ABSTRACT&REFERENCES

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DYNAMICS OF INDICATORS OF OXIDATIVE STRESS AND BONE METABOLISM DURING TREATMENT WITH THIOTRIAZOLIN IN PATIENTS WITH COMBINED TYPE 2 DIABETES MELLITUS AND OSTEOPOROSIS COURSE WHO RESIDE IN ANTHROPOGENIC PRESSURE CONDITIONS

p. 4-7

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The aim of the study. *To investigate the effect of thiotriazolin on oxidative stress and bone metabolism in patients with a combined course of type 2 diabetes and osteoporosis, who permanently reside in industrial region.*

Materials and methods. *On the basis of the educational and scientific medical center "University Hospital" of Zaporizhzhia State Medical University, 44 patients with combined course of type 2 diabetes and osteoporosis, who permanently resided in Zaporizhzhia, were examined for the period from 2016–2017. 22 patients received standard basic therapy for type 2 diabetes and osteoporosis, and 22 patients additionally received thiotriazolin. Patient groups were comparable in age, sex, and duration of type 2 diabetes mellitus. All patients studied the concentration of markers of oxidative stress (nitrotyrosine, 8-hydroxyguanine) and bone metabolism (osteocalcin and deoxypyridinoline).*

Results. *Patients with a combined course of type 2 diabetes mellitus and osteoporosis who received basic therapy with thiotriazolin supplementation registered a significant decrease in the concentration of oxidative stress. Thus, in patients of the second group, there was a significant decrease in the serum level of nitrotyrosine by 5.5 times ($p<0.05$) and 8-hydroxyguanine by 2.1 times ($p<0.05$). When evaluating markers of bone metabolism in patients of the second group, the level of osteocalcin increased by 24 % ($p<0.05$), and the concentration of deoxypyridinoline significantly decreased in individuals of both groups, but in the group with the addition of thiotriazolin, its rate decreased by 30 %, and in the first group only 16 % ($p<0.05$).*

Conclusions. *In patients with a combined course of type 2 diabetes and osteoporosis, which, in addition to basic therapy, thiotriazolin was included, a significant decrease in markers of oxidative stress was registered in a daily dose of 600 mg for 3 months. Under the influence of basic therapy with the addition of thiotrazoline, a significant increase in bone formation and a decrease in bone resorption were observed in patients with a combined course of type 2 diabetes and osteoporosis.*

Keywords: *thiotriazolin, oxidative stress, bone metabolism, type 2 diabetes mellitus, osteoporosis*

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THE EFFECT OF THERAPY ON THE CLINICAL COURSE OF ACUTE MYOCARDIAL INFARCTION WITH ST-SEGMENT ELEVATION IN PATIENTS AFTER PERCUTANEOUS CORONARY INTERVENTION

p. 8-13

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The aim: *to investigate the effectiveness of the use of ranolazine and quercetin in patients with acute IMEST after percutaneous coronary intervention and their impact on long-term results of treatment.*

Materials and methods: *The study involved 105 patients with acute myocardial infarction with ST-segment elevation, who underwent percutaneous coronary intervention. Patients were divided into three study groups: patients who received standard medical therapy (control group), patients who were prescribed an intravenous form of quercetin according to the scheme (Basic 1) and patients received oral form of ranolazine according to the standard therapy (Basic 2). The state of myocardial perfusion after PCI, EchoCG, KDI, CSI and FV dynamics, and long-term results of treatment after 1 year were evaluated. The combined endpoint included a non-fatal recurrent myocardial infarction, a nonfatal stroke, a second hospitalization for angina reflux, and a sudden cardiovascular death.*

Results*. Analyzing the state of myocardial perfusion in patients of the studied groups, it was found that in 18 patients (17.1 %) the degree of restoration of blood flow at the level of microcirculation remained unsatisfactory. EchoCG after 9.3±1.2 days after PCI showed less KDI in the Primary 2 group and less CSI in the Primary 1 group compared with the control group ($p<0.05$). After 8.3±0.6 months CSI and KDI in the Primary 1 and Primary 2 groups, respectively, remained lower, and the EF in the Primary 1 group was higher than in the control group. A decrease in the frequency of onset of the total combined endpoint in the group of patients with FNC (OR=0.029; CI: 0.001–0.574; $p<0.05$) was recorded. Patients of the Primary 2 group had a lower re-hospitalization rate for angina pectoris (OR=0.158; CI: 0.032–0.777; $p<0.05$) and the frequency of reaching the combined end point for the group as a whole (OR=0.244; CI: 0.081 0.730; $p<0.05$), as well as among patients with poor myocardial perfusion after PCI (OR=0.048; CI: 0.002–1.041; $p<0.05$).*

