

**Dudka T.V.**

**ANALYSIS OF INDICATOR CHANGES IN COMPUTER SPIROGRAPHY  
IN PATIENTS WITH BRONCHIAL ASTHMA  
AND ASSOCIATED CHRONIC CHOLECYSTITIS**

*Department of Internal Medicine, Clinical Pharmacology and Occupational Diseases  
Bukovinian State Medical University*

Respiratory diseases remain the most common pathology in the structure of morbidity of the population of Ukraine. In Europe the death rate from asthma has almost tripled in the last 20 years, and the frequency of emergency calls has increased. The long course of asthma causes not only its frequent combination with other diseases, but also requires long-term treatment. Every year more than 2,5 million surgical interventions are performed on the biliary tract and in 80% of cases of cholecystectomy are performed for cholesterol cholelithiasis in people of working age which in 12-20% is accompanied by a complicated course. According to various authors, the combined course of asthma and digestive diseases is observed in 8-50% of cases. In patients with chronic inflammatory diseases of the lungs and bronchi various authors describe the development of peptic ulcer disease, erosions of the stomach and duodenum, chronic gastritis, duodenitis, gastroesophageal reflux disease and sliding hernia of the esophageal orifice, duodenal dysfunction, duodenal duct etc.

Objective – to study the indicators of external respiratory function in patients with bronchial asthma depending on the stage of bronchial obstructive syndrome and the type of gallbladder dysfunction. 92 patients were involved in the study: 30 patients with mild and moderate persisting bronchial asthma (BA) (1st group), 30 patients with mild and moderate persisting BA of comorbid chronic acalculous cholecystitis (CAC) in the acute phase (2nd group), 32 patients with CAC in the acute phase (3rd group) and a control group - 30 practically healthy individuals (PHI) of the respective age. Ventilation lung function was studied by means of a computer Spirograph «Pneumoscope» company «Jaeger» (Germany), «Spirosift 3000» company «Fukuda Denshi» (Japan). The degree of disturbance in the respiratory function was evaluated through an analysis of spirometry findings and a curve «flow-volume» by comparing the findings obtained with the appropriate parameters for a given age, sex, height and weight before and after pharmacological tests with salbutamol. The range of normative parameters was considered 80-120% of appropriate.

The indicator analysis shows that in patients with an isolated course of asthma there was a probable decrease in the average values of FEV1 by 14,9% ( $p < 0,05$ ). At the same time, in patients of the 2nd group with comorbid course of asthma and the average values of FEV1 were reduced by 23,2% ( $p < 0,05$ ) which differed from that in the 1st group, probably. The indicators of the daily scope of FEV1 were also statistically significant. Thus, in patients of the 1st group the increase in the daily range by 39,2% ( $p < 0,05$ ) was found in comparison with the group of PHI, in the patients of the 2nd group the parameters of the daily range changed even more significantly, exceeding the indicator in PHI by 74,8% ( $p < 0,05$ ). At the same time, the rate of ventilation lung function after the test with salbutamol differed from those belonging to the test in all patients ( $p > 0,05$ ), according to the established severity of asthma. At patients of the 2nd group the tendency to decrease in an indicator to inhalation of salbutamol in comparison with a similar indicator at patients of the 1st group ( $p > 0,05$ ) was noted. In the 1st group the increase was 16,5% ( $p < 0,05$ ) and in patients of the 2nd group – 12,9% ( $p < 0,05$ ) which indicates a partial reversibility of bronchial obstruction in 2nd group and of patients under conditions of comorbidity.

These facts indicate the pathogenetic role of CAC in the formation and progression of bronchial obstruction syndrome in patients with comorbid bronchial asthma and CAC. The severity of bronchial asthma is found to decrease the intensity of ventilated oxygen use progressively ( $p < 0,05$ ), deepen tissue hypoxia and contribute to the development of hypoxic changes in the liver and gallbladder and lead to the development and progression of chronic acalculous cholecystitis.