ABSTRACT&REFERENCES

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EFFICIENCY OF BASIC TREATMENT OF ASTHMA PHENOTYPES IN CHILDREN DEPENDING ON THE TIME OF DISEASE ONSET

p. 4-7

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*The study **aimed** at improving the effectiveness of asthma treatment by analyzing the level of control, the dynamics of inflammometric and spirometric indices in children with phenotypes of early and late onset of the disease.*
***Materials and methods.** On the base of pulmonological department of the Regional Pediatric Hospital (Chernivtsi) 97 school-age children with late onset asthma and 59 school-age children with early onset asthma were examined. All the children received an amount of anti-inflammatory treatment equivalent to severity and control, defined by current standards of care. Determination of the effectiveness of basic therapy was carried out by assessing the control parameters of the disease using the AST test. Bronchial inflammation intensity was determined by the content of metabolites of nitrogen monoxide in the expiratory condensate by Yemchenko N. L. Bronchial lability was assessed by evaluating exersice-induced bronchoconstriction and response to short-acting β2-agonist inhalation. Airway hyperresponsiveness was assessed according to the results of bronchoprovocation testing with histamine by determining bronchial hypersensitivity to stimuli while calculating the provocation concentration (PC20H) and dose (PD20H).*
***Results.** Achievement of asthma control after anti-inflammatory treatment was inherently slower in a group of children with late onset asthma. Clinical manifestations of asthma control were accompanied by reduce of bronchial inflammation activity in children with early-onset phenotype than in patients with a late-onset phenotype, which is reflected in the indices of asthma control. Basic control therapy did not significantly affect the expressiveness of the nonspecific bronchial hypersensitivity to direct and indirect provocative stimuli.*
***Conclusion.** The worst indices of control achieving in schoolchildren with late- onset asthma phenotypes are associated with pronounced bronchial inflammation and hyperresponsiveness. In school-age children with a late-onset asthma phenotype basic anti-inflammatory therapy is performed reasonably according to the de-escalation principle, taking into account the control achievement*
***Keywords:** bronchial asthma, late-onset phenotype, children, treatment, bronchial inflammation, airway hyperresponsiveness*

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OPHTHALMOLOGIC AND PEDIATRIC PREDICTORS OF THE DEVELOPMENT OF THE ACQUIRED MYOPYA IN CHILDREN

p. 8-11

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The aim of the research *– to conduct an analysis of ophthalmologic and pediatric factors contributing to the development of acquired myopia in children.*
Methods of research: *We examined 52 children (104 eyes) aged from 6 to 13 years without ophthalmic pathology. Visual acuity in all children was 1.0. The observation period was 12–24 months. A dynamic monitoring of this group of children showed that myopia subsequently developed in 26 children (52 eyes) of the main group, and in 26 children (52 eyes) myopia was not observed (control group). We performed an ophthalmologic examination and determination of the presence of phenotypic signs of the syndrome of connective tissue dysplasia and the degree of its severity.*
Results: *The conducted factor analysis revealed 3 main factors that were designated as an «anatomical-constitutional» factor (48.9 % of the total dispersion), «hereditary» (7.6 % of the total dispersion) and «morphometric» (7.1 % of the total dispersion). When using ROC-analysis, optimal distribution points of the indicators that influence the development of acquired myopia were determined. The cut-off value of the corneal refractive index was ≤41.5 dpm, the axial length of the eye ≥23.9 mm, the radius of the cornea ≥7.88 mm, the corneal diameter ≥11.85 mm, the thickness of the layer of peripapillary nerve fibers ≤95.0 μm, reserve of relative accommodation ≤1.5 dpi, degree of dysplasia ≥2.0. The statistically significant correlation relations between the degree of connective tissue dysplasia and the anatomical-optical parameters of the visual analyzer were revealed: refractive corneal force ($r=–0.68$, $p<0.05$), axial eye length ($r=0.58$, $p<0.05$), radius of the cornea ($r=0.71$, $p<0.05$), corneal diameter ($r=0.77$, $p<0.05$), thickness of the layer of the peripapillary nerve fibers ($r=–0.42$, $p<0,05$) and the reserve of relative accommodation ($r=–0,79$, $p<0,05$). The correlation between the myopia heredity and the degree of dysplasia was ($r=0.37$, $p<0.05$). Thus, the risk of acquired myopia is higher in children with syndrome of connective tissue dysplasia, which emphasizes the importance and necessity of a multidisciplinary approach in the study of children with this pathology*
Keywords: *development of myopia, risk factors, children, connective tissue dysplasia*

