

Ministry of Public Health of Ukraine

**State Educational Establishment of Ukraine
“Ukrainian Medical Stomatological Academy”**

**AKTUAL'NÍ PROBLEMI SUCHASNOI MEDICINE
ACTUAL PROBLEMS OF THE MODERN MEDICINE**

VOLUME 16, ISSUE 4 (56), p.1, 2016

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СТОМАТОЛОГІЯ

УДК 616.314-089.23

IS INTRAOPERATIVE INTERMAXILLARY FIXATION BY BRACKET SYSTEMS: EFFICIENT OR NOT?

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Key words: mandibular fractures, intermaxillary fixation, osteosynthesis.

Despite of the development and clinical adoption of novel techniques of surgical fixation of fractured bone fragments, including the advanced of functionally-stable osteosynthesis, intermaxillary fixation still remains one of the most effective tactics in the management of patients with traumatic facial injuries due to the possibility to reach correct (premorbid) occlusal relationship. There are some drawbacks associated with techniques of jaw splinting with wires and ligatures including morbidity, periodontium and soft tissues traumatizing and irritation, complicated oral hygiene, risk of gloves perforations by sharp elements and contamination of surgeons by hazardous viruses (HIV, hepatitis B, C), involvement of dental technician etc, motivates for searching alternative and less invasive techniques of intermaxillary fixation. The present paper describes the results obtained by applying fixed orthodontic appliances for intermaxillary fixation in 37 patients with mandibular fractures of different locations. The technique described has the advantages proven with clinical examples.

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УДК 616.314.17-008.1-036.1-084

ANALYSIS OF CEPHALOMETRY VALUES OF DENTOALVEOLAR COMPLEX IN PATIENTS WITH DENTURES AND RESTORATIONS MADE IN SIMPLISTIC APPROACH

Zhegulovych Z.Ye.

Key words: occlusal disorders, balancing and hyperbalancing tooth contacts of teeth, vertical overlap, horizontal overlap, cephalometry, simplistic approach in prosthetics and dental restoration.

Identifying signs of disorders in dentoalveolar complex is used to evaluate any changes in tooth position while planning orthodontic correction. The aim of the study was to analyze the parameters of dentoalveolar complex in individuals wearing the dentures or having restorations made in simplistic approach based on the findings of lateral cephalometry findings. Material and methods: 24 patients were selected and divided into two groups (11 individuals with unaffected dentitions, 13 individuals with small defects of the dentition). 18 individuals with perfect occlusion made up a control group. Investigations included clinical analysis of occlusion, cephalometry, and condylography. Statistical analysis was performed by using the MedCalc v. 15.2 (MedCalc Software Inc., Broekstraat, Belgium, 2015). Results. Statistically significant differences between the values of vertical overlap were identified in the test groups and control group ($p = 0.003$ according to the Kruskal-Wallis criterion). The mean value of horizontal overlap was differed ($p = 0.005$ according to the Kruskal-Wallis criterion). Statistically significant differences in balancing and hyperbalancing contacts distribution between the test groups and the control group were identified ($p < 0.001$ according to Chi-square test with the Yates correction). The differences between the mean values of the occlusal plane were statistically significant when compared with the control group ($p < 0.001$ according to ANOVA results). The differences were not identified when both test groups were compared. Conclusions. The resulting data in occlusal plane value analysis point out changes in persons with dentures and restorations made in the simplistic approach and can be compared with the changes in vertical and sagittal overlapping of the teeth, as well as with the balancing and hyperbalancing contacts distribution that is the evidence of the occlusal disorders.

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УДК 615.462:678.7:616.314-089.28/.29

CLINICAL EFFICACY ANALYSIS OF HYDROGEL CONTAINING ADHESIVE ACTIVITY POLYMER "ACRYLAN-LPI" AND ANTISEPTICS IN RELATION TO WEARING TEMPORARY REMOVABLE LAMINAR DENTURES

Komaritsa A. I.

Key words: removable denture, hydrogel, adhesive active polymer, chlorhexidine digluconate, generalized periodontitis.

In order to prevent complications following dental procedures that can damage oral mucosa integrity, there is a need to develop technologies that could support proper concentration of active drug substances in cases of temporary prosthesis fitting and wearing. This paper presents the results obtained by carrying out comparative analysis of clinical indices of the effectiveness relating to modified temporary removable prosthesis with hydrogel containing adhesive active polymer in the complex treatment of patients with chronic generalized periodontitis. When comparing clinical indices of the inflammatory process and the dynamics of wound healing in 40 patients and the control group, showed a positive trend, but the treatment group showed a reduction of healing for 1 - 2 days. Using the modified polypropylene removable temporary prosthesis with hydrogel-based adhesive active polymer can not only restore chewing and aesthetics by replacing missing teeth, but also reduces the inflammatory reaction of the mucous prosthetic bed, accelerates epithelial regeneration of damaged tissue, promotes wound healing of surgical wounds in shorter intervals of time due to local medical effects of the oral mucosa.

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УДК 616.311.2 – 002 – 053: 612.014

INTENSITY OF CHRONIC CATARRHAL GINGIVITIS IN CHILDREN RESIDING IN ENVIRONMENTALLY INAPPROPRIATE TERRITORIES

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Key words: children, gingivitis, environment.

This article presents the data on the state of periodontal tissues in children residing in environmentally in-appropriate territories and exposed various unfavourable factors. It was found that in spite of the same growth trends of PMA index depending on age and an increase in the values of the intensity of the inflammatory process in periodontal tissues in children of test groups, residents of polluted territories demonstrated higher PMA index values compared with children residing in environmentally appropriate regions.

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УДК 616-093/-098

PATHOGENETIC ACTIVITY OF ORAL MICROBIOTA IN PATIENTS WITH SOMATIC DISEASES

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Key words: periodontium, microorganisms, gastritis.

Age-related dynamic changes of oral microbiota are an evidence of an increase in bacteria possessing proteolytic activity that increases the risk of developing inflammatory and destructive diseases of periodontal tissues. The dominant microorganisms in the range of microbiota in oral fluid identified in healthy individuals are aerobic and anaerobic streptococci, staphylococci, lactobacilli, and enterobacteria. Marked changes in oral microbiota that develop with aging and in chronic gastritis, are characterised by decreased intensity of compensatory reactions in oral organs and tissues. Simultaneous course of gastritis and inflammation in periodontal tissues can be revealed by pronounced negative changes in microbiota. Oral fluid microflora and plaque in the presence of somatic pathology and catarrhal gingivitis are characterized by excessive growth of bacteria and increased growth of pathogenic and opportunistic microorganisms. Thus, the presence of somatic pathology is associated with lower culturing rate and the number of lactobacilli and enterobacteria neysseriy, and with increased detection of parodontium-pathogenic microorganisms. The structure of the microbial landscape of the oral cavity can be used in the analysis of microbiota appropriate habitat for patients with above mentioned pathologies.

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УДК 616-071+616-092+616.314.17-008.1+ 616-08+615.33+616.33-002+616.24-002+618.12-002

DYNAMICS OF PERIODONTAL POCKETS DEPTH INDICES IN PATIENTS WITH CHRONIC GENERALIZED PERIODONTITIS RECEIVING SYSTEMIC ANTIBIOTIC THERAPY OF UNDERLYING SOMATIC PATHOLOGY

Matviyuk T.I.

Key words: generalized periodontitis, antibiotic therapy, periodontal pocket, therapy.

The aim of the study was to explore the values of periodontal pocket depth in patients with chronic generalized periodontitis who are receiving systemic antibiotic therapy of underlying somatic pathology before and after the periodontal treatment. 117 patients with generalized periodontitis were divided into groups: Group 1 (Control) involved patients with generalized periodontitis without somatic pathology (15 persons, according to generally accepted conventional treatment protocols for the generalized periodontitis). Group 2 included 102 persons: 2A subgroup was made up of (34 patients with systemic antibiotic therapy of somatic pathology and absence of periodontal treatment); 2B subgroup included (35 patients with systemic antibiotic therapy of somatic pathology and professional oral hygiene (according to proposed scheme of the treatment); 2B subgroup (33 patients with systemic antibiotic therapy of somatic pathology and corrective periodontal treatment by using proposed method that demonstrated high efficiency. Significant reduction in the depth of periodontal pockets was observed in the examined teeth ($p < 0.05$). The duration of the research was divided into 1, 6 and 12 month periods.

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УДК 616.314-07+613.95+616.314-002

IMMUNOLOGICAL INDICES OF ORAL LIQUID IN CHILDREN WITH CARIES RESIDING IN DIFFERENT CLIMATE AND GEOGRAPHICAL ZONES OF IVANO-FRANKIVSK REGION

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Key words: children, oral fluid, dental caries, lysozyme, secretory IgA, climatic and geographic zones.

This article presents the results of the assessment of immunological parameters of oral liquid obtained in 12-year-old children with caries, who reside in the plains and foothills of mountain climatic and geographical zones of Ivano-Frankivsk region. It was found that the concentration of secretory immunoglobulin A (s Ig A) was maximal in caries-resistant contingent, and was $(0,2 \pm$

002) g / l in the children residing in plains, $(0,19 \pm 0,07)$ g / l in the children residing in the foothills, and $(0,21 \pm 0,06)$ g / l in the children from mountainous areas. Children with decompensated course of caries demonstrated significant decrease in the value of this index by an average of 1.9 times as compared with the healthy children ($p < 0,05$). Minimum values of lysozyme content in oral fluid were recorded in children with high caries intensity that was 1.8-fold lower with respect to the data of children with intact dentitions ($p < 0,05$). There have been established significant differences between the contents of s Ig A and lysozyme in saliva of children residing in different climatic and geographical zones.

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УДК 616.724–008.6–02:616.314. 21a

ANALYSIS OF DENTOFACIAL COMPLEX OF PATIENTS WITH TEMPOROMANDIBULAR JOINT DISORDERS AND THEIR CORRECTION

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Key words: temporomandibular joint disorder, pathology of dentofacial complex.

The article presents the results of comprehensive analysis by clinical entities of dentofacial complex pathologies in 47 patients with temporomandibular disorders classified according to their nosology (compression of bilaminar region, displacement of meniscus, hypermobility, arthritis, arthrosis and their combinations) and the treatment applied. It was established that the most common disorders of articular pathologies were periodontitis (44.6%), multiple dental defects (34.0%), secondary deformation (19.1%), orthodontic pathology (12.8%) and their combinations. The comorbidities of occlusal pathology in patients with articular disorders were typical for aged individuals (over 40), while the orthodontic pathology was typical for patients aged 20 - 40. Complexity of comorbidity in TMJ and occlusal disorders requires thorough diagnosis, elaboration of a detailed treatment plan ranging from dental health plan to the application of occlusal splints of different types. Prosthetic rehabilitation including various prosthetic restorations to correct centric relation and functional occlusion should be mandatory completion of treatment.

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УДК 613.98, 616.314-08-039.57-06:613.863-08

APPLICATION OF "HIALUOST" OSTEOPLASTIC MATERIAL IN COMPLEX TREATMENT OF CHRONIC PARODONTITIS

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Key words: chronic generalized periodontitis, surgery, osteoplasty.

This article describes the results obtained by applying osteoplastic material "Hialuost" in the treatment of chronic generalized periodontitis. Comparative characteristics of flap surgeries without using osteoplastic materials and under applying this material to enhance reparative bone formation in the area of surgery.

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УДК 616.724:616.314-007.272]-073.178

Том 16, Випуск 4 (56) частина 1

POWER LOAD ON ARTICULAR HEADS OF MANDIBLE DEPENDING ON TYPE OF OCCLUSIVE EFFECT

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Key words: temporo-mandibular joint, model of the mandible, distribution of loads in articular head.

Nowadays the analysis of occlusion and jaw movements has developed into an independent clinical discipline known as gnathology, by which the articular components must be in harmony with the dentofacial functional anatomy. Without such harmony overloaded structures and their functional surfaces respond to the situation by remodelling and deformation of TMJ. We have designed an analogue of biomechanical model of human mandible to calculate the relative degree of TMJ pressure on the working and balancing sites in different parts of the joints. It was established that during the one-sided burden of lower jaw, inactive side of TMJ underwent more load, and the distribution of forces in case of occlusal loads on the frontal part of the dental arch contributed to the displacement of the articular disc backwards and unilateral action of occlusal forces on chewing group of resulted in the displacement of the articular disc forward of the working part. The findings of power responses obtained could not be considered as a direct reflection of the load distribution in TMJ, but they may serve as sufficient grounds for the qualitative detection of biomechanical phenomena that occur in the temporo-mandibular joint.

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КЛІНІЧНА ТА ПРОФІЛАКТИЧНА МЕДИЦИНА

УДК 616.61-003.4-616.12

DEPENDENCE OF ARTERIAL HYPERTENSION CORRECTION OUTCOMES ON KIDNEY CYSTS LOCATION

Abdelrakhman Maisara

Key words: arterial hypertension, kidney cysts, paracenteric sclerotherapy.

The article presents results of dynamics of arterial hypertension intensity indices depending on kidney cysts location. 123 patients involved in this investigation were divided into 4 groups

depending on kidney cysts topography: in the first group (34 patients) unicameral cysts were in the upper kidney segment; in the second one (30 patients) were in the middle segment. In 32 cases simple kidney cyst was located in the lower part of the kidney (the third group of the observation), the fourth one contained 27 patients, in whom parapelvic cyst was diagnosed. Therapy effectiveness of cysts in the upper segment made up 73,5% (25 patients), 60% (18 patients) for cysts in the middle segment, 68,8% (22 patients) for cysts located in the lower segment. Paracenteric sclerotherapy was observed to be the most effective in the group of parapelvic cysts (AP decrease and blood pressure lowering by more than 15 mm Hg was registered in 77,8% (21 patients). Paracenteric sclerotherapy of kidney cysts favours arterial pressure normalizing and confirms the theory about renal cysts preceding the development of symptomatic arterial hypertension.

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УДК 618.3/.7-06-036:616.988:578.826.6:616.523

PREDICTION OF OBSTETRIC AND PERINATAL COMPLICATIONS IN ASSOCIATED HIV AND HERPES VIRUS INFECTION

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Key words: HIV, herpes virus infection, pregnancy, obstetric and perinatal complications, prognosis.

