

ABSTRACT&REFERENCES

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PECULIARITIES OF PROTEIN METABOLISM IN PREGNANCY COMPLICATED BY INTRAUTERINE INFECTION

p. 4-9

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Purpose of the study. To determine the features of protein metabolism by changes in proteinograms in pregnant women with intrauterine infection.

Materials and methods. The examined 180 pregnant women were divided into 3 groups depending on the presence and nature of the infection: viral (CMV, herpes simplex virus types 1, 2, 6), bacterial (chlamydia, ureaplasma, mycoplasma) and mixed (viral-bacterial) infection. Each of these groups was divided into 2 subgroups: with subsequent implementation of infection in newborns (1) and without it (0). This group in the study was the main one. Control group included 50 patients with physiological pregnancy.

Serum of pregnant women was assessed for the content of total protein and protein fractions: albumin, total globulin fraction, alpha-1, alpha-2, beta and gamma globulin fractions.

Results. The study showed that protein composition of blood is most affected by viral infections. An increase in the level of gamma globulins is the most noticeable change in this case. However, patients with implementation of viral infection barely had a tendency to an increase in this fraction, while in the subgroup without implementation of this infection this increase was significant and quite expressed (by 30 %, $p < 0.05$).

This increase in immunoglobulins, along with other conditions, will likely prevent further implementation of viral infection in newborns.

The presence of bacterial infection in the examined pregnant was also shown to have a weaker impact on protein metabolism. As a feature, we can note only slight hyperproteinemia (not more than 10 % higher than in control) in patients with implementation of bacterial infection, which was not observed in any of the other groups. This increase in the level

of total protein could have developed due to the impact of infection on the genitourinary system and a disruption of excretion of nitrogenous compounds.

Combined viral and bacterial infections resulted in a more pronounced effect of the viral infection, although this group was found to have certain features in the form of moderate dysproteinemia with a decrease in albumin level and an increase in alpha and beta globulin fractions.

Conclusions. This study showed that intrauterine infection in pregnant women can affect protein composition of blood serum. The peculiarities of the impact of different types of infectious agents are variously reflected in their action on various aspects of protein metabolism in pregnant women

Keywords: intrauterine infections, protein metabolism, implementation of intrauterine infection

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PERIOPERATIVE PAIN MANAGEMENT DURING LAPAROSCOPIC CHOLECYSTECTOMY: RANDOMIZED CONTROLLED STUDY

p. 9-13

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Aim. Aim of this article was to review current literature regarding perioperative pain management for laparoscopic cholecystectomy.

Methods. The single-center, controlled study was carried out at the department of surgery, anesthesiology and intensive care, Postgraduate Institute of Bogomolets National Medical University. Eligible participants were assigned to intervention groups (Group D; n=30; Group K, n=30; Group L, n=30) or control (Group C; n=30). Group D received dexmedetomidine infusion 0,5 mcg/kg/h from induction in anesthesia to extubation, group L received lidocaine bolus 1mg/kg and infusion 2mcg/kg/h, group K received ketamine bolus 0,5mg/kg and infusion 0,25 mg/kg/h, group C (control) received normal saline infusion.

Results. Dexmedetomidine, lidocaine and ketamine infusion was associated with lower incidence of severe postoperative pain, morphine consumption and significantly higher time to first rescue analgesia. Also patients in group D, L, K had lower intraoperative fentanyl and sevoflurane consumption.