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THE STATE OF THE AUTONOMIC NERVOUS SYSTEM IN PATIENTS WITH ATOPIC DERMATITIS OF ADULTS

p. 12-17

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Aim of the research: *to establish the features of the vegetative nervous system (VNS) state in patients with atopic dermatitis (AD) of adults and its dependence on the severity of the course of dermatosis and the sex of patients, which will expand our knowledge of the pathogenesis of dermatosis in adults and develop additional methods of corrective therapy.*

Materials and methods. *There were 117 patients under observation, including 80 patients with AD at the age of 18 to 45 years and 37 healthy persons. In the study of questionnaires by A.M. Wein in patients with AD, the dysfunction of the VNS was 29±4.2 points (in healthy individuals 8±2.2), which was more pronounced in women with AD in severe dermatitis.*

According to the parameters of heart rate variability in patients with AD, hypersympathicotonia predominated and humoral-metabolic influences on the regulation of heart rhythm. In patients with AD, a decrease in the reactivity and tone of the parasympathetic department of the VNS has been established. All these indicators were more representative in patients with severe dermatosis, especially in women.

Result. *Progression of the degree of severity of AD in adults, especially in women, leads to stress and exhaustion of regulatory and adaptive mechanisms of the VNS with an increase in the activity of its sympathetic link. This position of the cardiovascular system contributes to the preservation and progression of the skin process, and therefore is an unfavourable prognosis for recovery and requires additional corrective therapy.*

Conclusions. *1. It was found that the reactivity of the VNS has its own peculiarities in patients with AD, the dependence of the severity of its changes according to the data of the A.M. Wein questionnaire, the sex of the post-lingual, the features of the course and clinical manifestations, especially the severity of the skin process.*

2. In the patients studied, hypersympathicotonia predominated and humoral-metabolic manifestations affected the regulation of the heart rhythm with reduced total power of the spectrum, a decrease in the tone of the parasympathetic section of the VNS, and an increase in the influence of humoral-metabolic mechanisms, especially in patients with more severe blood pressure

Keywords: *atopic dermatitis, sex, heaviness, heart, rhythm, patients, allergies, autonomic nervous system*

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EMOTIONAL DISORDERS IN PATIENTS WITH PARKINSON'S DISEASE ON THE BACKGROUND OF THE COMORBID PATHOLOGY OF AUTOIMMUNE GENESIS

p. 17-23

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Parkinson's disease is one of the most common neurodegenerative diseases, which affects more than 1% of the world's population, is over 65 years old, and the incidence rate can double by 2030. This pathology is accompanied by both motor and non-motor manifestations (NMM). One of the frequent types of affective disorders in patients with PD is depression. Depression can worsen both the motor and social activity of patients with PD. Understanding the factors associated with depressive symptoms contributes to early detection and timely treatment. In a number of studies, depression and anxiety are recognized as a major factor in the poor quality of life of patients with PD.

Aim of the research. *To study the features of emotional disorders in patients with Parkinson's disease (PD) and autoimmune thyroiditis (AIT).*

Materials and methods. *109 patients with PD at the age from 47 to 75 years were examined. The main group of patients consisted of IA and IB subgroups, control group – IIA and subgroups IIB. Conducted general clinical and neurological examination, assessment of motor functions using the unified PD scores (UPDRS), neuropsychological testing (Becky Depression Rating Scale (BDI), Hamilton Alarm Scale (HARS), PDQ-39 quality of life assessment, statistical analysis with program "Statistica 6.0".*

