МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ

М А Т Е Р І А Л И

106-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького колективу
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Матеріали підсумкової 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) – Чернівці: Медуніверситет, 2025. – 450 с. іл.

У збірнику представлені матеріали 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) зі стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

Загальна редакція: професор Геруш І.В., професорка Годованець О.І., професор Безрук В.В.

Наукові рецензенти:
професор Батіг В.М.
професор Білоокий В.В.
професор Булик Р.Є.
професор Давиденко І.С.
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професорка Тодоріко Л.Д.
професорка Хухліна О.С.
професор Чорноус В.О.

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Two groups of dehydrated blood film slides were used as samples: Group 1 included patients without a history of coronavirus disease, and Group 2 consisted of patients who had COVID-19 in the past.

Results. The table presents the central statistical moments of the 1st to 4th degrees, characterizing the integral diffuse phase maps of the supramolecular networks in these samples.

Table

Statistical structure of integral diffuse phase maps

Statistical moment	Group 1	Group 2
Mean	0,085	0,097
Variance	0,036	0,044
Skewness	0,31	0,24
Kurtosis	0,42	0,34

The differences increased nearly by 3 times – the central statistical moments of the 3rd and 4th degrees differ by 2,1-2,9 times.

Conclusions. Thus, the proposed method enhances the functional capabilities and improves the accuracy of detecting changes in the phase anisotropy of polycrystalline films of biological fluids by statistically monitoring changes in the coordinate structure of algorithmically reconstructed layer-by-layer phase maps of supramolecular networks in dehydrated blood films. For the first time, polarization-interference recording and polarization filtering of the interference distributions of laser microscopic images have been applied, along with statistical monitoring of changes in the algorithmically reconstructed layer-by-layer coordinate distributions of phase shifts in the polycrystalline architecture of supramolecular networks in dehydrated blood films.

Prysiazhniuk I.V.

CHANGES IN CYTOKINE PROFILE INDICATORS IN PATIENTS WITH CHRONIC NON-CALCULOUS CHOLECYSTITIS AND HYPOTHYROIDISM

Department of Internal Medicine
Bukovinian State Medical University

Introduction. According to various estimates, the prevalence of clinical and subclinical forms of hypothyroidism ranges from 1,4% to 8,0% of the general population. Studies have shown that cytokines of the IL-1 family affect the processes of absorption and secretion in the gallbladder, in particular, Il-1β, changing them can cause cholelithiasis. Il-1β also potentiates the properties of Il-6 in reducing the contractivity of smooth muscles and the development of insulin resistance. At the same time, the expression of pro-inflammatory Il-1β increases in patients with hypothyroidism. TNF-α causes dysfunction of smooth muscle contraction of the gallbladder, absorption processes, lipid peroxidation in it and contributes to the development of insulin resisstance and increases the secretion of mucin, which, under conditions of inflammation of the gallbladder wall. TNF-α also affects the function of the thyroid gland, which is due to the presence of TNF-α receptors in its parenchyma.

The aim of the study. To investigate the features of pro- and anti-inflammatory cytokines in patients with chronic non-calculous cholecystitis and hypothyroidism and their relationships with blood biochemical parameters and lipid profile parameters.

Materials and methods. 72 patients with chronic non-calculous cholecystitis and hypothyroidism were examined (experimental group) and 30 patients with chronic non-calculous cholecystitis with normal functional activity of the thyroid gland (comparison group) were examined. The control group consisted of 20 practically healthy individuals representative of the studied groups in terms of age and gender. The indicators of the biochemical blood test that were studied included: total bilirubin and its fractions, uric acid, total protein and albumin, urea and creatinine, aspartate aminotransferase (AST), alanine aminotransferase (ALT), lactate dehydrogenase (LDH), gammaglutamyl transpeptidase (GGTP), alkaline phosphatase (AP). Among the parameters of the lipid spectrum, the content of total cholesterol, triacylglycerols, cholesterol of

high (HDL), low (LDL) and very low-density lipoproteins (VLDL) was studied. The atherogenic factor was calculated for each patient.