Conclusions*: ranolazine and quercetin in patients with acute myocardial infarction contributes to the positive dynamics of KDI, XI and FV. Ranolazine and quercetin reduces the frequency of repeated hospitalizations for the renewal of angina during the year.*

Keywords: *the phenomenon of no-reflow, IMEST, ranolazine, quercetin*

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CONDITIONS IN THE COAGULANT AND ANTICOAGULANT ACTIVITY OF BLOOD IN PATIENTS WITH CORONARY HEART DISEASE WITH CONCOMITANT DIABETES MELLITUS TYPE 2, DEPENDING ON THE HIS COMPENSATION

p. 14-19

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The aim: *to evaluate and analyze the parameters of coagulant and anticoagulant activity in the blood in different groups of patients with coronary heart disease without and with associated Diabetes Mellitus (DM) type 2 depending on its compensation.*

Materials: *during the study of the coagulant and anticoagulant activity in the blood system, 52 patients were hospitalized in the cardiology and endocrinology department of the Kyiv Clinical Hospital on Railway Transport No. 2 of the Health Protection Center branch of the Ukrainian Railways Public Joint-Stock Company (clinical base of the Department of Internal Medicine Propedeutics No. 1 of the National OO Bogomolets Medical University) with clinical signs of coronary artery disease. Patients were divided into three groups: 27 patients with IHD and with type 2 diabetes in the subcompensation stage, 14th – compensation stage and 11th – decompensation stage.*

Results: *after analyzing the data, at all stages of compensation there was a decrease in all indicators of coagulation hemostasis: APTT – by 6,94 % (compensation stage (I)) ($p<0,05$) and 13,7 % (decompensation stage (III)) ($p<0,01$), PTT – by 9,14 % (I) ($p<0,01$), by 6,43 % (the stage of subcompensation (II) ($p<0,05$), by 10,3 % (III) ($p<0,001$), TT - by 15,54 % (I) ($p<0,001$), by 19,2 % (II) ($p<0,001$), by 20,9 % (III) ($p<0,001$) and also an increase in the level of fibrinogen by 32,16 % (I) ($p<0,001$), by 36,04 % (II) ($p<0,001$), by 48,06 % (III) ($p<0,001$), which indicates about accelerating the processes of coagulation at once in three links: reduction of the periods of generation of active trombin by internal and external mechanisms with simultaneous activation of fibrogenesis (factor IIA and fibrin). The anticoagulant potential was reduced: AT III by 16,5 % (I) ($p<0,001$), by 22,7 % (II) ($p<0.001$) , by 23,6 % (III) ($p<0,001$), and PS – by 18,63 % (I and II) ($p<0,001$). It should be noted that when comparing the groups between themselves, a significant decrease in AT III between the stages of subcompensation and decompensation on 8,5 % ($p<0,05$).*

Conclusion: *it should be noted that in patients with comorbid IHD with type 2 diabetes, hypercoagulable shifts in the hemostasis system occurred against the background of inhibition of the own anticoagulant blood potential. Changes in the coagulation potential in the combination of type 2 DM were marked by accelerating the processes of coagulation at once in all three stages of coagulation (prothrombinase, thrombin and fibrin formation)*

Keywords: *thrombosis, hemostasis, ischemic heart disease, the coagulant and anticoagulant system, type 2 diabetes mellitus*

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FEATURES OF BIOCHEMICAL CHANGES IN PATIENTS WITH LOCALIZED SCLERODERMA

p. 20-24

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The aim *of the study was to determine the characteristics of biochemical changes in localized scleroderma based on the analysis and evaluation of dysmetabolic disorders of homeostasis from the standpoint of the individual characteristics of patients.* ***Materials and methods.*** *Under our supervision there were 107 patients with localized scleroderma in the acute stage who were hospitalized in the Department of Dermatology of the State Institution "Institute of Dermatology and Venereology of the National Academy of Medical Sciences of Ukraine" from 2014 to*

2018. All patients were randomly assigned to 3 groups comparable in all parameters – the main group and two comparison groups. The main group consisted of 33 (34.01 %) localized scleroderma patients who received complex treatment; in the I group – 34 (35.05 %) patients who received only traditional therapy; in group II – 30 (30.92 %) patients who received treatment according to the scheme, which included traditional therapy with the addition of thiotriazoline.

