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WHEN SELECTING THORACOPLASTY CORRECTION OF THE FUNNEL CHEST IN CHILDREN

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Purpose of the work. Optimization of surgical correction of congenital funnel chest (CCFCh) in children.

Materials and methods. The Clinic of Pediatric Surgery, Anesthesiology and Critical Care Medicine TIPMT from 1997 to 2013 operated on 34 patients aged 4 to 15 years, mean 7,5 ± 4,8 years. CCFCh degree determined by the index Gizhisko, which is divided into 4 degrees. Patients have a third or fourth degree CCFCh inevitably accompanied by functional impairment: reduced life and residual capacity, regurgitation of blood in the mitral and tricuspid valves of the heart and pulmonary arterial hypertension (24). CCFCh grade 2 was observed in 3 (8.8%), grade 3 in 13 (38.2%) and grade 4 - 18 (53.0%). In 11 (32.4%) of 34 children had complaints only a cosmetic flaw. In 23 (67.6%) patients had complaints of cough, shortness of breath on exertion and chest pain. The algorithm study of children CCFCh included: radiography of the chest in frontal and lateral views, CT of the chest with the comparison of anatomical and topographical pictures before and after surgical correction, Doppler with the definition of central and pulmonary hemodynamics, spirography, ECG, ultrasound (US) of the heart, liver and kidney. Laboratory screening included a complete blood count, urinalysis, blood chemistry, hemostasiogram, cellular and humoral immunity. Indication for surgery was the presence of functional disorders of the internal organs, the psychological discomfort caused by cosmetic defect. Thoracoplasty performed by the method of GA Bairova with modification at 24 and minimally invasive technique on the basis of D. Nuss, developed technique in our clinic in 10 patients.

Results and discussion. At 3-4 degree CCFCh revealed confusion mediastina in 92.5%) children. By CT of the chest for the displaced sternum combined its rotation detected in 46% of cases, increasing the density of lung parenchyma at most retraction stern costal complex was observed in 19.0% of patients. At 91.2%) patients had respiratory failure on restrictive type in violation of alveolar ventilation, and 68% had reduced stroke index, muscle of the ventricles. Increased general and pulmonary vascular resistance in 58%. 70.6% were observed Grade 1-2 pulmonary arterial hypertension. In 82% of patients had metabolic activity of lung disorders, platelet-vascular hemostasis and secondary immunodeficiency.

CCFCh correction is as follows: parallel intercostal space at the deepest point of deformation sternum length of 3-4 cm between the mid clavicular and anterior axillary line on both sides of the skin incision is made, stupidly stand pecs, peel them from the ribs to the intercostal space parasternal line. Followed stupidly extending intercostal space punctured in the anterior mediastinum no pleural most protruding ahead of the ribs on

both sides. On both sides of the modified soft long (artificially curved tip of the clamp on the 30 °) clip to the back resting against the sternum is a tunnel. After creating a tunnel from both sides at a distance of 1-1.5 cm, further tunnels carried the same terminals. It should be noted that the tunnel was created with a diameter 1.5-2 cm with simultaneous elation deformed breasts. Conducted by the cable lug Nylon thread, lock fits under the ice or in liquid nitrogen to take the direct form for 5-7 minutes in this position is held under lock and chest fit. For lock the device uses metal thermomechanical processing of shape memory nickel-titanium (TiNi), having a biomechanical and biochemical compatibility (Institute of Medical Materials and Shape Memory Implants, Tomsk, 2007). Of TiNi wire diameter of 0.6 mm is produced in the form of the device form of a plate, depending on the age of the child in width from 1 cm to 2 cm of wire plate created a space that is not pressed on the intercostal muscles and the passage through the intercostal space is not the same shape pressed on the neurovascular bundle. The tip of the cone-shaped device. The back of the device are rectangular in order to be on the edges of the device and not to turn and migrate. To prevent migration of the conical tip of the device is worn fastener edges. Concave device, degree of concavity is determined depending on the stage of the funnel chest creating memory. Within 5-7 minutes, the lock gets set shape memory, raising a deformed chest to the target position. Followed by a slow absorbing clamp fixed to the edge of the seam. Wounds sutured in layers. In the left anterior mediastinum micro suction irrigator accumulated blood and administration of antibiotic. After thoracoplasty on G.A. Bairova with modifications in 3 (12.5%) of the 24 complications were observed in the form of recurrence. After thoracoplasty on the principle of D. Muss were no complications. In all cases, received a good cosmetic effect. Thus, the proposed method of thoracoplasty be proposed for surgical treatment CCFCh.

