## ABSTRACT&REFERENCES

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**THE LONG-TERM PROGNOSIS OF PATIENTS WITH HEART FAILURE AND THE GENE POLYMORPHISM GLN27GLU OF $\beta_2$-ADRENORECEPTORS**

**p. 4-10**

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***The aim:*** *to determine the influence of Gln27Glu polymorphism of the $\beta_2$-adrenergic receptor gene on the long-term prognosis of patients with heart failure.*

***Material and methods.*** *The study included 200 patients with heart failure. The clinical course of the disease was evaluated and a genetic study of Gln27Glu polymorphism of the $\beta_2$-adrenergic receptor gene was done. The material for molecular-genetic research was peripheral blood leukocytes of patients. Isolation of genomic DNA from blood leukocytes for molecular genetic studies was carried out using a commercial "DNA-sorb-B" kit in accordance with the instruction for the kit. Primer sequences were used for the polymerase chain reaction.*

***Results****. An analysis of the distribution of genotypes of the polymorphic Gln27Glu locus of the $\beta_2$-adrenoreceptor gene in patients with heart failure showed that the genotype Gln27Gln occurs in 33 % of cases; Glu-27Glu – in 13 %; Gln27Glu – in 54 %. Carriers of the mutant allele (G) of the β2-adrenoreceptor gene have a high incidence of atrial fibrillation (35.6 % vs. 7.7 %) over 3 years of follow-up. Hospitalization (42.0 % versus 19.2 %) and the frequency of reaching the combined end point (hospitalization + death) (54.0 % vs. 30.8 %) are greater among patients who carry the mutated G allele compared to homozygous patients with the "wild" allele C, for 3 years of observation. Polymorphism of the Gln27Glu gene of the $\beta_2$-adrenoreceptor does not significantly affect the three-year mortality of patients with heart failure.*

***Conclusions****. The carriers of the mutant allele (G) of $\beta_2$-adrenergic receptors have a high incidence of atrial fibrillation, hospitalization and the achievement of a combined end point (hospitalization + death) for 3 years of observation, compared to homozygous patients with the "wild-type" allele C. The polymorphism of the gene Gln-27Glu of the $\beta_2$-adrenoceptors does not affect the three-year mortality of patients with heart failure*

***Keywords****: heart failure, clinical course, atrial fibrillation, polymorphism, gene, $\beta_1$-adrenergic receptors, $\beta_2$-adrenergic receptors*

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## IMPACT OF TYPE 2 DIABETES MELLITUS IN THE COURSE OF ACUTE MYOCARDIAL INFARCTION OF THE LEFT VENTRICLE WITH INVOLVEMENT TO THE RIGHT VENTRICLE

**p. 11-16**

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***The aim.*** *To evaluate the effect of diabetes mellitus (DM) on the clinical course of the acute period of myocardial infarction (MI) of the left ventricle (LV) and the biventricular MI.* ***Materials and methods.*** *309 patients with Q-MI age 65.5±4.42 years were examined. Patients were divided into 3 groups: the 1st group – 155 patients with MI of the right ventricle (RV) on the background of Q-MI of the posterior wall of the LV, the 2nd group – 53 patients with RV MI due the Q-MI of the LV circular localization, and the 3rd group – 101 patients with Q-MI of the LV posterior wall. Patients with DM were 41 (26.5 %) in the 1st group, 22 (41.5 %) – in the 2nd group, and 26 (25.7 %) patients in the third group. The hospital treatment period was 16.8±2.7 days.*

***Results**. Patients with DM in all groups had late admission, usually within 12–24 hours ($p<0.05$) and after the first day of the MI ($p<0.05$). Among patients with DM there were more women ($p<0.05$). The presence of DM was associated with a significantly greater number of ventricular arrhythmias and ventricular fibrillation ($p<0.05$). The clinical course of the acute MI in patients with DM often complicated of early postinfarction angina ($p<0.05$), recurrent MI and the LV aneurysms in the 2nd group ($p<0.05$). The acute heart failure (HF) was more severe in patients with DM with prevalence of the number of cases with Killip II–III ($p<0.05$) and a higher frequency of cardiogenic shock ($p<0.05$). Patients with DM had more severe manifestations of chronic HF with greater frequency of the HF IIA, IIB and III NYHA in the total group of patients with MI ($p<0.05$).*

