

## ABSTRACT&amp;REFERENCES

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## TRACE ELEMENTS AND MINERALS CONTENT IN HAIR OF CHILDREN WITH EPILEPTIC SEIZURES, WHO HAD PERINATAL DAMAGE OF CENTRAL NERVOUS SYSTEM. CLINICO-LABORATORY CORRELATIONS

p. 4-12

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**Aim of research.** Identify the features of the content of trace elements and minerals in hair in children with epileptic seizures that have undergone perinatal pathology of the central nervous system. To determine the specificity of elemental status in patients whose seizures could be stopped, and in patients resistant to pharmacotherapy.

**Methods.** Twenty children with epileptic seizures underwent perinatal pathology of the central nervous system, aged from 3 months to 8 years (an average of  $3.04 \pm 2.9$  years) were controlled. Population is divided into two groups: I group (10 people) – children with epileptic seizures, managed to be stopped. Group II (10 people) – children with epileptic seizures, resistant to therapy. The control group consisted of 10 practically healthy children of the corresponding sex and age. The content of 25 chemical elements: Al, As, Be, Cd, Hg, Li, Ni, Pb, Sn, B, V, I, Ca, Co, Cr, Cu, Fe, K, Mg, Mn, Na, P, Se, Si, Zn,  $\mu\text{g/g}$  was determined in hair by atomic-emission spectrometry with inductively coupled argon plasma and mass spectrometry.

**Results.** The children with epileptic seizures showed a statistically significant increase in the content of Ca, Mg, Mn, Pb, a decrease in Sn concentration when comparing the content of elements in the group II and the control group ( $p < 0.05$ ). The increase in the concentration of the toxic element Pb in

the group of seriously ill children with pharmacoresistant persisting epileptic seizures is 3.5 times higher than in the control group ( $p < 0.05$ ). The amount of Ca, Mg, Mn, Pb ( $\rho$  from 0.42 to 0.67) in hair directly correlated (according to Spearman) with the severity of the condition and the propensity to resistance to therapy, in feedback – Sn ( $\rho -0.53$ ). The largest number of direct average and strong links with the severity of clinical evidence and the character of structural changes in the brain was noted in Mg.

**Conclusions.** The revealed changes in elemental status may indicate a possible pathogenetic mechanism in the development of clinical symptoms in the patients examined, the formation of pharmaco-resistance to therapy due to a disturbance of the metal-ligand homeostasis. More studies are needed to clarify the importance of the exchange of micro- and macroelements in the development of the disease

**Keywords:** trace elements and minerals, children, epileptic seizures, persisting epileptic seizures

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**PULSE PRESSURE CLASSES AND CLINICAL FEATURES OF PATIENTS AT THE ANNUAL STAGE OF MEDICAL THERAPY AFTER PERMANENT PACING**

**p. 13-18**

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*The aim of study was to assess the changes of patient's clinical signs in pulse pressure classes at the annual stage after pacemaker implantation and drug therapy.*

**Methods.** It is included 220 patients at the annual stage of the drug therapy after pacemaker implantation divided in pulse pressure (PP) classes (I – very low PP – less than 20 mm Hg, II – low more than 20 – less than 40 mm Hg, III – the norm – 40–60 mm Hg, IV – high more than 60 – less than 80 mm Hg, very high PP – more than 80 mmHg). We evaluated the frequencies of occurrence of the postinfarction atherosclerosis, functional classes (FC) of stable angina; stages and severity of arterial hypertension; diabetes mellitus, forms of atrial fibrillation; FC and stages of chronic heart failure (CHF). Student's t-test was used.

**Results.** It is necessary to strengthen antihypertensive therapy of patients with implanted pacemakers, especially in IV and V PP classes.

**Conclusion.** At the annual stage after pacemaker implantation drug therapy helps to reduce the frequency of clinical signs of patients in low and high PP classes, accompanied by their concentration in III PP class

**Keywords:** permanent pacing, pulse pressure, clinical features

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**CHARACTERISTICS OF FACTORS, WHICH WORSEN THE CLINICAL COURSE AND DISTURB THE QUALITY OF LIFE IN PATIENTS WITH THE COMBINED PATHOLOGY OF ASTHMA AND CHRONIC OBSTRUCTIVE DISEASE**

p. 18-23

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*The article studies factors that complicate the clinical course and disturb the life quality of patients with the chronic bronchial-obstructive pathology. Aim. To study factors that complicate the clinical course and disturb the life quality of patients with ACC for their rational modification.*

**Materials and methods.** All patients underwent: collection of anamnesis and general clinical examination, evaluation of the function of external respiration, clinical symptoms and risks.