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COMPLEX TREATMENT OF ACUTE PULMONARY INJURIES IN CHILDREN

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Purpose of the work. Optimization of complex treatment of acute pulmonary damage (SAPD) in children using a solution of succinct acid (reambirin).

Materials and methods. 67 children, who underwent examination and treatment, were aged: babies were - 13, from 1 month to 1 year - 30 and from 1 to 3 years -23 children. Cause of SAPD was respiratory infection - in 17, bronchopneumonia - in 21 bacterial and acute necrotizing pneumonia - 29. Patients with SAPD depending on intensive care are divided into two randomized groups. Children first group - 30 receiving traditional complex intensive therapy (CIT). Children of the second group - 37, along with CIT

received treatment with 1.5% sodium reambirina of 8-10 ml per kg of body weight of the child. Reamberin infusion twice a day for 3-4 days. In the practice of succinic acid is used in the solution reambirina 1.5% for infusion, which is balanced with the preparations with osmolarity close to normal osmolarity of blood. Efficiency of carried CIT studied as detoxification lung function by determining the average molecular mass (MSM), LII and duration of life paramecia (DLP), the state of lipid peroxidation (LP) with the definition malonic dialdehyde (MDA), antioxidant protection (AOP) by superoxidedismutase (SOD) and ascorbic acid (AA), glucose, Na and K in the blood flowing to the light (mixed venous blood - MVB) by catheterization of the right ventricle via the subclavian vein with ultrasound catheter and correct location of light flowing arterial blood (AB) to puncture the femoral or radial artery. 37 (55.2%) of 67 (1st gr. - 14 (46.7%) of 30 and 2nd gr. - 23 (62.1%) out of 37) patients received mechanical ventilation in high-frequency mode with a positive expiratory pressure on the unit, "BIR" - USA.

In healthy children (HCh) early age remains unexplored detoxification function of the lungs. In this connection, we studied the state of lipid peroxidation LP and AOP - SOD and AA, MSM, DLP, glucose, Na and K in the MVB and the AB from the lungs of 22 healthy infants aged 7 days to 3 years. In light HCh actively involved in the inactivation of MDA (the difference in the MVB and the AB is - 12.8%, P<0, 05) and for which actively synthesized SOD (the difference in the MVB and the AB - 13.5%, P<0.05) and enzymatic AOP - AA (the difference in the MVB and the AB - + 5.6%). All of the above data indicate an active part in the lung detoxification.

The results showed improvement in hemodynamic indicators, reducing hypoxia from 15 to 30% on the second day the children of the main group. Patients received Reambirina PO2 in arterial blood ranged 82 ± 4,5 mm Hg. Art., RS02 - 39 ± 3,2 mm Hg. Art. and Sat. 02 - 95 1.5%. In randomize control group (36) of children don't received the infusion of Reambirina P02 was reduced by 17% (68 ± 2,8 mm Hg. Cent.) And Sat. 02 to 6.4% (89 ± 1,0%), RS02 - increased by 16% (46,5 ± 4,0 mm Art.). Death was observed in 3 (8.3%) children in the main group and in 8 (22.2%) in the control group. In one day the children SAPD significantly, an increase in MDA (the difference in the MVB and the AB +12%) and decreased SOD and AA (the difference in the MVB and the AB - 18% and - 12.3%, respectively) in the MVB and the AB in violation of detoxification lung function. In the main group of patients on day 4 there was a significant decrease in MDA (the difference between CRS and the KLA - 2%), an increase of SOD and AK (no difference in the MVB and the AB), although detoxification function remained under sub compensation. At 7 days indicated recovery of lung function in the metabolism of MDA (the difference in the MVB and the AB - 5%) and AOP (the difference in SOD MVB and AB 5.7% and AA - + 4.5%) corresponding to the compensation stage. However, full recovery of lung function in the metabolism of lipid peroxidation and AOP in comparison with HCH happened, which required further rehabilitation. It should be noted that the children of the main group on the 7th day of treatment, along with the restoration of lung function had improved liver function (detoxification, protein-educational, enzymatic).

