

CURRENT CONTROL OF BRONCHIAL ASTHMA IN ADOLESCENTS AND THE STRENGTH OF THE BRONCHODILATION RESPONSE

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Abstract. *The aim:* to evaluate the bronchial asthma current control in adolescents and to establish personalized indications for a reversion test with short-acting bronchodilators. *Material and methods.* There were studied 32 adolescents with controlled (group I) and partially controlled (group II) bronchial asthma. Anamnesis, clinical and instrumental methods were used. The level of current control of asthma was determined by categorical and quantitative methods — asthma symptoms, asthma control test (AST), asthma control questionnaire (ACQ). The reversibility of expiratory flow disorders was assessed by the bronchodilation index (increase in FEV_1) in samples with various short-acting bronchodilators (salbutamol and the combined drug of fenoterol hydrobromide with ipratropium bromide). *Results.* Cases of latent bronchospasm with a frequency of 13.3 % in the group I and 17.6 % in the group II ($p > 0.05$) in the reversion test with salbutamol and accordingly — 20.0 % and 41.2 % ($p < 0.05$) in the reversion test with combined bronchodilator were found. The level of asthma control defined by AST did not coincide in 40.0 % of patients in group I and 58.8 % in group II, defined by ACQ — 33.3 % and 58.8 %. Ventilation deviations as latent bronchoobstruction (increase in $FEV_1 \geq 12.0$ % and no asthma symptoms) were detected in group I and group II, but twice as much in group II in the reversion test with combined bronchodilator. There was a direct correlation of high strength between the tests with salbutamol and combined bronchodilator. The calculated linear regression equations helped to establish personalized indications for prescription an additional test with combined bronchodilator. First of all, we prescribe a reversible test with salbutamol and establish an increase in FEV_1 . If the increasing in FEV_1 in the test with salbutamol will be 10.5 %–12.0 % in well-controlled asthma and 8.0 %–12.0 % in partially controlled asthma then in these cases it would be just right to prescribe another reversion test with a combined short-acting bronchodilator and increasing in $FEV_1 \geq 12.0$ % confirmed the presence of latent bronchospasm and asthma control was considered insufficient. *Conclusions.* Increasing the accuracy of diagnostics of asthma control level in adolescents without exacerbation is achieved by identifying latent bronchospasm by conducting tests with shortacting bronchodilators from different pharmacological groups.

Key words: adolescents, bronchial asthma, control, latent bronchospasm.

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