Results. *The study showed the presence of depression in 84 patients with PD, which is 77.1%, and anxiety disorders in 73 patients, respectively 67.0%. The analysis of the depression and anxiety index in the dynamics showed a statistically significant difference in the subgroups IA and IB. There was a strong statistically significant direct correlation between the scores for the detection of affective disorders and the patient's quality of life indicator (PDQ-39) during the initial examination and a year later in subgroups IA and IB.*

Conclusions. *There was a statistically significant difference in affective disorders in dynamics in patients with PD and AIT. The influence of the level of anxiety and depression on the quality of life of patients with PD and AIT was revealed, which indicates a high medico-social significance of these disorders*

Keywords: *Parkinson's disease, autoimmune thyroiditis, affective disorders, depression, anxiety, quality of life*

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BIOCHEMICAL PARAMETERS OF CEREBROSPINAL FLUID IN PATIENTS WITH ACUTE VIRAL MENINGITIS AND MENINGOENCEPHALITIS

p. 23-27

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The aim. *Determination of the diagnostic value of lactate, lactate dehydrogenase, cholinesterase, acid phosphatase and cholinesterase in CSF for early diagnosis and prognosis of acute viral meningitis and meningoencephalitis.*

Materials and methods. *92 patients with a confirmed viral etiology of the disease were examined. Among them – 20 patients with HSV 1,2 neuroinfection, 19 patients with EBV, 15 with VZV, 14 with HHV-6 and 24 patients with enterovirus neuroinfection. Patients were divided into groups depending on the etiology and severity of the disease. In addition to analyzing the clinical course of the disease, we conducted a CSF study to determine the level of lactate, lactate dehydrogenase, creatinine kinase, cholinesterase and acid phosphatase on admission to hospital and after 10–12 days of treatment.*

Results of the study. *The highest mean age was observed in patients with VZV meningitis – 38.27±18.24 years, the youngest were patients with enterovirus infection – 24.05±5.72 ($p<0.001$). The number of women and men was the same in almost all groups, but among patients with HSV 1, 2 neuroinfection women were significantly prevalent – 16 (80 %) out of 20 cases. The most severe course was observed in groups of EBV and HHV-6 neuroinfections. Neuroinfections of enterovirus etiology had the most favorable course.*

The obtained data indicate the dependence of the levels of indicators, which were determined primarily from the severity of the disease. So the level of creatinine kinase and acid phosphatase in patients with moderate severity was significantly higher in comparison with severe patients ($p<0.05$). The lactate level was higher in patients with severe neuroinfection ($p<0.05$). The highest levels of lactate were detected in patients with HHV-6 meningoencephali-

tis (p<0.05). The level of cholinesterase was significantly lower in severe patients.

Conclusions. *The obtained data confirm the presence of deep metabolic disturbances in the brain tissues in all patients with acute viral neuroinfections both at the onset of the disease and in the dynamics of treatment. Determination of levels of creatinine kinase, acid phosphatase, lactate and cholinesterase in CSF of patients with acute viral neuroinfection has a high diagnostic value, but cannot be used to predict an unfavorable course of the disease*

Keywords: *cerebrospinal fluid, meningitis, meningoencephalitis, acid phosphatase, creatininekinase, lactate, lactatedehydrogenase, cholinesterase*

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STUDY OF THE QUALITY OF LIFE INDICATORS IN DEPENDENCE ON NEUROPSYCHOLOGICAL CHANGES IN PATIENTS WITH MIASTHENIA

p. 28-31

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Aim of the research: *to study of the quality of life in adults with myasthenia, depending on the clinical form of the disease and the neuropsychological status of patients.*

Materials and methods. *An in-depth clinical and neurological examination was carried out, incl. with the definition of myasthenia class by MGFA, neuropsychological (assessment on the scale of Beck depression and determination of anxiety level on the Spielberg-Khanin scale) examination of 96 adult patients (56 women and 40 men) with myasthenia (71 with generalized, 25 with ophthalmic form, respectively).*

Results. *In assessing the MGQoL-15 scale, the average quality of life measures were 10.3±9.4 points (ranging from 0 to 31).*

When assessing situational anxiety on the Spielberg-Khanin scale, a moderate level of anxiety was detected in 44 patients, a high one in 24 patients, while a low level of anxiety was observed in 28 patients.

