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PICFLOWMETRY EXAMINATION OF PATIENTS WITH CHRONIC NON-SPECIFIC LUNG DISEASES.

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Abstract
Chronic obstructive pulmonary disease (COPD) is an independent nosological form, which is characterized by limitation of the air flow rate associated with the pathological inflammatory process in the lungs. Irreversible COPD is an irreversible process that develops continuously and causes serious complications from the cardiovascular system. Currently, special attention is paid to the study of OSOK risk factors, including urban air pollution, an increase in the amount of industrial dust, age, smoking, infectious diseases of the respiratory tract, their frequent exacerbations, obstructive lung. aggravating the condition of the disease. Thus, tobacco smoking is associated not only with the occurrence of pathological processes in the lungs, but also with the development of systemic inflammatory reactions, oxidative stress, dysfunction of the vascular endothelium, increased activity of procoagulant factors, increased oncogenes, and other systemic effects.

Keywords: ischemic heart disease, chronic cor pulmonale, arrhythmia, metabolic syndrome, arterial hypertension.

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Dolzarbligi. OSOK takes the 4th place among the causes of death. According to WHO, by 2030, OSOK will be the third leading cause of death in the world. Currently, about 3 million deaths are attributable to COPD each year. Smoking and metabolic syndrome are the main cause of COPD and one of the main risk factors for the development of various heart diseases, especially CHD and hypertension. Pathogenetic mechanisms in the stage of formation of these diseases are well studied. If we have a pathology in the lungs, then there is a pathology of the heart. If there is a pathology in the cardiovascular system, then chronic cor pulmonale, various rhythm disturbances, and pulmonary embolism may occur.

On average, international studies that analyzed about 6,000 patients with OSOK showed that the share of cardiovascular system diseases in this group of patients in the total mortality is 25% within 5 years [24]. Among the reasons for the first hospitalization of a patient with OSOK, 42% are heart diseases, and 48% are

repeated. With a 10% decrease in FEV1, the risk of cardiovascular death increased by almost 28%. This means that a decrease in FEV1 is one of the predictive criteria for cardiovascular complications. C-reactive protein levels, total cholesterol, lipoproteins and their fractions, as well as external respiratory parameters are predictors of myocardial injury [21]. All this demonstrates the relationship between COPD and cardiovascular diseases. In OSOK, the main complications arising from the cardiovascular system are arterial hypertension, cardiac arrhythmia, ischemic heart disease, painless myocardial ischemia, and the formation of chronic cor pulmonale. When both pathological conditions exist, they aggravate each other. There are certain difficulties in diagnosis here. Cardiology clinics for COPD and bronchial and broncho-obstructive clinics may appear in a patient with heart pathology.Currently, special attention is paid to the study of OSOK risk factors, including urban air pollution, an increase in the amount of industrial dust, age, smoking, infectious diseases of the respiratory tract, their frequent exacerbations, obstructive lung. aggravating the condition of the disease. Thus, tobacco smoking is associated not only with the occurrence of pathological processes in the lungs, but also with the development of systemic inflammatory reactions, oxidative stress, dysfunction of the vascular endothelium, increased activity of procoagulant factors, increased oncogenes, and other systemic effects.

In the case of respiratory system diseases, lipid peroxidation (LPO), which is the basis for the development of atherosclerosis, is activated due to hypoxemia. In the lungs, which perform many metabolic functions and take an active part in the exchange of proteins, fats, and carbohydrates, proteolytic enzymes become more active and cytokine reactions appear against the background of the inflammatory process. The result of these processes is an increase in anti-inflammatory cytokines (C-reactive protein, alpha tumor necrosis factor, interleukins-1, 6, 8), activation of the systemic inflammatory response, and disorganization of the connective tissue matrix. .

Against the background of oxidative stress, the adrenal glands are stimulated by the release of adrenaline into the blood and, as a result, vasoconstriction, increased blood circulation, increased blood pressure as a result of the general peripheral vascular resistance and the activation of the renin-angiotensin-aldosterone system, which in turn leads to the development of ischemic heart disease. will bring.

The development of endothelial dysfunction in patients with COPD occurs against the background of the development of pulmonary hypertension due to arterial hypoxemia. Damage to the endothelium leads to a decrease in the production of endogenous relaxing factors such as prostacyclin, prostaglandin E2, and nitric oxide (NO). The development of endothelial dysfunction against the background of increased atherogenesis contributes to the spasm of coronary vessels, which contributes to the development of ischemic heart disease [17, 21].

The presence of pulmonary hypertension in COPD patients also leads to volume overload of the right ventricle, right ventricle, and then the left heart. According to the Frank-Starling mechanism, the myocardium is overloaded external stress responds with an increase in the force of heart contraction, which in turn leads to an increase in myocardial oxygen consumption, which aggravates the patient's condition with already impaired coronary blood flow and O2 deficiency to the heart muscle.

Thus, the study of the clinical features of the functional state of the cardiovascular system in patients with OSOK, the severity of right ventricular failure depending on the stage of the disease and later left ventricular failure, the frequency of arrhythmia, the formation of chronic pulmonary heart , pathological conditions such as changes in the balance of the blood coagulation system, microcirculation disorders are observed, which is of great importance in the further study of this most important problem. At the same time, it should be noted that the treatment of cardiovascular diseases in patients with COPD should be carried out according to generally accepted standards, but such drugs should be selected (both COPD and cardiovascular diseases for treatment) they do not worsen the action of each, but improve, which creates a higher efficiency.

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