

0.05) and exacerbation frequency ($r = 0.51$, $p < 0.05$). We have analyzed the prognostic role of elevated total IgE in blood serum and IL-4 and -5 concentrations, whose biological effect was associated with regulation of immunoglobulin E synthesis and support of eosinophilic inflammation in the respiratory tract in the child patients, depending on their atopic status. It has been found that the serum total IgE concentration in the groups exceeded the healthy children population norm (120 IU/ml) and was 701.3 ± 56.0 IU/ml in the schoolchildren with the atopic phenotype of PBA while it was 491.7 ± 36.2 IU/ml ($Pt < 0.01$) in Group II. At the same time, IgE concentrations with more than 125.0 IU/ml were found in 82.6% of Group I cases and 68.7% of Group II cases ($P > 0.05$), with clinical and epidemiological risk indices of atopy: CI = 2.16 (95% CI 1.11-4.22), OR = 1.53 (95% CI 1.3-1.79), AP = 0.19. Besides, a strong probable correlation between the concentration of IL-5 and IgE ($r = 0.9$; $p < 0.05$) in the blood serum of children with the atopic asthma phenotype has been found.

However, the average concentration of IL-4 in blood serum was 8.6 ± 1.8 pg/ml in the children with APhBA, and 12.9 ± 3.6 pg/ml ($Pt > 0.05$) in the patients of Group II; the average concentration of IL-5 in Groups I and II was 21.3 ± 17.2 pg/ml and 29.6 ± 9.5 pg/ml ($Pt < 0.05$) respectively. However, despite the lack of significant differences in the average serum concentrations of these cytokines in children with different inflammatory phenotypes of BA, elevated levels of IL-5 (more than 1.2 pg/ml) were recorded in almost all (94.7%) cases of Group I and only in 87.5% cases of Group II ($P > 0.05$), which increased the risk of atopy as follows: SS = 2.55 (95% DI 0.9-7.34), ORS = 1.74 (95% DI 1.6-1.91), AR = 0.22.

Schoolchildren with atopic persisting bronchial asthma have the most significant skin sensitization to household allergens (house dust, pillow down and feathers, etc.), and the least sensitization to food allergens. Family history with allergic pathology increases the risk of atopic asthma phenotype by 1.85 times and correlates with inadequate control of the course of the disease in the form of nocturnal symptoms and the need for rapid therapy.

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THE EFFECT OF LONG-TERM USAGE OF INHALED CORTICOSTEROIDS ON PHYSICAL DEVELOPMENT OF CHILDREN WITH BRONCHIAL ASTHMA

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The low adherence of children with bronchial asthma (BA) to long-term control treatment is partly associated with the patients' fear of obesity and growth retardation due to the use of inhaled corticosteroids (ICS).

The aim of the study was to evaluate the physical development of children who have had background long-standing controller therapy of asthma by low/medium or high-dose ICS.

At the pulmonological department of the Regional Children's Clinical Hospital in Chernivtsi city, 50 school-aged patients with persistent BA have been examined. The anthropometric examination has been performed for all patients. The assessment of physical development with the calculation of the body mass index (BMI) of patients has been done by a centile method, taking into account the age of the patients. In the Ist clinical group, 21 patients under the long-term usage of low/medium doses of ICS were enrolled, and the second (II) group consisted of 29 patients who used long-lasting high-dose ICS to control asthma. These survey results have been analyzed by parametric (Pt , Students' criteria) and nonparametric (P , Fisher's angular transformation) methods of biological statistics, and by the methods of clinical epidemiology, considering the odds ratio (OR) and attributive (AR) risks of implementation of the event with the estimation of their 95% confidence level (95% CI).

Analysis of the data has shown that a patients' height was, on average, 50±4,4 percentile, which was corresponding to the average age-related normative values. At the same time, height below (10-25 percentiles) average regarding the age was recorded in 12% of all examined patients, but a low (5-10 percentile) or very low (<5 percentiles) height were noted in only 4 patients (6% and 2% respectively among all patients). Meanwhile, it has been found that the average BMI in the

examined patients was $20,4 \pm 0.5$ kg/m², which was corresponding to the normostenic structure. Meanwhile, only 5 of examined patients (10%) were overweight (BMI > 25 kg/m²), and only one person out of them (2%) had clinically significant (BMI > 30 kg/m²) obesity.