When comparing the quality of life in patients with myasthenia according to the MGQoL-15 scale and the level of situational anxiety by the Spielberg-Khanin scale, a reliable (albeit insignificant) negative effect of increased anxiety on the quality of life was established (r=–0.24, p=0.01).

Depressive manifestations in the form of mild (32 people) and moderate (34 people) depression were found in 66 patients, the average value on the Beck scale was 12.9±3.5 points.

When comparing the quality of life indicators in patients with myasthenia according to the MGQoL-15 scale and the indicators on the Beck depression scale, a reliable relationship was established between these indicators (r=0.49, p<0.001).

Conclusions. *The indicators of the quality of life of myasthenia patients depend on the severity of the disease. The quality of life is affected by the level of depression and situational anxiety. The highest quality of life is observed in patients with ophthalmic form of myasthenia. The incidence of anxious and depressive disorders in patients with myasthenia increases with the experience of the dis-*

ease. Disturbing and depressive manifestations are more pronounced in patients with generalized myasthenia compared with patients with an ophthalmic form

Keywords: *myasthenia, anxiety, depression, quality of life, ophthalmic form, generalized form*

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LONG-TERM RESULTS OF MENINGIOMAS SURGICAL TREATMENT. ANALYSIS OF 110 CASES

p. 32-37

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Meningioma is the most common intracranial tumor in adults. Often epilepsy is a major clinical manifestation of meningioma. Surgical treatment is a method of choice in patients with meningioma. The early results of the operation and the impact of operations on symptomatic epilepsy are well studied. However, long-term results are poorly investigated.

Aim: *We were interested in the evaluation of long-term results of surgical treatment of supratentorial meningiomas of the brain and their comparison with the early, as well as the dynamics of symptomatic epilepsy in these patients.*

Materials and methods*: A retrospective analysis of the course of the disease was performed in 110 patients with totally removed supratentorial meningioma of the brain. The long-term results of the effectiveness of surgical treatment are evaluated. The average duration of observation was 48 months (13–83).*

Results: *Neurological deficiency in the preoperative period was observed in 50 patients; at the time of discharge in 40, with an assessment in the distant period – in 12, out of 36 evaluated. Two patients had a hematoma in the removed tumor bed. Postoperative lethality was 1.8 % – two patients with vascular complications. 30 of the 40 patients who had epilepsy before the operation became free of attacks after the intervention. In 10 of 40 patients, epilepsy remained. Including 2 patients due to continued growth of meningiomas. In 7 of the 70 patients who did not have attacks before surgery, there were early and / or late postoperative seizures for various reasons. 87 (79%) of tumors were highly differentiated, anaplastic meningioma was detected in 5 (4.5 %) patients*

Conclusions: *Total removal of meningiomas can achieve good long-term results. In our series of cases, only 12 (11 %) of the neurological deficits with long-term observation were observed in 50 (45.4 %) patients who had prior surgery. Symptomatic epilepsy was regressed in 75 % of patients. There was an appearance of attacks in 7 patients with 70 patients who had not had an epinephrine before surgery. Histologically, 87 (79 %) patients were diagnosed with grade I meningiomas*

Keywords: *meningioma, epilepsy, neurooncology, brain membranes, neurosurgery*

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THE PREDICTORS OF LEUKEMIA FREE SURVIVAL IN PATIENTS WITH MYELODYSPLASTIC SYNDROME

p. 38-43

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The theoretical generalization and experimental confirmation of the features of the progression of myelodysplastic syndrome are presented in the article.

The purpose of the study was to identify the available clinical parameters that may be suitable for assessing of the course of MDS and predicting the risk of transformation of this pathology into acute leukemia.