Conclusions. Postoperative pain management after LCE remains one of the most significant challenges. Intraoperative dexmedetomidine, ketamine and lidocaine infusion may be effective and safe to improve analgesia during LCE. However further controlled randomised studies are required for accurate conclusions

Keywords: postoperative pain, laparoscopic cholecystectomy, dexmedetomidine, lidocaine, ketamine, randomized controlled trial

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ANALYSIS OF THE STRESS-DEFORMED CONDITION OF MODELS OF TROCHANTERIC FRACTURES OF FEMORAL BONE OF 5 TYPE BY EVANS AFTER ENDOPROSTHESIS

p. 14-19

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Aim of research: *to develop the mathematical model of trochanteric fractures of a femur by Evans' classification and to use it for studying main directions of loading the proximal femur section at endoprosthesis with the additional fixation of fragments by needles.*

Materials and methods of research. *For solving the set task, we developed the mathematical models of a femur with trochanteric fractures of different types by Evans' classification. We modeled trochanteric fractures of a femoral bone of 5 type by Evans, using the standard endoprosthesis, fixing separate fragments and model endoprosthesis of the offered construction.*

Results. *The loading results were obtained. At using the endoprosthesis, the zone of maximal loads covers its neck and is 97,6 MPa on its upper surface and 118,4 MPa – on the low one. The least loaded zone is the little trochanter area, where the load value is only 1,0 MPa, and adjacent zones, where tensions don't exceed the value 10,0 MPa. The diaphyseal part of a femur is characterized with the tension values at the level from 21,1 to 23,8 MPa. At using the model system, the most tension level (88,2 MPa) is observed in the upper part of the neck. Tensions in other control points are distributed evenly and don't exceed the value 25,4 MPa by absolute values in the femoral diaphase and 17,3 MPa in the fracture zone.*

Conclusions. *At modeling variants of endoprosthesis of the proximal section of a femur with trochanteric fractures of 5 type by Evans' classification, it was determined, that the model system at all fracture types allows to lower a tension in practically all control points of bone elements of the models essentially. Elements of metal constructions demonstrate zones of higher tensions, where they are rather higher than in the model with the endoprosthesis at the expanse of the essentially less hardness in the node of connecting the carrying pivot with the intramedullary one*

Keywords: *femoral bone fractures, cement bipolar hemiarthroplasty, modeling of femoral bone fractures*

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USE OF PROGRAMM OF THE PHYSICAL REHABILITATION OF THE INJURED IN CONSEQUENCES OF THE MINE-BLAST TRAUMA OF LOWER LIMB ON THE POLYCLINIC STAGE

p. 19-24

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Aim. The problem of the organization and tactics of medical and physical rehabilitation of injured of battle trauma is an urgent issue in the field of medicine, which is determined by the continuous process of improving weapons, qualitative change in the nature of injuries and expanding the capabilities of medical support for hostilities.

Methods. The basis of this work is the results of clinical observation of 48 injured with consequences of mine-blast trauma of the lower limb in the clinic of the medical center "Dorra-Center" in Belbek (Lebanon). The control group of patients (24 patients) carried out traditional physical rehabilitation, received in the clinic, the main (24 patients) – according to the proposed program, which combined traditional rehab with eastern massages and sessions of the eastern baths on the basis of Arabic.

Result. The use of the traditional physical rehabilitation program made it possible to obtain 20.8 % of the good, 58.4 % satisfactory and 20.8 % unsatisfactory functional results, and the proposed by us – 54.2 % good, 37.5 % satisfactory and only 8.3 % unsatisfactory results.

Conclusions. The proposed program of physical rehabilitation of injured after a mine-blast trauma is clinically substantiated and effective. The combination of traditional rehabilitation with the eastern massage and baths sessions on the basis of Arabic provides an adequate clinical outcome and a high quality of life for the affected

Keywords: mine-blast trauma, lower limb, rehabilitation, remedial gymnastic, eastern massage, eastern baths, polyclinic stage

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AGE FEATURES OF HEART RATE VARIABILITY IN OBESITY

p. 25-29

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Obesity is considered as one of the most significant health problems around the world, whose prevalence has increased dramatically in recent years.

The aim of the study is the determination of the age-specific features of the daily heart rate variability in subjects with obesity.

Materials and Methods: 118 persons with obesity and overweight in the age of 19–66 years old were examined. The control group included 25 practically healthy persons. A general clinical examination with obligatory measurements of the circumference of the waist and hips, weight and height, daily monitoring of the ECG were conducted to participants of the study.

