

**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
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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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STATE OF LIPID PEROXIDATION IN CHRONIC PANCREATITIS IN THE PRESENCE OF MUSCLE WEAKNESS OF SKELETAL MUSCLES

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Introduction. Chronic pancreatitis (CP) is one of the most frequently diagnosed pathologies in gastroenterology. Sarcopenia is a disease that leads to a gradual loss of muscle mass.

The aim of the study. To evaluate the state of lipid peroxidation in patients with chronic pancreatitis due to presence of sarcopenia.

Material and methods. The peroxidation of endogenous lipids was studied with thiobarbituric acid in 10 patients and 10 practically healthy individuals, which were comparable in age and sex. The age ranged from 35 to 50 years, the duration of the disease was within 5-7 years. The diagnosis of chronic pancreatitis was confirmed by a gastroenterologist. The presence of sarcopenia was determined by the grip strength, kg (dynamometry) and the "Chair sit-to-stand performance" test. In addition, the results of the "Questionnaire for the diagnosis of sarcopenia (translated into Ukrainian and adapted for the specified language)" (Povoroznyuk V.V. with co-authors, 2013) were also applied.

Results. Malondialdehyde (MDA) in plasma and erythrocytes of 10 patients, as a marker of oxidative stress, exceeded the indicators of the control group. Such a phenomenon can be interpreted as the progression of chronic pancreatitis, a sign of the slowly progressive course of chronic low-intensity inflammation, a violation of carbohydrate metabolism, which contributes to a decrease in overall energy potential, causing weakness in skeletal muscles. According to the obtained preliminary data, 7 patients complained that it is difficult for them to lift and transfer a weight of 5 kg, get up from a chair or bed; three patients noted the difficulty of moving around the room and overcoming 10 steps, and only one patient noted a fall 3 times, but without traumatic injuries. In 4 patients, the total score of the questionnaire was higher than 4 points, which indicates a sufficiently high probability of the presence of sarcopenia in the examined patients and bad outcomes. MDA indicators increased by 23.6% in these individuals compared to those in the practically healthy group.

Conclusions. The state of lipid peroxidation in patients with chronic pancreatitis can be not only a trigger for the progression of the disease but also a trigger for the development of sarcopenia in this group, which aggravates the course of the underlying disease.

Horbatiuk I.B.

ROLE OF INSULIN RESISTANCE IN THE PROGRESSION OF BILE LITHOGENICITY IN PATIENTS WITH THE METABOLIC SYNDROME

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Introduction. The relevance of the problem of chronic non-calculous cholecystitis is due to the significant morbidity and prevalence of the pathology and the decrease in the quality of life of patients. According to numerous studies, chronic cholecystitis and dyskinesia of the biliary system can cause liver dysfunction, the development of intrahepatic cholestasis, which worsens the course and contributes to the progression of the disease.

The aim of the study. Identification of the probable correlation between the glycemia level, the state of compensation of carbohydrate metabolism and the insulin resistance level, and the degree of lithogenicity of bile - as a risk factor for the development and progression of chronic cholecystitis in obese patients.

Materials and methods. There were examined 88 patients with a diagnosis of chronic non-calculous cholecystitis in the exacerbation phase, among whom 28 patients (1 group) had an isolated course of the disease, 30 patients were with chronic cholecystitis and coronary artery disease, cardiosclerosis with HF stage I-IIA (group 2), and 30 patients with chronic cholecystitis, coronary artery disease, cardiosclerosis with HF I-IIA stage and obesity I-II degree (group 3).

The lipid spectrum of blood and indicators of carbohydrate metabolism were studied by using standard sets of reagents from the company "Danish Ltd" (Lviv). The level of insulin resistance was determined by the value of the body mass index, insulin resistance indices.

Results. The analysis of the conducted studies showed that in patients of the 2nd and 3rd groups, a slight probable increase in the level of fasting glycemia by 9,0% and 9,4% ($p < 0,05$) and postprandial glycemia (respectively by 8,4% and 26,0%) were established ($p < 0,05$) in comparison with the control group, while in patients of the 1st group, changes in glycemic indicators were unlikely. The presence of a violation of the sensitivity of peripheral tissues to insulin in patients of the 2nd and 3rd groups is indicated by a probable decrease in the Caro index - an indicator of the ratio of the level of glucose in the blood to the level of insulin in the fasting blood (by 1,7 and 2,2 times, respectively ($p < 0,05$)), which indicates the phenomenon of insulin resistance. Calculation of generally accepted indices of insulin resistance, in particular BMI, indicates the presence of insulin resistance in patients of the 1st, 2nd and 3rd groups: the indicator exceeded the control by 19,0%, 25,8% and 39,4%, respectively ($p_{1,2,3} < 0,05$) with maximum values in patients with comorbid obesity (group 3). These data indicated that patients with chronic cholecystitis, which runs on the background of coronary artery disease and obesity, have insulin resistance syndrome, and its presence was the basis for the progression of all comorbid diseases. The established syndrome of insulin resistance is probably primary (hereditary predisposition), and may be formed secondarily in connection with liver damage against the background of biliary dysfunction. The data supporting this assumption is a probable increase in the HOMA IR index in all observation groups. In particular, in the patients of the 1st group, the HOMA IR index was within the normal range, in the 2nd group it exceeded the index of PHI by 1,8 times, in the patients of the 3rd group – by 2,4 times ($p_{2-3} < 0,05$) with the presence of a probable statistical difference between groups ($p < 0,05$). Correlation analysis between indicators of glycemia, compensation of carbohydrate metabolism, insulin resistance and the level of bile lithogenicity indicated that the duration of hyperglycemia episodes, BMI and the index of insulin homeostasis (HOMA IR) exerted the greatest influence on the lithogenicity of bile in patients with chronic cholecystitis with accompanying coronary artery disease and obesity.

Conclusions. The cause of the progression of insulin resistance and metabolic syndrome in patients with chronic cholecystitis is probably liver damage against the background of biliary dysfunction with the formation of secondary hepatic insulin resistance.

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THE ROLE OF CONNECTIVE TISSUE COMPONENTS IN THE PROGRESSION OF NON-ALCOHOLIC STEATOHEPATITIS COMBINED WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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Introduction. Fibrogenesis is a universal process, the basis of which is the excessive accumulation of extracellular matrix components (ECM). Activated hepatic stellate cells (HSC) play a key role in the process of hepatic fibrogenesis because they serve as the major source of ECM proteins and tissue collagenases. The combination of direct and indirect serological markers of liver fibrosis in patients with non-alcoholic steatohepatitis (NASH) and chronic obstructive pulmonary disease (COPD) allows not only to assess the severity of fibrosis, but also to predict the rate of its development, monitor the rates of liver fibrosis and lungs in the dynamics of treatment.

The aim of the study. To determine the metabolism characteristics of hydrocarbon-protein components of the extracellular matrix and their role in the progression of non-alcoholic steatohepatitis and chronic obstructive pulmonary disease in their comorbidity.

Material and methods. 100 patients with NASH and obesity of the 1st stage have been examined, including 48 with with COPD (GOLD 2-3 C-D) (2 group). The average age of patients was (48.4 ± 4.2) years. There were 20 apparently healthy persons (AHP) of the corresponding age and sex in the control group.