**Results.** At this work there were found factors that complicate the clinical course and life quality of patients with combined bronchial-obstructive pathology, especially clinical ones, such as expressed short breath, decrease of tolerance to physical loads and functional parameters of the external respiration.

**Conclusions** of this work correspond to introduced recommendations as to the treatment of patients with ACC: effective anti-inflammatory and broncholytic therapy with the spe-

*cial accent on timely detection and adequate treatment of a concomitant pathology*

**Keywords:** combined bronchial-obstructive pathology, heavy course, short breath, life quality

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**CONTENT OF  $\alpha$ -,  $\gamma$ -INTERFERON AND NEOPTERIN IN BLOOD SERUM OF WOMEN WITH PARVOVIRUS INFECTION IN DIFFERENT PERIODS OF PREGNANCY**

p. 23-27

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*The aim of the study was to determine  $\alpha$ -,  $\gamma$ -interferon (IFN) and neopterin levels in blood serum of pregnant women with a parvovirus infection.*

*Methods and materials:* There were examined 129 pregnant women, infected with a parvovirus B19, and 16 women with physiological pregnancy in I, II and III trimesters. Each group of pregnant women (I, II, III) was divided in two subgroups, depending on the presence or absence of clinical complications. The quantitative evaluation of  $\alpha$ -,  $\gamma$ -IFN and neopterin content in blood serum was realized by the method of immune-enzyme analysis.

*Results of research:* Blood serum of infected pregnant women contained increased  $\alpha$ - and  $\gamma$ -IFN levels, most expressed at studying IFN- $\gamma$  levels that reliably exceeded control indices in I-III groups in 3,4–2,9–2,1 times respectively. At the presence of clinical complications in different periods of pregnancy women demonstrated the reliably decreased  $\alpha$ -IFN level and reliably increased  $\gamma$ -IFN level compared with pregnant wom-

en without clinical complications. High levels of neopterin were revealed in blood serum of infected women that testifies to the activation of a monocytic link of the cellular immunity at the impact of  $\gamma$ -IFN. At comparing the subgroups of pregnant women it was established, that changes of the neopterin level in blood serum relative to control values had the unidirectional character; but women with clinical complications of pregnancy demonstrated the more essential exceed of control values in different trimesters – in 2,9; 2,9 and 3,1 times.

**Conclusions.** The increase of IFN- $\gamma$  and neopterin up to high values reflects the activation of a cellular immunity link and can play an important role in the pathogenesis of pregnancy complications

**Keywords:** pregnancy, parvovirus infection, alpha- and gamma-interferon, neopterin

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## ANALYSIS OF SYPHLIS INCIDENCE IN ZHYTOMYR REGION

p. 27-32

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**The aim of the study:** to analyze the epidemiological situation regarding syphilis in Zhytomyr region for the period from 2013 to 2016.

**Methods of the research:** bibliosemantic, systematic analysis and logical generalization, methods of statistical processing.

**Results.** From 2013 to 2016, the incidence of syphilis among residents of Zhytomyr region increased from 10.1 to 13.9 cases per 100,000 population. During 2013, for the first time with a diagnosis of syphilis were registered 129 patients, and in 2016 – 173 patients. In the structure of morbidity is a prevalence of early syphilis. A special place in the spread of the disease is occupied by patients with latent, asymptomatic forms of infection. It should be noted that from 2013 to 2017 no cases of congenital syphilis were diagnosed. The largest number of patients is recorded in age ranges 20–29 years, 30–39 years, 40 years and older. In the risk area (first of all) there are men and women without permanent place of residence and permanent work that lead to an immoral way of life.

**Conclusions.** The morbidity of the population of Zhytomyr region for syphilis from 2013 to 2016 has a slight tendency to increase. The greatest number of patients belongs to the age groups that belong to the reproductive period and the older age group. Assessing the social status of patients, they concluded that the illness most often registers in persons who do not work and do not study

**Keywords:** dynamics, morbidity, syphilis, Zhytomyr region, analysis, annual reports, epidemiological situation

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### ELIMINATION OF THE TRANSMISSION MOTHER-TO-CHILD HIV AND SYPHILIS: THE PROGRESS AND CHALLENGES TO UKRAINE

p. 32-36

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*The objective of this study is to analyze the indicators of impact and process of EMTCT of HIV and syphilis in Ukraine thus helping to prepare for validation of this process according to the WHO targets and criteria.*

*Materials and Methods.* In this retrospective study were presented the epidemiological and clinical data about 237 women who had syphilis before or during pregnancy and babies born to them (238) from 1999 to 2007 yy. Besides in article were used statistical forms of the Public Health Center and Center for Medical Statistics of the Ministry of Health of Ukraine for the incidence of syphilis and HIV in women of reproductive age, pregnant women and children born to them, including those who were diagnosed with congenital syphilis and HIV infection from 2007 to 2016.

