



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.

Nechytailo Y.M.

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

*Department of Pediatrics, Neonatology and Perinatal Medicine
Bukovinian State Medical University*

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 ± 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.



Already office measurements register differences between groups of surveyed children. In patients with obesity compared with the control group blood pressure was significantly higher. The systolic BP was 134.6 ± 2.4 mm Hg comparing with 125.0 ± 4.1 mm Hg ($p < 0.05$), diastolic BP – 81.7 ± 2.5 mm Hg against 77.1 ± 2.7 mm Hg. The most indicative was the average BP (calculated as diastolic BP + 1/3 pulse BP) – 99.3 ± 2.1 mm Hg against 93.6 ± 2.0 mm Hg ($p < 0.05$). The level of BP correlated with children's heart rate. Thus, heart rate correlated with systolic BP ($r = 0.32$, $p < 0.05$), diastolic BP and average BP ($r = 0.38$, $p < 0.05$), but had no associations with pulse BP. At the same time, correlations were observed not only with absolute BP figures, but also with blood pressure indicators standardized by age-sex-height percentiles and with BP during night time.

Along with the difference between the groups, there was a difference depending on the child's chronotype, which concerned those children whose office blood pressure was higher than the 90th percentile. Thus, in children with evening chronotype systolic BP averaged 131.9 ± 1.1 mm Hg, against 128.9 ± 1.2 mm Hg in morning carriers ($p < 0.05$), diastolic BP in children with evening chronotype was also elevated, but without a significant difference with the morning type. The level of BP difference depends on night sleep quality, anthropometric data etc. In obese children, we noted a difference within the group depending on the chronotype - SAT in persons with the morning type was 137.4 ± 1.2 mm Hg, in that time as in the evening - 140.9 ± 4.7 mm Hg. In ABPM data average day time and night time values of SBP were higher in children with evening chronotype too. Thus, when assessing the level of blood pressure in children should also be considered belonging to the chronotype.

Ortemenka Ye.P.

**DIAGNOSTICAL VALUE OF SOME INFLAMMATORY BLOOD MARKERS FOR THE
DIAGNOSIS OF ACUTE INFLAMMATORY PROCESSES OF THE LOWER
RESPIRATORY TRACT**

*Department of Pediatrics and Children Infectious Diseases
Bukovinian State Medical University*

Verification of acute infectious inflammatory processes of the lower respiratory tract and indication for antibiotic therapy are often based on the evaluation of the activity of inflammatory blood markers, but the data on their informative value in the diagnosis of acute pneumonia and bronchitis in children are controversial and conflicting.

The aim of this survey was to study the diagnostic value of some inflammatory blood markers in the verification of uncomplicated community-acquired pneumonia and acute obstructive bronchitis with the purpose of management's optimization of infectious inflammatory diseases of the lower respiratory tract in children.

At the pulmonological department of the Regional children's clinical hospital in Chernivtsi city 75 children have been examined. In the I clinical group 51 patients with diagnosis of "community-acquired pneumonia" (CAP) were enrolled, and the second (II) group consisted of 24 children with acute obstructive bronchitis (AOB). According to the main clinical characteristics, the groups of comparison have been comparable. These survey results have been analyzed by the methods of clinical epidemiology, considering the sensitivity (Se) and specificity (Sp) of diagnostic tests.

The analysis of the obtained data has showed that in the patients with CAP such common inflammatory blood markers (leukocytosis, relative neutrophilosis, shift of leukocyte formula to the left, elevation of erythrocyte sedimentation rate (ESR) or high level of C-reactive protein (CRP) are characterized by low sensitivity (Se in range between 11% and 63%) indicating that they are inadvisable for use as the screening tests for the verification of pneumonia. At the same time, it has been shown that these inflammatory blood markers are characterized by sufficient specificity (in the range from 75% to 93%) in the verification of pneumonia only under their significant increase (total leukocyte count $> 15.0 \times 10^9$, ESR > 10 mm/h and CRP level in blood > 6 mg/ml), indicating that they are relevant enough, but only for confirming inflammation of the lung parenchyma.