HIV / AIDS challenges are still urgent. The purpose of research was to develop ways to predict obstetric and perinatal complications in associated HIV and herpes virus infection. Calculations were carried out on 2 groups of patients: 1 group involved 35 HIV-infected pregnant with herpes

infection who developed marked signs of the most important obstetrical and perinatal complications (threatening premature labour, fetal distress, preeclampsia, birth asphyxia, intrauterine infection); 2 group included 115 women who did not manifest above mentioned complications. This two-stage method developed for predicting obstetric and perinatal complications in HIV-infected pregnant women with HVI enables to identify women at risk with high accuracy that in turn allows health care professionals to provide proper therapy and reduce the incidence of complications among the women. The proposed algorithms are easy-to-use for both manual calculations and using specialized software, and can be recommended for introducing into obstetric practice. Quantitative analysis (calculation of informativeness) mathematically proved the leading role of the activity of HIV-associated herpes virus process in the event of obstetric and perinatal complications.

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УДК 616-08-039.7-616.697-612.015.39

APPROACHES TO CORRECT MALE INFERTILITY BASED ON METABOLIC SYNDROME AND HIGH INDEX OF BODY WEIGHT

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Key words: pathospermia, metabolic syndrome, blood circulation in testicles.

The success of pathospermia treatment depends on the body weight index, severity of signs of metabolic syndrome, its duration, sexual function disturbances. It is quite difficult to recover androgenic function as the therapy effectiveness is not so productive. That is why it is important to find new of approaches in pathospermia treatment. Therapy effectiveness of pathospermia was thoroughly analyzed in this article; as well as comparative analysis of treatment effectiveness in groups by using colour Doppler mapping was carried out. Analysis of the blood circulation indices

demonstrates promising control method that enables performing and studying the efficacy of recommended pathogenetic therapy in patients with pathospermia who have metabolic syndrome with high index of body weight.

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УДК 616-089-035.2 - 617.58-002.44- 616.14-08

MINI-INVASIVE SURGICAL TECHNIQUES FOR CORRECTING PHLEBOHEMODYNAMIC DISORDERS IN MANAGEMENT OF TROPHIC ULCERS OF

VENOUS ETIOLOGY

Arseniy I. I.

Key words: chronic venous insufficiency, endovenous laser ablation, trophic ulcer, skin grafting.

This article presents the experience of integrated management of chronic ulcers of venous etiology by endovenous laser ablation of the vena saphena magna and its tributaries, the lower leg perforated veins in 52 patients. The details of the laser ablation procedure were described. 26 patients underwent skin grafting. The outcomes of this surgery were following: 23 patients demonstrated complete engraftment and 3 patients reached 60 - 70% of the outcome desired. The results suggest that endovenous laser coagulation of the affected veins is a reliable and sometimes the only possible technique. This approach considerably reduces surgical trauma, is characterized by low rate of postoperative complications, and reduces the duration of hospital stay.

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УДК [616.12-008.331.1+616.379-008.64]-008.9-083.97:57.083.3:57.088.6

CHARACTERISTICS OF HORMONAL, METABOLIC AND IMMUNE DISORDERS PROGRESSION IN PATIENTS WITH CONCOMITANT HYPERTENSION AND TYPE 2 DIABETES

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Key words: hypertension, type 2 diabetes, hormonal and metabolic disorders, immune disorders, omentyn, adiponectin.

This article focuses on the additional common pathogenic factors of comorbid arterial hypertension and type 2 diabetes. It has been proved that all the metabolic and hormonal as well as immune disorders considerably aggravate depending on the increase in body weight. The results point out a close pathogenetic link between metabolic disorders, omentinom, adiponectin and pro-inflammatory interleukins (IL-1 β , IL-6) that should be considered as an adverse factor in the course of concomitant hypertension and type 2 diabetes, which leads to the progression of atherosclerotic lesions of blood vessels and can lead to the risk of vascular complications.

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УДК 616.12-008.331.1-092:616.441-008.64:611.13/16-018.74

FACTORS OF CARDIOVASCULAR RISK depending on the state of vascular endothelium IN PATIENTS WITH HYPERTENSION AND COMORBID Hypothyroidism

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Key words: hypertension, hypothyroidism, endothelial dysfunction, cardiovascular risk, circulating endothelial cells.

The aim of this research was to study the hormonal and metabolic parameters and cardiovascular risk factors depending on the condition of the vascular endothelium (VE) in patients with arterial hypertension (AH) and subclinical hypothyroidism (SH). Depending on the level of desquamated circulating epithelial cells (CEC) in the blood of 74 patients (29 males and 45 females) aged from

45 to 65 with hypertension stage II and comorbidities including SH (n = 39) and combination of SH and diabetes mellitus type 2 diabetes (n = 35) were divided into 2 groups: group 1 - with moderately damaged vessel walls, group 2 involved patients with markedly damaged vessel walls. The control group comprised 20 healthy volunteers. We assessed the status of carbohydrate, lipid, thyroid metabolism, the state of endothelium, the structural condition of the arteries. The patients with hypertension and SH demonstrated significant changes in VE compared with the control group: 26 individuals made up the 1st group, 48 individuals formed the 2nd group against the background of increasing plasma levels of highly sensitivity C-reactive protein ($p < 0.05$) and increased thickness of intima-media complex of common carotid arteries ($p < 0.05$). The patients of the group 2 were observed to have severe dyslipidemia ($P < 0.05$), hyperglycemic disorders, signs of insulin resistance, and females were almost double more than male, regardless of the duration of the SH and AH. The patients with comorbidities of hypertension and subclinical hypothyroidism develop the most pronounced endothelial dysfunction, which is associated with significant dyslipidemia, insulin resistance and confirms a higher risk of cardiovascular complications.

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UDC 616.517-06-078:577.175.8:577.121.7

STATE OF HORMONES AND NEUROMEDIATORS WITHIN ENERGY METABOLISM IN PATIENTS WITH ADVANCED AND COMPLICATED PSORIASIS CONDITIONS

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Until now the issues of etiology and pathogenic mechanism of the psoriatic disease have been far from clear understanding in domestic medicine as well as in the whole world. The article discusses the study of some indices reflecting the conditions of hormones and neuromediators in patients with

psoriatic pathology. The task of the research was to evaluate the concentration of blood serum hormones and neuro mediators that can influence energy metabolism. The methods used to carry out the research were the following: fluorometry, enzyme immunoassay (EIA), immunoenzymometric methods, immunoradiometric assay (RIA). The results obtained by studying the amount of hormones in the blood serum that can influence energy metabolism in patients with psoriatic pathology, showed essential and dynamic rate changes. Activation of the neuroendocrine system within psoriatic pathology is closely connected with the state of the sympathoadrenal system, its hormones and neuro mediators. Long-term increase in the rating values in psoriasis can result in profound disorders in the system tissue and cellular levels of neurohumoral regulation, as well as in the breakdown of protection-adaptation mechanisms. The recourse of the psoriatic pathology is accompanied with activation of the hypothalamus, hypophysis, adrenal and thyroid glands, and with the underlying stimulation of the sympathoadrenal system. Dynamic changes in hormone and neuro mediators metabolism indicate the acceleration in all types of metabolism during the psoriasis development, including energy metabolism as well.

Key words: psoriatic condition, hormones, neuro mediators, metabolism, energy exchange, arthropathy.

This work is a fragment of the research "Optimization of pathogenetic treatment of psoriatic pathology, combined with hypertension" № SR 0116U004976 of the Department of Dermatology, Venereology and Medical Cosmetology, Kharkiv National Medical University.

Introduction

It is commonly known that an organism can exist only in case of relatively stable internal environment. The mechanisms providing homeostasis in complex multicellular organism are based on the universal interdependence of energy and integrity processes that are regulated by the neuroendocrine system in cooperation with the immune system [1]. Neuroendocrine system belongs to the category of functional super-systems, which has complex structural organization, built-up on the basis of the strict hierarchical control of its sub-systems. Neuroendocrine system reliability is specified by the feedback – either negative or positive, that makes the basis of each its chain functioning [1, 2, 3, 4]. It supports the metabolic state of cells, organs and the entire organism in the optimal level by way of the adaptation and protective-accommodative mechanisms. It also provides their safe functioning, self-renewal and regeneration [1]. Data of relevant literature indicate that, until now, the issues of etiology and pathogenic mechanism of the psoriatic disease have not been cleared up enough in Ukraine as well as in the whole world [2, 3]. No convincing proofs were suggested by neuro-genic, heredity, parasitic, infection, autoimmune, metabolic, and endocrine and other theories of the psoriasis occurrence [2, 3, 4, 5]. This necessitates further complex study of the mechanisms of co-operative interaction between the integrative homeostatic control systems on condition of the development of psoriatic pathology and taking into account the state of metabolic, bioenergetics processes, as well as the functions of the internal organs and tissues [2, 3]. The analysis is indicative of the fact that only the complex study of the condition of the nervous, endocrine, immune as well as bioenergetic processes enables clinicians to outline approaches in establishing the mechanisms of psoriasis development. [2, 3].

Based on above facts, the present research was aimed to study the hormone and neuro mediator metabolism in patients with advanced and moderate stable stage of psoriasis and in cases of the complicated forms — psoriatic arthritis, psoriatic erythrodermia.

Material and methods

The study of some indices of the hormone and neuromediators concentrations was performed in 153 in-patients with psoriatic pathology who took the course of therapy at the Regional Dermatovenerological Dispensary, Kharkiv. The patients were aged from 18 to 53 (88 males and 65 females). The control group in the clinical trial included healthy individuals of the same age and sex (12 males and 9 females). All the patients with psoriasis were divided into three groups, as it was prescribed by the programme of the study. The first group included 38 men and 27 women with advanced stage of the disease, the second group included patients with steady-state stage of the disease (35 men and 24 women), and the third one – patients with complicated forms of psoriasis (psoriatic arthritis, psoriatic erythrodermia), 15 men and 14 women. The task of the research was to specify the blood serum hormones and neuromediators concentration, which influence energy metabolism. The hormones were supposedly as following: adrenocorticotrophic hormone (ACTH), somatotrophic hormone (STH), thyrotrophic hormone (TTH), thyroxin (T4), triiodothyronine (T3), glucagon, parathyrine (PT), aldosterone and cortisol. They were tested in the blood serum with immunological and enzymatic assay (IEA) methods, Stat Fax 303 panel being used. Thus, T4 was tested with IEA method and reagents of AJKOP BIO (ALCOR BIO, Russia), STH, TTH, T3, cortisol – with Immynotech (Czech Republic), aldosterone – with CJS-BJO inter (France), glucagon – with Amersham (England), parathyrine – with ORJOM (Finland). Neuromediators – adrenalin, noradrenalin, dopamine, DOPA (dihydroxyphenylalanine) – were tested with fluorometry method [6, 7, 8]. Cyclic 3,6-adenosine monophosphate was tested with the radio immunological analysis and «Amersham» (England) re-agents. Statistical processing of the given results was carried out by methods of variable-based statistics and the estimated probability by Student-Fisher criterion.

Results and discussions

The results of the study of the blood plasma concentrations of hormones that can influence energy metabolism in patients with psoriatic pathology, showed their essential and dynamic rate changes due to adenylate cyclase transmitter cascade (Table 1); it was indicative with advanced and moderate stable stages of psoriasis, as well as with complicated forms. Advanced stage of the disease was characterized by the increase in the amount of adrenocorticotrophic hormone (ACTH) to 70,51%, somatotrophic hormone (STH) – up to 179,67%, thyrotrophic hormone (TTH) – up to 132,71%, thyroxin (T4) – to 151,27%, triiodothyronine (T3) – to 57,84%, glucagon – to 46,22%, parathyrine (PT) – to 72,93%, cortisol – to 33,07%, aldosterone – to 131,42%, as to be compared with the group of healthy control individuals. The data received show that psoriatic pathology develops to the advanced stage of the disease with the activation of hypothalamo-pituitary-thyroido-adrenal neuroendocrine complexes. During the moderate stable of the disease these data essentially decrease compared with the advanced stage and complicated forms of the psoriatic pathology. Apart from that, it must be noted that complicated psoriasis (psoriatic arthritis and psoriatic erythrodermia) was accompanied with more evident changes in hormone metabolism. Thus, the amount of ACTH in the blood plasma increased to 89,75%, STH – to 233,33%, TTH – to 198,76%, T4 – to 170,26%, T3 – to 100%, glucagon – to 87,84%, PT – to 121,19%, cortisol – to 78,01%, aldosterone – to 121,04%, when compared with the group of healthy control individuals. Analysis of the dynamic changes in the hormones concentration confirms the presence of disorders in protein, carbohydrate, mineral and energy metabolism that is accompanied with activation of intracellular metabolic processes that, in turn, are closely connected with cyclic adenosine monophosphate (cAMP) synthesis.

Table 1

Blood plasma concentration of hormones influencing energy metabolism by means of cyclic adenosine monophosphate (cAMP) in patients with psoriasis

Hormons	Test group, M±m			
	advanced stage	moderate stable stage	complicated forms	Control group
ACTH, (nmol/l)	70,51 * 42,34±3,58	27,66 * 31,70±2,42	89,75 * 53,7±3,24	24,83±2,66
STH, (nmol/l)	179,67 * 13,76±1,62	90,04 * 9,35±0,85	233,33 * 16,4±1,57	4,92±0,53
TTH (nmol/l)	132,71 * 7,54±0,58	73,76 * 5,63±0,46	198,76 * 9,68±0,72	3,24±0,24
T ₄ (nmol/l)	151,27 * 184,56±9,24	113,45 * 156,78±7,34	170,26 * 198,51±10,47	73,45±6,27
T ₃ (nmol/l)	57,84 * 25,84±1,37	32,07 * 21,62±1,54	100,0 * 32,74±1,86	16,37±1,46
Glucagon (pg/ml)	46,22 * 98,73±4,62	29,36 * 87,35±4,26	87,84 * 126,83±5,75	67,52±3,83
PT (pg/ml)	72,93 * 45,62±3,75	39,27 * 36,74±2,53	121,19 * 58,35±4,12	26,38±1,42
Cortisol, (nmol/l)	33,07 * 436,27±20,18	14,52 * 375,46±15,18	78,01 * 583,62±24,43	327,85±14,17
Aldosterone, (pg/ml)	131,42 * 19,58±1,63	93,26 * 16,35±1,44	121,04 * 27,16±1,48	8,46±0,78
cAMP (nmol/l)	84,21 * 23,45±1,27	40,29 * 17,86±1,62	122,70 * 28,35±2,14	12,73±1,24

Increase in the amount of cAMP in advanced, moderate stage and in case of complicated forms of psoriasis by 84,21%, 40,29%, 122,70% correspondingly indicates the rise in adaptation and protection-accommodative mechanisms to support the homeostatic function of the body in the patients with psoriatic pathology that is accompanied with activation of oxidizing and bioenergetic processes, in which central and peripheral internal secretion by endocrine glands (hypothalamus, pituitary gland, adrenal glands, thyroid gland and pancreas) is involved. The results of the research showed that activation of neuroendocrine system in psoriatic pathology which was closely connected with the state of the sympathicoadrenal system, its hormones and neuromediators [7, 8]. Being both the hormones of the adrenal medulla and neuromediators, catechol amines (adrenaline, noradrenaline) and their precursors, dopamine, dihydroxyphenylalanine (DOPA) influence the development of the necessary conditions that can provide human body's vital activity in the time of critical permissible load, disorders and malconditions; they can also be important means of activation of the protection-accommodative mechanisms to support homeostasis. During the study the increase in the concentration of adrenaline, noradrenaline, dopamine and DOPA (Table 2) was observed in the blood serum of the patients with psoriatic pathology. In the advanced stage of the disease the adrenaline concentration increased by 91,13%, noradrenaline – by 43,85%, dopamine –

by 25,41%, while DOPA decreased by 42,06%, compared with the control group.