The study of the concentration of C-reactive protein (CRP) was performed by quantitative immunoturbidimetry according to OP. Shevchenko (1997); serum protein fractions – by electrophoresis on agarose gel plates by the method of S. S. Chernecky, V. J. Berger (2008); total lipids – by V. N. Titovu, M. G. Tvorogova (1992); high-density lipoproteins, triglycerides, beta-lipoproteins – by S. E. Severin (1977); cholesterol concentration – according to D. Vaidya (2005); the atherogenic coefficient was calculated by the formula: CA=(total cholesterol – HDL)/HDL); determination of serum magnesium and chlorine using colorimetric analysis (A. Sh. Byshevsky, O. A. Tersenov, 1994).

Results. *In the studied groups of patients with OSD and in healthy donors, a study was made of the level of C-reactive protein (CRP., The concentration of which in patients with OSD in the exacerbation stage reached 44 g/l before treatment, after conducting a course of appropriate drug therapy in each study group amounted to: in group II, the comparison group – 38 g/l, in group I, the comparison group – 30 g/l, and in the main group – 16 g/l, which are closest to the level of CRP in healthy donors and indicate high efficacy of the treatment we developed a scheme with the inclusion of modern drugs.*

In the serum of patients of the I and II comparison groups, there was an increase in magnesium content by 1.8 times and a decrease in chlorine level by 1.2 times, which characterizes the presence of deep metabolic disorders in this category of patients, affecting not only immunoreactivity but also water-electrolyte metabolism. The magnesium content and the level of chlorine in the blood serum of the patients of the main group did not significantly differ from the control and was 2 times lower in comparison with the concentration of these indicators in the group of patients with SJD before treatment

Concentration of cholesterol was lower in the OSD group before treatment and in the comparison groups – an average of 1.8 times. Also noted increase in the concentration of high density lipoprotein – an average of 2.7 times. The concentration of triglycerides was minimal in the CSF group before treatment and was 0.4±0.03 mol/L, which was 5.4 times lower in the control group of healthy donors and 4 times lower than in the main group of patients.

Conclusion. *Based on the conducted research, a number of features of biochemical parameters were revealed, which indicate that localized scleroderma is accompanied by disturbances of the biochemical link of homeostasis. The change in the ratio of lipid and protein fractions indicates a violation of the regulatory and regenerative functions at the level of the structural organization of cell membranes, and an increase in the magnesium content and a decrease in the level of chlorine – deep metabolic disorders in this category of patients*

Keywords: *localized scleroderma, biochemical studies, therapy, magnesium, chlorine, C-reactive protein, protein fractions*

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PERIPHERAL NEUROPATHY IN PATIENTS WITH PSORIATIC ARTHRITIS

p. 24-31

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The aim of the study: *to improve quality of early diagnosis, to determine new link of pathogenesis and develop prognostic criteria of peripheral neuropathy course in patients with rheumatoid arthritis.*

Study material and methods: *overall, 131 patients aged from 17 to 79 years (46+/–1 years on average) with rheumatoid arthritis were enrolled into the study, of these 25±1 % male and 75±1 % female. Disease duration was 9 years. NJR (articular count), IR (index Richi) and IL (index Lansburi) were evaluated. Index DAD (overall disease activity) in points and criteria DAS28 (in-*

dex of arthritis activity for 28 joints) were determined to evaluate overall activity of inflammatory joint diseases. Radiological and sonographic examination of peripheral, sacroiliac joints and vertebral column were performed.

