

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.