Table

2

Blood serum concentration of neuromediators influencing energy metabolism

Indicators	Group supervision, M±m			
	advanced stage	moderate stable stage	complicated forms	Control group
Adrenaline (nmol/l)	91,13 * 4,53±0,38	58,22 * 3,75±0,44	105,06 * 4,86±0,42	2,37±0,24
Noradrenaline (nmol/l)	43,85 * 49,66±2,74	20,85 * 41,72±3,10	69,26 * 58,43±4,37	34,52±2,93
Dopamine (pg/ml)	25,41 * 148,57±6,18	12,13 * 132,83±4,37	38,71 * 164,32±5,75	118,46±7,13
DOPA (nmol/l)	42,06 * 9,34±0,85	22,09 * 12,56±1,35	49,32 * 8,17±0,76	16,12±1,43

Note: * deviation is likely ($p < 0,05$) with control.

In the moderate stable stage of the disease these data were less obvious, whilst in the complicated forms of psoriasis their rate was much higher: adrenaline increased by 105,06%, noradrenaline –by 105,06%, dopamine –by 38,71% with DOPA being decreased by 49,32%. Analysis of the dynamic rate changes in the hormones concentration indicate their cooperative interaction in the development of psoriatic pathology that can be characterized as a long-term chronic stress, accompanied with activation of oxidizing and bioenergetic processes. It is important to notice that long-term increase in the rating data in psoriasis can result in profound disorders in the system tissue and cellular levels of neurohumoral regulation, as well as in the breakdown of protection and adaptation mechanisms.

Conclusions

The results of the research have proven the course of the psoriatic pathology is accompanied with activation of functioning of hypothalamus, pituitary gland, adrenal glands and thyroid gland with underlying sympaticoadrenal system. These conditions can contribute to some disorders in adaptation and protection-accommodative mechanisms, which are associated with the increase in oxidizing and bioenergetics processes by means of adenylate cyclase intercellular mediator system, cAMP (cyclic adenosine monophosphate), that was suggested previously. Activation of neuroendocrine system is mostly detected in the patients with complicated forms of psoriasis and in the advanced stage of the disease, and it is less frequent in the moderate stable stage of psoriasis. Dynamic rate changes in the concentration of hormones and neuromediators indicate the activation of all the types of metabolism, including energy metabolism in psoriasis.

Prospects of further researches

The results presented in this article will be aimed at improving the management of psoriatic disease according to identified pathogenetic disorders.

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УДК 616.72-002.18:089.843-577

DYNAMICS OF BIOCHEMICAL AND IMMUNOLOGICAL MARKERS IN BLOOD SERUM OF PATIENTS WITH POST-TRAUMATIC COXARTHROSIS AFTER ARTHROPLASTY

Bondarenko S. Ye., Morozenko D.V.

Key words: post-traumatic coxarthrosis, inspection, joint replacement, biochemical and immunological markers, post-operative period.

The article deals with the study of biochemical and immunological serum markers in patients with post-traumatic coxarthrosis, requiring endoprosthesis replacement, in the dynamics of the early postoperative pe-riod. The authors have found out that patients with post-traumatic coxarthrosis after endoprosthesis re-placement demonstrate a decrease in serum biochemical markers – glycoproteins, sialic acids, chondroitin-sulfates, alkaline phosphatase activity, thymol and fibrinogen that coincides with the improvement of the clinical status of patients and indicates a decrease in the degree of inflammatory-destructive disorders and a favourable prognosis in the early postoperative period. Reduction of inflammatory interleukin-1 and inter-leukin -6 in patients after surgery indicates normalization of the immune status as well as points out the ab-sence of post-operative complications associated with periprosthetic infection and reaction to the implant. Evaluating the content of serum glycoproteins, chondroitinsulfates, sialic acids, alkaline phosphatase, fi-brinogen, interleukin-1, -6 and circulating immune complexes may be recommended for the assessment of patients with post-traumatic coxarthrosis after arthroplasty.

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УДК 613.888.15 + 176] : 613.99 – 057.875

STUDYING APPROACHES IN SELECTION OF CONTRACEPTIVES AND REPRODUCTIVE BEHAVIOUR OF FEMALE MEDICAL STUDENTS

Buhayevskiy K.A.

Key words: female medical students, reproductive behaviour, contraceptive selection, contraception, reproductive health

This paper presents the results of the study aimed to reveal the characteristics of reproductive behaviour of female medical students and approaches in their selecting contraceptives. These are sensitive issues dealing with their sexual life, use of contraceptives, pregnancy and its outcomes. The study includes the estimation of knowledge on reproductive health, sexual activity, use of contraceptives and its regularity and involved female students of their III - IV years. The study has revealed that the 121 (67,98%) students who participated in the study, have sexual relations. The debut of their sexual activity can be described as quite early, at the age of 14-15 (9,92%), with a sharp peak of the activity between the ages of 16 and 18 – in 87 (48,88%) females. It has been found out that the primary contraception used by the students who are sexually active are: condoms – 52,07%, coitus interruptus – 9,09%, and combination of both – 5,79%. It has been also established that these techniques are actively used by 81 (66,94%) of all sexually active females and only 16 (13,22%) females use hormonal contraceptives. The conclusion drawn can be following: female medical students involved in active sexual relations know little about novel approaches in contraception and have insufficient information about their characteristics and their application.

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УДК 616.12-008.315+616.127-005.8+615.22

LEVEL AND DYNAMICS OF GALECTIN-3 IN CHRONIC HEART FAILURE OF ISCHEMIC ORIGIN UNDER METABOLIC THERAPY

Vakalyuk I.P., Savchuk N.V.

Key words: galectin-3, chronic heart failure, ischemia, metabolic therapy.

This article presents the analysis of the effects of anti-ischemic therapy with trimetazidine on the level of galectin-3, NT-proBNP, and pro-inflammatory cytokines (IL-1.β and IL-6) in the blood of patients with chronic heart failure after myocardial infarction and following stenting. The results have shown that integrated therapy with trimetazidine leads to normalization of galectin-3, intense decrease in NT-proBNP concentration and proinflammatory cytokines compared with the basic standard therapy. When analyzing the chances of occurrence of the events studied it has been found that trimetazidine therapy in the course of basic therapy does not affect the chances of the occurrence of ventricular arrhythmias (ventricular premature beats) and systolic dysfunction of the left ventricle, but significantly reduces the risk of acute coronary syndrome.

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УДК 612.65+612.8]-053.32-047.36

RESULTS OF EARLY MONITORING OF NEUROLOGICAL AND PHYSICAL DEVELOPMENT INDICES IN PRETERM INFANTS

Velikanova T.V.

Key words: premature infants; catamnesis; neurological and physical development, extremely low birth weight.

This article presents the data obtained by analysing catamnesis, physical and neurological development of 149 preterm babies born before 37-38 gestation weeks of post-conceptual age (PCA). It has been found out that the extremely low birth weight (ELBW) and very low birth weight (VLBW) can be regarded as a cumulative risk factor and can considerably influence the state of health of newborns. In early infancy the children with ELBW and DNMT are diagnosed to have a lot of comorbidities. The most common pathologies are diseases of the respiratory and nervous systems. Most children can improve their neurologic status to the level of normal and optimal for 37-38 week PCA. However, 10-15% of the patients demonstrates low neurological indices and may constitute a risk group for the occurrence of disabilities. Physical development of prematurity occurs asynchronously and is characterized by catch-up growth, which in the 37-38 weeks of PCA does not stop in 38.5% of children with ELBW and in 20.6% of children with VLBW. The findings determine the necessity to further the dynamic observation of the physical development and its effect on the neuropsychiatric health of these children in order to prevent the occurrence of disabling conditions, to improve preventive, corrective and rehabilitation programs for these patients.

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УДК 614.777:543.3 (477)

DYNAMICS OF MORBIDITY RATE AMONG CHILDREN OF DNIPROPETROVSK REGION IN RURAL TAXA IN CONNECTION WITH INFERIOR QUALITY OF DRINKING WATER

Hryhorenko L.V.

Key words: rural taxa, morbidity rate, disease classes, decentralized water supply sources. drinking watep.

The structure of the morbid conditions among children under the age of 14 in different taxa of the Dni-propetrovsk region is different by classes of diseases. In particular, the diseases of I, XI, XIV, XIII classes, as well as the diseases of IX, II, XVII classes, including anemias are found to be the most prevalent throughout the majority of rural taxa in 2008-2013. This article shows a correlation between increased salt composition of drinking water from decentralized water sources and the content of some heavy metals (Zn, Cu, Mn) and some substances (pH, F, Al, nitrogen, ammonia, nitrites, nitrates, oxidizability) and the prevalence of such diseases among children as tumours ($r = 0,87$); diseases of the blood and impaired hemopoiesis ($r = 0,74-0,95$); anemia ($r = 0,79 - 0,87$); diseases of genitourinary system ($r = 0,79 - 0,82$); congenital anomalies ($r = 0,87$), circulatory disorders ($r = 0,74 - 0,95$), ($p < 0,001$).

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УДК 316:61

LIFE QUALITY OF AZERBAIJANIAN CHILDBEARING-AGED WOMEN WITH OVERWEIGHT AND OBESITY AND SELF-ASSESSMENT OF THEIR OWN HEALTH

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Key words: women of child-bearing age, overweight, obesity, quality of life, health self-assessment.

The research was aimed to study the opinions of child-bearing aged women regarding overweight and obesity, their quality of life and self-assessment of own health. Methods. Anonymous sociological prospec-tive study involved child-bearing aged women of Baku, Azerbaijan. The WHQ questionnaire was used to measure mid-aged women's emotional and physical health. The

questionnaire consists of 9 blocks of questions (98 questions) reflecting the purposes of the study. Some separate blocks contain questions that reflect the overall incidence of women's quality of life and self-evaluation of their own health. Quality of life was defined by 10 items each was evaluated out of 10 points. When the sum exceeded 70 scores, the quality of life was assessed as satisfactory, when it was less than 30 scores, it was evaluated as poor. In total, 4,000 questionnaires were handed out, 2838 of them were collected back (compared to $71.0 \pm 0.7\%$), of which 1748 questionnaires contained full answers to the questions ($61.6 \pm 0.9\%$). Age of women ranged from 16 to 47 years and all of them were Azerbaijanians. Results. Low response to the survey ($43.7 \pm 0.8\%$) was supposedly due to the fact that many women needed a detailed explanation in regard of some blocks of questions, some of respondents didn't know their current body weight. There were identified 5 groups of women's views concerning different aspects of body weight and obesity. Average indices of quality of life were as follows: women with normal body weight scored 63.6 ± 1.4 points (more than 70 points was considered as normal), women with increased body weight scored 52.4 ± 2.6 points ($t=3.80$; $P<0.001$), women with obesity scored 47.7 ± 2.2 points ($t=1.38$; $P<0.05$). Only $24.0 \pm 1.0\%$ of women evaluated the health condition as "good", and to $30.2 \pm 1.4\%$ of these self-evaluations were in women with normal body weight, and $17.9 \pm 2.3\%$, respectively, for women with an increased body weight ($t=4.57$; $P<0.001$), and $13.1 \pm 1.6\%$ in obese women ($t=1.71$; $P>0.05$). The most common was "satisfactory" level of health ranged from 38.3 ± 1.5 to $41.0 \pm 3.0\%$ of self-assessments ($t=1.18$; $P>0.05$). The indices of self-assessments of "poor" health increased with increasing body weight: $9.5 \pm 0.9\%$ of women with normal body weight vs $15.4 \pm 2.2\%$ of women with increased BWI ($t=2.48$; $P>0.05$), up to $18.3 \pm 1.8\%$ of women with obesity ($t=1.02$; $P>0.05$). The same sequence can be observed in increase of indices of self-rated "relatively satisfactory" level of health: $13.8 \pm 1.1\%$; $21.6 \pm 2.5\%$ ($t=2.86$; $P>0.05$); $25.8 \pm 2.2\%$ ($t=1.26$; $P>0.05$). i.e. the higher body weight of women, the more negative they perceived their state of health. Many women perceive the BMI and obesity as a cosmetic problem. While the QOL and self-rated health indicated the opposite. Conclusion. To enhance compliance to the implementation of obesity and body weight correction measures as well as to prevent their harmful health effects it is necessary to promote health educations among young women.

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УДК 618.14-006-071

CORRELATION BETWEEN CLINICAL AND MORPHOLOGICAL CHARACTERISTICS IN CHILDBEARING-AGED WOMEN WITH UTERINE LEIOMYOMA

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Key words: uterine fibroids, endometrial receptors, diagnosis and treatment of uterine fibroids, reproductive age.

