ABSTRACT&REFERENCES

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EFFECTIVENESS OF THE DOSED INDIVIDUAL ISOMETRIC PHYSICAL EXERCISE IN PATIENTS WITH KNEE OSTEOARTHRITIS

p. 4-9

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Aim of the work: *to evaluate the effectiveness of dosed individualized isometric physical activity in patients with OA of knee joints.*

Materials and methods. *Measurement of maximum isometric force of the flexor / extensor leg muscles was done in 71 patients with OA of knee joints and 32 practically healthy women. Muscle strength, quality of life, as well as the dynamics of blood serum leptin content in response to the course of physical activity in patients with OA was evaluated.*

Results. *A significant decrease ($p<0.05$) in flexor / extensor muscle strength in the OA patients was found in relation to the control group subjects. The proposed program of physical rehabilitation was effective in increasing muscle strength of the lower limbs, reducing the intensity of the pain syndrome and improving the quality of life. There were no significant differences in the levels of leptin in response to physical activity in patients with OA, using the WinBUGS method.*

Conclusions. *The proposed dosed individualized isometric physical activity in patients with OA increases muscle strength, reduces the severity of the pain syndrome, increases the functional capacity of patients, which is the reason for its inclusion in the complex of treatment in this category of patients*

Keywords: *Osteoarthrosis, isometric physical activity, KOOS, WOMAC, HAQ, Lequesne index, leptin*

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STUDY THE QUALITY OF LIFE AND ANXIETY IN PATIENTS WITH MYASTHENIA (CLINICAL-PARACHLINAL COMPARISON)

p. 10-13

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Aim of the research*: To investigate the level of anxiety in adult patients with myasthenia.*

Materials and methods*. An in-depth clinical-neurological, immunological (detection of antibodies to acetylcholine and/or muscle-specific tyrosine kinase receptors) examination, testing according to MGQoL-15 scale, and Spielberg-Khanin anxiety scale of 96 patients (56 women and 40 men) with myasthenia (71 – with generalized, 25 – with an ophthalmologic form, respectively) were done.*

Results*. 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, antibodies to muscle-specific tyrosine kinase in*

6 (8.5 %) of 71 patients with generalized form. In the case of an ophthalmic form, these antibodies were not detected. In 8 (11.3 %) out of 71 patients with generalized myasthenia and in 12 (48.0 %) out of 25 patients with ophthalmic form of myasthenia antibodies to acetylcholine receptors and muscle-specific tyrosine kinase were not detected.
When the MGQoL-15 scale was used, the average quality of life was 10.34±9.4 points (ranging from 0 to 31).
In assessing of situational anxiety, a moderate level of anxiety was detected in 44 patients, high – in 24 patients, while the low level of anxiety had 28 people. Patients with an ophthalmic form of myasthenia (class I by MGFA) are significantly more likely to have a low level of anxiety ($p<0.05$). The moderate level of situational anxiety was significantly more frequently recorded in patients with myasthenia class III by MGFA (moderate form), and high level – in patients with myasthenia class IV by MGFA (expressed form). In patients with a low level of situational anxiety, the average duration of the disease was significantly lower ($p<0.05$).
When comparing the quality of life in patients with myasthenia with the MGQoL-15 scale and the level of situational anxiety with the Spielberg-Khanin scale, there was a significant negative impact of increased anxiety on quality of life ($r=–0.24$, $p=0.01$)
***Conclusions**. The quality of life of patients with myasthenia and the level of anxiety disorders do not depend on the immunological subtype of the disease. The quality of life of patients with myasthenia is largely dependent on the degree of clinical manifestations of the disease. The increased level of situational anxiety reliably reduces the quality of life*
***Keywords:** myasthenia, anxiety, antibodies to acetylcholine receptors, quality of life*

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CYTOCHEMICAL EXAMINATION OF BLOOD CELLS OF CHILDREN WITH CHRONIC TONSILLITIS AND TYPE 1 DIABETES MELLITUS

p.13-17

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Aim of the work: *to study the state of the enzyme activity of the energy exchange of succinate dehydrogenase (SDH) and hydrolytic enzyme acid phosphatase (AF) in neutrophils and lymphocytes on the basis of their cytochemical study in blood cells of children with CT in combination with DM 1.*

Materials and methods: *the blood of 41 children aged from 6 to 12 years was examined. All patients were divided into 2 clinical groups: the first (main) group included 30 children, who were diagnosed with CT in combination with DM 1, and the second (control group of comparison) - 11 children with CT without DM 1. Blood smears were examined under a light microscope and an oil immersion. The results were evaluated by a semi-quantitative method, with the calculation of the average cytochemical coefficient (ACC)*

