ABSTRACT&REFERENCES

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INFLUENCE OF DIFFERENTIATED METABOLIC THERAPY ON DYNAMICS OF QUALITY OF LIFE IN PATIENTS WITH RHEUMATOID ARTHRITIS IN COMBINATION WITH ARTERIAL HYPERTENSION

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The combination of arterial hypertension (AH) with rheumatoid arthritis (RA) significantly aggravates the course of each person. The constant use of drugs, chronic pain, disability and social connections leads to a decrease in the quality of life (QOL).

Materials and methods. *We examined 96 patients with stage II hypertension in combination with RA, 45 patients with stage II hypertension, and 31 healthy patients. To assess QOL, we used the MOS SF-36 questionnaire (Medical Outcomes Study-Short Form). An assessment of anxiety and depression was performed using the Hospital Anxiety and Depression Scale (HADS). RA activity was determined according to the DAS28 scale, pain assessment according to the visual analogue scale (VAS). Patients with hypertension in combination with RA received basic therapy: 83 patients – methotrexate, 10 patients leflunomide, 79 of them were glucocorticoids 6 (6, 8) mg methylprednisolone, all patients received ramipril 10 mg per day, amlodipine 5 (5, 10) mg per day, atorvastatin 20 mg, and differentiated metabolic therapy using meldonium 500 mg per day and L-arginine aspartate 6 g per day for twelve weeks.*

Aim of the research. *In order to improve approaches to the treatment of patients with hypertension in combination with RA, to study the dynamics of the quality of life, the severity of anxiety and depressive disorders during complex treatment, with the inclusion of differentiated metabolic therapy, for twelve weeks.*

Conclusions. *In the subgroups of patients receiving metabolic therapy, there was a significantly pronounced improvement in QOL for all indicators of the MOS SF-36 scale and a decrease in anxiety manifestations in terms of the HADS scale ($p < 0.05$). The largest decrease in activity by 7 % on a DAS 28 scale of 2.65 (2.52; 2.75) points was noted in the subgroup of patients receiving meldonium, compared with the performance of the subgroup without metabolic therapy ($p=0.01$).*

Keywords: *arterial hypertension, rheumatoid arthritis, quality of life, metabolic therapy, meldonium, L-arginine aspartate*

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THE POLYMORPHISMS OF BETA-ADRENERGIC RECEPTORS GENES AND A RISK OF ATRIAL FIBRILLATION DEVELOPMENT IN PATIENTS WITH A HEART FAILURE

p. 11-19

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***Objective**: to study the relationship of gene polymorphisms of the β-adrenoreception system with the risk of atrial fibrillation in patients with heart failure.*

***Material and methods.** 286 patients with heart failure on the background of post-infarction cardiosclerosis were included. Of these, 25 (8.7 %) patients had the atrial fibrillation. The genotyping was performed using 4 polymorphisms (Gly389Arg of the β_1-adrenoreceptors gene, Ser49Gly of the β_1-adrenoreceptors gene, Gln27Glu of the β_2-adrenoreceptors gene and Ser275 of the β_3-subunit of G-protein gene) using the polymerase chain reaction. The genetic and epidemiological analysis was carried out using the SNPStats program.*

***Results**. Patients with heart failure with the G/C genotype of Gly389Arg polymorphism of the β_1-adrenoreceptors gene have a lower risk of developing atrial fibrillation (OR=0.14 (0.03–0.61), p=0.0043, co-dominant model of heredity).*

The data on a decrease in the risk of atrial fibrillation in patients with heart failure and with the G/C genotype Gly389Arg polymorphism of the β_1-adrenoreceptors gene are also confirmed in the overdominant (OR=0.15 (0.03–0.64), p=0.0012), as well as in the dominant (OR=0.23 (0.08–0.69), p=0.0029) and the log-additive (OR=0.40 (0.17–0.94), p=0.019) models.

***Findings**. The results allow us to conclude that congenital genetic differences in the pathways of β-adrenoreception can be associated with the development of atrial fibrillation in patients with heart failure*

***Keywords:** atrial fibrillation, β_1-adrenergic receptors, β_2-adrenergic receptors, G-protein, heart failure, polymorphism, gene, risk*

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PROGNOSTIC ROLE OF MACROPHAGE MIGRATION INHIBITORY FACTOR IN PATIENTS WITH MYOCARDIAL INFARCTION WITH ST-SEGMENT ELEVATION AFTER PERCUTANEOUS CORONARY INTERVENTION

p. 20-25

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The aim *of the study was to determine the prediction role of MIF in development of STEMI complications within 6 months after the event.*

Materials and methods. *The study included 45 people with confirmed myocardial infarction with ST segment elevation (STEMI) and successful restoration of blood flow – TIMI-III. The control group – 12 healthy volunteers. All patients underwent baseline investigation. The level of myocardial damage biomarkers MIF and troponin were determined before percutaneous coronary intervention (PCI), then within 24 hours. The pro-inflammatory CRP biomarker was determined before PCI and 5–7 days after the development of the coronary event. The patient follow-up period was 6 months, during which 8 patients reached the endpoint.*