Uterine leiomyoma is known as one of leading causes of female infertility. The frequency of this disease among women of reproductive age is up to 60%. Important role in the occurrence and development of fi-broids belongs to impaired metabolism of progesterone and estrogen, as well as the ratio of their fractions in the blood and the expression of their receptors in the myometrium and endometrium that consequently leads to morphological changes in the tissues. Thus, the mechanisms and factors of development of the condition are complex and varied, but their interpretation may open perspectives for the development of effective strategies in prevention and treatment of this pathology. We studied clinical and morphological features of uterine fibroids in 30 childbearing-aged women who were operated on by mini-invasive surgical techniques due to lack of effect or partial effect caused by the previous conservative therapy based on the large-scale research carried out by the Department of minimally invasive surgery "Improvement of mini-invasive surgical treatment of vascular diseases, internal and reproductive organs, abdominal wall,

nasopharynx, thyroid and parathyroid glands, and joints, including the use of implants based on nanobiosensorial technologies”. According to the results of research it has been found that the severity of the pathological manifestations of the disease largely depends on the size of myoma node, its localization, morphological structure, somatic health of women and concomitant gynaecological pathology. According to the results of hysteroscopy it has been revealed that in most cases (94%) childbearing-aged women with uterine leiomyoma are observed to have specific changes as focal endometrial hyperplasia seen in pathologically altered endometrium. In the tissues of the unaffected myometrium in 78% of cases, the expression of receptors to estrogen and progesterone is absent. In submucous myoma receptor dependence on estrogen is absent in 56% of cases, and in 27% of cases this is slight or moderate. The strong correlation is observed respectively in 17% of cases. An important histomorphological characteristic of patients with intramural nodes of classic morphostructures is a moderate level of expression of estrogen receptors against the background of the normal content of estrogenic receptors in the gland and stroma of proliferative endometrium.

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УДК 616.831-005.1-06:616.12-005.4:575.113.2(043.5)

ANALYSIS OF VITAMIN K EPOXIDE REDUCTASE COMPLEX SUBUNIT 1 (VKORC1) GENE C1173T POLYMORPHISM ASSOCIATION WITH ISCHEMIC ATHEROTHROMBOTIC STROKE BY USING MULTIVARIABLE LOGISTIC REGRESSION

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Key words: vitamin K epoxide reductase, complex subunit 1, gene polymorphism, ischemic stroke.

This article describes the results of vitamin K epoxide reductase complex subunit 1 (VKORC1) gene C1173T (rs9934438) polymorphism determining in 170 patients with ischemic atherothrombotic stroke (IAS) and 124 healthy subjects (control group) analyzed by using multivariable logistic regression. The ratio of main homozygotes, heterozygotes and minor homozygotes in case cohort was 37.1%, 43.5% and 19.4% while in control group was 47.6%, 37.9%, 14.5% respectively, ($P = 0.178$). Results of multivariable logistic regression analysis showed that none of genotype was associated with IAS development even after correction for age, sex, smoking status, body mass index and hypertension.

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УДК 616-056.3:613.26/.29]-07

COMPONENT APPROACH TO DIFFERENTIATED DIAGNOSIS OF ADVERSE REACTION TO FOODSTUFFS

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Key words: food allergy, molecular diagnostic, tolerance to histamine.

The prevalence of abnormal allergic reactions is growing up rapidly. Significant percentage of these reactions is caused by food. In recent years due to the development of clinical immunology and allergology new opportunities to differentiate true allergic reactions to food from other reactions have appeared. This article presents only some marked cases associated with food allergy chosen from a large number of the cases to demonstrate the urgency in identification of sensitizing profile and conducting component diagnostic to verify the diagnosis and adequate choice of the treatment. We have established the manifestations of food allergy in most cases are due to cross-reactions between molecules of related protein families. In addition, we should emphasize the importance of differentiated approach to diagnosis of manifestation of adverse reactions caused by food in cases of enzyme deficiency or bacterial infections. Component studies provide an alternative opportunity in diagnostic of true food allergy in conditions when carrying provocative tests are difficult or impossible.

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УДК 616.211-002.193-022.854.2-053.2(477.54)

ETIOLOGICAL SPECTRUM OF SPRING POLLINOSES IN KHARKIV REGION

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Key words: children, pollinosis, bronchial asthma, allergic rhinitis, aeropalinological monitoring, sensibilization.

This article evaluates the data of aeropalinological study conducted by volumetric method in 2011–2012 in Kharkiv Region (country of Ukraine). Plants mainly contributing to the pollen spectrum in spring season in 2011–2012 (by peak concentration) have been detected as following: maple (Acer), 198–115 pollen particles per cubic meter (pp/m³), ash (Fraxinus) 172–180 pp/m³, elm (Ulmus) 108–180 pp/m³, poplar (Populus) 97–137 pp/m³, oak (Quercus) — 78–84 pp/m³, birch (Betula) — 77–60 pp/m³, willow (Salix) — 57–59 pp/m³ and ailanthus (Ailanthus altissima) — 18–19 pp/m³. In 643 children with allergic diseases the sensibilization to main plants producers of pollen in spring season has been evaluated by prick-test. The presence of sensibi-lization to pollen of maple (in 39,32 %), birch (37,13 %), ash (30,36 %), poplar (41,36 %), oak (43,93 %), lime (29,92 %), alder (44,54 %), willow (26,14 %) has been detected. The exact data of prophylactic control medi-cal check-ups for patients have been calculated with taking into account of the type of sensibilization and data of aeropalinological study in Kharkiv Region.

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УДК 616.711-002:615.47

RESULTS OF TREATMENT OF ANTERIOR CERVICAL INTERBODY SPONDYLOSYNDESIS WITH DYNAMIC CERVICAL PLATES

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Key words: cervical spine trauma and diseases, anterior cervical interbody fusion, vertical meshes, rigid cervical plates, dynamic cervical plates.

This article presents the analysis of clinical and radiographic results of anterior interbody fusion by

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the cervical devices providing dynamic and rigid fixation for patients with injuries and diseases of the cervical spine. The paper also describes the changes in the dynamics of position of cervical devices, their screws well as fixed cervical vertebrae after the anterior interbody fusion; provides the details of dynamism and its laws when using translation-rotation dynamic cervical devices.

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УДК 614.2:616.1-07-084(083.97)

ADDITIONAL METHODS FOR EXAMINING CARDIOVASCULAR SYSTEM IN PATIENTS WITH MODERATE CARDIOVASCULAR RISK BY SCORE SCALE

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Key words: blood pressure, risk factors, methods of inspection, hypertension.

The lack of effective measures of primary prevention aimed at providing early detection and correction of risk factors for disease is one of the leading causes of high mortality rate. The aim of this study was to optimize the diagnostic algorithm of examining cardiovascular system in patients with moderate cardiovascular risk by SCORE scale. The study has demonstrated these patients are diagnosed to have a large number of additional risk factors including increased levels of LDL, TG, reduced HDL cholesterol, increased body mass index, obesity, hypertension stable. The most common risk factors are increasing cholesterol, overweight and obesity, found in 86% of subjects. Stable hypertension, confirmed by DMAT was registered in 67% of individual, including hypertension verified in the second phase (44%). The results of the study indicate individuals who belong to the group of moderate cardiovascular risk by the SCORE scale, should be examined more thoroughly using additional techniques. All the patients are recommended to take detailed lipidogram. Patients with increased level of office blood pressure should conduct daily monitoring of blood pressure. In cases of stable hypertension, it is necessary to specify target organ damage by means of echocardiography and duplex scanning of the main arteries of the head and neck. Other investigations techniques are optional. This will help to reclassify patients according to the level of their cardiovascular risks and to prescribe proper preventive therapy.

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УДК 616-022+616.441-008.63+616.31:616.32:616.33

ROLE OF IODINE DEFICIENCY AND THYROID PATHOLOGY AS COMORBID FACTOR IN COURSE OF CANDIDIASIS OF UPPER DIGESTIVE TRACT IN PATIENTS WITH GASTROENTEROLOGICAL PATHOLOGY

Kushnirenko I.V.

Key words: candidiasis, mucosa, thyroid gland, iodine deficiency, comorbidity.

A number of investigations carried out recently demonstrated the growth of occurrence rate of oropharyngeal and esophageal candidiasis in immunocompetent patients, causes of which have not been identified yet. The role of thyroid disorders and iodine deficiency in triggering this pathology is little known, even despite iodine deficiency prevalence in Ukraine and throughout the world. The aim of the investigation is to study the condition of thyroid and iodine supplement in patients with candidiasis of upper digestive tract. 136 patients involved in the investigation were divided into three groups: the first group contained 65 patients with oropharyngeal candidiasis and superficial growth of fungi, the second group contained 47 patients with invasive growth of fungi in the mucosa, and the third group included 24 patients without candidiasis. According to the findings the patients of the first and second groups had severe iodine deficiency, in 3,1 and 4,2 times higher compared with the third group ($p>0,05$) and ($p<0,05$), correspondingly. The incidence rate of nodular goiter in the patients of the second group exceeded three-fold compared with the patients of the third group ($F<0,05$). Correlation analysis demonstrated the connection between structural changes of thyroid gland with indices of structural degradation of mucous gel in the stomach due to the fucosa decrease, lowered level of CD8+ та CD16+, and increased adhesiveness of buccal epithelial cells. Iodine deficiency negatively affects the level of lactoferrin and secretory IgA in saliva, antioxidative activity of blood serum, cytokines activation of IL-6, IL-8, TNF- α , and is associated with increase of endotoxemia and inflammation. It also increases adhesive properties of buccal epithelial cells. Thus, data obtained show that iodine deficiency is a confounding comorbid factor of upper digestive tract candidiasis that is proved by detected correlation with a number of factors providing barrier function of mucosa.

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УДК 567.56-002.71-066:561-097.8

LIPID-LOWERING THERAPY OF ENDOTHELIAL DYSFUNCTION IN PATIENTS WITH ISCHEMIC HEART DISEASE, ARRHYTHMIAS, AND DIABETES MELLITUS

Latoguz S.I.

Key words: arrhythmias, ischemic heart disease, lipid metabolism, lovastatin, diabetes mellitus, carbohydrate metabolism.

The coronary blood flow to a large extent is known to be regulated by the normal endothelial function. In the presence of risk factors of coronary heart disease, especially hypercholesterolemia, there is a breach of receptor-dependent and blood flow mediated endothelium-dependent relaxation of blood vessels. Impairment of vasodilating endothelial function occurs in patients in early period before the development of angiographically detected plaques. The negative effects of hypercholesterolemia on endothelial function is indirectly proved by the fact that during the

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treatment aimed at normalizing lipid metabolism, there is a decrease of symptoms caused by myocardial ischemia. This is particularly important for patients with coronary artery disease and diabetes mellitus, in which there is constant impairment of lipid metabolism. 56 patients (31 women and 25 men aged 53 to 57) with ischemic heart disease and type II diabetes were included in dynamic 12-week study in the course of lovastatin therapy. The patients were divided 5 groups: 1-I 11 patients with ischemic heart disease and diabetes II without associated arrhythmias; 2-I - 12 patients with supraventricular arrhythmia; 3rd - 12 patients with ventricular premature beats, 4th group - 11 patients with paroxysmal atrial fibrillation and 5th group - 10 patients with persistent atrial fibrillation. The drug was administered in a dose of 40 mg once a day in the evening. Lovastatin therapy was not associated with significant effects upon cardiac hemodynamics indicators. There was no statistically significant difference in heart rate and blood pressure during the treatment. The lovastatin therapy has been observed to result in significant slowing of the number of premature ventricular and supraventricular premature beats. The number of paroxysms of atrial fibrillation was significantly changed. This therapy was associated with significant decrease in the number of angina attacks and fewer consumable nitroglycerin tablets. The medication improves exercise tolerance in most patients with coronary artery disease and diabetes mellitus II, as well as in the patients with supraventricular extrasystole and ventricular arrhythmias. There is no effect of the medication on exercise tolerance in patients with atrial fibrillation of paroxysmal and permanent character.

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УДК 616.65-006.6:615.28

ANALYSIS OF ONCOLOGIC RESULTS OF COMBINED HORMONAL THERAPY AND CHEMOTHERAPY BASED ON MITOXANTRONE IN PATIENTS WITH HORMONE-NAÏVE METASTATIC PROSTATE CANCER

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Key words: metastatic hormon-naïve prostate cancer, chemotherapy and hormonal therapy, androgenic deprivation, mitoxantrone.

The article presents the study of the effectiveness of the combined chemotherapy and hormonal therapy based on mitoxantrone in patients with metastatic hormone-naïve prostate cancer. 96 patients were involved in this investigation, they were divided into two groups: the first group took the complex therapy included mitoxantrone and androgenic deprivation ($n=36$), and the second group included only androgenic deprivation therapy ($n=60$). Antineoplastic therapy was carried out according to the following scheme (patients of the first group): mitoxantrone (12 mg/ m² once in 21 day intravenously) / prednisolone 5 mg/ day+ androgenic deprivation. Each patient received 6 courses of chemotherapy. Androgenic deprivation therapy was carried out according to analogues of LHRH. The patients of the both groups had the similar peculiarities according to main parameters. Improved survivability, free from tumour progression compared to those in the patients who underwent complex chemotherapy and hormonal therapy ($Me=21,5\pm2,4$ in comparison with $Me=9,0\pm0,7$; $p<0,001$). Median survivability without tumour progression was by 11,5 months longer in the patients of the first group. Parameters of general survivability were also better in this group of patients, but these differences were not statistically accurate ($Me=54,5\pm4,2$ compared with $Me=44,5\pm3,1$; $p>0,118$). Complex chemotherapy with hormonal treatment based on mitoxantrone intake demonstrated objective advantages concerning survivability free from tumour progression. But accurate differences of general survivability were not recorded among patients of both groups.

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УДК 617-089: 620.3

DIFFERENTIATED APPLYING OF MINI-INVASIVE SURGICAL TECHNIQUES IN TREATMENT OF UTERINE SUBMUCOUS MYOMA in CHILDBEARING-AGED WOMEN

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Key words: uterine fibroids, endometrial hyperplasia, thyroid dysfunction, child-bearing age, infertility, hysteroscopy, myoectomy, laparoscopy.

The purpose of this work is to improve the reproductive health of childbearing-aged women with uterine submucous myoma by improving mini-invasive surgery techniques. Patient-centered approach enables to choose proper mini-invasive surgical techniques for the patients, and namely the combined method of hys-teroscopy with laparoscopic assistance and putting endoscopic sutures onto the uterine wall under hys-teroscopic guidance, e.g. in cases requiring an objective assessment of the capacity of the uterine wall in the area of difficult of access fibroids. This approach considerably reduces intraoperative blood loss, and in turn, the necessity in infusion therapy, promotes early restoration of motor activity of patients (6 hours after surgery), reduced length of hospital stay, and improves reproductive function by preserving the functioning vessels in the myometrium that accelerates elimination of blood clots from microvasculature bed in the site of alteration. The assessment of childbearing function in patients who underwent through combined

surgical treatment of uterine fibroids in the remote period is based on morphofunctional and immunohistochemical study of endometrial receptor system and its operational response to stress compared to traditional operative techniques.

