



The cohort of fifty three school age patients with asthma was formed by simple random sampling. We assessed the diagnostic severity, pulmonary function, exacerbation prevalence, and controller treatment level, anamnestic and clinical peculiarities etc among three BMI groups of asthmatic patients.

Forty five of children presented normal weight status (control group) with average body mass index (BMI)  $19,9 \pm 2,3 \text{ kg/m}^2$ , while alternative small group consisted of 8 patients presented overweight status with BMI  $27,2 \pm 2,9 \text{ kg/m}^2$  (main group). 87,5% of overweight children lived in good conditions, while in control group – only 39,6%. Majority of overweight children presented delayed or non-vaccinated status (85,7%), while such subgroup consisted of only 47,1% in controls. 86% versus 42% of children in main and control groups correspondingly demonstrated the allergic skin signs. Overweight children had the history of spacer use while inhaling drugs (50%) more often as compared to controls (18%). Neurasthenic type of attitude to disease was demonstrated by 60% of overweight patients and by only 25% of children in control group. Only 57% of overweight children reported close friendly relationships with their mother as compared to controls (79%).

The same basic FEV<sub>1</sub> indices were observed in children of compared groups:  $83,9 \pm 16,7\%$  versus  $82,1 \pm 19,0\%$  ( $p > 0,05$ ); as well as bronchial lability index -  $26,3 \pm 19,8\%$  versus  $27,9 \pm 23,4\%$  ( $p > 0,05$ ) in overweight asthmatics and controls correspondingly. The number of relieving inhalations of short-acting beta-agonists in case of asthma attack was the same in children with high BMI and controls:  $3,2 \pm 1,4$  versus  $3,6 \pm 2,0$  ( $p > 0,05$ ) correspondingly. We assessed no any differences due to diagnostic severity, asthma phenotype, number of exacerbations and their severity, pulmonary function, controller treatment level, but we revealed significant anamnestic and clinical peculiarities of asthma course in overweight asthmatic children as compared to controls.

Future studies should clearly differentiate severe asthma exacerbations due to inadequate asthma control from those occurring in children whose asthma is well controlled, and use a systematic approach to identify the best predictors after accounting for the multiple dimensions of the problem.

Thus, future predictive models of severe asthma exacerbations in children should include a combination of epidemiological, clinical data and biomarkers, and target specific asthma phenotypes (e.g., “obese childhood asthma”). Preventing severe asthma exacerbations requires identifying patients at high risk, to develop personalized care protocols that may prevent such exacerbations. Obesity is a possible modifying risk factor of asthma attack in children due to scientific data, while we haven't revealed such association.

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### **A CASE OF NEONATAL MEASLES**

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Ukraine has been experiencing measles outbreaks since 2017. During the outbreak of measles cases have recorded among pregnant women, newborns and infants who have had certain clinical peculiarities.

The purpose of the study was to analyze the clinical features of the acquired measles in a newborn.

The girl was born full-term at 40 weeks gestation with the weight 3300 g. She was vaccinated for age, breastfeeding and discharged home on the 3<sup>rd</sup> day. On the 10<sup>th</sup> day of the baby's life a fever and catarrhal symptoms were appeared in the mother. Macular-papular rash was appeared on the 5<sup>th</sup> day of the mother's disease, rash spread throughout the body step by step. A typical form of moderate measles was diagnosed. Mother and a baby were hospitalized in the infectious department of the Regional Hospital.

On the 20<sup>th</sup> day of life, 9 days after the first mother's symptoms the baby's body temperature was increased to febrile degrees, mild catarrhal symptoms were appeared. The following day, a subfebrile fever and a macular-papular rash were appeared on the face and spread



to the body over the next 24 hours. The rash and fever persisted for 6 days. The child received symptomatic therapy and vitamin A orally. On the 28th day of life a recovery child discharged home.

The present case demonstrates the peculiarities of the measles' course in the newborn. The duration of the incubation period and the epidemiological evidence of the baby's environment suggest that the mother is a source of measles infection. At the same time, despite the presence of a typical step by step measles rash, catarrhal period is shorter, complete classic complex of measles symptom is absent, in particular, specific and nonspecific enanthema and conjunctivitis are absence. Despite the immunosuppressive properties of the measles virus and insufficient differentiation of the immune system in the neonatal period, this child had an uncomplicated course of the disease.

The presence of measles in the newborn indicates a leveling off of periods of absolute and relative insensitivity to the measles in infants, which was made possible by the non-immune status of the mother and the lack of appropriate protective antibodies. The clinical features of the case testify to the age aspects of the measles in the neonatal period.

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### **THE ELEMENTS OF HEALTHY SAVING SCHOOL PROGRAMS USE IN THE EDUCATIONAL PROCESS**

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In recent year's children's developmental disorders, morbidity of the respiratory tract and cardiovascular systems were increasing in Ukraine and in the world. In this condition schools could play important role in promoting and protecting health. That is why, many programs were developed to preserve the health of school-age children, methods of correcting their disorders and primary prevention measures: health education, health promotion and disease prevention. On the basis of a comprehensive school in Chernivtsi region the elements of health-saving programs were applied, namely: gymnastics, improving child posture methods, a walk on open air during the breaks between lessons, ophthalmotor training and color therapy. In addition special breathing exercises were included. It is known that regular breathing gymnastic improve the excursion of the chest, strengthen the respiratory muscles, contribute to the normalization of metabolism and neuroendocrine regulation, ameliorate the activity of other internal organs and are dealing in prophylaxis of respiratory diseases.

The purpose of the study was to analyze the effect of health-saving programs elements in the educational process on the reserves of the respiratory system of school-age children. In total 48 children of both sexes in age 10-15 years were examined. The children did not have chronic diseases and the majority of them led a healthy lifestyle. The study includes assessment of resting anthropometric data, physical activity habits, tests for the functional state of the cardiovascular system and readiness of child organism for physical loading (Ruffier and breath-holding hypoxic tests Stange and Genchi). The breathing exercises according to the Strelnikova method were applied. Statistical analysis conducted with program Statistica.

The basic rule of used breathing technique was a body movement aimed at compression of the chest, with intensive noisy air inhalation through the nose and with a subsequent passive long exhalation through the mouth or nose. The children were divided into two subgroups: those who had just started training (17 children) and those who performed breathing exercises during the year (31 children). In the group of children with long-term training were better indicators of functional breath holding tests Stange, higher oxygen blood saturation in the Genchi probe, better indicators of spirometry "flow-volume". The children in this group also experienced less fatigue in the classroom and have a better night's sleep. Along with breathing exercises, posture training was carried out by carrying sandbags on the head and alternating positions sitting at a desk and standing behind a desk. The Department of pediatrics, neonatology and perinatal medicine provides medical support to this health saving program at school.