

## RESPIRATORY FUNCTION TESTS IN ASTHMATIC CHILDREN AND TEENAGERS PERFORMED DURING A REHABILITATION TERM

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**Introduction:** Asthma is the most common chronic disease of the respiratory tract, about 300 mln people around the world suffer from it and this number increases every year. This disease significantly decreases the quality of patients life and is also connected with high social costs, including i.a. hospitalization, emergency care, treatment and also indirect costs resulting from the absence at work or decreased productivity. Spirometry and flow-volume observation are the most common methods in asthma diagnostics and in treatment control. They allow to assess the state respiratory function, which should be kept on the right level, while being the main objective of treatment. Inhaled glucocorticoids, usually in combination with long-acting  $\beta$ -agonist, are the most often medicines used in asthma treatment. Although it usually allows to control the disease properly, clinicians should never forget about the right cooperation between the doctor and patient, which should be considered in planning the optimal asthma treatment. **Aim:** The aim of this study was to compare the state of respiratory function of children with diagnosed mild or moderate asthma, who were treated in pulmonary office with group of healthy children. **Material and methods:** We studied 35 subjects (27 girls and 8 boys) at the age from 10 to 15, with diagnosed asthma. All patients were under control of the specialist clinics. Patients were instructed not to use the drugs 12 hours before the test. Control was statistically similar group of 35 healthy subjects. All patients were tested with spirometer Lungtest 500 from MES (spirometry and flow-volume). Results were compared with the standards and statistically analyzed: the normality of distribution was tested by Shapiro-Wilk test, next all parameters with normal distribution have been analyzed with t-student test, these non-parametric with Mann-Whitney test. **Results:** The results of spirometry and volume-flow observation in all cases were in the range of laboratory standards. Comparing to the control group the statistically significant difference was observed in parameter FEV1/VC, which average amount was 5% higher in group of healthy people. **Conclusion:** The results of treated patients with diagnosed asthma indicate the reinstatement of right respiration function and are the evidence of the efficiency of performed treatment. The statistically significant difference in parameter FEV/VC indicates the high sensitiveness of this parameter and it confirms its high usefulness in asthma diagnostics.