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УДК 616.216-002-006.5-089.87-085.371-037

RESULTS OF FACTOR ANALYSIS OF CLINICAL AND PATHOGENETIC PARAMETERS IN PATIENTS WITH POLIPOUS RHINOSINUSITIS AND PROTOCOL OF FURTHER PROGNOSIS VALUATION AFTER COMPLEX TREATMENT INCLUDING BACTERIAL AUTOVACCINE

Lupyr A. V.

Key words: polipous rhinosinusitis, pathogenesis, treatment, autovaccine, efficacy, prognosis.

Three hundred patients of both gender aged 17–77 years with polipous rhinosinusitis underwent a pro-found study using clinical, epidemiological, instrumental, pathomorphological, biochemical, immunological, immunoenzymatic methods. Using factor analysis 6 main factors have been stated, by joined influence of which about 54 % of variations are explained. About 47 % of parameter variations can be explained by the influence of two most powerful factors ("clinical and immunoinflammatory", "clinical and pathomorphologi-cal"). Factor scoring by the most powerful factor has differentiated patients' groups with primarily revealed disease and relapse with high reliability. The protocol of the disease relapse prognosis has been developed. This protocol widens

the spectrum of diagnostic and prophylactic measures, improves their efficacy that proves the expediency of its applying for such category of patients. The further perspectives relate to the development of prognostic discriminant model of bacterial autovaccine use in patients with polipous rhinosinusitis.

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УДК 612.014.5-053.4:611.781.1:57.088.6:577.128

MINERAL PROFILE OF INFANTS AND ITS IMPACT ON THEIR PHYSICAL DEVELOPMENT

Okhapkina O.V., Amash A.G., Dubonosov V.L.

Key words: physical development, trace element profile, hair spectrogram, type of feeding.

Rational feeding of young infant provides physiological physical development, which is one of the main health parameters. The aim of the study was to determine the effect produced by the type of feeding on the physical development of the young children, taking into account the content of trace elements in the hair of children. All the children underwent a comprehensive medical examination (inspection experts), with the evaluation of their physical development and its pace. The children were grouped according to the type of their feeding: breastfeeding group included 50.9% of children; formula feeding group included 26.4%. Breast milk and formula feeding received 22.6% of the children. The mineral profile was evaluated by the content of trace elements in the hair by mass spectrometry. It has been found that children developing overweight, obesity and malnutrition according to the deviations in normograms, except of the boys of the breastfeeding group and breast

milk and formula feeding, demonstrated elevated calcium levels, which in turn leads to a shift of potassium / calcium profile. It has been determined the bottle-fed children show an increased zinc and chromium content that may affect their health in the future.

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УДК 616.37-002.2:616.71-007.234-07

ROLE OF CHRONIC PANCREATITIS IN IMPAIRMENT OF BONE METABOLISM AND DEVELOPMENT OF OSTEOPOROSIS

Pasiyeshvili L.M.

Key words: chronic pancreatitis, bone metabolism, osteopenic state.

The results of the study of bone metabolism in 49 patients with chronic pancreatitis were presented in the papep. It has been shown that the development of the disease, its chronic and recurrent nature of the course accompanied by the excretory and endocrine dysfunction of the pancreas contributes to the development of osteopenic syndrome. It has been proved by changes in levels of the markers of the bone (bone isoenzyme of alkaline phosphatase and tartrate resistant acid phosphatase), and by indicators of bone mineral density according to the findings of densitometry. The results can be used in correction of medical measures (diet, calcium supplements) in patients with chronic pancreatitis.

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УДК 616.12-008:615.225

PATHOGENETIC CORRELATION OF LABORATORY FINDINGS IN PATIENTS WITH IRON DEFICIENCY ANAEMIA

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Key words: iron deficiency anaemia, pathogenetic correlations.

According to WHO data, up to 20% of the world population suffers from anemia. 80-90% of these conditions are iron deficiency anaemias (IDA). The purpose of this research is to identify pathogenetic correlations between various indicators of standard laboratory tests for patients with iron deficiency anaemia and chronic loss of blood.

42 adult patients (12 men and 30 women) with IDA aged 20 to 52 were investigated by using standard laboratory clinic techniques in the hospital setting. The causes of IDA for the majority of these patients were chronic metrorrhagia (67%) and hemorrhoids bleeding (19%). Control group consisted of 30 healthy individuals aged 20 to 40. Most complaints of patients were typical and caused by tissue hypoxia and sideropenia. The following laboratory criteria of IDA were used: low color index; hypochromia and microcytosis of erythrocyte; the decrease of serum iron, the increase in total iron binding capacity serum (OSS), the decrease in the content of ferritin in blood serum. The treatments consisted in taking iron preparations per os and par-enteral iron supplementation for 12-14 days in accordance with existing standards of therapy for patients with IDA. Computational package R was used to perform statistical analysis of laboratory indicators and to reveal their possible correlations.

Following the treatment, patients with IDA demonstrated higher concentration of red blood cells, hemo-globin and color index, reactive reticulocytosis and granulocytosis (an increase of relating to stab neutrophils). Unlike the control group, both before and after treatment, patients with IDA showed positive correlation between the levels of hemoglobin and color index. There was no positive correlation between above indices and the amount of erythrocytes in IDA patients before the treatment (unlike the control group), but appeared after the treatment.

The presence of positive correlation between the numbers of reticulocytes and serum iron blood concentration, and the negative correlation between the latter and OSS signify genuine, rather than functional, iron deficiency in the group of patients being studied.

One should note the change in correlation between the amount of stab neutrophils and serum iron blood, as well as the absence of the negative correlation between the latter and the number of lymphocytes in IDA patients unlike the controls. Observed changes in the correlation between cells of the different line hemato-poiesis suggest systemic nature of the pathogenic process during IDA course.

After the hospital treatment, not all correlation dependencies between blood indices are restored, suggesting the necessity for continuing therapy with iron preparations.

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The number of erythrocytes in IDA patients positively correlates with the level of glucose in the blood (unlike the control group), thus suggesting the tension of the process of glycolysis. IDA patients demonstrate positive correlation between glucose and blood urea nitrogen, which is the product of protein metabolism. They also demonstrate negative correlation between thymol test and alkaline phosphatase levels, and a positive correlation between the latter and the serum iron blood. Unlike the control group, in anaemic patients there is positive correlation between indices of red blood (hemoglobin, erythrocytes, reticulocytes) and the number of lymphocytes with cholesterol levels and ALT. These results illustrate the process of intensification of lipid peroxidation during IDA that can also refer to the changes in protein metabolism.

Obtained pathogenic correlations during iron deficiency anaemia can be used as prognostic measures, as well as for classifying the level of metabolic dysfunction and for identifying the degree of sideropenia.

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УДК 616.24—007.271—036.12—092:612.014.484]—07:616.15—07.

HAEMATOLOGICAL INDICES IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN DISTRESS AND EUSTRESS

Radchenko E. M., Pylypiv L. I.

Key words: chronic obstructive pulmonary disease, distress, eustress, haematological indices, inflammation, endogenous intoxication.

In order to analyse informational value of integral haematological inflammatory parameters, endogenous intoxication and nonspecific response depending on the stage of adaptation, 155 patients with acute form of chronic obstructive pulmonary disease (COPD) were examined.

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According to Harkavi L. Kh. (1998) and Radchenko E. M. (2004), we determined the types of adaptive responses – eustress and distress – and calculated 19 integral haematological indices of inflammation, endogenous intoxication and nonspecific response, anisocytosis of red cells and platelets. It was found the course of COPD accompanied with distress demonstrated more pronounced inflammation syndrome, which was characterised by neutrocytosis and acceleration of red cells sedimentation rate with the increase in all the integral indices of inflammation, activation of the syndrome of endogenous intoxication and changes in nonspecific response in the form of activation of cellular component of immune system and content reduction of lymphokine cell producers. The integral haematological indices are claimed to be a common informative technique in the estimation of inflammation syndrome intensity, endogenous intoxication and response avoiding the need to increase the scope of examination.

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УДК 616.316-008.811-008.64-07:[616.379-008.64:616.72-018.3-018.4-007.17]

DYSFUNCTION OF SALIVATION AND DIABETES: THEORETICAL AND PRACTICAL ASPECTS

Rudyaga T.N.

Key words: diabetes mellitus, osteoarthritis, hyposalivation, xerostomia.

The aim of work is to evaluation of salivation in patients with comorbid diabetes and osteoarthritis. We evaluated the secretory activity of the salivary glands in the patients with diabetes and osteoarthritis. The study has found out the presence of salivation disorders, including changes in salivation rate and the volume of saliva in diabetic patients as well as the impact of diabetes and osteoarthritis on the salivation. It has demonstrated that changes in salivation in diabetic patients depend on the duration of the underlying disease and concomitant osteoarthritis.

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УДК: 616.36-002-056.7

PECULIARITIES OF CLINICAL AND LABORATORY CHARACTERISTICS OF CHRONIC HEPATITIS C IN PATIENTS WITH POLYMORPHISM ASP299GLY OF TLR4 GENE AND GLN11LEU OF TLR7 GENE

Sizova L.M.

Key words: chronic hepatitis C, genotype, gene TLR4, gene TLR7.

The aim of the study was to analyze the clinical and laboratory characteristics of chronic hepatitis C (CHC) in patients with polymorphism Asp299Gly of TLR4 gene and Gln11Leu of TLR7 gene. To achieve this goal a cross-sectional cohort study of 125 patients with CHC was carried out. In the course of the study we revealed the predominance of women among CHC patients with "mutant" genotypes TLR7 gene compared with the carriers of "wild" of the genotype of this gene $\square$ 56.5% against 34.3%, respectively ($\chi^2=3.91$, $p=0.048$). It was also found out that the clinical and laboratory characteristics of chronic hepatitis C in patients with polymorphisms Asp299Gly of TLR4 gene and Gln11Leu TLR4 gene were typical for this disease except for certain features: among carriers of the genotype Asp299Gly of TLR4 gene the manifestations of asthenic-neurotic syndrome ($p=0.039$; $rS= -0.203$, $p=0.023$) were rarely recorded, higher values of erythrocyte sedimentation rate ($p=0.025$) and γ -glutamyl transpeptidase ($p=0.017$) were fixed; among carriers of genotypes Gln11Leu+Leu11Leu of TLR7 gene the manifestations of asthenic-neurotic syndrome ($p=0.022$; $rS= -0.224$, $p=0.012$) were rarely recorded, while erythropenia ($p=0.043$; $rS=0.219$, $p=0.014$) is registered more often, lower total bilirubin ($p=0.039$) and rate of liver fibrosis progression ($p=0.025$) were lowered.

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УДК [616.728.3-018.3-003.8-085.382-032:611.72-082-058.8-039.57:362.121]

CLINICAL EFFECTIVENESS OF AUTOLOGOUS PLATELET RICH PLASMA IN THERAPY OF KNEE OSTEOARTHRITIS IN EARLY STAGES

Smolina L. A.

Key words: osteoarthritis, knee joints, clinical monitoring, family medicine, efficiency.

The results of the clinical monitoring of patients with knee osteoarthritis in the initial stages of the disease (88 women and 58 men) demonstrated that autologous platelet-rich plasma injections (APRP) produced more significant effect on the clinical manifestations of the disease severity. The articles also described a new technique and implementation of a new integral index to assess the clinical efficacy of the differentiated therapy including the use of APRP and proved that the effectiveness of correcting algofunctional manifestations also depended on the age and sex of patients with osteoarthritis. It was proven that depending on the age and sex of patients who took the APRP course, the impact of a WOMAC index severity on the structural components can vary considerably.

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УДК 616.62-003.7-089.879.

FEATURES postoperative period, indications for preoperative and postoperative drainage of the upper urinary tract endoscopic treatment DIFFICULT WITH STONES ureter

Stetsyshyn R.V.

Key words: ureteral stones, contact lithotripsy, intraoperative and postoperative complications

The assessment of the peculiarities of the postoperative period in patients with severe ureter concretions was carried out on the basis of Urology Clinic of Kharkiv Medical Academy of Postgraduate Education and Regional Clinical Centre of Urology and Nephrology. Special attention was paid to the group of patients experienced intraoperative and early postoperative complications as well as to the cases where these problems were combined. Among 231 patients with complicated cases of ureter concretions shifting, 40 (17.3%) were diagnosed to have stones inaccessible for ureteroscopy and contact kidney lithotripsy, and ureter were observed in patients, 17 (7.4%) patients, despite the removal of ureter stones developed some intraoperative complications. Postoperative complications after removal of ureteral stones occurred in 19 (8.2%) patients. 32 (13.9%) patients had combined intraoperative and postoperative complications. The majority, 139 (60.2%) patients with complex ureteral stones were observed to have combined intraoperative and postoperative complications. Failures and complications in the treatment of complicated ureteral stones by ultrasonic contact ureterolithotripsy lead to aggravating of postoperative period in these patients. They observed to have postoperative hyperthermia, attacks of renal colic, pain in the lumbar region. These patients require prolonged stenting and additional nephrotomy.

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УДК 616.72 – 002 – 007.24 – 071/072: 575.174.015.3: 577.152.321

CLINICAL AND INSTRUMENTAL CHARACTERISTICS OF OSTEOARTHRITIS IN PATIENTS WITH VARIOUS LACTASE GENE POLYMORPHISMS

Tereshkin K. I.

Key words: gene polymorphism, lactase, osteoarthritis, obesity, apelin.

According to the results of in-depth clinical examination of 96 patients with osteoarthritis the predominance of heterozygotes (CT) gene lactase ($51,0 \pm 5,1\%$) has been found out, while the homozygote with genotype CC and CT genotypes have been identified respectively in $39,6 \pm 5,0\%$ and $9,4 \pm 3,0\%$. The absence of impairment of structural and functional state of the bone tissue was reported in ($37,5 \pm 4,9\%$) individuals surveyed, including 23.7% of homozygotes CC, in 66.7% with TT homozygotes, and in 42.8% of heterozygotes. The presence of variants CC and CN lactase gene polymorphism increases the relative risk of a more pronounced destruction of the articular cartilage. The general index of osteoarthritis severity and its components in patients with different types of polymorphism of LCT gene were not significantly different, but the CC homozygotes were significantly predominant indicator of stiffness. Among the CC homozygotes, 68.5% individuals were overweight or obese, among heterozygotes – 89.8%, and among TT homozygotes – 88.1%, while the content of apelin plasma depended on the body mass index and the variant gene polymorphism LCT: in the case of homozygosity CC, with an increase in body weight, apelin also increased, whereas in cases of homozygosity TT with increasing body mass index the apelin content decreased. The relationship between polymorphism of LCT gene and radiographic OA stage is characterized by predominance of homozygous CC alleles and in heterozygous patients with more severe radiographic manifestations of articular cartilage degradation.