Results and discussion: *peripheral neuropathy was diagnosed in 17 (13.0±1 %) of patients with rheumatoid arthritis, which were enrolled into the main group, other 114 patients remained in control group. Peripheral neuropathy was observed in 13±0.1 % of patients with rheumatoid arthritis as polyneuropathy and mononeuropathy in 5:1 ratio with motorial, sensor, vegetative and mixed disorders in ratio 1:2:3:3, in ½ of cases patients had tunnel syndrome. This is linked to the patient gender (more often with male), tendovaginitis presence, digital arteritis, ophthalmopathy, myositis and spondylopathy. Osteochondrosis and spondylarthrosis have been observed in ½ of patients with rheumatoid arthritis, moreover clinical manifestation of disease was revealed in 35.1±0.1 % of cases which linked to patients age, damage of wrist, elbow, hip and sacroiliac joints, presence of general osteoporosis and tendovaginitis, sensor and motorial disorders.*

Conclusions: *peripheral neuropathy more often has been observed in male, patients with tendovaginitis, digital arteritis, ophthalmopathy, myositis and spondylopathy. Severity of course was influenced by wrist joint arthritis and presence of joint calcification. Level of IL and DAS28 might be prognostic criteria of peripheral neuropathy course in patients with rheumatoid arthritis*

Keywords: *peripheral neuropathy, arthritis, rheumatoid arthritis, prognostic criteria, spondylopathy, spine damage*

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ANALYSIS OF COMPUTER TOMOGRAPHIC IMAGE: SKELETO-MUSCLE INDEX AS A CRITERION OF SARCOPENIA IN PATIENTS WITH PATIENTS WITH PATIENTS

p. 31-36

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Aim of the study. *The study of the possibility and informativeness of the detection of sarcopenia in a patient with pancreatic cancer (PC) by post-processing obtained using computed tomography (CT) images.*

Materials and methods. *A total of 108 patients with obstructive jaundice syndrome (probably of tumor etiology, and later diagnosed with pancreas cancer) were studied using the «Activion 16» spiral tomograph (Toshiba Medical Systems Corporation) according to a common protocol. The control group consisted of 60 patients aged from 22 to 74 years. We determined sarcopenia criteria on CT images: musculoskeletal L3 index (MSI) as the ratio of the area indicator of skeletal muscle in the body to the level L3 square growth patient. The somatotype index (SI) was determined by the formula: SI=BL×100/TSCH, where BL is the body length, TSCH is the transverse size of the chest, measurement in centimeters.*

Results. *Based on media values at the L3 level, sarcopenia was generally detected in 85.18 % of patients with pancreas cancer. Sarcopenia was observed in 100 % of patients with a dolichomorphic type, in 87.8 % of patients with a mesomorphic type, and in 65.5 % of patients with a brachiomorphic type of somatotype. Sarcopenia based on SMI at the L3 level is set in 85.2 % of patients with pancreas cancer: 47.8±4.3 cm²/m² for men, 36.2±4.1 cm²/m² for women, 58.4±3 6 cm²/m² and 44.2±±3.5 cm²/m² for conditionally healthy men and women, respectively ($p<0.01$). The reliable differences of SMI according to gender were established in conditionally healthy men and women suffering from pancreatic cancer with inaccurate differences in BMI. In patients, the statistically significant difference of SMI ($p=0.001$), corresponds to the various distribution of fatty mass in the body structure, was accompanied by statistical misleading differences in BMI.*

Findings. *CT as a standard method of diagnosis of pancreatic cancer and inflammatory diseases of the pancreas by calculating the SMI allows evaluating the degree of sarcopenia. SMI is more informative and personalized indicators to assess body composition than the standard used BMI as CT allows differentiation of muscle and fat components in the composition of the human body and to quantify*

Keywords: *pancreatic cancer, sarcopenia, computed tomography, skeletal muscle index, somatotype*

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PROGNOSTIC IMPORTANCE OF IMMUNOLOGOCHEMICAL MARKERS OF PAPILLARY THYROID CANCER

p. 36-41

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In Papillary Thyroid Cancer (PTC) in recent years an immunohistochemical markers were detected. Several authors consider their use as perspective to predict tumor behavior and the risk of recurrence and for differential diagnosis between different variants of PTC. However, the data obtained during various studies are controversial, which necessitates further research.