***Conclusion.** The DM in patients with Q-IM of the LV and the biventricular MI is accompanied by late admission and is more common in women. The presence of the DM in patients with MI is associated with a higher frequency of ventricular extrasystoles, ventricular tachycardias and ventricular fibrillation, cases of early post-MI angina, the development of recurrent MI and the LV aneurysms. Patients with DM have a high frequency of cardiogenic shock and worse manifestations of acute and chronic HF*

***Keywords:** right ventricular myocardial infarction, diabetes mellitus, acute period, complications*

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## GENDER AND AGE FEATURES OF FATTY ACID COMPOSITION OF BLOOD PLASMA IN MOUNTAIN DWELLERS OF TRANSCARPATHIAN REGION

**p. 16-19**

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***The aim*** *of the work is to identify the age and gender characteristics of the fatty acid plasma spectrum in the inhabitants of the mountain settlements of the Transcarpathian region, depending on the body mass index. The object of the study is the lipid and fatty acid plasma spectrum. The subject of the study is the relationship between the state of the fatty acid composition of the plasma and the age and sex of the subjects.*

***Materials and methods*** *54 inhabitants of the mountain village Vydrychka of Rakhiv district of Transcarpathian region (average altitude 797 m above sea level) were surveyed. The analysis of the fatty acid plasma spectrum was done, using the method of gas chromatography method, and also lipid spectrum was analyses and evaluation of the body mass index and abdominal circumference was done.*

***Results:*** *Inhabitants of mountain settlements over 40 years have significantly higher BMI, larger abdominal circumference, higher total cholesterol, higher levels of pentadecanoic, palmitic and stearic, oleic and linoleic acids, higher total polyunsaturated fatty acids (PUFAs), first of all because of a higher level of ώ6 PUFA. Similar deviations were also found among highlanders with overweight and 1st degree obesity, although they have a higher level of not only total but also individual ώ6 PUFAs, in particular, linoleic, Y-linolenic, ώ6-digomo-γ-linolenic, ώ6-arachidonic and ώ6-andrenic PUFA.*

***Conclusions.*** *People living in mountain settlements over 40 years old, overweight or obese have a higher level of total cholesterol and a more prognostically unfavorable profile of fatty acids due to higher levels of saturated fatty acids (pentadecane, palmitic and stearic fatty acids) and a higher level of total ώ6 PUFA. Favorable lipid and fatty acid profiles were found in persons younger than 40 years old and in subjects with normal weight. Significant differences in the composition of fatty acids among men and women were not found*

***Keywords:*** *lipid metabolism, fatty acid spectrum, mountain settlements, overweight, obesity*

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## INFLUENCE OF THERAPY ON THE DEVELOPMENT OF LONG-TERM ARTICULAR AND EXTRA-ARTICULAR DAMAGES IN ADULT PATIENTS WITH JUVENILE IDIOPATHIC ARTHRITIS

**p. 20-26**

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***Aim of the research:*** *to evaluate the effect of therapy on the development of articular and extra-articular damages in adult patients with JIA.*

***Materials and methods:*** *the study included 163 patients aged >18 years, with a JIA according to the ILAR classification. The study did not include patients with disease duration <3 years. The JADAS-10 disease activity, functional capacity (HAQ), articular (JADI-A) and extra-articular (JADI-E) damages of JIA were evaluated. The received therapy, a dose and duration of reception of various medications were analyzed.*