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УДК 616.447-008.61-089

SECONDARY AND TERTIARY HYPERPARATHYROIDISM: WAYS OF SOLVING PROBLEM

Tkachenko R.P., Kuryk O.G., Denysenko A.I., Hubar A.S.

Key words: secondary hyperparathyroidism, tertiary hyperparathyroidism, radionuclide scintigraphy, subtotal parathyroidectomy, morphological study.

The article discusses the questions on the etiology and pathogenesis of secondary and tertiary hyper-parathyroidism, their clinical manifestations, laboratory and instrumental methods of diagnosis and the approaches of surgical treatment. We proposed the method of radionuclide scintigraphy with ^{99m}Tc-MIBI for differential diagnosis of secondary and tertiary hyperparathyroidism. This method allows us to objectify the absolute indications for surgery, to improve topical diagnosis, especially in atypical location of the parathyroid glands. We presented the results of surgery in 31 patients with secondary and tertiary hyperparathyroidism with pathological examination of surgical material. It was found that in the most of parathyroid glands in secondary hyperparathyroidism we found the adenomatous changes of gland as micro- and macroadenomatosis. Macroadenomas were observed in 2/3 cases that testifies to passing of secondary hyperparathyroidism to tertiary hyperparathyroidism. It is proved that surgery at the secondary and tertiary hyperparathyroidism is highly effective and safe method of treatment that is rapidly normalizes laboratory parameters, improves clinical symptoms and improves the quality of life of patients. Surgery of choice is subtotal parathyroidectomy following the identification of at least four parathyroid glands.

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УДК 616-366-002+616.12-001.46]-036.1-06:616.839

VEGETATIVE STATUS OF PATIENTS WITH CHRONIC ACALCULOUS CHOLECYSTITIS AND CONCOMITANT CARDIAC FAILURE

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Key words: chronic acalculous cholecystitis, cardiac failure, vegetative status.

Choosing treatment for elderly patients it is important to consider polymorbidities, i.e. the presence of several diseases, as well as age-related structural and functional changes in organs and systems that lead to affection of pharmacodynamics and pharmacokinetics of drugs, and socioeconomic status of the patient. Polymorbidity is an important characteristic of diseases of middle-aged people and older. If we consider the prevalence of the nosological forms, the conclusion can be drawn that cardiovascular diseases prevail in the aged patients while gastrointestinal disorders are more typical for patients of middle age group. The combinations of these pathologies are quite common. Thus we have analyzed changes in vegetative status of patients with acalculous chronic cholecystitis and comorbid cardiac failure. The data obtained indicate that patients with chronic acalculous cholecystitis and cardiac failure more often suffer from subepicardial myocardium ischemia. The patients with chronic acalculous cholecystitis and comorbid cardiac failure demonstrates the changes in vegetative status in the form of increased sympathetic tone of nervous system as opposed to the dominance of the parasympathetic nervous stimulation in the patients with isolated chronic acalculous cholecystitis.

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УДК 616.12 – 008.331.1 – 06: 616.379 – 008.64] – 056.7 – 008.9 – 092: 612.13

DIFFERENTIATED TREATMENT OF PATIENTS WITH COMORBIDITY OF ESSENTIAL HYPERTENSION AND TYPE 2 DIABETES

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Key words: essential hypertension, type 2 diabetes, comorbidity, genetic polymorphism.

The aim of the study was to develop a differentiated treatment of patients with essential hypertension (EH) and concomitant type 2 diabetes mellitus (DM2) based on genetic polymorphism. We examined 320 patients with EH stage II, grade 2 and DM2 moderate, subcompensated. It was established that the complex of genetic polymorphisms of AGTR1, PPAR γ 2, IRS-1 and TCF7L2 is associated with the development of comorbidity of EH and DM2. Unfavourable genetic polymorphisms to the development of EH and related DM2 were established. We designed the algorithm of differentiated therapy for patients with EH and concomitant DM2 based on crossed unfavourable genetic polymorphisms.

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УДК 616-001.37-089.844

STATE OF OROPHARYNGEAL AND ESOPHAGEAL BIOTA IN PATIENTS WITH STENOSING ESOPHAGEAL DISEASE

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Key words: stenosing esophageal disease, biota, oropharynx, esophagus.

The article is devoted to the investigation of the state of the oropharyngeal and esophageal in patients with stenosing esophageal disease. 112 patients were subjected to bacteriological investigation of oropharynx and suprastenotic department of esophagus. Sanation of the oropharynx for decontamination by 50 ml of 0,01 % of miramistin solution in the peredoperative period was carried out in patients with aggressive biota. It was established that the proposed method of decontamination of the oropharynx and esophagus with miramistin solution led to reliable depression ($p < 0,05$) of opportunistic microorganisms and subsequently to reduce failure-organ sutures of esophageal anastomosis from 14,00 % to 5,19 % ($p < 0,05$).

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УДК 616-053.2: 614.2

PROGRAM TO CORRECT FACTORS OF ANTENATAL RISK OF BRONCHOPULMONARY DYSPLASIA AS MEDICAL COMPONENT OF STRUCTURAL AND FUNCTIONAL MODEL OF PEDIATRIC CARE CARE FOR CHILDREN AT REGIONAL LEVEL: MULTIFACTORIAL ASSESSMENT OF ITS EFFECACY

Shypko A.F.

Key words: social medicine, health of the children, prevention, risk factors, evaluation of effectiveness.

On the basis of some genealogical and antenatal factors and their impact on the health of the children we determined expected indice of pathogenic and sanitary effects of the most significant risk factors of dysplasia-dependent bronchopulmonary pathology among children. The article describes the outcomes of some models aimed to modify risk factors and evaluates the expected effectiveness of N - factorial programs for primary prevention by antenatal and complex genealogical factors. Priority areas of implementation of prevention programs assessed by their impact on the antenatal and genealogical factors are presented. The draft of calculations of the

estimated effective management of health control the children by eliminating these factors is suggested.

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УДК 616.523:577.213-06.047.42:572.784-058.86+616.9-007.272-036.87

ASSESSMENT OF IMPACTS PRODUCED BY EBV, CMV AND HSV REPLICATION ON INDICES OF IMMUNE SYSTEM OF RESPIRATORY TRACT IN CHILDREN WITH INFECTION-ASSOCIATED ALLERGIC RECURRENT OBSTRUCTIVE BRONCHITIS DURING RELAPSE

Yukhymenko O.

Key words: children, recurrent obstructive bronchitis, EBV, CMV, HSV.

In order to study the impact of replication of persistent infection EBV, CMV and HSV agents in the course of acute obstructive bronchitis we conducted DNA investigation of these pathogens in the

saliva PCR technique in children with infection allergic recurrent obstructive bronchitis during relapse and in children of control group with acute respiratory disease. We assessed the levels of IL-4, IL-6, IL-8, IL-10, IgE by ELISA by "Vector-Best" system (Novosibirsk, Russia). It was found that children with infection-associated recurrent obstructive bronchitis were significantly more often diagnosed to have EBV reactivation. It was also revealed that children with infectious-associated recurrent obstructive bronchitis in whom replication was determined in the saliva of EBV, demonstrated significantly higher levels of IL-6, IL-8, compared with patients whose salivary replication of the virus was absent. Levels of IL-10 were significantly higher in children who did not show EBV replication activity in the saliva. The persistent infection, including the EBV, causes an immunomodulatory effect on the course of the immune response in children with infection-associated allergic and recurrent obstructive bronchitis that is impacted by the direction of the dominant processes in the immune system.

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ЕКСПЕРИМЕНТАЛЬНА МЕДИЦИНА ТА БІОЛОГІЯ

УДК 615.356+615.272.4:796

PHARMACOLOGICAL AGENTS BASED ON GAMMA-BUTYROBETAINE IN SPORTS MEDICINE: GOOD COMBINING OF CARDIOPROTECTIVE AND ERGOGENIC EFFECTS.

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Key words: cardioprotectors, cardiomyocyte, sport, exercise, efficiency, gamma-butyrobetaine.

At present, one of the important task of sport pharmacology and sport cardiology is searching for and assessing of the effectiveness of the measures aimed at protecting the cardiovascular system of athletes, which limits the stimulation of physical performance in most sports and in cases of improper cardioprotection can be a major cause of ill health and quality of life, as well as the sudden death of athletes. This problem is much more complex in modern conditions due to the continuous toughening of anti-doping sanctions (ban on the use of trimetazidine and meldonium the last two years), which greatly limits the ability of sports cardiologists. Therefore, the most reasonable way out of this situation is to use metabolite tropic agents, and in particular those on the basis of gamma-butyrobetaine (L-carnitine). A wide spectrum of physiological and biochemical actions of this substance in the body makes it possible even in conditions of prolonged strenuous downloads indirectly to influence the physical and mental fitness of athletes. The complex pharmacological effect produced by means of gamma-butyrobetaine on the body enables its use at all stages of the sport training with high cardioprotective ergogenic effect.

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УДК 616.379 – 008.64:577.114

CHARACTERISTICS OF INFLUENCE PRODUCED BY MELATONIN ON SOME BIOCHEMICAL PARAMETERS OF RAT BLOOD PLASMA AT ALLOXAN DIABETES

Davydova N.V.

Key words: diabetes mellitus, alloxan, melatonin, rats, cholesterol, urea, creatinine, alkaline phosphatase.

The activation of free radical oxidation of biomolecules is in the base of diabetes mellitus development therefore a potent endogenous antioxidant melatonin is of particular interest. The aim of the study was to investigate the effect of melatonin on some biochemical parameters in rat's blood plasma under conditions of alloxan diabetes. Experimental diabetes was caused by a single intraperitoneal administration of 5% alloxan monohydrate solution 150 mg/kg. It was revealed that alloxan-induced diabetes was accompanied by increased levels of glucose concentration in the rats blood plasma (2.26 and 1.88 times), total cholesterol (48% and 41%), urea (98.9% and 66.2%), creatinine (86% and 65.9%) and by decreased activity of alkaline phosphatase (58.3% and 25.5%) on 7 and 14 days of experiment respectively compared to the control. Administration of melatonin 10 mg/kg of body weight daily during 14 days against a background of alloxan diabetes helped to reduce glucose and creatinine concentration and normalized levels of total cholesterol, urea, and alkaline phosphatase in rat's blood plasma.

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УДК 615.011:547.857.4

CORRECTION OF renal excretory function in rats during the course of furoxan

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Key words: saluretic, furoxan, excretory function of the kidneys.

This article describes the outcomes produced by the course of furoxan administration under water load, evaluates diuretic effect of the drug. Diuretic effect produced by furoxan consists of two components: enhancing of glomerular filtration and tubular reabsorption inhibition of sodium ions. The course of furoxan administration was observed to show no significant changes in indices of acid-regulating kidney functions and protein excretion. Furoxan is a low toxic substance causing diuretic effect that points out the necessity for further in-depth research of its specific activity and designing an effective diuretic drug based on its properties.

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УДК 612.143:616-07

STATE OF AUTONOMIC REGULATION IN ADOLESCENTS WITH ARTERIAL HYPOTENSION

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Key words: initial tone of autonomic nervous system, functional state of cardiovascular system, heart rate variability.

This article is devoted to assessment of the functional state of the autonomic nervous system and its initial tone in adolescents with arterial hypotension. According to the objectives a complex examination of 128 students of their 2nd year of KhNMU aged 17-21 years was carried out. The individuals were divided into 2 groups depending on the frequency of symptoms and severity of complaints as well as on the level of mean arterial pressure (MAP). First test group with moderate

arterial hypotension included 39 individuals with MAP level ranged from 80 to 75 mmHg; second group with severe hypotension consisted of 39 individuals with MAP ranging from 74.9 to 70 mmHg; control group included 50 healthy individuals. Cardiointervalography for estimating autonomic nervous system tone and function of the cardiovascular system was used. It has been determined that in the patients with moderate arterial hypotension the state of regulatory mechanisms is characterized by moderate stress with utilizing additional reserves, while the individuals with severe hypotension demonstrate overstrain of regulatory mechanisms with lack of protective and adaptive mechanisms and their failure in providing optimal adequate body response to influence of environmental factors.

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УДК 796.332

MEASURES OF URGENT REHABILITATION TO IMPROVE PHYSICAL PERFORMANCE AND FUNCTIONAL STATUS OF FOOTBALL PLAYERS

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Key words: football, precision, muscular load, recovery process, a set of special exercises.

The article throws light on the issues of improving the quality of recovery of young football players during their training as well as during their participating in competitions of various levels. It has been found out the intake of milk in the acute recovery period contributes to retaining calcium in

the body due to excess phosphates in milk, which at metabolic acidosis are excreted and as a consequence result in less calcium loss. This led to stabilization and even to some decline in the ratio of calcium and phosphorus. This dynamics of the mineral composition of urine indicates less pronounced disorders of mineral homeostasis that likely causes a higher level of physical capacity and a more rapid recovery in the experimental testing of the football players. These results allow us to suggest that the intake of milk can contribute to urgent recovery and to sustain a high level of physical performance of football players.

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УДК 611.12-034:591.33-092.9

MORPHOLOGICAL STUDY OF EFFECT PRODUCED BY HEAVY METAL SALTS IN RATS' OVARIES IN EXPERIMENT

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Key words: lead acetate, reproductive system, ovaries, follicles, yellow body, toxicity.

The increasing complexity of environmental situation is one of the leading factors in female reproductive disorders and risk factors for child health. Lead can produce a toxic effect on all the organs and systems of women. It is able to penetrate the placenta and cause a disruption of the normal fetal development. The aim of this research was to carry out comparative morphological analysis of rats' ovaries in normal conditions and after isolated influence of lead acetate and its effect combined with metal-citrates on various stages of pregnancy. The study involved 120 white mature pregnant female Wistar rats. All rats were divided into 5 groups (24 animals in each group): Group 1 — animals were introduced lead acetate solution in a dose of 0.05 mg/kg; Group 2— animals were introduced lead acetate solution in a dose of 0.05 mg / kg and iron citrate solution in a dose of 1.5 mg / kg; Group 3 — animals were administered lead acetate solution in a dose of 0.05 mg / kg and gold citrate solution in a dose of 1.5 mg / kg, Group 4 — animals were injected lead acetate solution in a dose of 0.05 mg / kg and a solution of silver citrate in a dose of 2.0 mg / kg; Group 5 — control, animals were administered distilled water. Solutions of acetate and lead citrate metals administered through a tube once a day, at the same time, from 1 to 11th, 15th and 19th day of gestation. Rats were mated by the standard scheme. First day of pregnancy was identified from the moment of detecting sperm in vaginal smear. Lead acetate solution was injected to pregnant female through a tube once a day, at one and the same time. The test animals were killed on 12th, 16th and 20th day of pregnancy.