As a result, the presence of dysfunction of the autonomic nervous system during the day was established in obese patients in all age groups. Young subjects had decrease activity of parasympathetic nervous system and increase of activity of sympathetic nervous system in comparison with subjects without obesity.

Conclusions. *Dysfunction of the autonomic nervous system in obesity included the increasing activity of the sympathetic nervous system and decreasing activity of the parasympathetic nervous system in day and night time. There was a progressive decrease in the activity of the parasympathetic nervous system with increasing the age of subjects*

Keywords: *obesity, heart rate variability, age, autonomic nervous system, body mass index*

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RESEARCH OF THE COLONIZATION LEVEL OF THE FUNGI *MALASSEZIA* SPP. AND *CANDIDA* SPP. ON THE SKIN OF PATIENTS WITH SKIN DISEASES

p. 29-32

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The aim of the work was to research the skin colonization of *Malassezia* spp., and *Candida* spp. of the patients with skin diseases and healthy individuals by the method of “bacterial swab test”. The features of colonization of the skin of patients with skin diseases the fungi of the genus *Malassezia*, *Candida* and molds, which complicate of these diseases, are established.

Methods of the research. It has included 107 patients with skin diseases and 20 healthy individuals. For the study, sterile plastic Petri dishes ($d=3.5$ cm.) with Leeming-Notman agar were used. After 5 days of incubation, the numbers of colonies grown on the dish were counted. The identification was performed to the morphological, microscopic and tinctorial properties.

Results: The highest level of colonization (>20 CFU/10 cm²) on the intact skin of the fungi of the genus *Malassezia* were detected in patients with eczema and atopic dermatitis (18.6 % and 30 %), and in the “locus morbi” in 15 % and 25 % respectively. *Candida* spp. in quantity >20 CFU were detected in the patients with psoriasis (9.6 %) on “locus morbi”. *Malassezia* spp. was detected in 40 % healthy individuals, in quantity 10–15 CFU. *Candida* spp was not detected in healthy individuals.

Conclusions: The method of “bacterial swab test” was used to research the skin colonization of *Malassezia* spp., and *Candida* spp. of the patients with skin diseases and healthy individuals

Keywords: *Malassezia* spp, *Candida* spp., colonization of the skin, the method of “bacterial swab test”, skin diseases

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STUDY OF THE DEPRESSIVE DISORDERS IN PATIENTS WITH MYASTHENIA GRAVIS

p. 32-34

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Aim of the research: To study depressive manifestations in patients with myasthenia depending on the duration, clinical form and immunological type of the disease.

Methods: A neurological examination, determination of antibodies to acetylcholine receptors and muscle-specific tyrosine-kinase, a Beck depression score of 96 patients with myasthenia was performed.

Results: The average age of patients was 50.5 ± 12.4 years, the average duration of the disease was 4.4 ± 1.2 years. Antibodies to acetylcholine receptors were detected in 57 (80.3 %) of 71 patients with generalized form and in 13 (52 %) of 25 patients with ophthalmic myasthenia. In 6 (8.5 %) of 71 patients with generalized myasthenia, antibodies to muscle-specific tyrosine-kinase were detected. In 8 (11.3 %) out of 71 patients with a generalized form of myasthenia and 12 (48.0 %) out of 25 patients with an ocular form of myasthenia antibodies were not detected. Depressive manifestations in the form of mild (32 persons) and moderate (34 persons) depression were detected in 66 patients, the mean score on the Beck scale was 12.9 ± 3.45 points). In patients with a generalized form of myasthenia, the incidence of mild to moderate depression does not significantly differ, with no significant difference in the average duration of the disease in these groups of patients. At the same time, in patients with generalized myasthenia without manifestations of depression, the average duration of the disease was significantly lower. The presence and degree of manifestations of depressive disorders does not depend on the presence of antibodies to the receptors of acetylcholine, antibodies to muscle-specific tyrosine-kinase or their absence.