Materials and methods: *Using standard methods, the pathogistological material was obtained after surgical treatment of 273 patients with PTC. Expression of immunohistochemical markers: TTF1 and Gal3 – in 48 patients, p53 – in 50 patients, Ki-67 in 53 patients, NIS in 44 patients detected immunohistochemically. The connection between the histological type of tumor, the level of expression of immunohistochemical markers and the histological signs of aggressive tumor behavior are analyzed: multifocal, capsule invasion, extratireoidal invasion, lymph node damage.*

Results: *In the analysis of data obtained with the use of standard histological techniques, it was found that the most aggressive variant was cylindrical cells PTC with a high incidence of extrathyroid invasion – 5.4 %, a capsule invasion – 7.2 %, multifocal growth – 10.8 %, metastatic lymph nodes – 17.1 %. The high levels of TTF1 and Ki-67 expression, as well as the absence of NIS expression, were reliably associated with metastatic lymph node involvement ($p<0.05$). Reliable relationship with other histological signs of aggressive behavior of the tumor was not detected. No association was found between Gal3 and p53 expression levels and signs of aggressive tumor behavior. The data obtained*

in the study suggest that immunohistochemical markers reflect the processes characterizing the biological pathomorphism of the tumor and indicate a gradual loss of differentiation signs in more aggressive tumors.

Conclusions: *immunohistochemical markers changes reflect biological pathomorphism of the tumor, overexpression of ki67 and TTF1, as well as the loss of NIS, suggest a greater malignant tumor potential. The obtained data may help in individualized choice of surgical procedure*

Keywords: *papillary thyroid cancer, TTF1, Ki-67, NIS, Gal3, p53, prognosis of outcome*

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CURRENT FEATURES OF FORMATION OF ALCOHOL DEPENDENCE ON MEN AS THE BASIS OF THEIR REHABILITATION

p. 42-44

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Aim. *To study modern psychological and clinical-psychopathological features of the formation of alcohol dependence in men as a basis for their rehabilitation.*

Materials and methods. *The study carried out a comprehensive clinical-psychopathological and psychodiagnostic survey of 150 male patients aged 20 to 55 years, in which according to the diagnostic criteria of the ICD-10, a syndrome of alcohol dependence was established. 94 patients were treated at the Kharkiv Regional Clinical Narcological Hospital No. 9, and 56 patients at the Clinic of Psychiatry and Narcology of the Military Medical Clinical Center of the Northern Region.*

Results of the research. *In 35.2±1.5 % of civilian patients and 40.2±1.9 % of military men, interspersed with the domination of the dysphoric-explosive component, in 43.5±2.1% and 35.1±1.6 % of alcohol dependent, respectively, anxiety-depressive component in 21.6±1.1 % of civilian and 24.7±1.4 % of military aggressive component of intoxication.*

For civilians, the main motive for alcohol abuse was "for a company", "to support a friend", "a desire to obtain physical and psychological satisfaction from the action of alcohol". For

the military, the main motive was to "eliminate combat stress," "drown out pain", "to get rid of important military memories", "the desire to level off with alcohol, negative emotional experiences (tension, anxiety, fear, anguish)".

In the surveyed soldiers with alcohol addiction there is a complete and obvious manifestation of stress disorder, compared with civilians who have a slight manifestation and lack of traumatic stress.

The surveyed patients are dominated by non-constructive forms of coping strategies.

Based on the data obtained during the work we systematized modern predictors of the formation of alcohol addiction in men in modern conditions, which are considered as targets of psycho-correction and psycho-educational effects in the construction of the system of rehabilitation of patients.

Conclusions

1. Clinical and psychopathological features of the formation of alcohol dependence in men, in the aspect of their rehabilitation, are specific depending on the predominant personally significant motives of alcohol use, loss of situational control, dysphoria, affective reactions, anxiety and depressive disorders.

2. Pathological psychological predictors of the formation of alcohol addiction in men are the effectiveness of behavior, conflict, the prevalence of non-constructive forms of coping strategies. The main factor of the risk of alcohol dependence in the military is a complete and obvious manifestation of stress disorder

Keywords: *alcohol dependence, motives for using alcohol, stress disorder, coping strategies, risk factors, component of intoxication*

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PSYCHODIAGNOSTIC FEATURES OF YOUNG AGENTS WITH DISORDERS OF ADAPTATION

p. 45-47

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Aim of the work: *To study psychodiagnostic features of medical students with adaptive disorders.*

Materials and methods of the research: *A total clinical and anamnestic, clinical and psychopathological and psychodiagnostic examination of 412 students of both sexes (216 women and 196 men) of Kharkiv National Medical University with an average age of 18.0±2.0 years was conducted to achieve the goal, in compliance with the principles of bioethics and deontology. Among the surveyed, 215 students were residents of eastern Ukraine; 87 students - residents of Luhansk and Donetsk regions, who entered the study at the KhNMU before the ATO and 110 students – settlers from the ATO zone.*

Methods of the research: clinico-psychopathological, psychodiagnostic, statistical.