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Results. The study of the ovaries morphology of pregnant rats at different stages of gestation in the control and experimental groups was performed by estimating basic structural components of the cortex and medulla organ. The results showed that in the rats of experimental group lead intoxication led to the emergence of a number of morphological changes in ovaries of various degree of severity. At all stages of gestation ovaries in the experimental group were covered with cubic epithelium, the height of which was comparable to the control. Unlike the control group, microvilli on the superficial epithelium were partially reduced. The structure and the degree of protein membrane showed not significant differences compared to the norm in relevant terms of the research. On the 12th day of gestation ovarian cortex exposed to lead acetate follicles was observed to be of different maturities, often oval or irregular shape. In following terms of the study we observed progression of follicle degeneration with the replacement of primordial follicles by connective tissue. Regression of primary follicles occurred through the formation atretic bodies in the form of wrinkled shiny membrane surrounded by tecocytes. All this led to the fact that at the 20th day of gestation in the ovarian parenchyma we observed a marked decrease the total content of the follicles and the predominance of yellow and atretic bodies. We can conclude that the process of follicular atresia during pregnancy in conditions of lead intoxication became intense and ahead of control. Against the background relative volume of corpora lutea we also observed growth of the vascular stream. Circulatory disorders appeared as a plethora of capillary-venous components of hemocirculation of various severity, perivascular edema, sludged erythrocytes in capillaries. Stroma cortex and medulla of rat ovaries of experimental group on the 12th day of pregnancy were characterized by friable connective tissue fibres perhaps due to its swelling. On the 16th day of gestation disorganization and thickening of fibrous stroma component occurred. The study has shown that the effect of lead intoxication causes rapid and active atresia of follicles, manifested in the reduction of the total content of follicle in rats ovaries, the size of corpora lutea, and their premature regression, as well as degeneration and reduction of content luteocytes, proliferation of ovaries stroma, hemodynamic disorders caused by severe damaging effect of lead acetate. All this leads to changes in hormonal balance and disorders of the reproductive function pregnant female rats.

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УДК 616.379-008.64+ 616.3-02

OPTIMIZATION OF INTEGRATED THERAPY OF MORPHOLOGICAL SIGNS OF DIABETIC GASTROPARESIS

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Key words: stomach, intermuscular plexus, interstitial cells of Cajal, streptozotocin-induced diabetes mellitus, exenatide, glargine.

The research work is devoted to the study of morpho-functional changes in the muscular membrane of the stomach in experimental diabetes mellitus and its correction. Morphological signs of diabetic gastroparesis in the stomach of animals were registered on the 56th day of the development of streptozotocin-induced diabetes mellitus. According to the results of our research, a combination of insulin and exenatide that provides normalization of glycemic profile throughout the day without intensifying the risk of hyper- and hypoglycemia is the most optimal treatment of diabetic gastroparesis. Such combination therapy results in the restoration of structural elements of the myenteric plexus, the interstitial cells of Cajal and smooth myocytes of the muscular membrane of the stomach and, consequently, normalizes the motor-evacuation function of the stomach proving the adequacy of the therapy proposed.

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УДК 618.36-092.9:611.018:546.81:661.8:616-099

INFLUENCE LEAD ACETATE AND ITS COMBINATIONS WITH CITRATE METALS ON MORPHOLOGICAL AND FUNCTIONAL STATUS PLACENTA OF PREGNANT FEMALE RATS

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Key words: lead acetate, gold citrate, silver citrate, rat placenta.

At the present time it is well known fact that environmental contamination with heavy metal compounds, the most common of which is lead and its compounds is quite common. Entering the body, lead affects hemopoietic organs, nervous, cardiovascular, digestive system and other organs. The reproductive system becomes one of the most severely affected. Lead compounds can pass through blood-placental barrier and result in pathological processes in the body of the fetus and placenta. To assess the influence of these substances on the body it is important to be aware of cumulative effect of the elements toward the biological systems. Chemical elements functioning in the body interact with one another; these interactions can be detected in the form of synergistic or antagonistic effects. Lead is a physiological antagonist to zinc, iron, calcium, magnesium, phosphorus, selenium, and vitamins A, C, E, B complex, folic acid, sulphur-containing amino acids. Searching for new bio-antagonists for lead is an urgent task, as well as studying the impact of certain micronutrients can help to solve the issues on prevention of intoxication in industrial areas.

The aim of the research work was to investigate morphological and functional state of rat placenta, placental circulation under the influence of gold and silver citrates in lead intoxication.

The study was conducted on 64 white mature pregnant female Wistar rats. All animals were divided into 4 groups (16 animals in each group): Group I involved animals injected with lead acetate solution in a dose of 0.05 mg/kg, group II included animals injected with lead acetate solution in a dose of 0.05 mg/kg and gold citrate solution in a dose of 1.5 mcg/kg; III group involved animals injected with lead acetate solution in a dose of 0.05 mg/kg and silver citrate solution in a dose of 2 mcg/kg; IV group included control, animals injected with distilled water. Rats were mated by the standard scheme. First day of pregnancy was identified from the moment of determining sperm in vaginal smear. Solutions of heavy metals and nano-metals were injected to pregnant female through

a tube once a day, at one and the same time. Operative slaughter was performed on 16th and 20th day of pregnancy. The animals were taken out of the experiment by an overdose of ether anaesthesia. Histological slides of placenta were prepared by standard techniques, placentas were fixed in a solution of 10% neutral formalin, dehydrated with successively stronger concentrations of ethyl alcohol, embedded in paraffin wax and sectioned on a microtome, and stained with haematoxylin and eosin.

The experimental research has shown the injection of citrate metal to experimental animals in condition of lead intoxication up to the 20th day of pregnancy develops compensatory adaptation in the placenta that leads to improved morphological parameters compared to the group, which was injected with isolated lead acetate. The mechanisms include increasing the diameter of the placenta, the expansion of labyrinthine zone, and increase in the relative volume of the Hofbauer cells, in the diameter of the central uterine-placental arteries, which leads to increased blood flow to the placenta. The combination of these features contributes to the formation of a living fetus during pregnancy followed by chronic lead intoxication.

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УДК 611.389.013-053.13

EMBRYOGENESIS OF ORGANS AND STRUCTURES OF RETROPERITONEAL SPACE AT THE BEGINNING OF PREFETAL PERIOD OF HUMAN ONTOGENESIS

Marchuk V.F., Marchuk F.D., Protsak T.V., Humeniuk A.L.

Key words: retroperitoneal space, prefetal development, ontogenesis.

This study was conducted on human prefetuses 14.0-28.0 mm CCL by microscopy techniques, graphic and plastic reconstruction and morphometry. It was established that the adrenal glands are the largest organs in the size in the retroperitoneal space at the beginning of the prenatal period of human ontogenesis. Location of the adrenal glands during the second month of prefetal development in relation to the vertebral column was not significantly changed and ranged at the level of XI-XII thoracic - II lumbar vertebra. Medially right and left adrenal glands were adjacent to an accumulation of dense mesenchyme retroperitoneal space that passes without clear limits to the root of mesentery intestinal tube. In the prefetuses under the study adrenal glands were adjacent to gonadomesonephric complex. And prefetuses 25.0-26.0 mm TKD demonstrated marked reduction of contact plane between gonadomesonephric adrenal complex and adrenal gland both laterally and anteriorly. With further development in prefetuses 27.0-28.0 mm TKD gonadomesonephric complex became located slightly below, so topographic-anatomical relationship between these structures were completely lost. Left to the front surface of the adrenal there is the back wall of the stomach, rudiments of spleen, pancreas, dorsal mesogastrium. In the early period of prefetal development anterior boundary of primitive retroperitoneal space was represented by mesothelial layer, while posterior boundary of the space was relatively structureless. At investigated study of

the ontogenesis at the back of the abdomen there were rudiments of adrenal glands, gonads and mesonephros, kidneys and ureters.

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УДК 616.12 – 008.331.1:616 – 092.41 – 085: 615.225.2:615:036.6

ANGIOLIN IFLUENCE ON MARKERS OF ENERGETIC METABOLISM IN MYOCARDIUM OF RATS WITH MODELLED HEART INSUFFICIENCY

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Key words: angiolin, mildronat, chronic cardiac insufficiency, energetic metabolism of myocardium.

Last years the scientists throughout the world paid particular attention to the endothelium as pathogenetic target of the cardiac disturbances as well as the site of drugs action. There are many drugs designed to perform endothelioprotective functions such as vasodilators, ACE inhibitors, angiotensine receptor blockers, calcium channels blockers and different metabolic compounds. Angiolin is a new endothelioprotector with cardioprotective, antihypoxic, antioxidant, neuroprotective properties. The experiments were conducted on the 70 white rats weighed 180-220g, 10 of which had normotensive cardiac insufficiency, 20 rats had doxorubicin cardiac insufficiency treated by angiolin, and 20 rats had doxorubicin-induced cardiac insufficiency treated by mildronat that also provided endothelioprotective properties. Angiolin was injected intragastrically together with doxorubicin in the dose 100 mg/kg. Mildronat was injected intragastrically in the dose 250 mg/kg by the same scheme. The animals were decapitated under thiopental injection. It was found out that in the myocardium of rats affected with cardiac insufficiency the content of adenyl nucleotides (ATP, ADP), malate, pyruvate, isocitrate, aspartate, glutamate, activity of creatine-phosphokinase in cytosole and mitochondria and the activity of NAD-malatdehydrogenase was observed to be decreased. The content of lactate, AMP was increased. Angiolin normalized all markers of energetic metabolism. Mildronat was also observed

to provide normalizing action.

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УДК: 616.71-001-007-092.9-085.849.112:615.835.1:534.222.2:621.374-078-097:611-018.54:612.017.1

EFFECTS OF RADIAL EXTRACORPOREAL SHOCK-WAVE THERAPY ON IMMUNE BLOOD CELLS IN CASE OF BONE INJURY

Xie Fei, Ostapchuk R.N.

Key words: immune cells, shock-wave therapy.

Introduction. Available scientific reports have proven that the radial extracorporeal shock-wave therapy promotes osteogenesis. The induction of immunocompetent cells is considered to be one of

the suggested modes of its action. The aim of this study was to investigate the effects produced by radial shock-wave on the activity of immune blood serum in rabbits in the dynamics before and after the tibia injury. Materials and Methods. Immunological studies involved 40 rabbits to detect the level of cytotoxic activity of lymphocytes and macrophages, the cytotoxic activity of the blood serum cells, and the level of middle molecular circulating immune complexes. Results and conclusion. The findings obtained showed that on the 2nd day after the tibial bone injury the animals demonstrated partial paralysis of functional activity of immune blood serum cells (depletion phase). And by the end of the observation (the 45th day) the immune cells activity was characterized as normal, moreover, it was significantly higher than norm level.

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УДК 616.31-008.87-092:616.314-008.87]-07-092.19

PATHOGENICITY FACTORS INFLUENCING ON PERIODONTAL BIOTA IN MODELLED DENTAL MICROBIOCENOSIS (Part 1)

Smolyar N.I., Dacko V.A., Fedechko J.M.

Key words: paradontium, dental microbiocenosis, pathogenicity factors.

In dentistry the studying pathogenicity factors, oral biota and their interaction with periodontal tissues is one of the most significant directions. Therefore, the aim of this work was to study the development of dental microbiocenosis in vitro and the virulence factors produced by pathogenic microorganisms in paradontium. We used modified Kitta-Taroci medium and an analogue of tooth for the experimental model. After 72 hours of cultivating the smears taken from some biotopes models were studied microscopically as well as collagenase, hemolytic and phospholipase biocenosis activity of experimental model was explored. It was proven that the model suggested created the conditions for different microbial groups, which were close to microbiocenosis of dental and gum surfaces. During the cultivation of microorganisms by using the material taken from patients with soft tissue lesions of periodontium the pathogenic factors with collagenase, hemolytic and phospholipase biocenosis activity were identified.

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УДК 611.133.27.013-053.15

TOPOGRAPHIC AND ANATOMICAL CHARACTERISTICS OF superficial temporal artery in 5-month fetuses

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Key words: superficial temporal artery, anatomy, topography, human fetus.

Macroscopic study of typical and variant anatomy of superficial temporal artery was performed on 6 human fetal preparations 136,0-185,0 mm parietal-coccyx length (TCL) using the methods of anatomical dissection with vascular injection and morphometry. Fetus 181.0 mm TCD demonstrated asymmetry in the topography, in the number and length of the branches of the left and right superficial temporal artery. The asymmetry detected in length and in topography frontal and parietal branches determined certain changes in the blood supplying in the right and left superficial temporal artery, and in particular in the frontal branch of the right superficial temporal artery better developed than its parietal branch. The research of the superficial temporal artery branching within the tendon helmet not only gives us information about the cases of blood supply to certain areas of the head, as well as about the nature of its structure, as the studied fetal tendon helmet does not have the typical structure and is represented by connective tissue plates. There is a wide fluctuation limits in the length of the left and right middle temporal arteries. In addition, we established differences in topography, in the number and length of the front auricular branches and branches near the parotid gland. We also found out the starting point of right zygomatico-orbital artery originating from frontal branch of the right superficial temporal artery and the absence of left zygomatico-orbital artery.

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УДК 616-005.1-08

PLATELETS REACTION TO ADP-POSSIBLE MECHANISMS AND CLINICAL SIGNIFICANCE OF INDIVIDUAL DIVERSITY

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Key words: platelets, aggregation, platelet-rich plasma.

ADP-induced platelet aggregation was measured and assessed in 32 healthy male individuals aged 18 – 42. We found put wide variability of platelets response to ADP in a concentration causing 50% aggregation and bimodal distribution of variance. We also detected the peaks of platelet aggregation occurred within the range of 30-50% and 60-80%. The assessment of platelet aggregometry revealed individual differences of aggregation amplitude, time to reach a peak of aggregation and plateau. In addition, in several cases we recorded reversible aggregation curve, reflecting the lack thrombus stabilization phase. As stable aggregation is associated with activation and degranulation process, such variability of aggregation may reflect individual differences in granules secretion. This grounds the necessity for preliminary assessment of platelets aggregation to predict the effectiveness of degranulation and secretion of biologically active molecules which determine the morphogenetic potential of platelet rich plasma.

