МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»

М А Т Е Р І А Л И

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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To address this critical knowledge gap, a comprehensive exploration of the cardiovascular implications of post-acute COVID-19 is urgently required. This endeavor holds the potential to not only provide a deeper understanding of the disease but also to pave the way for enhanced care and support for individuals grappling with post-acute COVID-19 conditions. By harnessing the power of research and innovative medical solutions, we can work toward more effective strategies for prediction, prevention, and treatment, ultimately alleviating the burden of cardiovascular complications stemming from the pandemic.

The aim of the study. To provide a longitudinal study of patients after COVID-19 in order to study its long-term outcomes and investigate the clinical predictive factors of their development.

Material and methods. We studied 328 COVID-19 patients admitted to the hospital between February and April 2021, with an average age of 56.1, and 51% of them were males. Excluding individuals with severe comorbidities, prior major cardiovascular events, and in-hospital mortality, we monitored these patients for 12 months after discharge. Our data encompass clinical records, laboratory results, instrumental findings, and medical records collected over the year, analyzed using standard statistical methods. This research offers insights into the long-term effects of COVID-19 among a subset of patients without severe comorbidities or a history of major cardiovascular events, potentially informing future health care strategies and improving post-COVID-19 patient care.

Results. Through an analysis of clinical data, we observed a correlation between elevated levels of C-reactive protein, D-dimer, neutrophil/lymphocyte ratio, and decreased thyrotropin levels, and a heightened 12-month risk of cardiovascular complications. Our longitudinal study revealed that 16.4% of patients experienced major adverse cardiovascular events (MACE), with 8.5% suffering from myocardial infarction, 5.2% from cerebrovascular disorders, and 2.7% from pulmonary embolism. The MACE contributed to cardiovascular-related mortality in 2.4% of the studied population. Overall, the incidence of cardiovascular complications, including first-detected hypertension, arrhythmias and heart failure, reached 25.9%.

The investigation of laboratory findings during course of COVID-19 treatment showed that the level of C-reactive protein was significantly higher in patients who later experienced long-term outcomes (71.02 ± 12,47 mg/L vs. 62,14 ± 10,04 mg/L ($p<0,01$)). Patients who went on to experience long-term outcomes exhibited significantly higher levels of D-dimer (2,03 ± 0,61 mg/L vs. 1,72 ± 0,24 mg/L ($p < 0,01$)) and a higher neutrophil/lymphocyte ratio (4,88 ± 1,48 vs. 3,96 ± 1,12($p < 0,01$)). The level of thyrotropin was lower in group with cardiovascular outcomes (1,06 ± 0,23 mU/L vs. 1,41 ± 0,35 mU/L ($p<0,01$)).

Conclusions. The cardiovascular well-being of COVID-19 survivors demands particular consideration due to the elevated risk of post-acute cardiovascular complications associated with the disease. Notably, C-reactive protein, D-dimer, the neutrophil/lymphocyte ratio and thyrotropin may serve as valuable indicators for predicting cardiovascular outcomes in COVID-19 patients.

Ivanchuk P.R.

REHABILITATION OF PATIENTS WITH MYOCARDIAL INFARCTION: ASSESSMENT OF EFFICIENCY

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Introduction. Rehabilitation of patients after myocardial infarction is relevant and requires an assessment of the effectiveness of rehabilitation, estimation of recovery progress and adjustment of the rehabilitation program.

The aim of the study. In order to evaluate the effectiveness of rehabilitation processes in patients after myocardial infarction (MI), it was proposed to evaluate the response of the cardiovascular system at the beginning and at the end of the rehabilitation period, using a hemodynamic stress test during an ultrasound examination of the heart.

Material and methods. Patients with diagnosed Q and non-Q MI who underwent rehabilitation at the "Regional Clinical Cardiology Center" in Chernivtsi were selected. The

distribution of patients: total after an MI - 45, of which there are 17 patients with non-Q MI (37.7%), 28 patients with Q MI (62.2%). Evaluation of hemodynamic parameters was performed by determining the common ejection fraction of the left ventricle (LVEF) and calculating the regional ejection fraction (RLVEF) using the proprietary software "SmartUZD" with the possibility of computer processing of the digitized ultrasound image of the heart chambers during the loading antiorthostatic stress test - raising the lower limbs to an angle of 45º. The results of the survey were analyzed with the determination of average values and root mean square deviation. Non-parametric Wilcoxon rank tests were used for data whose distribution law differed from normal. For data whose distribution law was normal, Student's t-test was used.

Results. The analysis of changes in RLVEF parameters before and after the loading test in the group with Q MI showed a tendency to decrease the contractile capacity of the LV after loading in most segments with significant changes in RLVEF 1,4,6 (32.30±3.20 vs. 27.77± 4.44, 58.30±6.39 vs. 39.77±8.41, 32.26±3.92 vs. 25.52±5.24, $p<0.05$) and RLVEF 5 (60.04±5 .12 versus 28.67±7.50, $p<0.01$). These changes were expected due to a larger zone of myocardial damage. Regarding the results of the stress test in the group of patients with non-Q MI, with a general distortion of the shape of the curve, an unreliable increase in the values of segmental contractility in the area of the apex, lower and middle sections of the anterolateral wall of the LV, with a slight decrease in the mobility of the interventricular membrane was established. These changes can be preliminarily interpreted as compensatory.

After undergoing rehabilitation measures, the analysis of RLVEF was again performed in the same groups with a comparison of the results obtained before and after the load test. The analysis of the change in RLVEF in the non-Q-MI group showed a tendency towards an increase in myocardial contractility indicators in the middle part of the interventricular membrane and the anterior wall of the LV with significant changes in RLVEF8 (31.73±3.03 vs. 38.30±2.27, $p< 0.05$). Values of RLVEF in the Q-IM group had an unreliable decrease in segments of RFV3, 4, 9, 10 ($p>0.1$), and practically did not change in other segments.

Conclusions. Thus, when performing a stress test to determine the regional contractility of the myocardium, an assessment of the state of contractility before and after rehabilitation in the indicated groups of patients was carried out, which allows to evaluate its effectiveness and performing control at various stages of rehabilitation.

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THE PREDICTING METHOD OF DIABETIC FOOT SYNDROME COMPLICATED COURSE AND ULCER OCCURRENCE

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Introduction. The medical community around the world recognized diabetes mellitus (DM) as the most important non-infectious disease, the prevalence of which has become a pandemic. In the structure of late complications of diabetes, diabetic foot syndrome (DFS) is observed in 4.6-25% of patients, holding a leading position and causing disability and increased mortality of this group of patients. According to The International Diabetes Federation in 25-47% of cases, hospitalization of patients with DM is associated with damage of the feet. Chronic wound defects of the lower extremities are observed in 15-25% of the patients with DFS, serving as a direct cause of "high" amputations of the lower extremities in 12% of these patients.

The aim of the study: to develop a new predicting method of the DFC course severity and the trophic ulcers occurrence.

Material and Methods. The study included patients with DFS (43 persons). The formula IRB = (number of leukocytes (thousand/l) * age) / LIImO was used in the study. The number of leukocytes of peripheral blood obtained in the general blood test and the age of the patient are substituted into the numerator. The denominator is substituted with the data of the leukocyte index intoxication in the modification of Ostrovsky (LIImO), calculated by the formula LIImO = ((myelocytes+plasma cells+metamielocytes+Band neutrophils+Segmented neutrophils),%) /