shown that zinc clinically and pathophysiological associated with lung inflammatory diseases, including asthma and COPD. In patients with COPD, there is a decrease in the level of zinc in plasma, which negatively correlates with rales in the lungs.

Objective**.** To study the lipid metabolism, C-reactive protein and zinc levels in the blood of patients with COPD and concomitant obesity.

Material and methods. The study involved 18 patients with COPD, 10 obese patients, 10 patients with COPD and concomitant obesity and 10 healthy individuals. Fat mass, visceral fat levels were determined using bioimpendance analysis by a portable device BC-601 (TANITA, Japan). Patients morning fasting venous blood sampling was performed to determine the level of basic lipid metabolism (total cholesterol (TCh), low density lipoprotein cholesterol (LDL cholesterol), cholesterol very low density lipoproteins (VLDL cholesterol), high density lipoprotein cholesterol (HDL cholesterol), triglycerides. VLDL cholesterol content was calculated using the formula triglycerides /22,2, atherogenic index (AI) - the formula Klimov A.N.: AI=(total cholesterol - HDL cholesterol)/(HDL cholesterol). C-reactive protein (CRP) determined according to the instructions (latex analysis , Germany). Determining the concentration of zinc in serum performed using atomic absorption spectrophotometer.

Results**.** In analyzing the data bioimpendance analysis percentage of fat mass and visceral fat levels in patients with COPD with an accompanying obesity at 61.1 % and 78.9 % higher than the corresponding rates in COPD patients with obesity ($p<0,05$). Content of VLDL cholesterol, triglycerides and atherogenic index significantly higher than that of healthy individuals at 74.6 %, 41.4 %, and 57.9% respectively – in patients with obesity, at 55.9 %, 28.9 %, 31.1% respectively – in patients with COPD, at 69.5 %, 38.8 %, 47.2% respectively in patients with COPD and concomitant obesity.

The level of zinc in serum of patients with COPD without obesity was 25.7 % lower than in the control ($p < 0,05$). In patients with COPD with an concomitant obesity zinc level decreased by 22.1 % ($p<0,05$). The level of C-reactive protein significantly increased in patients with obesity, COPD and in this combination. In patients with COPD and concomitant obesity C-reactive protein level was in 1.7 times higher than in COPD patients without obesity.

Conclusions**.** Significantly higher percentage of fat mass and visceral fat in patients with chronic obstructive pulmonary disease and concomitant obesity compared with healthy individuals is accompanied with a significant increase in cholesterol content of very low density lipoproteins and triglycerides in the blood, as well as with the value of atherogenic index. The course of chronic obstructive pulmonary disease and obesity, and concomitant obesity is characterized by the occurrence of zinc deficiency on the background of significant increase in C-reactive protein, which may point out systemic inflammation.