



in COPD stimulates the production of a large number of inflammatory mediators, among which leukotrienes play a significant role, in particular, leukotriene B₄ (LTB₄) and thromboxanes (Tx). The investigation of the role of eicosanoids - important mediators of the inflammatory cascade in the progression of COPD, combined with CHD, as well as the search for effective ways of influencing them, will increase the results of treatment and the quality of life of patients with comorbidity of COPD and CHD.

The purpose of the study was to investigate the characteristics of the content of eicosanoids - leukotriene B₄ and thromboxane A₂ (by stable metabolite B₂) in the blood serum and urine of patients with COPD combined with CHD.

There were investigated 37 patients with exacerbation of COPD (clinical group B, GOLD II) associated with CHD – the main group, 27 patients with exacerbation of COPD (Ist comparison group) and 30 patients with CHD, stable angina pectoris (IInd comparison group). Levels of TxB₂ and LTB₄ in the blood serum and urine were examined in all patients and 32 healthy volunteers, using certified in Ukraine reagents TxB₂ and LTB₄ ELISA kit (Enzo Life Sciences, USA) by the method of enzyme immunoassay.

The concentration of TxB₂ in the blood serum reached (3382.3 ± 290.8) pg/ml in the patients of the primary group, exceeding the average level of healthy volunteers by 22.2 times (p <0.001), the same parameter of patients with exacerbation of COPD without CHD by 2.2 times (p <0.01) and by 1.4 times (p <0.05) in patients with CHD. In patients from the primary group, the serum LTB₄ content was the highest among all examined patients, reaching (6678.0 ± 375.4) pg/ml and exceeding the norm by 20.3 times (p <0.001). Evidently, systemic inflammation in COPD, combined with inflammatory manifestations in CHD, provided maximum concentration of this eicosanoid in the blood serum. The concentration of TxB₂ in the blood serum of patients from the Ist comparison group was the lowest among all examined patients, however, it exceeded the reference norm by 10 times (p <0,001).

Thus, in the blood serum of patients with COPD associated with CHD, the highest concentrations of LTB₄ and TxB₂ were marked, compared to patients with COPD without CHD and with CHD without COPD that was accompanied by increasing of their excretion with urine. The strength and direction of correlation links between concentrations of these eicosanoids in blood serum and indices of bronchial patency indicate their negative influence at bronchial patency of patients with a combination of COPD and CHD. Correlations between concentrations of LTB₄ and TxB₂ in the blood serum of patients with combined pathology confirm their mutually reinforcing effect to systemic inflammation according to their biological actions.

Sluhenska R.V.

THE PHYSICAL CULTURE AND HEALTH TECHNOLOGIES USE DURING PHYSICAL EDUCATION CLASSES FOR STUDENTS OF HIGHER EDUCATIONAL ESTABLISHMENT

*Department of Internal Medicine, Physical Rehabilitation and Sports Medicine
Higher State Educational Institution of Ukraine
"Bukovinian State Medical University"*

The systems of physical education teaching for students at higher educational institutions of Ukraine testifies that scientific principles of using very attractive modern highly effective physical culture technologies are not sufficiently developed in modern theory and physical education method.

The physical education traditional system turns out to be more effective at higher educational institutions (schools), as it is provided with gyms, specialized equipment. The program may be valid with the absence of such conditions, but physical education teachers shouldn't carry all the weight of its development on the proposed standards in the program, that is, actually transfer the burden of responsibility for the effectiveness of physical education system from themselves to students.

It is necessary to indicate (choose) kind of physical exercises during optimization of physical education practical classes, using physical culture and health technologies, and then, according to the above mentioned, focus on such important characteristics as time and features of student contingent. Then it is substantial to select forms and methods of physical culture and health technologies, taking into account presence or absence of sports equipment and musical accompaniment, the rate of exercise execution, the amount of training load, periodicity.

Therefore, physical education practical classes for students at the higher educational institution (school) which are optimized as recreational lessons with using physical training and health technologies are based on the laws of training motor activities and physical qualities development of the youth, peculiarities of physical education method of student contingent. Such classes comply with basic principles of physical education. Compulsory pedagogical control and physical qualities development monitoring, physical exercises diversity use from all directions of physical education and health technologies.

Slyvka N.O., Plesh I.A., Boreiko L.D., Makarova O.V.

DIAGNOSTIC MARKERS OF HEPATORENAL SYNDROME

*Department of Patients Care and Higher Nursing Education
Higher State Educational Establishment of Ukraine
"Bukovinian State Medical University"*

Hepatorenal syndrome (HRS) is a common complication in patients with alcohol liver cirrhosis (ALC) and it is associates with higher mortality in proportion to progressive HRS severity. However, the most common indicator of renal function, serum creatinine (Scr), may be an unreliable surrogate for glomerular filtration rate (GFR) due to the