Results and discussion. *Statistically significant increase of MIF levels in STEMI patients was defined relative to the control group. During the observation period 19 % of patients reached the endpoint. The MIF_I level significantly correlated with complications in the acute period of myocardial infarction, the class of acute heart failure according to Killip, with troponin levels, with active smoking, MIF_{II} was correlated with stable angina pectoris before the index event, the size of the left atrium and the mass of the left ventricular myocardium. Assessment of blood glucose in with the MIF_{II} was significant in predicting the development of an adverse outcome, in comparison with a separate biomarker definition, the diagnostic efficiency of the model was 88 %.*

Conclusions. *An early increase of MIF level was associated with an adverse course of the disease. Our prognostic model significantly improved the prediction of the risk of complications after STEMI*

Keywords: *macrophage migration inhibitory factor, acute myocardial infarction, prediction, biomarkers*

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RETROSPECTIVE EVALUATION OF THE EFFECT OF LONG-TERM USE OF INHALATION GLUCOCORTICOSTEROIDS ON PHYSICAL DEVELOPMENT OF CHILDREN AND ADOLESCENTS WITH BRONCHIAL ASTHMA

p. 26-31

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*The **aim** of research was to evaluate retrospectively the dose-depended effect of the use of inhaled steroids on the anthropometrical indices of children and adolescents with bronchial asthma.*

***Material and methods.** Based on the pulmonological department of the Regional children clinical hospital in Chernivtsi city there has been conducted the evaluation of the physical development of 50 asthma patients who were under long-term use of inhaled glucocorticosteroids (IGCS). All patients underwent anthropometric study: weight and height measurements with calculation of body mass index (BMI). The assessment of physical development of patients has been performed by a centile method, taking into account the age of patients (using percentile tables "anthropometric indices to age").*

***Results.** Analysis of the data has showed that a patients' height was, on average, 50.0±4.4 percentile, which was corresponding to the average age-related normative values. At the same time height below (10–25 percentiles) average regarding to the age was recorded in 12 % of all examined patients, but an low (5–10 percentile) or very low (<5 percentiles) height were noted in only 4 patients (6 % and 2 % respectively among all patients). Meanwhile, it has been found that the average BMI in the examined patients was 20.4±0.5 kg/m^2, which was corresponding to the normostenic structure. Simultaneously, only 5 of examined patients (10 %) were overweight (BMI>25 kg/m^2), and only one person out them (2 %) had clinically significant (BMI>30 kg/m^2) obesity.*

***Conclusion.** From the perspective of evidence-based medicine, negative impact of the long-term use of IGCS, in medium-high or high doses as well, on growth and body weight of the asthmatic children and adolescents had not been confirmed. At that, statistically significant data on the association of obesity and short stature with prolonged use of medium-high or high doses of IGCS had not been found: the attributive risk of excessive (body mass index >25 kg/m^2) body weight was 24 %, the odd ratio=3.2 (95 % confidence interval: 0.33–30.94), but at the same time the attributive risk of short stature (height <10 percentiles): was 18 % and the odds ratio=2.3 (95 % confidence interval: 0.22–23.88)*

***Keywords:** bronchial asthma, children, inhaled glucocorticosteroids, physical development, retrospective analysis*

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DYNAMICS OF PROINFLAMMATORY AND ANTI-INFLAMMATORY CYTOKINES IN BLOOD PLASMA IN THE TREATMENT OF BACK PAIN WITH NON-STEROIDAL ANTI-INFLAMMATORY DRUGS

p. 32-36

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The objectification of non-specific back pain is still limited by subjective methods – interviewing the patient, using pain scales. In some cases, degenerative-dystrophic changes in the spine, increased muscle tone of the back are determined, but morphological changes in the spine do not always correlate with the presence and severity of pain. Therefore, the search for biomarkers that objectify the presence of pain, its intensity, would help in the differential diagnosis and in the treatment of pain, is relevant.

The aim: *to search for biomarkers to objectify the presence of pain and facilitate the differential diagnosis and further treatment.*

Materials and methods: *20 patients were studied – 14 women and 6 men – with vertebrogenic dorsalgia. For all patients, a standard vertebral neurological examination was performed using neuroimaging methods (radiography, MRI or CT of the spine). All patients were prescribed NSAID treatment in the same way: in the first two days, ketorolac was prescribed, then meloxicam or celecoxib, depending on the patients' comorbid pathology, during the 10 days of hospital stay, and then another 10 days for outpatient use. On days 1 and 10, we eval-*

uated the intensity of the pain syndrome using a visual analogue scale (VAS). In parallel, in those days we took blood tests from all patients to measure the levels of cytokines – interleukin 1 β (IL-1β), interleukin 6 (IL-6), interleukin 10 (IL-10). We determined the level of pro-inflammatory (interleukin -1β, IL-1β, interleukin -6-IL-6) and anti-inflammatory cytokines (interleukin-10, IL-6) blood enzyme-linked immunosorbent assays using kits of the company "Vector Best" in the clinical laboratory of the "Institute of neurosurgery named after academician A. P. Romodanova NAMS of Ukraine". The indicators were expressed in conditional units (cu).