In 7 out of 26 children with complicated neurotoxicity accompanied by swelling of the brain, a positive effect was in all patients. Introduction Reambirina accompanied by mild diuretic effect, correspondingly amplified and detoxification effect.

In the control group on day 4 of treatment showed improvement in lung function and lipid AOS and were equal to the days of one of the main group. These children on the 7th day of lung function were being sub compensation and showed signs of functional impairment of the liver.

Thus, in children SAPD an infusion Reambirin in CIT promotes rapid activation of antioxidant protection with a reduction of free radical detoxification with improved lung function, liver and metabolic processes.

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METABOLIC SYNDROME IN ENDOCRINE PRACTICE

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Public health protection is one of the priorities of the state policy and the most important factor of national security.

Currently, there is a steady growth of the patients with metabolic syndrome (MS) in a population has a pandemic character.

According to WHO (2006), the MS frequency rate in the population of Western countries in average reaches 25-35%, and at the age of 20-29 years it takes place in 6.8% of cases, and in people older than 60 years - in 42-45% of cases. The high prevalence of MS plays a major role in the epidemic growth rate of diabetes mellitus, type 2 as well as to accelerate the development and progression of cardiovascular disease (CVD) associated with atherosclerosis (AS). For example, in MS, the risk of myocardial infarction and stroke is tripled, and mortality rate from these diseases is doubled.

It is known the fact that the MS frequency rate increases with age and has a tendency, as well as racial and ethnic differences. The growth of obesity and MS occurs in people of working age in the countries and ethnic groups with previously low prevalence of the disease.

According to the national studies, in Kazakhstan, in 2008, one in two women (50.6%) and men (45.4%) had obesity and overweight at the age of 25-60 years.

Metabolic syndrome is a collective notion and manifests itself in the form of certain metabolic, hormonal, and clinical disorders.

According to the scientists' recommendations for the diagnosis and treatment of metabolic syndrome in 2007, the metabolic syndrome is characterized by hypertension, an increasing in visceral fat mass, decreased sensitivity of peripheral tissues to insulin - insulin resistance and hyperinsulinemia, which causes a disturbance of carbohydrate, lipid and purine metabolism.

The main manifestations of the metabolic syndrome are insulin resistance with basal

hyperinsulinemia, abdominal obesity, impaired glucose tolerance or diabetes mellitus type 2 diabetes, dyslipidemia, hypertension.

With discovering the endocrine function of adipose tissue, there is an evidence to suggest that the development and progression of insulin resistance and its various manifestations may be due to an imbalance of adipokines. The accumulated data so far indicate that adipokines play a multifaceted role in the regulation of metabolism, from eating to recycling nutrients at the molecular level.

Diagnostic criteria for metabolic syndrome recommended by WHO are: central obesity (BMI of 30 or WC / HM higher than 0.85 for women and more than 0.90 for men), hypertension (systolic blood pressure greater than 140 mm Hg and a diastolic 90 mmHg or established fact antihypertensive therapy), dyslipidemia (triglyceridemia above 1.7 mmol / L, decreased HDL cholesterol below 0.9 mmol / L for men and 1.0 mg / dL in women), a plasma glycemia 6.1 mmol / l, impaired carbohydrate tolerance or diabetes.

The main objective of metabolic syndrome treatment is to reduce the risk of diabetes, atherosclerosis, conditions associated with insulin resistance, reducing the severity of its major manifestations.

Comprehensive long-term treatment involves a combination of non-drug - lipid-lowering diet, increasing physical activity, smoking cessation - andtaking the medicines.

Clinical experience suggests that the long-term metabolic abnormalities are asymptomatic. Early diagnosis of the metabolic syndrome identifies a category of persons at high risk for diabetes, cardiovascular diseases, reproductive dysfunction, which is of great clinical importance, since the condition is reversible with appropriate and timely treatment reduces the severity of all its major manifestations.