***Results.*** *JADI-A>1 was detected in 36.9 %, and JADI-E>1 was detected in 30.7 % of patients. Remission was diagnosed in 37 (41.6 %) patients with JIA. Most patients (67 %) had previously taken glucocorticoids (GC). Only 25 % of patients received GC at the time of observation, 28 (17.2 %) received only non-steroidal anti-inflammatory drugs (NSAIDs), 134 (82.2 %) – disease-modifying anti-rheumatic drugs (DMARDs). Biological therapy (BT) was received earlier or at the time of the examination in 23.9 % of patients. JADI-A was more frequently observed in RF-negative polyarthritis (47.1 % of patients vs 15.5 %, p<0.05). Presence of articular damages (JADI-A>1) in patients with persistent oligoarthritis was observed in 16.7 % of patients vs in 31.1 % without long-term joint damages (p<0.05). Extra-articular damages (JADI-E>1) were observed more often in RF-negative polyarthritis (in 36 % of patients vs 20.4 %, p<0.05). In patients without articular (JADI-A<1, 33.0 % vs. 5 %, p<0.05) and extra-articular damages (JADI-E<1, 30.1 % vs 6 %, p<0.05) remission was diagnosed more often. Patients with JADI-A>1 and JADI-E>1 had higher degree of JADAS activity (p<0.05) and a worse functional capacity for HAQ (p<0.05). Patients with long-term extra-articular damages in adulthood were more likely to take GC in history or continued to take GC than patients without extra-articular damages (p<0.01), they received longer GC (p<0.01) and the cumulative dose of GC was higher (p<0.01). However, both groups did not differ in the prescribing BT. Although a difference was found both in the administration of DMARDs, in the duration of treatment with DMARDs and the number of DMARDs assigned sequentially or in parallel in patients with long-term extra-articular damages (p<0.05). Patients with extra-articular damages needed intensification of therapy with BT more often (p <0.05) than patients without JADI-E.*

***Conclusions:*** *the presence of JIA in childhood leads to the development of articular damages in adulthood. These damages are observed more often in patients with RF-positive and RF-negative poly-arthritic JIA than with enthesitis-associated arthritis JIA and JIA with extended oligoarthritis. Extra-articular damages were developed in RF-positive and RF-negative poly-arthritic JIA more often than in oligoarthritic JIA and enthesitis-associated arthritis JIA. The development of long-term articular and extra-articular damages in adulthood is associated with a history of GC intake (p<0.01) and usage of GC at the time of examination (p<0.01), with a longer duration of GC intake (p<0.01) and a higher cumulative dose of GC (p<0.01). In order to reduce the development of long-term articular and extra-articular damages in adulthood DMARDs and BT should be more often administrated, as well as to avoid long- term use and high doses of GC*

***Keywords:*** *juvenile idiopathic arthritis, adults, long-term damages, therapy, glucocorticoids*

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**CYTOKINE PROFILE IN PATIENTS WITH PARKINSON'S DISEASE ON THE BACKGROUND OF THE AUTOIMMUNE PATHOLOGY**

**p. 27-31**

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*Parkinson's disease (PB) is a chronic, slowly progressing neurodegenerative disease characterized by pathological damage to dopaminergic (DA) neurons, the formation of intraplasmic inclusions, known as Lewy bodies. The etiology of PB is not completely known, various factors, including genetic, immunological, ecological, initiate the neurodegenerative process of DA-neurons. The results of several clinical studies show the possible role of the immune system, in particular autoimmune mechanisms, in the etiopathogenesis of PD. About 30 years have passed since the first time when activated microglia of the brain was detected on autopsy in patients with PD. Since then, scientists are trying to investigate the effect of the inflammatory process on the development and progression of degeneration of DA-neurons.*

***Aim of the study.*** *To study the concentration of anti-inflammatory (IL-10) and pro-inflammatory cytokines (IL-1β, IL-6) in patients with PD and autoimmune thyroiditis (AIT), to evaluate their connection to motor and non-motor disorders.*

***Materials and methods of research.*** *109 patients with PD at the age of 47 to 75 years (mean age 61.0±14.0) were examined. The main group consisted of patients of IA and IB subgroups, control group of IIA and IIB subgroups. A general clinical and neurological examination, an evaluation of motor functions using the unified PD scores (UPDRS), neuropsychological testing (MoCA, FAB, BeDI depression scale (BDI), Hamilton anxiety scale (HARS)), a scale for evaluating vegetative disorders in patients with PD. The concentration of cytokines in the blood serum was determined by the method of solid-phase enzyme-linked immunosorbent assay with the help of sets of reagents from Vector Best Ltd. Statistical analysis was done with the use of the program "Statistica 6.0".*