Results*: a significant decrease in SDH was observed in the group of patients with CT in combination with DM 1, and ACC was respectively, for neutrophils, 0.85±0.22 and 1.27±0.31 for lymphocytes, as compared with patients with only CT for neutrophils 0.37±0.18 ($p<0.05$), and 0.53±0.12 ($p<0.05$) for lymphocytes. The combination of DM 1 and CT reduces the activity of the lysosomal enzyme acid phosphatase. At the same time, the ACC of AF with a combined pathology is 0.286±0.07 for neutrophils and 0.165±0.055 for lymphocytes, and 0.361±0.057 ($p<0.05$) and 0.213±0.038 ($p<0.05$), respectively, for comparison with CT.*

Conclusions*: the revealed changes in the cytochemical characteristics of blood cells reliably determine the nature of metabolic disorders with DM 1 in children and affect the course of CT. Violation of the activity of the enzymes of energy supply and hydrolysis in neutrophils and lymphocytes in patients indicates a decrease in the functional activity of these cell elements, which may affect their bactericidal and immunological protection in patients with DM 1 and CT, and also contribute to a more severe course of CT and frequent exacerbations of chronic diseases of lymphoepithelial pharyngeal formations*

Keywords: *diabetes mellitus 1 type, chronic tonsillitis, cytochemical analysis, acid phosphatase, succinate dehydrogenase*

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PURINS DYSMETABOLISM IN PATIENT WITH GOUT AND ITS ASSOCIATION WITH DYSADIPOKINEMIA

p. 18-22

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Aim of the research *was the study of the features of the exchange of urea acid in patients with gout and assessment of their connection with disadypokinemia.*

Materials and methods. *In the study took part 151 patients with gout and 31 person from control group. The level of uric acid in the serum of blood and urine was determined by the biochemical method, the level of leptin and adyponectin by the enzyme-linked immunosorbent assay. The evaluation of the correlation between uric acid metabolism and disadypokinemia was performed using the Pearson correlation coefficient. Student's t-criterion was used to assess the differences between the groups.*

Results. *It turned out that in patients with gout there is a significant increase in the level of UA in the blood, lower clearance of UA and low fractional excretion compared with the control group. Disadypokinemia was also more pronounced in the group of patients with gout. In subjects with severe disadypokinemia, higher values of hyperuricemia were observed, a significantly lower excretion of UA with urine, reduced clearance and fractional excretion of UA.*

Conclusions. *Patients with gout have a rise in uricemia with reduced clearance and fractional excretion of UA. An associative connection between adypokin status in patients with gout and urinary acid metabolism was established*

Keywords: *gout, leptin, adyponectin, adyponectin / leptin ratio, uric acid metabolism*

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THE INFLUENCE OF RISK FACTORS IN PATIENTS WITH ULCER DISEASE ON THE DURATION AND MULTIPLICITY OF THE TREATMENT IN RESIDENTS OF VINNYTSIA REGION

p. 23-26

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The aim *of the study is to reveal the influence of the risk factors in patients with gastric and duodenal peptic ulcer on duration and multiplicity of the treatment in residents of Vinnytsia region.*

Methods. *As the materials for research we used reporting forms from Vinnitsia state medical institutions: inpatient cards 003/0, outpatient cards 025/0 (total n=700 with duodenal and gastric ulcer), cards of patients who left the hospital, questionnaires. In order to calculate the dependence between the risk factors and duration and multiplicity of treatment thereof we used the criteria of score valuation of the Charlson index, which accumulates the comorbidity of diseases.*

Result*. The results of quantitative evaluation of the factors scoring suggest of the underlying H.pylori infection (the significance of which is growing along with the growth of the disease incidence) and comorbidity as the most important ones. There is a linear dependence between the risk factors and the necessity for specialized care, which was manifested in the duration and multiplicity of treatment.*

Conclusions*. We have established the direct dependence between the most important peptic ulcer risk factors, severity of the disease, and duration and periodicity of treatment thereof during the year in the day gastroenterological hospital. We revealed the necessity for formation of risk groups among the population, each of which requires a systematic approach to studying the general condition, taking into account existing illnesses, their negative interactions. The best method of improving the medical care organization is active-constructive prophylaxis*

Keywords: *gastric ulcer and duodenal ulcer, risk factors, duration and multiplicity of treatment*

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GALECTIN-3 SERUM PROFILE IN PATIENTS WITH KNEE OSTEOARTHROSIS: ASSOCIATION WITH THE DISEASE COURSE

p. 27-32

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Aim of the work *was to study the level of galectin-3 in serum in patients with osteoarthrosis of knee joints and to evaluate its association with the course of the disease.*

Materials and methods. *We examined 141 patients with osteoarthrosis (OA) of knee joints (76.6 % of women), an average age of 58.4±7.91 years, a disease duration of 10.5±6.50 years, an II–III radiological stage. 33.3 % of patients had a combination of OA knee and hip joints. Diagnosis of OA was established on the basis of criteria ACR 1991 and recommendations EULAR (2010). The Lequesne algo-functional index, Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), Knee Injury and Osteoarthritis Outcome Score (KOOS) were determined. Functional disorders were evaluated by the Health Assessment Questionnaire (HAQ). The content of galectin-3 in the blood was determined by the enzyme-linked immuno sorbent assay.*

