

ABSTRACT&REFERENCES

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RELIEVING TREATMENT OF BRONCHIAL ASTHMA ATTACK IN SCHOOLCHILDREN SUFFER FROM SEVERE DISEASE PHENOTYPE

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The study **aimed** at improving relieving treatment of bronchial asthma attacks in children of school age with a severe phenotype of the disease.

Materials and methods. On the base of pulmonological department of the Regional Pediatric Hospital (Chernivtsi) 57 school-age children with severe persistent asthma were examined, the attack period was determined in 48 patients (84,2 %). The severity of bronchial obstruction syndrome on patients' admission to the hospital during the exacerbation period was assessed by point scale. Therapeutic tactics in the period of attack was assigned according to the protocol for diagnosis and treatment of asthma in children. It was determined that in patients with severe bronchial asthma for the purpose of desobstruction short-acting inhalation β -agonists, steroids of systemic effect and methylxanthines preparations (Euphylline) were administered for oral and intravenous use in various combinations with one another. 80,0 % of children with severe bronchial asthma received steroids of systemic effect, the average duration of the course was $2,9 \pm 0,19$ days. Most children with severe bronchial asthma (52,9 %) in acute period of the disease received infusion therapy with methylxanthines (Euphylline), the average duration of infusion therapy in children with severe pathology persistence lasted $3,3 \pm 0,24$ days. Systemic use of glucocorticosteroids and infusion therapy with methylxanthines (Euphylline) possess distinct clinical effect, since it was considered appropriate to analyze the frequency of their administration during the first three days of hospital treatment.

Result. Relieving treatment with steroids of systemic effect during 3 days the attack severity regress was observed on the seventh day of hospitalization compared to the first day, so reduce relative risk of preserving severe bronchial obstruction reached 80 %, the reduce attributive risk was 67 % with the number of patients to be treated – 1,5 children. Intravenous Euphylline administration in children with severe variant of the disease causing regression of bronchial obstruction, the reduce relative risk of severe bronchial obstruction on the seventh day of hospitalization in patients with severe bronchial asthma reached 74 %, reduce attributive risk was 63 % with the number of patients to be treated – 1,5 children.

Conclusions. Thus, these data give reason to prove the value of initial three-day course administration of steroids of systemic effect and intravenous Euphylline administration in the treatment of attack period in children with severe bronchial asthma

Keywords: bronchial asthma, phenotype, children, treatment, attacks severity, methylxanthines, steroids, β 2-agonists

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JUVENILE IDIOPATHIC ARTHRITIS IN ADULT PATIENTS: AN ANALYSIS OF CLINICAL DATA

p. 8-13

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Aim. To study the connection of the disease with social and clinical parameters of adult patients with JIA in the anamnesis for improve the observation of them and decrease remote results.

Methods. There were examined adults with JIA in the anamnesis, age – 24,3±8,3 years, the disease duration – 13,6±9,3 years, with the assessment of the diagnosis determination, disease activity in the child and adult age (JADAS, VAS), received treatment with glucocorticoids (GC) and its duration, life quality (SF-36), functional activity disorders (HAQ), psychological state, cardio-vascular risk, remote results of JIA (JADI-A, JADI-E).

Result. Adult women had the more active disease by JADAS ($p<0,05$) and JIA remote results by JADI-A took place in them more often ($p<0,05$). Patients with a higher education had the more disease duration ($p<0,05$). The influence of social factors on the health state was more ($p<0,05$) in patients with a finished higher education comparing with ones with an incomplete one, although the life quality (SF-36), anxiety and depression level didn't differ in these groups. Patients with invalidism, developed as a result of JIA had the worse general state by VAS ($p<0,05$), glucocorticoids were prescribed longer ($p<0,05$), JADI-E extra-articular results developed more often ($p<0,05$), although their psychological state didn't differ from patients without invalidism. Patients,

divided in groups depending on ACCP/RF, ANA, HLA-B27 presence and negative by all markers, differed by the age of the disease start, SF-36, disease activity (DAS28), remote results by JADI-E and JADI-A. The treatment duration and GC cumulative dose didn't differ in these groups.

