was registered in relatives on the paternal and both lines (18.2% each), which is probably less than the frequency on the maternal line - 63.6%,  $pf < 0.05$ .

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## **DYNAMIC ANALYSIS OF BRONCHIAL HYPERSENSITIVITY IN CHILDREN WITH ATOPIC BRONCHIAL ASTHMA**

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The aim of the research is to study the dynamics of 5-year follow-up indicators of bronchial hypersensitivity to bronchospasmogenic stimuli in children with atopic bronchial asthma.

To achieve the goal of the work in the pulmonary department of the Regional Children's Clinical Hospital in Chernivtsi, 103 school-age patients with bronchial asthma were examined. The first (I) clinical group consisted of 81 children in which atopic bronchial asthma was verified (average age of patients  $10.5 \pm 0.39$  years, 74.0% of boys, 42.0% of rural residents), and the second (II) group - 22 of their peers with non-atopic form of the disease (mean age of patients  $9.6 \pm 0.80$  years, 82.0% of boys, 41.0% of rural residents). According to clinical characteristics, clinical groups were comparable.

It was found that in patients with non-atopic form of bronchial asthma in the dynamics of the disease there is a decrease in bronchodilator response to inhalation of bronchospasmolytics, and,



accordingly, a decrease in bronchial lability. Thus, at the beginning of observation, the index of bronchodilation in children of clinical group I was  $12.2 \pm 1.33\%$ , and in patients of group II -  $12.1 \pm 2.43\%$ ,  $p > 0.05$  (index of bronchial lability, respectively,  $19.2 \pm 1.91\%$  and  $13.1 \pm 3.43\%$ ,  $p > 0.05$ ). After three years of observation, the bronchodilation index reached  $11.6 \pm 1.76\%$  in children of group I and  $6$  in representatives of group II, respectively,  $4 \pm 1.85\%$  ( $p < 0.05$ ) (bronchial lability index, respectively,  $19.1 \pm 2.34\%$  and  $8.0 \pm 2.50\%$ ,  $p < 0.05$ ). After five years of observation, bronchodilation in children of group I was  $11.7 \pm 1.82\%$  and in patients of group II -  $7.1 \pm 1.44\%$  ( $p < 0.05$ ) (bronchial lability index, respectively,  $22.3 \pm 2.16\%$  and  $11, 2 \pm 2.83\%$ ,  $p < 0.05$ ).

It should be noted that if at the beginning of the observation the most pronounced indicators of bronchospasm were recorded in patients of clinical group II on average at 3.9 minutes after exercise, then in the dynamics of the disease, these results were 9.5 minutes after 3 years and 10.0 minutes after 5 years, which indicates the formation of the phenotype of exercise-induced bronchial asthma in this cohort of patients. These indicators in patients of clinical group I were kept at approximately the same level and reached 3.9, 4.5 and 4.6 minutes, respectively (in all cases  $p > 0.05$ ). At the same time, the provocative concentration of histamine, which led to a decrease in forced expiratory volume in the first second by 20% or more, was registered at the beginning of the observation in clinical group I at 2.48 mg / ml, and in children of group II - 5, 89 mg / ml ( $p > 0.05$ ), and after five years - 2.25 mg / ml and 3.18 mg / ml, respectively ( $p > 0.05$ ).

Thus, in patients with atopic bronchial asthma compared with patients with non-allergic form of the disease, increased hypersensitivity of the bronchi to histamine is more common. however, signs of exercise-induced bronchial asthma phenotype and decreased bronchodilation are probably less common, usually indicating the possible formation of bronchial remodeling.

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## **BLOOD PRESSURE IN CHILDREN AND ITS BIORITHMOLOGICAL FEATURES DEPENDING ON THE CHILD CHRONOTYPE**

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In the medical literature, the term "epidemic of non-communicable diseases" is increasingly used to refer to a pathology that is rapidly spreading in the world, progressing and covering a significant percentage of the population. Arterial hypertension belongs to this class of diseases and is becoming highly important for modern pediatric cardiology. In recent years, approaches to the diagnosis and treatment of high blood pressure (BP) in children have been agreed internationally. The European Society of Cardiology and the Ukrainian Association of Cardiologists recommended during the examination of children to use methodological approaches, which are based not only on office BP measurement but on the results of ambulatory blood pressure monitoring (ABPM) too. The analysis of the daily profile of blood pressure is based on its division into constant (time average) and variable components. The constant component in turn depends on the chronotype of the child, and the variable component is divided into relatively slow, regular and stable fluctuations (circadian rhythm) and random changes in blood pressure. The most important and reliable indicator of the circadian rhythm of blood pressure is its nocturnal decrease in the percentage of the daily value (circadian index).

The goal of the study was to assess peculiarities of BP in healthy children with normal weight in comparison with obese patients. In total 78 children of age 10-16 years were examined, 28 with overweight and control group of 50 children without it. The mean age of the subjects was  $14.7 \pm 0.17$  years, the ratio of boys and girls - 52.7% and 47.3%. In patients, the general chronotype (morning or evening) was established by reduced version of Horne-Ostberg morningness-eveningness questionnaire and ABPM was performed. The total number of measurements per day were 38 times (28 times during the day and 10 at night). We determined the average daily, average day time and average night time values of systolic and diastolic BP, as well as the time index of elevated BP during the day and night, the degree of nocturnal BP decrease and the corresponding classification of patients according to this indicator.