Results. The proinflammatory Il-1β plasma level in patients in the experimental group 55,3% (p=0,03) prevailed that in a control group of people. Il-1β content positively correlated with the urea concentration (r=0,41, p=0,04), AST (r=0,40, p=0,05) and ALT activities (r=0,43, p=0,04). In patients with chronic non-calculous cholecystitis and hypothyroidism TNF-α concentration in 4,6 times (p=0,0005) prevailed that in healthy individuals and in 23,1% (p=0,04) – such in comparison group of patients. A direct correlation between the TNF-α level and AST (r=0,47, p=0,02), ALT (r=0,52, p=0,01), alkaline phosphatase (r=0,60, p=0,002) and GGTP activities (r=0,52, p=0,01) was studied. The concentration of anti-inflammatory Il-10 in the blood of patients with chronic non-calculous cholecystitis and hypothyroidism was significantly lower compared to that in healthy individuals and patients with chronic cholecystitis at 56,4% (p=0,05) and 53,8% (p=0,04) respectively. Established inverse correlation between the Il-10 content and GGTP (r=0,44, p=0,04), ALT activities (r=0,39, p=0,09), total cholesterol level (r=0,46, p=0,03), LDL (r=0,51, p=0,01), VLDL (r=0,43, p=0,04).

Conclusions. In patients with chronic non-calculous cholecystitis and hypothyroidism, there is a significantly higher concentration of pro-inflammatory tumor necrosis factor-α and a lower level of anti-inflammatory interleukin-10 in blood compared to patients in the comparison group. Correlations were established between the content of interleukin-1β, tumor necrosis factor-α, intrekin-10 and biochemical markers of cytolysis, cholestasis, intoxication, as well as lipid profile indicators, which indicates the active involvement of the cytokine link of the immune system in the pathogenesis in patients with chronic non-calculous cholecystitis and hypothyroidism.

Rachynska. I.V.

FEATURES OF ULTRASONOGRAPHIC CHANGES IN LIVER TISSUE IN COMORBID COURSE OF METABOLIC DYSFUNCTION-ASSOCIATED STEATOTIC LIVER DISEASE AND COMMUNITY-ACQUIRED PNEUMONIA

Department of Internal Medicine, Clinical Pharmacology and Occupational Diseases
Bukovinian State Medical University

Introduction. Metabolic dysfunction-associated steatotic liver disease (MASLD) is one of the most common gastrointestinal diseases in the USA and Western Europe, occurring in 25% of the global population. The most common causes of fatty liver disease development are: obesity, diabetes, hyperlipidemia, metabolic syndrome, the use of certain medications (amiodarone, methotrexate, glucocorticosteroids, nonsteroidal anti-inflammatory drugs, tetracycline, etc.), and congenital metabolic abnormalities. Community-acquired pneumonia (CAP) is a fairly common infectious disease affecting the lungs. The relevance of the study of this disease is related to the increasing range of pathogens, their resistance to traditional antibacterial treatments, and the impact of pathological processes on existing diseases in humans.

The aim of the study. The aim of the study was to compare the ultrasonographic patterns of the liver in patients with isolated MASLD and those with comorbid CAP.

Material and methods. The study included 67 patients with MASLD and obesity, among which 32 patients had comorbid CAP of moderate severity (clinical group III) (Group 1), and 35 patients had an isolated course of the disease (Group 2). The patients were randomized by age and degree of obesity. The control group consisted of 25 practically healthy individuals (PHI).

Results. The study showed that patients in both groups experienced hepatomegaly, medium-grained transformation of liver structure, and heterogeneous densification ("patchiness", hyperechogenicity) of the liver parenchyma with dorsal fading of the ultrasonographic signal due to diffuse fatty infiltration. In Group 1 the size of the right and left liver lobes exceeded the PHI values by 1,6 times ($p<0,05$). In Group 2 the size of the right and left liver lobes was increased by 1,5 and 1,4 times respectively ($p<0,05$). In Group 1 the hepatorenal index exceeded the PHI values by 1,6 times ($p<0,05$), while in Group 2 it exceeded by 2,1 times ($p<0,05$).