

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
ВИЩИЙ ДЕРЖАВНИЙ НАВЧАЛЬНИЙ ЗАКЛАД УКРАЇНИ  
«БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»**



## **МАТЕРІАЛИ**

**100 – ї**

**підсумкової наукової конференції**

**професорсько-викладацького персоналу**

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**MODERN OPPORTUNITIES FOR INCREASING  
THE CONTROL OF BRONCHIAL ASTHMA IN SCHOOL-AGE CHILDREN**

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Bronchial asthma is one of the most common diseases in the world with a continuous growth of the number of patients, especially among children. According to epidemiological studies conducted in different countries, the population suffering from BA ranges from 2 to 30 % of children.

The lack of anti-inflammatory therapy effectiveness in some cases necessitates the administration of new drugs in children which can improve the course of the disease.

From this perspective, the drug Nucleinat whose administration in adults significantly increased the controllability of asthma should be considered promising.

Considering this fact the objective of our scientific study was to increase the controllability of asthma in school-age children by using Nucleinate as a component in the complex therapy.

To achieve this purpose we have conducted our study following the two main tasks: to analyze the dynamics of spirometry examination according to the indices of FEV<sub>1</sub> (forced expiratory volume for the first second) and PEF (peak expiratory flow rate) in children in both clinical groups; to analyze the sum of the points of children's clinical condition at a school-age.

In the Pulmonology Department of Chernivtsi Regional Children's Clinical Hospital 45 school-age children with asthma in the remission period were comprehensively examined. Nucleinat was given at the dose of 0.25 g per day for 21 days in the complex of basic therapy prepared in accordance with the International Consensus for the treatment of asthma in children.

All the children underwent a baseline assessment of asthma control before and after the course of anti-inflammatory therapy.

The effectiveness of the control therapy was analyzed according to the sum of the points of the children's clinical state (the sum of scores I, maximum - 28) and the dynamics of the spirometry examination (the sum of scores II, maximum - 8), in such a way that given the deterioration in the control of the BA the score increased. Hypersensitivity of the bronchi was assessed according to the provoking dose of histamine, which reduces the forced expiratory volume in the first second by 20% (PC<sub>20H</sub>), and the cumulative dose (PD<sub>20H</sub>) using serial dilutions of histamine. The obtained results were analyzed by variation statistics methods using statistical software StatSoft Statistica v5.0.

Administration of Nucleinat with basic anti-inflammatory therapy in children decreased a part of children who needed frequent use of short-acting  $\beta_2$ -agonists (an average of 4-7 doses per week). So, before the start of treatment, the need was indicated in 46.6% of patients, and after only 22.2% of patients ( $P < 0.05$ ). At the same time, school-age children had a significant decrease in the score of the clinical state of children (from  $15 \pm 0.8$  points before treatment to  $11.1 \pm 0.8$  points after ( $p < 0.05$ )).

After treatment a decrease in the bronchial hypersensitivity in the form of an increase in the provoking and cumulative doses of histamine by 2.6 times was found. Thus, before using the drug, provoking and cumulative doses of histamine were  $1.02 \pm 0.2$  mg / ml and  $0.22 \pm 0.04$  mg, and after treatment -  $3.6 \pm 1.3$  mg / ml and  $0.8 \pm 0.3$  mg, respectively ( $p < 0.05$ ). Simultaneously after treatment, the hypersensitivity of the respiratory tract decreased in 57.8% of patients.

Therefore, the use of Nucleinate in the complex anti-inflammatory therapy reliably enables to achieve a better level of bronchial asthma control in school-age children. The use of Nucleinate in the complex of basic therapy of bronchial asthma in children can reliably reduce bronchial hypersensitivity due to decrease in the activity of inflammatory process of the respiratory tract.