Results. *It has been established that in 75 % of patients with OA of knee joints aberrant levels of galectin-3 in the blood are detected, including 44 % of subjects with a registered high level of the index (>15.8 ng/ml). The weak associative relationships between the level of galectin-3 and the age of patients and the duration of OA were established. Among patients with aberrant levels of galectin-3, persons with severe clinical manifestations of OA appeared more often. The increase in the level of galectin-3 was associated with a significant increase in the pain syndrome and the deterioration of physical function by the indexes of Lequesne, WOMAC, KOOS, HAQ.*

Conclusions. *In patients with OA, the increase in the production of galectin-3 is a factor in the deterioration of the clinical course of the disease, the increase in pain syndrome and functional disorders. A close associative relationship was found between the level of galectin-3 and the clinical severity indexes of OA and the weak associative relationship between the level of galectin-3 and the age and duration of the disease*

Keywords: *galectin-3, osteoarthritis, knee joint, gonarthrosis, Lequesne index, WOMAC, KOOS, HAQ*

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RESULTS OF TREATMENT AND CRITERIA OF PROGRESS OF RESPIRATORY ORGANS SARKOIDOSIS

p. 33-38

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The aim of the work. *This research work is devoted to the development of new additional criteria for the activity of inflammatory process in sarcoidosis of respiratory organs. The goal is to assess the effectiveness of performed treatment of sarcoidosis of respiratory organs by using low-cost highly-sensitive inflammatory markers.*

Materials and methods. *The study involved 68 patients with lung sarcoidosis before and after the three-month treatment. In addition to general-clinical methods of examination, in patients with sarcoidosis we also determined the levels of TNF-α and IL-2.*

Results. *Patients with active lung sarcoidosis had 2.61 times ($p<0.05$) increased level of IL-2 in bronchoalveolar lavage fluid and 9.05 times ($p<0.05$) increased levels in peripheral blood serum; the levels of TNF-α increased by 4.98 times ($p<0.05$) in bronchoalveolar lavage fluid and by 3.2 times ($p<0.05$) in peripheral blood serum as compared to the findings in the control group of patients. The study showed that in the group of patients, where the efficacy of the prescribed therapy was noted, the level of IL-2 decreased by 2.08 times ($p<0.05$) in bronchoalveolar lavage fluid and by 3.76 times ($p<0.05$) in peripheral blood serum, and the concentration of TNF-α decreased by 3.87 times ($p<0.05$) in bronchoalveolar lavage fluid and by 2.06 times in peripheral blood serum as compared to the initial indices.*

Conclusions. *The decrease of TNF-α level in bronchoalveolar lavage fluid on the background of three-months treatment correlated ($r=0.84$; $p<0.05$) to the changes in peripheral blood serum; at the same time the decrease of TNF-α level in peripheral blood serum correlated ($r=0.89$; $p<0.05$) to the decrease of IL-2 in peripheral blood serum of patients with sarcoidosis of respiratory organs*

Keywords: *sarcoidosis of respiratory organs, activity criteria, treatment, prognosis, interleukin-2*

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CLINICAL CHARACTERISTICS OF SCHOOL-AGED CHILDREN WITH ESOPHAGUS DISEASES

p. 39-43

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In pediatric, because of diversity of clinical symptoms and difficulties of invasive surveying methods, there is a constant search of methods of early diagnosis, optimal treatment and course prediction. Clinical symptoms, risk factors, peculiarities of GERD coursing for school-aged children are examined in the article.

Methods. *It is included 93 patients (6–18 years) with clinical symptoms, typical for gastroduodenal pathologies. Children surveying involved detailed medical histories gathering, specification of feeding patterns, feeding regularity, daily regime, presence of chronical stress, sleep duration, presence of bad habits and bad feeding habits. From history of life – duration of breast-feeding and start of eating first food. Common clinical analyses: biochemical blood analysis, lipid profile, upper endoscopy with intragastral endoscopic pH-meter were applied.*

Results. *Based on endoscopic surveying, three sub-groups were obtained: GERD-positive children without esophagitis, GERD-positive with esophagitis (catarrhal esophagitis), and GERD-positive with esophagitis (erosive esophagitis). Depending on GERD form, in both groups presence of risk factors was evaluated. Both groups were interviewed with questionnaire by Vein (2003). Symptoms of autonomic dysfunction was detected for 88.04 % of patients (more than 15 points by questionnaire).*

Conclusions*. Conducted research showed diversion of GERD main clinical symptoms for children of two age groups: 6–11 and 12–18 y.o, and also relationship between separate risk factors and different forms of GERD. Optimization of primary screening diagnosis can be achieved by applying GERDQ-type kid's questionnaire*

Keywords*: gastroesophageal reflux disease, children, diagnosis, questionnaire, esophageal symptoms, extra-esophageal symptoms*

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