The subject of the study was a group of patients with different subtypes of myelodysplastic syndrome according to the FAB classification. The statistical analysis was performed using the application software package STATISTICA for Windows 5.0 and NCSS. Leukemia-free survival was evaluated using the Kaplan-Meier method. To compare survival rates in two groups, the log-rank test and the Cox F-criterion were used. Cox proportional hazard regression was used to determine the most significant independent prognostic factors influencing the survival rate. The obtained results indicate that the process of leukemic transformation of the low and high risk myelodysplastic syndrome is different, confirming the presence of different predictive risk factors for the transformation in these patients. It is statistically confirmed that the main predictors that shorten the leukemia free survival in patients with low-risk myelodysplastic syndrome are the age of patients above 60 years, multilineage dysplasia of bone marrow cells and serum TNF-α level above 10 pg/ml. Instead, in patients with high-risk myelodysplastic syndrome, besides the older age and multilineage dysplasia of bone marrow cells, with a shorter leukemia-free survival are also significantly associated: the presence of thrombocytopenia, increased blasts in bone marrow and the IL-6 concentration above 50 pg/ml.

Permanent search for prognostic factors and the development of new, more advanced prognostic scales that could cover not only demographic, laboratory or cytogenetic parameters, but also pathogenetic markers, are not only of scientific but also of a great practical importance, since they provide the opportunity to start therapy in patients with a high probability of transformation on time, thereby increasing the time to progression of the disease, in patients with MDS both low and high risk

Keywords *myelodysplastic syndrome, acute leukemia, leukemia-free survival, prognostic factors*

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CLINICAL DIFFERENTIATION OF PSYCHOPATHOLOGICAL SYMPTOMATICS IN DEPRESSIVE, MANIACAL AND MIXED TYPES OF SCHIZOAFFECTIVE DISORDER IN DYNAMICS

p. 43-48

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Aim of the research: *conducting a comparative analysis of clinical and psychopathological features of depressive, manic and mixed types of schizoaffective disorder during active therapy at the time of the exacerbation of the disease.*
Materials and methods. *In the course of the study, 110 patients with schizoaffective disorder (F 25 for MIC-10) who were treated at the 1 psychiatric department of the State Institution "Institute of Neurology, Psychiatry and Narcology of the National Academy of Medical Sciences of Ukraine" for the period from 2000 to 2017 were examined. The average age of the surveyed patients was 26.0±7.1, the mean duration of the disease was 5.0±0.8 years.*
The first group consisted of 60 patients with schizoaffective disorder, depression type MKH-10 (F25.1) and the second group – 50 patients with manic and mixed type of schizoaffective disorder for MKH-10 (F25.0, F25.2).
For the purpose of standardized assessment of psychiatric disorders and treatment effect, the PANSS scale, the Young Mania Rating Scale, and the Calgary Depression Scale (CDSS) were used. The assessment of the severity of psychopathological symptoms through these scales was performed four times during treatment in a hospital: at the first, second, third and fourth weeks of therapy. The analysis of the results was carried out with the help of methods of mathematical statistics (Student-Fisher test (t)). The data is given in the format M ± m, where M is the average value, and m is the standard error.
Results. *It was found that in patients with both depressive and manic and mixed types of SAD at the time of the 4th week of active treatment of exacerbation, which actually corresponds to the discharge from the hospital, there remain certain psychopathological manifestations that are revealed by the use of assessment techniques such as the PANSS scale, Young Manic Scale, Calgary Depression Scale. In the course of the study, presented in this article, it has been shown that the depressive type of SAD on the one hand, and manic and mixed on the other, have quite distinct differences in the dynamics of symptoms at the clinico-psychopathological level.*
Conclusions. *Therefore, patients with schizoaffective disorder (SAD) after the quenching of acute psychotic symptoms need continued support therapy, aimed at both psychotic and affective residual manifestations*
Keywords: *schizoaffective disorder, psychopathological symptoms, PANSS, YMRS, Calgary, monopolar type, bipolar*

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RARE OCCUPATIONAL INFECTION: TWO CASES OF PARAVACCINIA – VIRAL DISEASE OF MILKERS AT BUKOVYNA

p. 48-51

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The article presents two clinical cases of rare zoonotic professional viral infectious disease caused by DNA-containing parapoxvirus, which is transmitted directly during contact, most often in the milking of cows, which also caused the disease to be called "milker's nodules", but the risk of infection is also subject to butchers, farmers and agro-tourists.