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VITAL EXHAUSTION AND THE PREVALENCE OF CORONARY ARTERY DISEASE IN MALE POPULATION AGED 25-64 YEARS

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Objective: To study the association between the prevalence of coronary artery disease (CAD) and high level of vital exhaustion (VE) in open male population aged 25-64 years.

Methods: The study was carried out within the World Health Organization (WHO) according to PSY-MONICA programme. Representative sample, stratified by age at random sample, was formed by male patients of Tyumen aged 25-64 years. Different types of CAD, such as known and probable CAD, were determined on the basis of standard methods used in epidemiological studies. The analysis of vital exhaustion was carried out

using standard WHO MOPSY test, consisting of 14 statements. Each statement included three gradations «yes», «no», «don`t know». The level of vital exhaustion was assessed as low, middle, high. Association between vital exhaustion and CAD was calculated with odds ratio (OR) and their 95% confidence interval (CI). The response to cardiac screening was 85.0% - 850 patients.

Results: The prevalence of CAD in male patients aged 25-64 years was 12.4%. The prevalence of known CAD was detected in 6.6% of patients. The prevalence of probable CAD was detected in 5.7%. Vital exhaustion was found in more than half male population of Tyumen. High level of vital exhaustion in population was 15.9%. In male population aged 25-64 years the OR with and without CAD in extended epidemiological criteria and high level of vital exhaustion was 6.02 (95% CI =3.55±10.20, $p<0.05$). While analyzing the influence of high level of vital exhaustion to known CAD the OR was 14.11 (95% CI=6.29±31.67, $p<0.05$) and index was more than twice higher compared to the group of patients with CAD according to extended epidemiological criteria. The OR was not statistically significant in male patients aged 25-64 years with probable CAD and high level of vital exhaustion.

Conclusions: Thus, in open male population patients with CAD aged 25-64 years have more evident high level of vital exhaustion compared to patients without CAD. The increase of known CAD risk was observed in patients aged 25-64 years with high level of vital exhaustion.

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MORPHOLOGY OF A SKIN WOUND IN THE COURSE OF THE TREATMENT BY LIGHT THERAPY

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The establishment of the effective approach in the selection of regional therapy allows solving the problem of the defect closure with the restoration of barrier-protective properties of the skin. In this case a crucial role plays not only the applied method, but also the mode of this method. The identification of the morphological equivalent of the changes of tissues in the course of the treatment is of great importance. The purpose of the study was to examine the morphology of the skin wound in the course of the treatment by light therapy. The research was carried out on male albino outbred rats that had the weight of 250–300 g. The standard linear wound 1.0x0, 5 cm was made on the front surface of the thigh of the anesthetized animals in the aseptic conditions. The light therapy was performed by using the device «Bioptron Compact» («Zepter»).

Three experimental groups were formed: one control and two experimental. In the first experimental group the light therapy was used during the change of an aseptic dressing for 8 minutes once daily and in 8 hours the change of the aseptic dressing was done without the use of polarized light. In the second experimental group the light therapy was applied during the change of the aseptic wound dressing for 8 minutes twice daily with intervals of 8 hours. The animals were taken out of the experiment on the day 1, 3, 5 and 7 of the treatment. For the assessment of the wound process and identification of the reaction by cellular component, histological and immunohistochemical studies were carried out

Analysis of structural and metabolic disorders in the course of the treatment by the light therapy showed that active reparative processes took place in the 2nd experimental group, indicating that this mode of the light therapy has biopositive effects. In the experimental groups in comparison with the control group the resolution of inflammatory manifestations was more active on the 3d day, which was accompanied by the decrease in the infiltration of the walls of the wound defect and more rapid formation of the granulation tissue. The epithelium began to restore the integrity of the skin from the periphery to the center, these processes were accompanied by the increased immunohistochemical reactions, which were typical for all groups, but the highest expression was observed in the 2nd experimental group.