***Results****. The study showed a statistically significant increase in the level of proinflammatory cytokines (IL-1β, IL-6) in the blood serum in patients with PD and AIT in comparison with PD patients. The level of anti-inflammatory cytokine IL-10 in the patients of the IA subgroup was statistically significantly higher in comparison with the patients of the IIA subgroup. We did not find a statistically significant difference between the indices of IL-10 concentration in the serum of patients in the IB and IIB subgroups.*

*A connection was established at a statistically significant level between the cytokine profile and neuropsychological testing data, the general index of the vegetative assessment scale in patients with PD, the initial scale of the UPDRS scale.*

***Conclusions****. Patients with PD and AIT had higher indices of interleukins (IL-1β, IL-6, IL-10) in the blood serum compared with the control group (PD patients). There was a correlation at a statistically significant level between the cytokine profile and motor and non-motor PD manifestations*

***Keywords****: Parkinson's disease, autoimmune thyroiditis, interleukins, neuropsychological testing, motor disorders*

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**PROGNOSTIC VALUES OF SERUM NEURONAL BIOMARKERS NSE AND PROTEIN S-100 IN ACUTE PERIOD OF SEVERE HYPOXIC-ISCHEMIC ENCEPHALOPATHY IN TERM INFANTS**

**p. 32-41**

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*It remains unclear if the serum concentrations of neuron-specific enolase (NSE) and protein S-100 correlate with severity and possible complications of hypoxic ischemic encephalopathy (HIE) as well as monitoring parameters of cerebral perfusion and central hemodynamics in term newborns.*

***The aim of research.*** *To determine diagnostic and predictable values of NSE and protein S-100 in acute period of severe hypoxic-ischemic encephalopathy in neonates.*

***Materials and methods.*** *Data of 89 term infants with Apgar score at birth of seven or less and Sarnat stage II–III was collected during ≤72 hours of life. The correlation between NSE, S-100 and Glasgow Coma Scale, seizures, confirmed by the aEEG, the unwanted development of neurological complications such as cerebral leukomalacia, and the short-term clinical results were analyzed.*

***Result.*** *In acute period of HIE the concentration of serum neuronal biomarkers S-100 and NSE proteins substantially exceeds the reference values for the first hours after labor and exceeds the normal range until the 5$^{th}$ day of life. The dynamics of these data significantly changes during this period. Mostly diagnostically and prognostically significant the measurement of biomarkers was on the 3rd day of treatment, immediately after the end of the therapeutic hypothermia, at the beginning of rewarming and brain reperfusion, when both indicators were most closely correlated with the assessment of the GCS: NSE (r=–0.3; p=0.002) and S-100 (r=–0.3; p=0.003). The value of S-100 on day 1 correlating with the following unwanted development of leukomalacia is above 1.8 μg/L (p=0.002), which is more than 3 times higher from the reference level of 0.51 μg/L given by Simon-Pimmel J. (2017) for term newborns.*

***Conclusion.*** *The evaluation of the serum concentrations of protein S-100 and neuron-specific enolase in the acute period of hypoxic ischemic encephalopathy in the term newborns has a significant diagnostic and predictable value and correlates with the severity and short-term clinical results of HIE*

***Keywords:*** *caspases, biomarkers, protein S-100, NSE, hypoxia, ischemia, reperfusion, hypothermia, encephalopathy, newborns*

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**STRUCTURAL FEATURES OF MULTIFIDUS MUSCLE IN PATIENTS WITH DEGENERATIVE DISEASES OF THE LUMBAR SPINE**