The clinical course of two cases of paravaccinia is described in detail, the virus infection begins 5–15 days after inoculation in the form of a violet erythematous rounded node with a clear compression in the center and surrounding its erythematous ring.

The need for a clear elucidation of the epidanamnesis, which may facilitate differentiation with the Rhozenbach erysipeloid, skin neoplasms, contagious mollusks and anthrax carbuncle, is emphasized.

According to modern literature, in farms, the appearance of nodules may occur in people with impaired immunity, which also has an increased risk of serious complications. The nodules independently dissolve in persons without weakened immunity and heal without the formation of a scar. There is evidence that a para-vaccine virus can become a source of antigen for the development of multiform erythema.

Analyzing the data of professional foreign and native articles, paravaccinia is a self-limiting viral infection, the prevention of which is reduced to compliance with sanitary and hygiene rules for milking cows, animal care, the use of antiseptics in veterinary and farm.

Scientific interest in the study of the state of the immune system is susceptible to the virus, especially the clinical

course of the comorbid immunodeficiency pathology of various genesis, since the question remains unclear.
The unique structure and replication process of parapoxviruses is being intensively investigated, and these data may open up promising therapeutic options for treating cancer.
General practitioners-family medicine and practitioners of other specialties-infectious disease specialists, dermatologists, oncologists and surgeons should remember the features of this infection, since the high probability of misidentification for persons who had not previously met her could lead to unwanted use of too intense methods of treatment

Keywords: *occupational infectious disease, parapoxviruses, paravaccinia, milker's nodules, zoonoses, rare infections*

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PHYSICOCHEMICAL AND STRUCTURAL FEATURES OF THE STRUCTURE OF ENAMEL OF PERMANENT TEETH AND THEIR HEREDITARY CONDITIONALITY

p. 52-57

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Aim. *To determine the degree of influence of hereditary factors on the physicochemical and morphofunctional features of tooth enamel as a factor determining caries resistance or susceptibility to the carious process.*
Methods. *To solve the problem, the degree of hereditary and environmental conditioning of the physico-chemical and structural properties of the enamel of intact and carious teeth was analyzed using the method of electron paramagnetic resonance on teeth removed by indications of a*

twin sample (30 monozygotic and 30 dizygotic pairs of twins). The method of electron paramagnetic resonance (EPR) allows one to obtain unique information about microscopic and macroscopic properties of tooth enamel, which cannot be obtained with the help of X-ray diffraction, spectral and other analyzes.

Result. *We found that the concentration of paramagnetic centers formed after irradiation is generally 1.5–2 times higher in enamel of carious teeth than in intact ones. The value of K, which characterizes caries susceptibility, is most pronounced when comparing the concentration of free radicals in the enamel of intact and carious teeth; incisors on the vestibular surface (1.35), in molars in the cervical region (1.97). As is known, the radiation resistance of solids can be characterized by the concentration of paramagnetic centers formed after irradiation. This stability, in turn, is related to the structure, chemical composition, strength of chemical bonds. Analysis of the results of twin studies showed that the intraparity differences in the concentration of free radicals of the F-center of the corresponding parts of the enamel of teeth in monozygotic pairs were significantly lower (1.6) than in identical sites of dizygotic twin pairs (7.0). High values of the heritability index (H-0.81) give grounds for making a conclusion about the significant contribution of hereditary factors to the indicator under study*

Conclusions. *The physico-chemical and morphological properties of the enamel determine the susceptibility or stability of the teeth to carious lesions and experience a high degree of hereditary influences (H-81, H-0.95). Based on the data obtained, it can be concluded that the structure of the enamel is genetically determined. This indicates the need for an individual approach to the implementation of preventive measures with the allocation of risk groups to tooth decay*

Keywords: *electron-paramagnetic resonance, EPR dosimetry, heredity, twin method, microcrystals, hydroxyapatite*

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