Conclusions. 1. In female adult patients with JIA was revealed the more disease activity by JADAS and remote articular results of JIA took place more often that testify to the need of the more aggressive therapy and more accurate rheumatologists' survey for decreasing the number of remote results of this disease. 2. Patients' education level indicated that the influence of social factors on the health state was higher ($p < 0,05$) in patients with a finished higher education comparing with ones with an incomplete one, although the anxiety and depression level and life quality didn't differ in both groups, and the psychological state of adult patients with JIA invalidism was the same as in patients without invalidism that testifies to the good social adjustment of JIA patients in the adult age. 3. Clinical differences between groups of patients, divided by immunological parameters (ACCP/RF, HLA-B27, ANA), prove a hypothesis that their pathogenetic mechanisms of JIA development are different and need a differentiated approach to the diagnostics, treatment and observation

Keywords: juvenile idiopathic arthritis, classification, remote results, rheumatoid factors, ANA, HLA-B27

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ALTERATION OF BLOOD CYTOKINE CONTENT AT SHIGELLOSIS IN CHILDREN WITH HELICOBACTER INFECTION

p. 14-17

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Aim. The substantial incidence of acute enteric infection rate among children, especially associated with such bacterial pathogen as *Shigella*, makes the search for new methods of management and improved therapeutic approaches a matter of high priority in current medical science. Moreover, prior infection with *Helicobacter pylori* is considered to be one of the factors which impacts the course of the shigellosis in children. As the course of shigellosis and its consequences depend on balanced action of pro-inflammatory and anti-inflammatory interleukins and at present it is of a great concern, study is focused on assessment of anti-inflammatory interleukins content in blood serum of children with shigellosis and infected with *H. Pylori*.

Methods. The study enrolled 113 children aged from 3 months to 3 years who were divided into two groups: Group 1 (37–32.74 %) represented by patients infected with *H. pylori* and Group 2 (76–67.26 %) made up by patients without laboratory markers of *Helicobacter* infection. The levels of IL-1 β ,

TNF- α and IL-4 of blood serum were assessed for all children by means of solid-phase enzyme immunoassay in the acute period and during early convalescence.

Results. *It has been established that at the peak of the disease the IL-1 β and TNF- α levels in patients of both groups were well higher than the indices of healthy children. At the same time in the children of Group 2 the concentration was well higher than the corresponding indices of Group 1 patients. Insignificantly increased levels of IL-4 as well as higher IL-4 content levels in children without background infection in comparison with those infected with *H. pylori* were revealed. However, in both cases this difference was not relevant. The convalescence period was not characterized by relevant difference of IL-1 β and TNF- α indices between the study groups as well as by comparison of these indices in Group 2 and the control group. In the meantime, a significant difference between IL-1 β and TNF- α levels is observed between the patients of Group 1 and the control group in the acute period. IL-4 content in blood serum of the children with shigellosis without background infection in the period of convalescence turned out to be well higher in comparison with that in apparently healthy children as well as in the patients infected with *H. pylori* who had higher IL-4 content, however the difference was not relevant.*

Conclusions. *Present infection with *H. pylori* has a significant impact on the indices of pro- and anti-inflammatory interleukins of blood serum of the children with shigellosis both in the acute period and at the stages of early convalescence. The data obtained make it possible to deepen the idea concerned with immune pathogenic mechanisms of development and course of shigellosis in children infected with *H. pylori* and afterwards can be applied for improvement of therapeutic methods*

Keywords: *shigellosis, Helicobacter pylori, cytokines, interleukins, IL-1 β , TNF- α , IL-4*

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PECULIARITIES OF ANTIOXIDANT PROTECTION SYSTEM IN THE DYNAMICS OF ACUTE RESPIRATORY DISTRESS SYNDROME DEVELOPMENT AND AT DIFFERENT METHODS OF ITS CORRECTION IN RATS

p. 18-23

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Taking into account the pathogenetic role of membrane destructing processes of the oxidative stress and hypoxia in ARDS development, it becomes obvious that it is necessary to use antihypoxants-antioxidants. During the last decade the large number of researchers searched for effective metabolic preparations to treat and prevent ARDS. This work is devoted to this important question of the modern medicine.

Aim of research – to determine the indices of the antioxidant protection system in the dynamics of an acute respiratory distress-syndrome development and at different correction methods in rats with a different tolerance to hypoxia.