***The results** revealed a reliable direct correlation between the change in the intensity of the pain syndrome with dorsalgia and the levels of pro-inflammatory interleukins IL-1β, and the coefficient of IL-6/IL-10. A reliable correlation of long-term pain indicators with a change in blood levels of IL-6/IL-10 cytokines in the blood during the first days of NSAID treatment was first revealed.*

***Conclusions:** according to the study, the level of pain with dorsalgia of various localization correlates with changes in the pro-inflammatory cytokines of IL-1β. A change in the ratio of pro-inflammatory and anti-inflammatory cytokines (IL6/IL-10) correlates with a change in pain intensity. The level and rate of change of the IL6/IL-10 coefficient are markers of the severity of the inflammatory process and reflect the likelihood of chronic pain in the future*

***Keywords:** nonspecific back pain, cytokines, as markers of inflammation, non-steroidal anti-inflammatory drugs, visual analogue scale*

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ANALYSIS OF EARLY PATIENTS OUTCOMES AFTER SUBARAHNOID HEMORHAGE DEPENDING OF IT`S COMPLICATIONS

p. 37-42

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***Aim.** The purpose of our article was to analyze all cases of non-traumatic SAH that have been treated at our clinic*

since January 2013 to December 2016 and determine the impact of the complications that can affect on the early patient`s outcome.

Materials. *Database included 127 patients with subarachnoid hemorrhage that were treated at the Regional Clinical Center for Neurosurgery and Neurology in Uzhgorod during 2013–2016. Extended analysis of the data was performed. The influence of various factors (intracerebral hematoma, symptomatic vasospasm, repeated rupture of aneurysm) on the early patient`s outcome was determined.*

Result. *It was found that more than a half of the patients (70 people) experienced certain types of complications and only 41.7 % of patients had no complications at all. The most common complications were: intracerebral hematoma, intraventricular hemorrhage or their combination, as well as symptomatic vasospasm. According to our data, they were met with the same frequency of ~26–28 %. Rarely, occlusive hydrocephalus and re-rupture of the aneurysm occurred (7 % and 13 %). Mortality among patients with complications was 24 % – symptomatic vasospasm, 28 % – occlusive hydrocephalus, 17 % – intraventricular hemorrhage, 28 % – intracerebral hematoma, but in case of re-rupture of the aneurysm – up to 62.5 %. It is one of the most unfavourable factors for early outcome after SAH ($p<0.001$).*

Conclusions. *Thus, according to our data, the most unfavourable SAH complication for early outcome is symptomatic cerebral vasospasm and repeated rupture of the aneurysm, slightly less – occlusive hydrocephalus and parenchymal hemorrhage. No significant influence of the presence of intraventricular haemorhage on the initial computed tomography after SAH was found*

Keywords: *subarachnoid hemorhhage (SAH), aneurysm rapture, hydrocephalus, cerebral vasospasm, Glasgow Outcome Scale (GOS)*

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COGNITIVE VIOLATIONS OF PERSONS WITH ALCOHOLIC ENCEPHALOPATHY AND PAROXISMAL STATES

p. 43-46

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The article addresses the issues of cognitive impairment among persons with alcohol dependence, aggravated by alcoholic encephalopathy and paroxysmal conditions.

*The **aim** of the study was to identify the levels of impaired short-term memory, to identify cognitive impairment of patients with alcohol addiction with alcoholic encephalopathy and paroxysmal conditions.*

Materials and methods: *132 people from the contingent of alcohol addicts (AA) and from the contingent of healthy and 4 comparison groups have been identified and examined over the two years on the basis of KNP CHOR «Regional Clinical Narcological Hospital No. 3». The*

following techniques were used to assess psychosocial and cognitive impairment: "Jacobson Short-Term Memory Measurement Technique"; «The methodology for determining the index of short-term memory proposed by L. S. Muchnik and V. M. Smirnov (1968)».

Result. *According to the results of the researches, the cognitive and mnemonic sphere of persons with AA, AE and PS were expressed in the form of significant reduction of short-term memory and cognitive impairment. The presence of significantly "deeper" and "gross" degenerative-organic lesions of the central nervous system in chronic alcoholic lesions with the development of alcoholic encephalopathy and paroxysmal states of alcoholic genesis has been proved.*

Conclusions. *Thus, the obtained research results only confirm the data of numerous world sources on the development of cognitive decline in individuals with alcohol dependence*

Keywords: *alcohol addiction, alcoholic encephalopathy, paroxysmal states, cognitive impairment, abuse of alcoholic drinks and alcohol-containing substances*

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