From the perspective of evidence-based medicine, the negative impact of the long-term use of ICS, including high doses, on the growth and the body weight of asthmatic children and adolescents had not been confirmed. Thus, the AR of excessive (BMI > 25 kg/m²) body weight was 24% and the OR=3.2 (95% CI: 0.33-30.94), but at the same time the AR of short stature (height <10 percentiles) was 18% and the OR=2.3 (95% CI: 0.22-23.88).

Thus, prolonged background therapy by low/medium or high-dose ICS had not had a statistically significant influence on the physical development of school-aged asthma patients.

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THE STATE OF THE CARDIOVASCULAR SYSTEM IN ADOLESCENTS WITH HYPOTHALAMIC OBESITY

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Hypothalamic syndrome of puberty (HSP) is a symptom-complex of neuroendocrine disorders, expressed by polyglandular dysfunction with disorders of metabolic trophic processes, puberty, cardiovascular, nervous system and occurs as a result of hypothalamic dysfunction.

The aim of our study was to investigate the functional state of the cardiovascular system in children with hypothalamic obesity.

We examined 76 children with hypothalamic obesity (34 girls (44.7%) and 42 boys (55.3%)) who were hospitalized in the endocrinology department of the Chernivtsi Regional Children clinical hospital (RCCH). The average age of the patients was 15.4 ± 0.45 years (11-18 years). The parameters of physical development, state of endocrine, cardiovascular systems in children, state of cerebral vessels with this pathology were studied. 76.3 children lived in the districts of the region and 23.7% in the city of Chernivtsi.

Adolescents with hypothalamic obesity most often complained of excessive body weight (92.1%), increased appetite (89.5%), headache (85.5%) of different intensity, increased blood pressure (89.5%) (10.5%), cardialgia (47.4%), irritability (39.5%). On objective examination, there was uniform obesity of different degrees (overweight, 26.3%; grade I, 40.8%; grade II, 32.9%).

Striae occurred on the hips in 52.6% of children, on the arms in 23.7%, on the chest in 19.7%, and on the back in 6.6% of children. Acrocyanosis occurred in 36.8% of children. Red dermographism was detected in 89.5% of cases, occurring for 2 sec and disappearing for 9 sec. Hyperhidrosis of the palms and feet was found in 76.3% of cases.

The pulse was synchronous on both hands, in all subjects. It was fast, high, of low tension and filling in 28.9% of the subjects. In 71.1% of investigated subjects, the pulse was of usual filling, tension, size and form.

Children's HR was mostly normal in 71.1%, tachycardia was observed in 28.9%. The apex thrust on palpation was within the age norms. In 89.5% of cases, its area was 2 cm³, of average height and strength. Blood pressure level was normal at the moment of examination in 89.5% of cases, but with episodic elevations, and in 10.5% of cases there was the 1st-degree persistent arterial hypertension.

On biochemical examination, cholesterol levels in 36.8% corresponded to the upper limit of the norm, and 28.9% revealed hypercholesterolemia (5.6-6.0 mmol/l). Elevation of high-density lipoproteins was detected in 34.3% of children. Glucose tolerance test: flattened glycemc curve occurred in 23.7% of cases, and impaired glucose tolerance was detected in 15.8% of cases. The blood insulin level was 52.4 ± 0.3 mIU/ml in 15.8% (the norm was 10-20 mIU/ml), in 23.7% the level was 31.8 ± 0.3 mIU/ml, and in 60.5% of patients, the level was 17.2 ± 0.3 mIU/ml.

All patients underwent ECG. All cases had sinus rhythm, and 85.5% had sinus brady or tachyarrhythmia. Amplification of biopotentials in the left ventricle was detected in 19.7% of cases.