On the 5th day the reparative processes were expressed in the intense coverage of the defect with granulation tissue, especially in the 2nd experimental group. This mode of the light therapy facilitates the process of collagenogenesis. Cellular component is represented mainly by fibroblasts and mast cells. The decrease of macrophage reaction in the animals of the experimental groups indicated the predominance of plastic processes. In the dermis an increase in the content of mast cells was observed, indicating reactive changes in the tissues of the zones around the wound. Proliferative processes grew to 7th day. In the 2nd experimental group the maturation of granulation tissue was noticed. Within the epidermis the elevation of the cells that gave positive reactions to the monoclonal antibodies Ki-67, which was reflected by the epithelization of the skin defect, the thickness of layers was close to the level of the intact epithelium, was determined immunohistochemically.

The morphological analysis of the regenerative processes in the course of the treatment of skin wounds by the light therapy revealed high reactivity of tissues. Within the dermis the resolution of inflammatory symptoms was accelerated, intensified formation and maturation of granulation tissue were activated, which ensured the formation of qualitatively mature collagen fibers. Within the epidermis the rapid closure of the defect and acceleration of cell differentiation, providing stratification, were noted. Mode of the 2nd experimental group had the most positive impact on the process of reparative regeneration.

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MODERN IDEAS ABOUT REGULATION OF LABOUR ACTIVITY

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Introduction: When studying the basic mechanisms of initiation of term labour the issue of the role of corticotrophin-releasing hormone remains outside the scientists' field of view. The objective was to study the content of the corticotrophin-releasing hormone (CRH), substance P (SP), neurokinin A and B (NA, NA), relaxin and cortisol in blood and amniotic fluid, their relationship and influence on the biomechanism of birth.

Materials and methods: Blood and amniotic fluid in the first period of labour and during a caesarean section of 100 parturient women were studied by means of fluorescence immunoassay. The first group included 40 patients with spontaneous physiological labour, the second group 20 women with an emergency caesarean section and discoordination of labour activity and the third group consisted of 40 patients with an "unripe" neck of the womb and a planned caesarean section.

Results: The results showed that the CRH level in the blood serum of women with a planned caesarean section (group 3) was 1.5 times lower than of those of the control group and 1.4 times lower than of women with discoordination of labour activity ($p < 0.05$) and was 62.73 ng/ml (25.33-226.4).The CRH content in the blood serum of women in the first group (control) and in the second group (discoordination of labour activity) was not significantly different, 92.49 ng/ml (52.22-137.14) and 86.53 ng/ml (45.14 – 202.45). The given metabolic situation shows a chance in the production of CRH, involved in the regulation of labour activity. The NA content in the first and third groups d not differ significantly, while in the second group exceeding the level of the other two groups in 5.9 and 7.6 times ($p<0,05$), respectively, and was 80.53 ng/ml (45.12-198.45). At the same time, the NB activity among women of the second group and the third group was 1.7 times lower than normal ($p<0.05$). In the control group this figure was 56.07 ng/ml (34.99-77.23). Differently directed changes of NA and NB levels condition their participation in the discoordination processes of labour activity. The ratio of cortisol in the groups was quite interesting. High cortisol levels in serum were observed among parturient women of the second group (discoordination of labour activity), and was 1415.7 ng/ml (683.1–1699.2) ($p<0,05$), which was 2,4 times larger than the level during spontaneous labour and 1.5 times larger than the level in the group with a planned caesarean section.

In order to determine the role of the foetus in the initiation of labour the content of the substances in the amniotic fluid was examined. The results suggest that in early labour the CRH concentration in the amniotic fluid in the control group was 36.17 ng/ml (6.46-90.81), which is 1.5 times lower than the result of the third group and 1.9

times lower than that of the second group (p<0,05). A similar result was observed in the case of the NA content. At the same time, these processes occurred with high NB levels in the control group and in the group of patients with a planned caesarean section. The content of SP level in the studied clinical groups did not differ significantly. There was an increased production of relaxin in the amniotic fluid during spontaneous labour. The level of this hormone in the control group was 16.6 ng/ml (8.98-25), 14.42 ng/ml (6.56-50.64) in the group with a planned caesarean section and 13.48 ng/ml (3.8-19.32) (p <0.05) in the group with an emergency caesarean section. This clearly misbalanced data bioregulators produced sustained hypertonicity myometrium and low relaxin in the group with an emergency caesarean section. A high level of IL6 probably reduces the expression of matrix metalloproteinase in the cervix, which accounts for its rigidity and results in the dystocia cervix.