Results. *According to the results of the study, 27±1.7 % of students of eastern Ukraine, 36.4±1.9 % of students living in Luhansk and Donetsk regions who enrolled in the KhNMU before the ATO and 92.2±3.1 % of immigrant students from the zone of ATO detected deadaptive states. In the course of work it was established that deadaptive states of medical students are manifested by anxiety-depressive disorders with a predominance of moderate and anxious and depressive episodes on Hamilton's depression scale, high levels of reactive anxiety and personal anxiety (according to the Spielberger-Khanin scale) and excessive neuropsychiatric stresses for the Nemchin scale.*

In the structure of adaptation disorders, light cognitive impairments were observed, which were manifested by lower volumes of verbal memory, reduced speed of counting operations, slight difficulty of orientation and decreased perceptive-gnostic spherical indices, decreased concentration of attention and memory

of the received information, expressed reaction of mental fatigue
Conclusions. *In the surveyed students with adaptive disorders - on average in the group of surveyed, the general indicator on the scale MMSE was (28.2±0.2) points out of 30 possible. There was a decrease in volumes of verbal memory, the speed of counting operations, reducing the concentration of attention, memorizing received information, deterioration of "memory", increased fatigue, reduced tolerance to stress. In the structure of adaptation disorders, the prevalence of a moderate and severe anxiety and depression episode high levels of reactive anxiety and personality anxiety and excessive neuro-psychic tension*
Keywords: *medical students, adaptation disorders, anxiety, depression, nervous-psychic tension, memory, concentration of attention*

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SOCIO-DEMOGRAPHIC RISK FACTORS FOR THE PSYCHOGENIC ANXIETY-DEPRESSIVE DISORDERS DEVELOPMENT IN PATIENTS WITH PANCREATITIS

p. 48-52

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When studying the socio-demographic factors of the risk of developing psychogenic anxiety and depression disorders in patients with pancreatitis, we used the results of a comprehensive study. The complex evaluation of socio-psychological and clinical risk factors for pancreatitis was analyzed, and a comprehensive analysis of socio-demographic characteristics, anxiety-depressive and neurotic symptoms in patients with pancreatitis has been performed. The article presents the socio-demographic factors that influence the development of mental disorders in acute recurrent pancreatitis.
The aim of the study *was to identify socio-demographic features of psychogenic anxious and depressive disorders in patients with pancreatitis (acute and chronic) to improve the quality of life of this contingent of patients.*
Materials and methods. *The study was attended by 131 patients with recurrent pancreatitis, exclusion criteria in the study; age over 65, the presence of other somatic diseases, mental and behavioral disorders as a result of alcohol abuse, narcotic substances and substances not included in the state list of narcotic drugs, refusal of the patient from a psychiatrist's examination. Established factors associated with the development and severity of neurasthenia in patients with chronic pancreatitis. Statistical processing of the results of the study was conducted using the software package Statistica v.6.1.*
Research results. *The article presents the analysis of psychopathological symptoms in patients with pancreatitis, which revealed a number of features of the quantitative and qualitative structure of emotional disorders. The factors with which the de-*

velopment and severity of psychogenic anxiety-depressive disorders in patients with pancreatitis are noted is noted. The basic pathogenetic link of development of psychogenic anxiety-depressive disorders in patients with pancreatitis was revealed. Presented is a symptomatology that predominates in affective pathology in patients with pancreatitis.

Conclusions. *The data of the main socio-demographic factors influencing the development of mental disorders in chronic recurrent pancreatitis, such as male sex, low frequency of appeals for medical aid during the year, absence of a family history of pancreatic diseases*

Keywords: *pancreatitis, anxiety, depression, psychogenic disorders, risk factors, socio-demographic factors*

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