C-REACIVE PROTEIN IN COPD PATIENTS WITH ARTERIAL HYPERTENSION AND OBESITY

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Background: Chronic obstructive pulmonary disease (COPD) is characterized by the local and systemic inflammation and remodeling causing parenchymal destruction and airflow limitation. Mechanisms of pathological changes include exposure to cigarette smoke and environmental stimuli that activate pro-inflammatory responses, stimulate alveolar neutrophils, macrophages, T-lymphocytes, B-celles, mast cells and lead to apoptosis of the endothelial and epithelial cells. Pro-inflammatory systemic effect of smoking promotes many complex diseases and co-morbidities as cardiovascular diseases, metabolic syndrome, obesity and others. Blood levels of several inflammatory proteins are elevated in COPD exacerbation: C-reactive protein (CRP), tumor necrosis factor α (TNFα), fibrinogen, interleukins and others. In patient with arterial hypertension (AH) and obesity inflammatory molecules, including TNFα, interleukin and leptin in the adipose tissue are also increased. **Aim:** To measure CRP level in patients with COPD, AH and obesity. **Materials and methods:** 23 patients with COPD II-III stage and normal BMI and 11 patients with accompanying arterial hypertension and obesity were examined. The patients' age was 48-66 years, duration of the disease was 8-11 years. Spirometry was used for diagnosis and gradation of COPD severity according to GOLD guidelines. **Results:** COPD patients with co-existing condition (arterial hypertension, obesity) present higher levels of CRP (mg/l) (14,56±0,56) than patient with COPD and normal body mass (9,23±0,46) index. Adipose tissue may be additional possible source of systemic inflammation in patients with COPD, AH and obesity.