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УДК 611.12-034:591.33-092.9

EXPERIMENTAL EVALUATION OF COMBINED EFFECTS OF LEAD ACETATE AND CITRATE SILVER ON CARDIOGENESIS IN RATS

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Key words: cardiogenesis, lead acetate, citrate silver, embryogenesis, heart.

Aim of the study was to determine the effects of morphogenetic patterns of the isolated impact produced by lead acetate and lead acetate combined action of silver citrate obtained by aqua-nano-technology on the development of heart fetuses of rats in the experiment. When lead acetate was introduced separately, its toxic effect on cardiogenesis was manifested by reducing the average weight of the heart embryos, reducing myocardial wall thickness of compact ventricle, the thinning of different parts of the interventricular septum. There was also a delayed development of atrial myocardium against the background of increased volume and decreased thickness of the atrial walls. Combined administration of lead acetate and citrate silver was characterised by reducing cardiotoxicity of lead acetate in all definite parameters that makes it possible to consider silver citrate as bio-antagonist for lead acetate by its influence on the cardiogenesis in rats.

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ГУМАНІТАРНІ ПРОБЛЕМИ МЕДИЦИНИ ТА ПИТАННЯ ВИКЛАДАННЯ У ВИЩІЙ МЕДИЧНІЙ ШКОЛІ

УДК 614.253.4: 378.147: 17.023.36: 617-053.2 (477)

DEVELOPMENT OF BASICS OF PROFESSIONAL CULTURE IN MEDICAL STUDENTS MAJORING IN "PAEDIATRIC SURGERY"

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Key words: students, self-learning, pediatric surgery.

European standards determined by Bologna convention provide for the unification of the educational process and use of different forms of training aimed at maximizing students' independence and initiative. Development of self-learning skills is one of the main tasks of the higher educational institutions. 368 V-VI year students of Dnepropetrovsk Medical Institute of Traditional and Alternative Medicine, who attended classes on the subject "Pediatric Surgery», were the object of this study. It was conducted during 2014-2016 years based on conventional methods of research, surveys, and testing of students. It was found out the training of sophisticated specialists in majoring "Pediatric Surgery" needed methodological, technical and informational support provided by the departments. On the other hand, among the priorities is the learning activity and independence of the students themselves. The approach of activity in the training process should not be interpreted as an adaptation of students to the new curriculum, but as an independent mastering educational material on the basis of their own experience that contributes to the formation of communicative skills. An important source of cognitive activity is students' creativity and the ability to self-learning together with curriculum material comprehension.

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УДК 616-036.86:614.253.2-055:378.147

IMPROVING KNOWLEDGE OF GENERAL PRACTITIONER ON VOCATIONAL REHABILITATION OF DISABLED PERSONS

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Key words: family doctor, invalidity, rehabilitation.

At the beginning of 2016 the number of persons with disabilities in Ukraine makes up 5.8% of the population. The main task of the Ukrainian state in relation to disabled persons is to restore full or partial capabilities to domestic, social and professional activities. According to the current requirements of health care, the priorities and responsibilities of general practitioners include the following: to examine and to consult temporary disable patients, and in cases of evidence to send them to a medical advisory committee; to draw up documents for presentation to the medical-social expert commissions and to work on medical and social rehabilitation of disabled persons including the professional rehabilitation. Family physicians are directly involved in matters of medical and social rehabilitation of the disabled persons. Vocational rehabilitation, thus, is essential for their social adaptation and contributes considerably to their reaching financial independence and integration into social life. The article is based on an analysis of our own data analysing the needs of disabled persons in vocational rehabilitation, and also based on a detailed analysis of a number of new state regulations for general practitioners and family physicians on issues of vocational rehabilitation. The findings and conclusions presented in the article may be useful in extending GP knowledge on reporting documentation and monitoring the implementation of individual rehabilitation programs for disabled individuals and their integration into society.

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УДК 378.147+371.315+616.314

INTERACTIVE TEACHING TECHNIQUES IN PAEDIATRIC DENTISTRY

Petrniv V.B.

Key words: higher education, pedagogy, interactive methods, case-study method, pediatric dentistry.

This article describes the advantages of introducing case-study method as one of promising interactive teaching techniques during the module "Diseases of hard dental tissues in children and adolescents" in the course of pediatric dentistry. This technique allows us to improve the level of students' efficiency for practical training and seminars, as well as promotes their motivation to independent in extracurricular time, and develops their communicative skills.

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УДК 340.6: 614.251

FORENSIC APPROACH IN ESTABLISHING CAUSE-EFFECT RELATION BETWEEN ADVERSE HEALTH OUTCOMES AND INADEQUATE MEDICAL ASSISTANCE

Pletenetskaya A.

Key words: forensic examination, cause-effect relations, improper medical care.

Analysis of the forensic examinations of "medical cases" has shown that the issue on determining the cause-effect relation between defects of medical care and adverse outcomes and events remains one of the most complicated for experts. Forensic re-examinations revealed that experts from various expert and medical institutions of Ukraine could interpret the presence or absence of cause-effect relations in different ways. The article presents the scheme, which will help the practical forensic experts to establish cause-effect relations between defects of medical care and adverse consequences in different situations.

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КЛІНІЧНИЙ ВИПАДОК

УДК 616.599–003.219–031.31:616.351–072.1–06

RARE CLINICAL CASE OF SUBCUTANEOUS EMPHYSEMA OF NECK FOLLOWING PROCTOLOGIC EXAMINATION

Kravchun P. G, Kadykova O. I, Amer L.B, Molotyagin D. G.

Key words: subcutaneous emphysema of neck, angioedema.

This article describes a rare clinical case of subcutaneous emphysema of the neck following proctologic examination. After the double-contras X-ray of the large intestine a man developed subcutaneous emphysema of the neck, initially diagnosed as Quinke edema (angioedema). During the examinations pneumoperitoneum and pneumomediastinum were revealed that allowed us to suggest that small amount of air resulted from air insufflations entered the abdominal cavity through an existing pelviorectal fistula and then spread through the esophageal aperture in the mediastinum and neck organs.

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УДК [616.314-053.6-76:616.594:616.56]-007.17-056.7

ATYPICAL PROSTHETIC CORRECTION OF ADOLESCENTS WITH HYPOHIDROTIC ECTODERMAL DYSPLASIA

Tkachenko Yu.V., Diasamidze E.D., Zhukov K.V.

Key words: adolescents, hypohidrotic ectodermal dysplasia, atypical prosthetics.

This article describes a clinical case of rehabilitation of patients with partial primary adentia determined by hypohidrotic ectodermal dysplasia. Orthodontic Diagnosis: anomaly Class I in Engle, deep bite, moderate dento-alveolar form, partial primary maxillary and mandibular adontia, acantoid 11 and 21 teeth, aesthetic defects, loss of chewing efficiency of 12% by Agapov, ectodermal dysplasia, hypohidrotic form, thin biotype of periodontal tissues. In concordance with geneticists we recommended: diet with restricted purines (excluded broth, tripe, canned meat), rich in vitamin C, B6, folate, Canephron in an age-related dose for 2 weeks, Neurovitan 1 tablet twice a day for a month, as well as monitoring of biochemical parameters, regular checkups by dentist, neurologist, gastroenterologist, gynaecologist, endocrinologist, vertebrologist. Dental rehabilitation included the following measures: a gentle approach to hard tissues of supporting teeth by designing point clasps in the denture, "U-shaped Adams" and the method of chewing load redistribution on periodontal tissue and periodontal available temporary and permanent teeth by wire and plastic pelota and atypical manufacturing of artificial plastic crowns connected to a base, which was made of colourless plastic; professional hygiene once for every 3 weeks, toothpaste for xerostomia (containing Betayn 4.00% and polyol humectants), additional hygienic measures (flossing).

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КОРОТКІ ПОВІДОМЛЕННЯ

УДК 616.367 – 089

MODERN APPROACHES TO IDENTIFICATION OF ETIOPATHOGENESIS OF CHOLELITHIASIS

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Key words: cholelithiasis, gall stone formation, gallbladder, *Helicobacter pylori*, microlithiasis.

The author has studied and summarized the theories on gallstones formation and found out the basic research directions that explain the causes of cholelithiasis. It has been revealed that some researchers consider the cause of cholelithiasis is in the liver function disorders when the liver produces pathologically modified bile which results in its hard components precipitation. Another group considers pathological changes (inflammation, stasis) in the gallbladder are the causes of the disease. The hypothesis of a bacterial nature of gallstone formation seems to be quite noteworthy. The experimental study of pathological material (bile taken from operated rabbits) by polarizing microscopy has revealed numerous crystals in the form of small microlites. The results of experimental studies give some reasons to suggest that *Helicobacter pylori* may start triggering reactive changes in the gallbladder wall with the subsequent formation of microlithiasis in bile.

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УДК: 617.582-001.5:617.583-089.843

PERIPROSTHETIC FEMUR FRACTURES FOLLOWING HIP REPLACEMENT: RELEVANCE AND WAYS TO SOLVE PROBLEM

Shtonda D.V.

Key words: periprosthetic fracture of the femur, hip arthroplasty, osteosynthesis.

Among the complications of total hip arthroplasty (THA) a special place is ranked by periprosthetic fractures of the femur (PFF). The rate of intra-operative fracture (with cemented or uncemented stems) has been reported as ranging from 1% and 3%-20% respectively 2-7. The exact prevalence of postoperative periprosthetic fracture is more difficult to determine but is estimated to be

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approximately 1% over the life of the prosthesis. Factors that increase the risk of PFF include: female gender, rheumatoid arthritis, osteoporosis, elderly age. The most commonly used system, the Vancouver Classification, has been reported by C.P.Duncan and B.A.Marsi. The Vancouver classification for PFF takes into consideration fracture location, implant stability and quality of femoral bone. The main method of treatment according to the literature PFF is surgery, in which the priority is to restore the stability of the implant and fracture, the maximum preservation of bone and early activation of the patient. According to modern views, conservative treatment is the option for patients who can not have surgery due to some health contraindications.

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ОГЛЯДИ ЛІТЕРАТУРИ

УДК 611.813:615.212.7]-018.1-08

MORPHO-FUNCTIONAL STATE OF FOREBRAIN WHITE MATTER IN NORMAL AND PATHOLOGICAL VARIANTS

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Key words: forebrain white matter, morphology.

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Analysis of current relevant literature demonstrates a special interest of researchers in studying forebrain. The availability of new investigation methods opens up new possibilities in studying morpho-functional state of the nervous system. The pathology of the corpus callosum can be caused by a number of factors including congenital, inflammatory, cancerous, infectious diseases, traumatic injury, metabolic and vascular disorders, and exposure to toxic substances. The purpose of the study was to analyze the data available on structural and functional characteristics of the forebrain white matter in normal variants and pathological conditions. Nowadays the issues on age, sexual and constitutional peculiarities of the brain structures in normal variants are still urgent. There are conflicting data about the morphological status of forebrain white matter in term and preterm infants. There are a number of works devoted to the age-related changes in the forebrain white matter in normal development and in pathological conditions. According to the research reports, the problem of morphological features of the forebrain white matter in normal development and under the influence of exo- and endopathogenic factors is important both for morphologists and for clinicians. A lot of questions on this issue are controversial and require a solution as soon as it is possible by means of experimental and clinical studies. Studying the anatomy of the corpus callosum in physiological normal development and under the influence of pathological factors is important for radiologists to determine the disease at its early stage and to help clinicians to make the optimal therapeutic choice.

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УДК 579.61

PHYSIOLOGICAL FUNCTIONS OF INTESTINAL MICROFLORA IN NORMAL AND PATHOLOGICAL VARIANTS

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Key words: microbiome, functions of intestinal microflora.

This review presents experimental researches on human physiological functions of intestinal microflora in normal and pathological variants. The relationship between intestinal biota and the whole body is quite complex and being implemented in the metabolic, regulatory, intracellular and genetic level. The study of the role of human microbiome in the etiopathogenesis of a wide variety of human diseases including irritable bowel syndrome, ulcerative colitis, diabetes 1 and type 2, obesity, cardiovascular, autoimmune, allergic diseases and diseases of the central nervous system is one of the urgent and promising approaches.

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УДК 616.12-008.331.1-092:616.126-31

MODERN ESTIMATION METHODS OF ELECTROPHYSIOLOGICAL CARDIAC REMODELLING IN ARTERIAL HYPERTENSION

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Key words: arterial hypertension, electrophysiological remodelling; T-wave alternant; high-resolution electrocardiography; Q-T interval analysis; variability and heart rate turbulence; dipole cardiography.

This review article presents the available data on the possibilities and prospects of electrophysiological assessment of cardiac remodelling in patients with arterial hypertension. T-wave alteration and high-resolution electrocardiography techniques have high negative predictive value. They can be useful for identifying patients at low risk. Prognostic significance of autonomic tone indicators of the risk arrhythmic event is currently insufficient evidence from randomized trials for a broad application in clinical practice. Here the main problem is seen in the lack of standardization techniques. As a modification of how to assess autonomic regulation of heart rate some authors proposed cardio-interval-graph method. Using this technique we can assess the imbalance of sympathetic and parasympathetic nervous systems, starting with the initial stages of the disease that enables to select proper patient-centred treatment. The new and promising for detecting ectopic foci in patients with hypertension are multichannel ECG techniques by using realistic three-dimensional digital models of the heart and torso based on patient's chest radiography in two projections or spiral CT scan of the chest.

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УДК 618.14-006.3.04

ON HORMONE THERAPY OF UTERINE LEIOMYOSARCOMAS

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Key words: leiomyosarcoma, hormone therapy, conservative treatment, hormone sensitivity.

Malignant mesenchymal tumors are a complex section of clinical gynecological oncology. 40 % of them are leiomyosarcomas, characterized by an aggressive clinical course with a high incidence of progression. In this paper we discuss methods of uterine sarcoma treatment and primarily the appropriateness of performing on conserving surgery in patients with uterine leiomyosarcoma, taking into account the major prognostic factors (histological variant of the tumour, stage of disease, etc.). We also discuss the difficult dilemma of treatment tactics following diagnosis of leiomyosarcoma after performing conservative surgery in young women. Hormone ER/PR receptors are actively involved in the process, as they are of significant prognostic value; their expression in uterine LMS is positively correlated with disease-specific survival and over-all survival rate, although it is not fully confirmed by others. Hormones are used as part of a systemic treatment of these patients.

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