

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»**



## **МАТЕРІАЛИ**

**105-ї підсумкової науково-практичної конференції  
з міжнародною участю  
професорсько-викладацького персоналу  
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ  
присвяченої 80-річчю БДМУ  
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Матеріали підсумкової 105-ї науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) – Чернівці: Медуніверситет, 2024. – 477 с. іл.

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У збірнику представлені матеріали 105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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showed that, at least initially, there are no appreciable variations in the degree of health preservation culture among students in the experimental and control groups: the development of needs and value orientations aimed at preserving and strengthening health, self-assessment, self-control, awareness of their actions in the field of health preservation, physical development, and the ability to use potential opportunities for preserving their health are predominantly at low and moderate levels in both groups and qualitatively similar.

**Conclusions.** The pedagogical experiment provided results that showed the experimental group's students formed a culture of health preservation more so than the control. It demonstrates how well the experimental approach enhances the creation of a health preservation culture through physical education.

**Pavliukovych N.D.**

## **METHODS OF LASER POLIARYMETRY FOR ERYTHROCYTE MORPHOLOGY INVESTIGATION IN PATIENTS WITH COMORBID PATHOLOGY**

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**Introduction.** Changes in the rheological properties of blood are one of the most important moments in the pathogenesis of most diseases, especially in case of comorbidity.

**The aim of the study.** To investigate possible structural changes of erythrocytes membranes (EM) in patients with chronic heart failure (CHF) and diabetes mellitus type 2 (DM).

Methods of optical physics reveal and objectify structural changes of EM, which can expand the arsenal of diagnostic methods of rheological disorders detection due to various pathological conditions.

**Material and methods.** 60 patients with CHF the (I group) and 55 patients with CHF with comorbid DM (the II group) were included in the research. For objective assessment of EM functional state laser polarimetry of the red cell suspension smear was applied.

**Results.** Intensity distribution of Fourier spectrum histogram of erythrocytes suspension smear had symmetrical "bell-like" appearance. Unlike this, intensity distribution of Fourier spectrum of erythrocytes suspension smear in patients of the II group was uneven, and histogram transformed into asymmetric dependence.

The revealed fact indicates the growth of EM anisotropic component, conditioned primarily by conformational changes of the EM protein structure due to chronic hyperglycemia (activation of the peroxic oxidation of the biopolymers and lipids, protein molecules glycolization, and, as a result, the change of the conformational and spatial orientation of the protein fibrils, including integrated, of the erythrocyte membrane), which is accompanied by worsening of EM morphological features. Correlation analysis showed a statistically significant direct relationship between the level of fasting glucose and anisotropy degree of the red blood cells suspension in patients with CHF and DM.

**Conclusions.** Thus, laser polymerization methods of the EM may be used for early diagnosis of erythrocytes structural changes in patients with CHF and DM.

**Prysiazhniuk I.V.**

## **CLINICAL AND ULTRASONOGRAPHIC ASPECTS OF CHRONIC COLECYSTITIS IN PATIENTS WITH HYPOTHYROIDISM.**

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**Introduction.** Hypothyroidism, especially its subclinical forms, is a common disease in which changes occur in many tissues of the body. It has been studied that changes in homeostasis in tissues sensitive to thyroid hormones include carbohydrate, fat and protein metabolism. In turn, changes in fat metabolism lead to dyslipidemia, which is often combined with diseases of the gastrointestinal tract, in particular, chronic cholecystitis. Clinical and ultrasonographic features of the integrated course of chronic cholecystitis and hypothyroidism require further investigation.

**The aim of the study.** It was to investigate clinical features and ultrasonographic parameters of the gallbladder in patients with chronic cholecystitis and concomitant hypothyroidism.

**Material and methods.** 20 patients with chronic non-calculous cholecystitis and hypothyroidism (experimental group) and 23 patients with chronic non-calculous cholecystitis without thyroid dysfunction (comparison group) were examined. The control group consisted of 20 practically healthy individuals representative of the studied groups in terms of age and gender. We used general clinical methods of research, study of the thyroid profile (study of the content of free triiodothyronine, thyroxine, thyroid-stimulating hormone, antibodies to thyroglobulin and thyroid peroxidase); ultrasound examination of abdominal organs, and statistical research methods.

**Results.** The majority of patients with chronic non-calculous cholecystitis and hypothyroidism (90.0%) had a pain syndrome in the right hypochondrium of medium intensity, which had a pressing, aching or tingling character. The increase in clinical manifestations in patients with chronic non-calculous cholecystitis and accompanying hypothyroidism was consistent with the results of an ultrasound examination of the gallbladder. In patients with chronic cholecystitis and hypothyroidism, a torpid course of the gallbladder disease is observed against the background of a significant increase in the diameter (larger on average by 4,0 mm ( $p=0,02$ ) compared to control indicators and by 4,5 mm ( $p<0,05$ ) compared to patients in the comparison group), length (significantly increased on average by 8,9 mm ( $p=0,005$ ) compared to the control indicators and by 5,7 mm ( $p=0,04$ ) compared to the corresponding patients of the comparison group), and volume of the gallbladder (which on average was 16,3 ml ( $p=0,002$ ) higher than the corresponding indicator in practically healthy individuals and by 10,8 ml ( $p<0,05$ ) - in patients with chronic non-calculous cholecystitis), more frequent identification of signs of sediment, sludge in the gallbladder, and thickening of its walls during ultrasonographic examination. The specified changes in the size of the gallbladder in patients with chronic non-calculous cholecystitis and hypothyroidism indicate a greater tendency to cholestasis, which must be taken into account when prescribing treatment. During the ultrasonographic examination, 15 (75,0%) patients with combined pathology revealed sediment in the gallbladder, 9 (45,0%) patients of this group were diagnosed with the presence of biliary sludge. In patients of the comparison group, such ultrasonographic symptoms of chronic non-calculous cholecystitis were determined less often, in particular, sediment in the gallbladder was visualized in 7 (30,4%) patients, sludge - in 5 (21,7%) patients with this disease. In patients with chronic non-calculous cholecystitis and hypothyroidism, the thickening of the gallbladder walls was more pronounced, in particular, in 7 (35,0%) patients of this group, the thickness of the gallbladder wall was  $\geq 5$  mm, which indicated a significant and long-term inflammatory process in it. Among patients of the comparison group, there were only 2 such patients (8,7%).

**Conclusions.** Patients with chronic non-calculous cholecystitis and hypothyroidism have a torpid course of the disease, which is accompanied by an increase in the size of the gallbladder and cholestasis compared to patients with chronic non-calculous cholecystitis with normal thyroid function.

**Reva T.V.**

## **LIFESTYLE MODIFICATION FOR THE PATIENTS WITH GASTROESOPHAGEAL REFLUX DISEASE AND HYPOTHYROIDISM**

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**Introduction.** Gastroesophageal reflux disease (GERD) is a widespread disease, the treatment of which includes a combination of lifestyle changes with optimal pharmacological treatment. Pathological functioning of the thyroid gland has an aggravating effect on the regulatory mechanisms of the kinetics of the esophagus and stomach. In patients with gastroesophageal reflux disease with hypothyroidism, all changes in the function of the stomach and duodenum are associated with a decrease in the acid-forming function of the gastric mucosa, due to its atrophy,