Materials and methods. The study was carried out on 106 white non-linear male rats, kept on the standard ration of the vivarium of Ternopol state medical university, named after I. Y. Gorbachevsky. The experiment on the assessment of an effect of oxygen insufflation, “KD-234” and reamberin was carried out taking into account animals’ individual tolerance to hypoxia, determined by the method of V. Y. Berezovsky. For further studies were taken animals from

the group of hypoxia middle tolerable rats (HMT) with the survival time 240–360 s and low tolerable rats (HLT) with the survival time less than 180 s. Animals were divided in 5 groups: 1 – control group (n=12; HMT/HLT=6/6), 2 – ARDS modeling without correction, observations in 2 hours. (n=24: 12/12), 3 – ARDS modeling, correction by oxygen insufflation (n=24: 12/12), 4 – ARDS modeling “KD-234” correction (n=24: 12/12), 5 – ARDS modeling, reamberin correction (n=22: 11/11). Animal underwent ARDS modeling by G. Matute-Bello method. For the correction in 4th studied group for used “KD-234” substance, diluted in distilled water for injections and administered intragastrally through a probe in the dose 50 mg/kg and in 5th studied group – reamberin, administered intraabdominally in the dose 10 ml/kg to animals in 1 hour before ARDS modeling.

Results. It was established, that under conditions of the acute respiratory distress-syndrome SOD, catalase activity and SH-groups content in animals with a different tolerance to hypoxia decrease comparing with the control ($p < 0,05$). In HMT animals group this index is more than in HLT animals. The use of oxygen insufflation under conditions of an experimental distress-syndrome leads to normalization of SOD, catalase activity and SH-groups content in animals with a different tolerance to hypoxia. “KD-234” substance administration is attended by the reliable increase of catalase activity and normalization of the antioxidant-prooxidant index in liver tissues of HMT animals. At reamberin administration SOD activity in liver homogenate grows in both studied groups with the index normalization in HMT animals and the antioxidant-prooxidant index of liver tissues increases ($p < 0,05$).

Conclusions. These data give grounds to consider the use of the combination of “KD-234” substance and reamberin in the complex treatment of ARDS in the experiment as pathogenetically grounded and prospective

Keywords: acute respiratory distress-syndrome, antioxidant system, correction, insufflation by oxygen, KD-234, reamberin

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MINIMALLY INVASIVE TECHNOLOGY OF SURGICAL TREATMENT OF PERFORATING PYLORODUODENAL ULCERS WITHOUT VAGOTOMY

p. 24-27

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Aim of the work: to study the effectiveness and expedience of the use of videoendoscopic minimally invasive methods of surgical treatment in patients with perforating pyloroduodenal ulcers.

Materials and methods of the research: On the base of the surgical department № 1 of MIHP “Kharkiv city clinical hospital and urgency, named after A.I. Meschaninov” and surgical department of MIHP “Regional clinical hospital – center of urgency and catastrophe medicine” of Kharkiv city in the period 2005–2015 were operated 204 pa-

tients with perforating ulcer, they were divided in 2 groups: I group (comparison) – 103 (50,5 %) patients, who underwent a vagotomy with an operation, draining the stomach; II group (main) – 101 (49,5 %) patients was divided in subgroups: 1 subgroup 56 patients with a closure or excision of a perforating ulcer without a vagotomy from the laparoscopic access, 2 subgroup – 45 patients, who underwent the same operation volumes from the laparoscopic access. Patients underwent methods of laparoscopic diagnostics and instrumental examination methods. After the operation the remote results were studied in different terms using Visic life quality criteria.

Results: In patients of the comparison group took place post-vagotomy motor-evacuating disorders of the functional character in the remote period. In the main group in the remote period the best results were received in the subgroup, where videolaparoscopic interventions were realized with the further use of modern antiulcer preparations taking into account the immunohistochemical proliferation index, received by the study of KI-67 antigen expression. The most number of complications – 16,2 % was observed in patients, who underwent a trunk and selective vagotomy, combined with the closure of the perforating ulcer. The algorithm of the operative practice at this pathology was elaborated based on the received results.

Conclusions: The realized studies allowed to determine indications for the videolaparoscopic closure of a perforating ulcer without a vagotomy that is replaced by the prescription of modern blockers of a protonic pump

Keywords: stomach ulcer, pyloroduodenal zone, perforation, laparoscopy, ulcer closure, vagotomy, immunohistochemistry

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INFLUENCE OF MATERNAL INFECTION ON THE MORPHO-FUNCTIONAL STATE OF PRETERM FETUSES' ADRENAL CORTEX

p. 28-32

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Adrenals as the one of main organs that reacts to a stress have the extreme importance for the normal organism development. Despite numerous researches in the perinatal period, the problem of pregnancy infections on the morpho-functional state of adrenals of fetuses was not completely studied.