**p. 41-49**

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***Aim:*** *to investigate the structural and functional changes in paravertebral muscles of patients with degenerative diseases of the lumbar spine based on histological and electron microscopic analyzes.*
***Material and methods****: histological and electron microscopic analysis of multifidus muscles of 49 patients (27 men and 22 women) was performed. Patients were on treatment between September 2015 and March 2018. The material was obtained during surgery for degenerative diseases of the lumbar spine: instability (9 patients), spondylolisthesis (11), spinal stenosis (9), lumbar disc herniation (20).*
***Results****: dystrophic disorders of muscle fibers were detected. There were thickness unevenness, discoid decay, loss of transverse striation and polygonality, replacement of muscle fibers with fat tissue, proliferation of fibrous tissue, edema. Prevalence of adipose tissue was found in 20 % of patients with a lumbar disc herniation, 22.22 % with instability, 36.36 % with spondylolisthesis, 44.44 % with spinal stenosis. The proliferation of connective tissue only in perimysium was defined in patients with a diagnosis "lumbar disc herniation", in others – both in perimysium and in endomysium. At the ultramicroscopic level, in the postoperative material of the patients with spondylolisthesis and spinal stenosis, in addition to intermyofibrillar edema and the violation of the architectonics of sarcomeres, as well as the structure and location of the mitochondria, focal necrosis of myofibrils were detected. Areas with a normal distribution of mitochondria were noted only in a group of patients with a lumbar disc herniation. In patients with a diagnosis of "spinal stenosis" violations of the ultrastructural organization of venules were found. This has a negative effect on nutrition and, accordingly, the functioning of a partitioned muscle.*
***Conclusion****: the greatest manifestations of dystrophic disorders of muscle fibers at the tissue and ultrastructural levels were revealed in patients with diagnoses of "spondylolisthesis" and "spinal stenosis"*
***Keywords:*** *degenerative diseases, m. multifidus, histology, electron microscopy, mitochondria, lumbar spine, patients*

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**CERVICAL LAMINOPLASTIC IN PATIENTS WITH CEREBRO-SPINAL CORD INJURY**

**p. 50-53**

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*Cervical laminoplasty is a surgical method of treating the stenosis of the spinal canal in the cervical region, which increases the intraspinal space and allows preserving the integrity of the posterior elements of the vertebrae.*

***Purpose:*** *The aim of the study was to investigate the efficacy and develop the treatment tactics for patients with posttraumatic cervical spondylotic myelopathy due to stenosis of the spinal canal.*

***Materials and methods****. On treatment in "Dnepropetrovsk Regional Clinical Hospital after named I. I. Mechnikov", from April 2014 to February 2018 there were 7 patients with posttraumatic cervical spondylotic myelopathy due to stenosis of the spinal canal. The age of the patients was 54–68 years. To assess the effectiveness of the treatment, the ASIA neurological disorders scale was used. The degree of severity of neurological disorders of patients corresponded to C-D. All patients underwent standard SCT and MRI study.*

***Results of the study.*** *In the early postoperative period, 6 patients showed improvement in their neurological status. Patients of group C-2 observations (before surgery, muscle strength in the limbs was below 3 points), recovered to category D (muscular strength was more than 3 points). In patients included in the category D-4 examinations (before surgery, muscle strength was more than 3 points, but did not reach 5 points), there was a complete restoration of muscular strength in the limbs – 5 points. One patient in Group D did not have a neurological recovery.*

***Conclusions:***

*1. The operation is organ-preserving and after the operation the spinal cord remains covered with a bone tissue behind it, which prevents the formation of scar tissue directly on the dura mater.*

*2. Decompression of the spinal cord is achieved without significant disruption of stability, thus reducing the likelihood of postoperative kyphotic deformity and spondylolisthesis.*

*3. Laminoplasty does not require subsequent spondylodesis, movement remains in the segment, in contrast to the methods that include the installation of the fixation structure, in this connection, the severity of degeneration at adjacent levels may decrease.*

*4. Carrying out decompressive laminoplasty in patients with traumatic myelopathy, most effective in the early days after trauma, the first 7 days*

***Keywords:*** *laminoplasty, stenosis, myelopathy, trauma, MRI, ASIA, decompression, instability, operation, organ PRESERVING*

