



aggregation and a significant increase in the content of the XIII factor of coagulation were detected. The proteolytic activity of plasma is significantly altered by the level of azoalbumin and azocasein with a decrease in the level of proteolysis in the case of the carrier of the "protective" H1 allele ($p < 0.05$).

Received data have suggested the hypothesis of the presence a dependency in the increase of the possible thrombotic complication in patients who are the carriers of "risk genotype". This group of patients should be provide more careful and serious antithrombotic prophylaxis.

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**THE COLLAGEN-INDUCED PLATELET AGGREGATION AND ARTERY STATUS
IN PATIENTS WITH ARTERIAL HYPERTENSION AND HEART FAILURE
WITH PRESERVED EJECTION FRACTION**

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Atherotrombosis is one from the recent complications of arterial hypertension (AH). The crucial role in the development of it played thrombocyte activation. Different studies have shown controversial results in blood platelet functionality profiles due to the influence of cardiovascular continuum due to the state of vessels in different places of arterial bed.

The objective of the research was to set the the types and relationship of the thrombocyte activation induced by collagen in the clinical course of AH and heart failure with preserved ejection fraction (HFpEF). In the study we have included 102 patients (62 women and 40 men, aged 52 to 74 years) with AH with HFpEF. The 3 indexes of collagen-induced platelet aggregation (the level (LA), time (TA) and rate of aggregation (RA)) and the plasma level of NO-metabolites, the indexes of systemic vascular resistance were measured.

Using multivariate nonparametric analysis of variance we have set the significant increase of the level and rate of aggregation ($p < 0,05$) in the group of AH with HFpEF. There was not significant difference between the TA in all groups ($p > 0,05$). As for the interrelationship between the aggregation and level of NO-metabolites we have found a reliable negative correlation between the LA and NO-metabolites ($R = -0,31$; $p = 0,045$) and RA and NO-metabolites ($R = -0,26$; $p = 0,019$). Also we have set the association between the increase of general vascular resistance index and the level of collagen aggregation ($R = 0,31$; $p = 0,005$) and general vascular resistance index and the rate of aggregation ($R = 0,23$; $p = 0,04$).

So, the AH with HFpEF followed by the activation of thrombocytes, which directly deal with changes of functionality of the arteries in different places of riverbed.

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**INVESTIGATION OF THE RESPIRATORY FUNCTION CHARACTERISTICS OF
PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE COMBINED
WITH ISCHEMIC HEART DISEASE**

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WHO statistics suggests that chronic obstructive pulmonary disease (COPD) ranks 4th place in the world among causes of death, and its prevalence worldwide reaches about 210 million patients. Ministry of health of Ukraine determines the prevalence of COPD in the country is about 3000 per 100 thousand people and growing every year. Approximately 61.7% of patients with Ischemic heart disease (IHD) have comorbidity with COPD. In developed countries, COPD and cardiovascular diseases take the leading place among causes of mortality, and in recent years the clinical importance of comorbid conditions increases. In turn, the presence of comorbidity in patients with COPD causes more severe course of the disease and has more unfavorable outcomes. Acute cardiovascular events are the common cause of death in patients with COPD, while in patients with COPD reduced FEV₁ by 10% increases cardiovascular mortality by 28%.



The leading factor contributing to the development of cardiovascular disease in patients with COPD is endothelial dysfunction, influencing to rise of the vascular tonus, pathological vasoconstriction to stimuli, platelets aggregation, proliferation and migration of smooth muscle cells, expression of adhesive molecules, and adhesion of monocytes. These conditions lead to development of defeat of target organs, progression of hypertension, atherosclerosis progression and tendency to thrombosis.

The objective of the research was to assess the severity of respiratory function disorders and the effectiveness of the therapy in patients with combined pathology of COPD and IHD. We investigated 40 patients with COPD (mean age of 69.4 ± 5.6 years). All patients were hospitalized due to acute exacerbations of COPD (infectious – 69%, non-infectious – 31%). IHD was diagnosed in 70% of patients, COPD without concomitant cardiac disease – in 30% of patients.

During the hospital period of the treatment bronchodilation therapy included tiotropium bromide 18 mcg/day by inhalation. Twice before and after treatment assessment of clinical symptoms was carried out: severity of dyspnea (MRC scale), cough (scores), bronchial patency (spirometry), state of the cardiovascular system (ECG). 1st group consisted of 28 patients (70%) (COPD, associated with IHD), 2nd group – COPD without IHD, 12 patients (30%). Duration of COPD in patients of the 1st group lasted 10.3 ± 2.2 years, in 2nd group - 8.8 ± 1.6 years, duration of IHD – 8, 4 ± 2.8 years. Spirometry data revealed the presence of bronchial obstruction in all patients (FEV_1 in patients of the 1st group was $61.3 \pm 5.6\%$, 2nd group - $68.3 \pm 6.3\%$ predicted; the Tiffeneau Index in patients of the 1st group was up to 24.9%, 2nd group - up to 25.3% less than normal range). In cases of comorbidity bronchial obstruction was prevalent in large caliber bronchi (MEF 25% - $41.2 \pm 5.3\%$), patients with COPD without IHD presented with more pronounced violation of the patency of small bronchi (MEF75% - $52.3 \pm 4.8\%$). The VC value was less than 80% of the proper levels in 50% of patients of the 1st group and in 25% of patients of the 2nd group. Bronchial obstruction was reversible in 27.5% of patients from the 1st group and in 50% of patients from the 2nd groups. Course of in-patient treatment resulted with subjective improvement in the severity of dyspnea. The prominence of bronchial obstruction was significantly decreased (rise of FEV_1 by 10.3% and Tiffeneau index by 11.4% in patients of the 1st group; 12.4% and 14.2% relatively in patients of the 2nd group) without significant changes of VC. ECG data did not reveal the negative impact of the therapy with tiotropium bromide inhalation to the cardiovascular system.

Thus, the combination of COPD and IHD is the frequent comorbid disorder, with the development of the syndrome of mutual aggravation. This combination is characterized by a more pronounced progression of COPD, is manifested by development of lung restriction and decreased reversibility of airway obstruction, reduced response to therapy with bronchodilators and worsening of quality of patients' life.

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COMPREHENSIVE ANALYSIS OF MULTIPLE CYTOKINES IN PATIENTS WITH THE CHRONIC OBSTRUCTIVE PULMONARY DISEASE COMBINED WITH THE CHRONIC PANCREATITIS

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It was established that the exacerbation of the chronic obstructive pulmonary disease is accompanied by the activation of the local inflammation in pulmonary tissue, and also is accompanied by a rise of the cytokines in the peripheral blood. This is a sign that COPD exacerbation is associated with the systemic inflammatory response.

The aim of our study was to analyze the level of some circulating pro-and anti-inflammatory cytokines, such as C-reactive protein (C-RP), interleukin-6 (IL-6), tumor necrosis factor alpha (TNF- α), interleukin-10 (IL-10) in patients with COPD combined with chronic pancreatitis (CP). 27 people suffering from COPD formed group I, 25 COPD patients with concomitant CP made the second group, and 7 healthy persons made the group of comparison.