Conclusions: As a result of the work, it was found that the development of depressive disorders in patients with myasthenia increases with the duration of the disease. Depressive manifestations are more pronounced in patients with generalized myasthenia in compare to patients with ophthalmic form.

The development and degree of depressive manifestations does not depend on the immune type of myasthenia.

Keywords: myasthenia, depression, antibodies, acetylcholine receptors, muscle-specific tyrosine-kinase, ophthalmic form, generalized form

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A PERSONALIZED APPROACH TO THE PREVENTION OF SMOKING IN ADOLESCENTS

p. 35-38

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The aim of the work is to develop and introduce personalized antismoking programmes for adolescents in practice, on the basis of own studies on the prevalence and status of smoking.

Methods of research: Anonymous survey of 2299 adolescents. The age of the beginning of smoking, the length of smoking, the number of smoked cigarettes per day was estimated. The status of tobacco smoking was studied, which included: the calculation of the smoker's index (IR) and the «pack/years» indicator; the assessment of the degree of nicotine dependence, the assessment of smoking motivation and motivation to quit smoking.

Results. The prevalence of tobacco smoking in the city of Dnipro is 20,8 %. The negative tendencies in the status of tobacco smoking are revealed – 26,3 % of smokers have an IR above 140, almost 25,0 % of adolescent smokers have formed a high and very high nicotine dependence. At the same time, 48,0 % of adolescents have a low motivation to quit smoking and one-third (31,7 %) do not have motivation to quit smoking at all.

Conclusions. Modern antismoking programs for adolescents should be aimed, first of all, at reducing the intensity of smoking and increasing the incentive to quit smoking, promoting healthy lifestyles, and conducting a careful dispensary review of smokers in order to identify risk groups for the development of COPD in the future. Using a personalized approach to the prevention of smoking in adolescents will increase its efficiency and preserve the health of the younger generation.

Keywords: the status of smoking, adolescents, motivation to quit smoking, personalized antismoking programmes.

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CLINICAL PHENOMENOLOGY OF SUICIDAL BEHAVIOR IN DEMENTIA OF VARIOUS TYPES

p. 38-44

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Aim. The study of clinical phenomenology of suicidal behavior in patients with different types of dementia aimed at defining the predictors and preventing the development of suicidal behavior within the above-mentioned category of patients.

Materials and methods. Based on the clinical and anamnestic examination of 213 patients, we studied clinical phenomenology of suicidal behavior in dementia of various types. 75 patients with Alzheimer's disease, 73 patients with vascular dementia and 60 patients with mixed dementia were examined. The main group consisted of patients with suicidal risk, the control group included patients without manifestations of suicidal behavior.

Results. Thus, in case of Alzheimer's disease anti-vital utterances (41 %) and thoughts (50 %) prevailed. Vascular dementia was characterized by outward behavioral manifestations of suicidal behavior (suicidal intentions (25.6 %), suicidal attempts (33.33 %) and anti-vital utterances (35.9 %). Patients with mixed dementia in 50 % of cases had suicidal intentions and in 66.7 % suicidal thoughts.

The most typical suicidal attempt for the patients with vascular dementia was suicide by hanging ($p \leq 0.05$), and for the patients with mixed dementia a fall under moving transport prevailed ($p \leq 0.05$).

Conclusions. There has been determined the relationship between mild dementia and the ideational component of suicidal behavior (thoughts, mood) as well as between mild dementia and outward behavioral manifestations (attempts, intentions and utterances). The presence of an additional depressive syndrome in dementia correlates with suicidal thoughts and mood; and a hallucinatory syndrome along with mixed symptomatology is connected with suicidal attempts and intentions

Keywords: clinical phenomenology, suicidal behavior, thoughts, Alzheimer's disease, vascular, mixed dementia

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