Conclusion: It is possible to say that the peculiarities of preparation, the nature of labour activity and the birth outcome do not only depend on the absolute values of biological substrates in the blood serum and amniotic fluid, but also depends on their ratio. The discoordination of labour activity was observed at high concentrations of the corticotrophin-releasing hormone (CRH), relaxin and cortisol in the blood serum in combination with a low level of prostaglandin F2α before delivery and a high level of IL6 and low values of IL8, cortisol and prostaglandin F2α in the amniotic fluid.

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TREATMENT OF PROXIMAL FORMS OF HYPOSPADIAS IN CHILDREN

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Purpose: to improve the results of treatment of severe hypospadias in children.

Materials and methods. Over the period 1996 to 2010 in our clinic, operated 107 boys. Between the ages of 1 and 3 years were 49 children, from 4 to 7 years - 27, 8-10 years - 17 and 11-15 years of age - 14. By forms of hypospadias patients were as follows: stem - 44, scrotal - 36 and the crotch - 27. All the children had penile curvature (60 to 45 ° - 31, from 45 to 30 ° - 47 and 30 ° - 29). Curvature of the penis due to the fibrous strands were observed in 30 children and the remaining 77 mixed forms (due to shortage of skin, fascia and fibrous strand). All patients, along with clinical and laboratory studies (urography, ultrasonography, excretory urography cystography indicated) performed bacteriological studies of penis skin, urine and hormones (FSH, LH, testosterone, and 17-ketosteron urine).

Results. Prevention of postoperative complications in urethroplasty consist of the following activities: the treatment of chronic inflammation of the urinary tract, preoperative antibiotic decontaminationa through directed transport of antibiotic (NTA)

in erythrocyte shadows 1-1.5 hours before surgery; flushing the urethra and bladder 0.5 dioxydin soluition and 1% protargol, processing of the surgical field with dressing with a 12% solution of detergent before surgery (rational offer Nr. 8 adopted by the DIP TIPPC 22.04.2003).

In proximal hypospadias made one contemporaneous urethroplasty, consisting of three parts of the operation (patent TJ 306 of 16.03.2010.). First the straightening of the penis, depending on the shape of the curve. The second part of urethroplasty - distal urethra - is the creation of leaflets neouretra foreskin holding on the ventral surface of the penis on the vascular pedicle. Usually created from sheets neouretra prepuce in the scrotal and perineal hypospadias are short and to the distal end of the urethra is not getting through, or create a tension. In view of this, finding a reliable and free neouretra created urethra of local tissue crotch and scrotum, which anastomose "end to end" with neouretra. To set up the urethra there placed a stand thinner than the created urethra, so that due to flushing of neouretra (dioxidine 0.5-1% and the solution of Curiosin) fluid flows freely between the urethra and the stand. Use monofilament absorbable suture of polyglycolic acid (Vicryl, Dexon, polysorb) 6/0-7/0. Surgical interventions were performed using microsurgical techniques (precision engineering, optical magnification of 6 to 10 times). Urinary diversion is performed by applying through uretroepicystostomy special catheter (patent TJ 307 of 16.03.2010). Early functional therapy is conducted as follows: the first day to improve microcirculation and prevent thrombosis of the created urethra vessels , improve blood rheology (or reosorbilact or latren, fraxiparine) under the control of coagulation. To stimulate regeneration and immune stimulation prescribed methyluracil, Kalium oraticum, vitamin E and actovegin. From the second day course is conducted magnet-infra red laser therapy. In order to improve regeneration sutures' line and cavity of neouretra y were processed by Curiosin solution. On the seventh day, after the removal of sutures, appointed the application of ozokerite and resolution therapy (FIBS or aloe, vitamin B15). In the nearest postoperative period, 13 (13.1%) of 107 patients had complications in the form of festering wounds with fistula formation (6), the partial failure of anastomosis (5) and skin flap necrosis (2). The resulting postoperative urethral fistula in 7 children eliminated in 3 months, have four children - 6 months. Long-term results of treatment were studied in 97 children in a period of 6 months to 10 years. In 90 (92.8%) of 97 results assessed as good. Patients were asymptomatic, the external opening of the urethra located on the usual natural place, urine flow was good. On urethrography - no pathology. Good cosmetic result. On urofulometry obstructive urination is not seen. In 7 (7.2%) children had a stricture of the anastomosis (5) and urethral fistula (2). As for the stricture made probing, and urethral fistula eliminated by surgery.

