

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.

Left bundle branch block was observed in 10.5% and right bundle block in 7.9%. Respiratory arrhythmia was detected in 52.6% of cases.

Treatment was performed according to the Protocol No. 254 of the Ministry of Health of Ukraine dated April 27, 2006.

So, most adolescents with hypothalamic obesity have obesity of the gynoid type, hyperinsulinism is noted, and persistent arterial hypertension, a predictor of metabolic syndrome development, was found in 10,5% of cases.

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SPIROMETRIC INDICES TO PREDICT THE SEVERITY OF VIRUS-INDUCED ASTHMA EXACERBATION

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Bronchial asthma (BA) remains a topical medical and social problem. In terms of prevalence, severity, issues in diagnosis, treatment and rehabilitation, BA is the leading disease of the 21st century. A huge economic impact directs health efforts to improve management of the disease and the quality of life of patients and their parents.

Airway hypersensitivity to direct and indirect (including infectious agents) triggers with the appearance of typical symptoms of the disease (wheezing, breathlessness, non-productive cough, etc.) is a pathomorphological consequence of chronic inflammation. The management of exacerbation of bronchial asthma changed due to the COVID-19 pandemic. International documents recommend limiting unscheduled visits to medical establishments during asthma exacerbations and adhering to remote management during the asthma attack.

The aim of the study was to analyze dynamic spirometric indices to predict the severity of asthma attacks and improve patients' management.

On the base of the pulmo-allergological department of the Chernivtsi Regional Children Clinical Hospital, 47 patients hospitalized for virus-induced asthma exacerbation were observed. Depending on the severity of the obstructive syndrome, two groups of monitoring have been formed. The first (I) group included 22 patients with mild to moderate symptoms of BA, the second (II) clinical group formed 25 patients with severe episodes of asthma attack. No significant differences by sex, age, duration of the disease have been shown, indicating that clinical groups comparison were formed correctly.

The spirometric study included the calculation of bronchospasm indices (IBS) after dosed physical exercise and bronchodilation (IBD) after inhalation of a short-acting β_2 -agonist at the level of small, medium and large bronchi. The prognostic value was evaluated taking attributive (AR), relative risks (RR), odds ratio (OR) and their 95% confidence intervals (CI).

It was found that among patients of the first clinical group, the average rate of IBD at the level of the small diameter of airways was significantly lower compared with patients with severe asthma exacerbation ($15,7\pm 4,5\%$ versus $53,1\pm 4,2\%$, $< 0,05$). Average values at the level of the medium and proximal airways were also lower in children of the first clinical group although the difference wasn't significant ($19,0\pm 4,3\%$ versus $24,3\pm 4,3\%$ at the level of medium bronchi, $8,0\pm 3,7\%$ versus $11,4\pm 4,0\%$ at the level of large bronchi, $> 0,05$). There was no significant difference in IBS among patients of the I and II clinical groups: $16,8\pm 4,2\%$ versus $16,6\pm 4,4\%$ in distal, $21,4\pm 4,2$ versus $22,8\pm 4,1$ in medium, and $11,5\pm 3,8\%$ versus $11,8\pm 4,0\%$ in proximal airways, $> 0,05$). The IBD at the level of small airways with a cut-off point of 45.0% and higher was characterized by an AR of more severe exacerbation within 38,4%, RR – 2,9 (95% CI 1,3-6,9) and OR – 8,2 (95% CI 3,1-27,4).

The dynamic spirometric parameters in particular the index of bronchodilation predict the severity of virus-induced asthma exacerbation in children. Index of bronchodilation higher than 45,0% is a prognostic factor of more severe attack of the disease. Patients with similar spirometric characteristics require more aggressive therapy for bronchial asthma exacerbation including earlier administration of systemic glucocorticosteroids.