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**METHODOLOGY AND EFFICIENCY OF THE PSYCHOTHERAPEUTIC CORRECTION SYSTEM OF ADAPTATION DISORDERS OF STUDENTS**

**p. 54-58**

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***The aim****: to develop a system of psychotherapeutic correction of adaptation disorders of medical university students.*
***Materials and methods of research****: to achieve the set aim with observance of the principles of bioethics and deontology, a comprehensive clinico-anamnestic, clinico-psychopathological and psycho-diagnostic examination of 412 students of both sexes, Kharkov National Medical University (KhNMU) at an average age of 18.0±2.0, 52.2 % of the surveyed (215 students) were residents of eastern Ukraine, 21.1 % (87 students) – residents of the Lugansk and Donetsk regions who entered the KhNMU at the beginning of the ATO and 26.7 % (110 students) internally displaced persons from the ATO zone.*
*Research methods: clinical-psychopathological, psycho-diagnostic, statistical.*
***Results.*** *As the results of the study showed, the students-migrants from the ATO zone show a higher level of adaptation disorders, compared to students in eastern Ukraine and residents of the Lugansk and Donetsk regions who entered the KhNMU for education at the beginning of the ATO. We developed a system of psychotherapeutic correction of disadaptation conditions in students of the medical university which was aimed at overcoming adaptation disorders and potentiating adaptive personality mechanisms of students by revealing the pathogenetic nature of the conflict, determining the start of disadaptive reactions, processing the pathological behavior stereotype, forming a tendency to use constructive forms of coping, normalizing the system of emotional-volitional reaction, increasing self-esteem, activation of protective psychological mechanisms skill formation self psychological state. As shown by the results of dynamic observation against the background of the proposed system of psychotherapeutic correction of disadaptation states, the level of adaptation of students has significantly increased, anxiously depressive symptoms have been reduced, and the level of neuropsychic tension has become lowered. The obtained results of the research testified to the positive influence of psychotherapy on the optimization of the coping strategy of the problem-solving behavior of medical students.*
***Conclusions.*** *A system of psychotherapeutic correction of medical students' disadaptation conditions has been developed. This includes the use of rational psychotherapy (Dubois P., 1912), individual cognitive behavioral therapy (Beck A. T., 2006), autogenic training – psychotonic variant by A. M. Shogam, K. I. Mirovsky (1963) and art therapy using the techniques of "Drawing Yourself", "The Star of Senses". Sense-forming element of the developed system of psychotherapy is psychoeducation using information modules and training the formation of communicative skills and skills in solving problems of interpersonal interaction. Under the influence of psychotherapeutic correction of adaptation disorders, rapid reduction of anxious and depressive symptoms, normalization of emotional state, optimization of coping strategy of problem-solving behavior with predominance of coping of problem-oriented problem*

***Keywords:*** *medical students, adaptation disorders, anxiety, depression, coping strategies, psychoeducation, psychotherapy*

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**EVALUATION OF THE EFFICIENCY OF PSYCHOEDUCATION IN THE STRUCTURE OF REHABILITATION OF PATIENTS WITH ALCOHOL DEPENDENCE**

**p. 58-61**

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***Aim of the research:*** *to develop and evaluate the effectiveness of psycho-educational programs in the system of psychosocial rehabilitation of patients with alcohol dependence.*

***Materials and methods:*** *the study carried out a complex clinical-psychopathological and psycho-diagnostic examination of 150 male patients from 20 to 55 years old, who, according to the diagnostic criteria of ICD-10, had alcohol dependence syndrome. The main group (whose patients took part in the psycho-educational program) consisted of 105 people. The control group included 45 patients who received standard regulated therapy in the hospital.*

***Results of the study:*** *during the work, a system of rehabilitation of patients with alcohol dependence with the use of psycho-education was developed and tested. The main strategy includes a complex impact on the cognitive, emotional, psycho-physiological, behavioral and social aspects of alcohol dependence.*

*The main goal of psycho-education is the formation in alcohol addicts of an adequate understanding of narcological disorders and involvement in adequate participation in rehabilitation activities.*