*Results.* The analysis of the data from Public Health Center shows that one of the target indicators for the impact of HIV/AIDS has been achieved in Ukraine: the number of new cases of mother-to-child transmission of HIV per 100,000 live births was 20.8 in 2015. But in the same time the indicator of mother-to-child transmission of HIV in Ukraine is still higher than the WHO minimum criterion ( $\leq 2\%$ ) and was 3.7% according to a cohort of children born to HIV-infected women in 2015, which still does not meet the criteria WHO to validate this process.

*Despite the main target indicator of CS elimination has been achieved, some process indicators of syphilis as coverage of syphilis testing and treatment of pregnant women have not reached yet.*

**Conclusions.** *Given the policy of dual elimination of MTCT of HIV and syphilis in Ukraine, an expansion of the PMTCT program on universal access to HIV and syphilis diagnostics and treatment services in pregnant women at high-risk groups is required*

**Keywords:** *pregnancy, HIV, syphilis, mother-to-child-transmission, congenital syphilis, elimination, validation*

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## LIFE QUALITY LEVEL AS A TARGET OF ART-THERAPEUTIC INFLUENCE IN THE COMPLEX TREATMENT OF PATIENTS WITH SCHIZOPHRENIA

p. 36-39

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**Aim:** *to study the life quality dynamics of patients with schizophrenia under the influence of art-therapy in the system of therapy and rehabilitation.*

**Materials and methods:** *At the research there was realized the complex clinical-psychopathological examination of 125 patients of both sexes, 20–45 years old (mean age 35,0±2,0 years) with the set diagnosis schizophrenia in the period of stabilization. The main group (participated in art-therapy) included 95 persons (54 women and 41 men). The control group consisted of 30 patients (16 women and 14 men), who received the standard regulated treatment at hospital.*

**Results of research.** *At the research there was used the system of art-therapy in the complex therapy of patients with schizophrenia and its effectiveness was proved.*

*On the background of the complex therapy including art-therapy, there was observed the fast reduction of the psychopathological symptomatology, normalization of the emotional condition, stabilization of patients' behavior, improvement of cognitive indices, increase of patients' psychophysical activity.*

*It was established, that on the background of using art-therapy in the complex treatment of patients with schizophrenia, the life quality index increased by all scales in the main group by 42,4 %, compared with the control – 26,9 %.*

**Conclusions.** *Under the influence of art-therapy in the complex treatment of schizophrenia there was observed the fast reduction of psychopathological symptomatology, increase of the duration and quality of remission.*

*There was established the high effectiveness of art-therapy compared with the traditional complex treatment as to improving the life quality of patients with schizophrenia.*

*Art-therapy, based on elaborated principles for patients with schizophrenia is characterized by the higher effectiveness, compared with traditionally used methods*

**Keywords:** *art-therapy, patients with schizophrenia, social functioning, positive, negative, general psychopathological syndromes*

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#### CLINICAL-PSYCHOPATHOLOGICAL ANALYSIS OF CURRENT DEPRESSIVE DISORDERS ASSOCIATED WITH SUICIDAL BEHAVIOR OF WOMEN

p. 39-42

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**Aim of research.** Study of clinical and psychopathological features of depressive disorders associated with suicidal behavior in women in modern conditions

**Materials and methods of research.** A comprehensive survey of 150 women aged 25–65 years was conducted who were diagnosed with depressive disorders: disorders of adaptation, in the form of depressive reaction (42.8 %); moderate and severe depressive episode (35.1 %), recurrent depressive disorder (22.1 %)

The main group consisted of 77 patients with signs of suicidal behavior, control – 73 patients without signs of suicidal behavior.

Methods of research: clinical-anamnestic, psychodiagnostic, clinical-psychopathological

**Results.** Distinguished anxiety (45.4 % of the patients in the main and 32.1 % of the control group), obesity (35.2 % and 36.3 % respectively), asthenia-apathetic (7.1 % of the patients in the main and 18.2 % of the control group) and melancholic (12.3 % and 13.4 % respectively) variants of depressive disorders.

It is proved that women with depressive disorders combined with suicidal behaviour are adhered to high suicide risk, high anhedonia, severe anxiety and depression on the Hamilton scale, a large depressive episode on the Montgomery - Iceberg scale. For women with depressive disorders without signs of suicidal behaviour there was an average level of suicidal risk, high level of anhedonia, severe anxiety and depression on the Hamilton scale, a large depressive episode on the Montgomery - Iceberg scale

#### Conclusions.

1. Women with depressive disorders with suicidal behaviour characterized by anxiety, tedious, asthenia-apathy and melancholy variants of depressive disorders. Patients with disturbing and timid variants of depression are characterized by a high level of suicidal risk.

