The aim. Study is to determine functional activity of lymphocytes in patients with comorbidity of chronic obstructive pulmonary disease (COPD) and chronic pancreatitis.

Materials and methods. 79 COPD patients have been examined: 47 COPD patients in combination with chronic pancreatitis have been regarded as a main group, 32 patients with an isolated course of COPD made up a compared group. Standard values were obtained while examining 20 almost healthy patients of the same age and gender. The latter made up a control group. The functional activity of lymphocytes has been determined in reaction of blast transformation of lymphocytes. Statistical data has been performed on workstation by means of software “Microsoft Excel” and “Statistica 6.0”.

Results. The study showed that COPD exacerbation was accompanied with a decrease of functional activity of T-lymphocytes both in groups with isolated COPD and in groups with comorbidity in comparison with almost healthy patients. It has been found out that patients with comorbid pathology are characterized by the significant decrease of functional activity of T-lymphocytes to 29.44±1.6%, in comparison with control group – 42.23±2.57%(p<0.05). At the same time patients with isolated COPD functional activity of T-lymphocytes decrease to 35.67±1.2% (p<0.05). Simultaneously it has been found out that significantly increase the activity of B-lymphocytes in both groups - 18.22±0.9% and 14.53±1.1% respectively, in comparison with almost healthy patients - 11.35±0.57%.

Conclusions. Thus, as a result of studies, it has been found out that there is an exacerbation of COPD, in the isolated course of disease as well as in disease combined with chronic pancreatitis, there is an observed severe deficiency of suppressor function of T-lymphocytes against us hyperactivity of B-cells, which may cause the development of autoimmune complications in such patients. At the same time, changes in patients with comorbidities of COPD and chronic pancreatitis were significantly deeper and had significant differences from those in patients with isolated COPD, reflecting significant deviations in immune reactions in patients with comorbidity, even in the remission of concomitant disease.