Methods. Organs were taken from incisions of premature fetuses (gestational age 24-36 weeks). The material was divided in 3 groups: control, chronic intrauterine hypoxia and infections. The study included two adrenals, investigated histologically and immunohistochemically.

Results. Mother's infectious pathology has the more harmful effect on fetuses' adrenals than a "pure chronic intrauterine hypoxia". In fetuses was revealed a hypoplasia of glomerular zone. In all groups were observed nidi of cytolysis and spongocytes resorption in the bundle zone with cortisol production increase. In a fetal cortex is observed the exhaustion of its functional activity.

Conclusions. These data testify to adaptive reactions of fetuses' adrenals as a response to antigen stimulation

Keywords: adrenals, fetus, intrauterine infection, hypoxia, prematurity, stress, stillbirth, fetoplacental failure

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EFFECT OF TRANSPLANTED NEURAL PROGENITORS ON HIPPOCAMPAL CELLS PROLIFERATION AFTER ISCHEMIC BRAIN INJURY

p. 32-36

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The aim of research was to establish the effect of neural progenitors (NP) transplantation on hippocampal cells proliferation after an ischemic brain injury of a mouse.

Methods. An ischemic brain injury was modeled by 20-minutes occlusion of both carotid arteries in mice of FVB line with the further reperfusion. In 24 hours after the occlusion NP, separated from the hippocampus of mice of FVB-Cg-Tg(GFPU),5Nagy/J line, transgenous by a green fluorescent protein (GFP) gen, were stereotaxically transplanted in CA1 hippocampus zone of ischemic animals. To reveal proliferating cells, all animals from experimental groups were intraperitoneally administered with synthetic nucleoside 5-bromodeoxyuridine (BrdU). For the assessment of hippocampal cells proliferation after the ischemic brain injury and after NP transplantation, the immunohistochemical coloration of brain cuts was realized using antibodies against BrdU.

Results. The received data demonstrated that NP transplantation after an ischemic brain injury statistically reliably increases the number of BrdU-positive cells in the dentate gyrus comparing with animals from the control pseudo-operated group and the comparison group without the transplantation.

Conclusions. These data allow to suppose that NP transplantation after an ischemic brain injury may influence cells proliferation in the subgranular zone of the dentate gyrus and in such a way stimulate the neurogenesis in the hippocampus

Keywords: neural progenitor cells, cells transplantation, brain ischemia, hippocampus, cells proliferation

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ENDOMETRIAL PATHOLOGY AND REPRODUCTIVE PROFILE OF WOMEN IN LATE REPRODUCTIVE AND PREMENOPAUSAL AGE

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The aim of the research was to determine the features of intrauterine pathology structure and obstetrical-gynecological anamnesis of women in the late reproductive and premenopausal period.

Materials and methods. The observation cross-section retrospective study by the method of general sampling included 849 medical histories of women of all age categories with an endometrial pathology. The inclusion criteria: the presence of one or several endometrial pathologies - endometrial polyp, endometrial hyperplasia, chronic endometritis, intrauterine synechia.

Results. More than a third of patients (37,3 %) with an endometrial pathology is women of the late reproductive and premenopausal age. In the endometrial pathology structure of all age groups prevail endometrial polyps, and their part essentially grows in the menopause period. The two-side chronic adnexitis, ectopia of cylindrical epithelium of the cervix, endometrial polyp and uterus myoma prevailed in the genital pathology structure. Each fourth patient of the early and late reproductive age had endometritis. Each fifth woman in the group of late reproductive age has the uterus myoma.

Conclusions. Women of the late reproductive and premenopausal period relate to the high risk group of endometrial pathology, in which structure prevail endometrial polyps and endometrial hyperplasia, combined with the endocrine-dependent pathology.

The elaboration of the integral system of diagnostics, prophylaxis and treatment of an endometrial pathology in women of the late reproductive and premenopausal age on the base of the etiopathogenetic personified approach is urgent

Keywords: endometrial pathology, reproductive profile, premenopause, late reproductive age, complex system of diagnostics

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