## FUNCTIONAL EFFICIENCY OF COMPLEX THERAPY WITH THE INCLUSION OF THIOTROPIUM BROMIDE IN PATIENTS WITH COMBINED PATHOLOGY OF ASTHMA AND CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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## Abstract

**The objective** of the study was to evaluate the effect of adding of tiotropium bromide to the prior therapy of patients with asthma-COPD overlap (ACO) on bronchial patency and pulmonary hyperinflation.

Materials and methods. The study included 58 patients with ACO, all of them completed the study. The functional state of lung function was studied using spirometry, whole body plethysmography, impulse oscillometry (Jaeger Master Screen, Erich Jaeger GmbH, Germany).

**Results and conclusions.** The addition of tiotropium bromide contributed to the improvement of the lung function parameters. With decreased signs of pulmonary hyperinflation – significantly reduced the overall bronchial resistance, reduced the residual volume of lungs (improved emptying of the lungs), improved reserves of them (increased inspiratory capacity). Statistically significant improvement was shown and clinically meaningful bronchial patency (increase in FEV<sub>1</sub> was 280 mL). The parameters of resistance at the level of not only large, but also small bronchi (based on impulse oscillometry) improved, elasticity increased and obstruction of the respiratory tract decreased after 3, 24 hours, 2 months after the first dose. Significant positive dynamics was observed after two months of treatment after 3 hours after the morning application.

Key words: asthma-COPD overlap, combined therapy, tiotropium bromide.

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