2. Women with depressive disorders associated with suicidal behaviour there is a high level of suicidal risk, high anhedonia, severe anxiety and depression on the Hamilton scale, a large depressive episode on the Montgomery – Iceberg scale.

3. Prognostically significant in the formation of suicidal behaviour are disturbing and timid variants of depressive disorders, high rates of clinical anxiety and depression scales, high suicidal, obese suicidal anamnesis

**Keywords:** depressive disorders, women, suicidal behaviour, anxiety, depression, anhedonia, psycho-traumatic factors

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#### SUBSTANTIATION AND FUNDAMENTALS OF MEDICO-PSYCHOLOGICAL ESCORT IN THE CHILD NEUROSURGERY SPHERE

p. 42–46

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**Aim:** Comprehensive study of the features of emotional disorders in the parents of a child of the first year of life with severe craniocerebral trauma.

**Materials and methods.** To achieve this aim, in compliance with the principles of bioethics and medical deontology was conducted a comprehensive clinical-anamnestic, clinical-psychological and psychodiagnostic examination of

137 families (mother and father) of children of the first year of life who received a craniocerebral trauma. All the examined families were full (mother and father), the average age of their parents was 27.0±3.0 years.

The main group consisted of 97 families who took part in the program of medical and psychological support using psychoeducation. Control group – 40 families who did not receive psychological support.

The following survey methods were used in the study: clinical and anamnestic; clinical and psychological; psychodiagnostic using a questionnaire of nervous-psychic stress, clinical scale of anxiety and depression of Hamilton, adapted to MKH-10; scale of situational and personal anxiety Ch. D. Spielberger; methods of studying the styles of stress-breaking behavior "Methods of coping", methodology "Determination of ways to resolve conflicts" by K. Thomas in adaptation by N.V. Grishina.

**Results of the research.** The child's illness is a traumatic situation for all parents, which leads to the development of anxiety-depressive reactions and conditions. Distributed anxiety-depressive, asthenoid-depressive, depressive-apatitic and dysphoric variants of emotional disorders in the parents of infants with severe craniocerebral trauma and described their clinical features.

For parents of infants with severe craniocerebral trauma are characterized as ones with high levels of emotional stress, a sharp increase of negative emotions, a feeling of anxiety, depressive manifestations.

The obtained results allowed to substantiate expediency of medical-psychological support of the family with the first year child with severe craniocerebral trauma, which includes methods of differentiated psychotherapy and psycho-educational programs.

**Conclusions** The structure of psycho-emotional disorders in the parents of infants with severe craniocerebral trauma is represented by anxiety-depressive (40.9 %), asthenoid-depressive (22.5 %), depression-apathy (20.5 %) and dysphoric (16.1 %) variants.

The efficiency of the system of medical and psychological support of the family with the first year child with severe craniocerebral trauma, which includes methods of differentiated psychotherapy and psycho-educational programs is proved

**Keywords:** infant's parents, craniocerebral trauma, emotional disorders, anxiety, depression, asthenia

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## INVESTIGATING CAUSES OF DATA SCATTERING ABOUT THE PREVALENCE OF MUSCLE AND JOINT DYSFUNCTION OF TEMPOROMANDIBULAR JOINTS IN DENTAL PATIENTS

p. 46-50

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**Aim of research.** To study biopotentials of chewing muscles and possible noise phenomena in temporomandibular joints in dental patients, who have two and more symptoms of a muscle and joint dysfunction of a temporomandibular joint with no complaints for pains in chewing muscles at movements of a lower jaw as ones of criteria for substantiating appropriateness of setting the diagnosis of a temporomandibular joint dysfunction. **Materials and methods.** The group of 136 persons with 2, 3, 4 and more symptoms of a temporomandibular joint dysfunction, deviations in the work of the joint, but no complaints for pains at movements of a law jaw and chewing was formed of patients of the dental clinic.

**Results of research.** The artrophonographic study demonstrated that patients with 2 and 3 symptoms related to a muscle and joint dysfunction of a temporomandibular joint, demonstrate disorders in the work of a temporomandibular joint (56,6 % of patients) and ones with 4 and more symptoms – in 64,1 %. The electromiographic study revealed the absence of disorders of biopotentials of chewing muscles in all 136 patients.

**Conclusions.** One can make a conclusion that a muscle and joint dysfunction of a temporomandibular joint must not be diagnosed in these patients. The repeated examination, realized in 6 months proved the absence of worsening of a condition of chewing muscles and temporomandibular joint in such patients. Assessments of the prevalence of this disease, presented in literary sources, are overestimated unreasonably in a series of cases

**Keywords:** muscle and joint dysfunction, temporomandibular joint, electromyography, artrophonography

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