*The algorithm of psycho-education of patients with alcohol dependence was developed, and it aims to increase the level of special (narcological) knowledge of the patient and his family; the development of skills for solving life problems and includes the training of communication skills; training of coping skills.*

*Against the background of the psycho-educational program in the rehabilitation system of patients with alcohol dependence, there is a positive dynamics of mental status, a positive transformation of coping strategies in patients of the main group that included psycho-education into the traditional complex of rehabilitation measures, which significantly exceeds the corresponding changes in the control group.*

*When analyzing the duration and quality of remission, it was established (in 6 months): in 70.1 % of the examined main group, complete remission of alcohol dependence was observed compared with 41.5 % of patients in the control group; incomplete remission, respectively, in 26.2 % and 49.1 % of those surveyed; steady alcohol abuse in 3.7 % of the examined primary and 9.4 % of the control group.*

***Conclusions:***

*1. The system of psycho-educational effects in the rehabilitation of men with alcohol dependence should include four modules: raising the level of special (narcological) knowledge of the patient and his family; the development of skills in solving life problems, the training of communication skills; coping skills training.*

*2. We established expressed positive dynamics of mental status, high quality of remission, positive transformation of coping strategies in patients of the main group who included psycho-education into the traditional complex of rehabilitation measures, which significantly exceeds the corresponding changes in the control group*

***Keywords:*** *alcohol dependence, psycho-education, psychosocial rehabilitation, remission, coping strategies, alcohol consumption*

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**SYSTEMATIZATION OF ETHIOPATHOGENETIC FACTORS OF MUSCLE AND JOINT DYSFUNCTION DEVELOPMENT OF THE TEMPOROMANDIBULAR JOINT**

**p. 62-67**

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***The aim:*** *to substantiate the concept of the system approach for generalization and regulation of ethiopathogenetic factors of muscle and joint dysfunction development of the temporomandibular joint to propose schemes for factors structuring based on the analysis of scientific sources and the authors' own clinical studies and to provide methodological and practical assistance to physicians in studying this pathology in order to improve efficiency and quality diagnosis and treatment.*

***Materials and methods:*** *As a materials for the study were taken modern native and foreign scientific sources on the etiology and pathogenesis of the muscle and joint dysfunction of the temporomandibular joint, as well as the authors' own clinical observations. The retrospective analysis of a representative sample consisting of 306 dental patients cards was conducted (men – 90 (29.4 %), women – 216 (70.6 %) aged 16 to 74, the average age was 38.07±1. 97 years) taken from the database of the Republican Center of Dental Implantation (Kharkov), which were diagnosed and treated for muscle and joint dysfunction of the temporomandibular joint during 2010–2017 years. During the research, the system approach, methods of analysis, synthesis and generalization, structural decomposition were used.*

***Results of the study:*** *the concept of generalization and integration on a single system basis of various approaches presented in scientific sources to the ethiopathogenetic factors structuring that can lead to the development of muscle and joint dysfunction was suggested. As the result of the study, a unified structured complex of pathogenetic factors is presented, the composition of local factors (dental genesis) and general factors (associated with diseases of various organs and systems of the body, traumas, stresses, etc.) which can be the cause of the temporomandibular joint pathology development and act as predisposing, trigger (provoking) or supporting factors.*

***Conclusions:*** *the presented results allow expanding and systematizing the knowledge of practicing dentists, as well as doctors of other specialties, family doctors, interns, students of dental faculties about the ethiopathogenetic factors of the muscle and joint dysfunction development of temporomandibular joint in order to direct their attention to multifactorality and polygenic of this disease, which has great practical importance. The results of the research show that for quality diagnosis and the appointment of an adequate rational treatment for dysfunction, a system, multidisciplinary approach is needed with active and motivated involvement of the patient in order to identify, if possible, the majority of the active negative factors that led this particular patient to this pathology*

***Keywords:*** *temporomandibular joint, muscle and joint dysfunction, ethiopathogenetic factors, generalization, systematization*

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