Thus, the correction of proximal hypospadias with the use of the method of preoperative and contemporaneous urethroplasty enables to reduce the number of operations and duration of treatment compared with the results of the multistage methods.

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EFFECT OF THERMALLY ACTIVATED WATER "AQUA FORTE" AT LABORATORY-INSTRUMENTAL INDICES OF PATIENT BILIARY DYSKINESIA

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Experimental studies conducted on the simplest organisms and laboratory animals indicate biostimulation effect thermally activated water. The aim of study was to assess the effectiveness of thermally activated water "Aqua Forte" as an aid in the complex methods of rehabilitation treatment of patients with a diagnosis of biliary dyskinesia without exacerbation.

The study included patients clinics "Gazprom Transgaz Saint - Petersburg" Saint Petersburg. The study group (group 1) and control group (control group 2) included 25 patients for biliary dyskinesia meeting inclusion/exclusion criteria. In the two groups included 29 women, 21 men aged 29 to 58 years. The study was conducted single-blind method. Patients received the first group of thermally activated water "Aqua Forte." Patients of the second group received normal drinking bottled water. Technologically clean drinking water "Aqua Forte" was used during the day 5-6 times per day, totaling up to 1000 ml per day for 3.5 months of the study. Patients comparison group received drinking bottled water in the same way. The criteria for evaluating the effectiveness of drinking regimen in all groups were clinical variables, the results of standard laboratory (clinical, biochemical) and instrumental (ultrasonography) studies. Hematological and biochemical study was performed at the beginning and end of the study, physical examination weekly. Quantitative evaluation of the data was carried out by methods of variation statistics.

On the basis of the research it can be concluded that the use of thermally activated water "Aqua Forte" has a positive impact on holekinez, metabolism, improves trophic, tissue respiration of cells and decrease endogenous intoxication (increase in hemoglobin in red blood cells, reduces the content of indirect bilirubin in the blood; enzyme activity of ALT, AST, GGT, alkaline phosphatase and amylase), reduces LDL, VLDL and increase HDL levels, particularly among female patients, which is likely to decrease may indicate stagnation of bile in the liver and normalizing lipid metabolism, stimulates water exchange (change of sodium and potassium in the blood), providing rapid purification of intracellular (endoecological) space and sanogennykh activation processes in the neighborhood of the liver tissue.

The use of thermally activated water "Aqua fort" as drinking regimen in patients with biliary dyskinesia, promotes regression of the main symptoms of the disease, improve the quality of life of patients, longer periods of remission that reflect test systems functional status of patients.

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PHARMACOLOGICAL AND MECHANICAL SUPPORT OF CIRCULATION IN CARDIOSURGICAL PATIENTS WITH CHRONIC HEART FAILURE

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Objective. The study was taken to develop the indications for use for pharmacologic and/or mechanical circulatory support in patients with chronic heart failure in preoperative periods.

Materials and methods. The study included 30 patients (25 men and 5 women, mean age 53 ± 3 years) with chronical heart failure (CHF) 3 – 4 functional class according to NYHA. All patients had lower left ventricular ejection fraction (FI ≤ 35%), grade 3-4 mitral dysfunction (MD) (70%), grade 2 tricuspid dysfunction (TD) (63%), grade 2 (in majority of cases) pulmonary hypertension (PH) (84%), grade 2-3 hypertension (47%), left ventricular aneurysm (27%). For the purposes of treatment and to evaluate the reserve capacity of the myocardium all the patients got levosimendan infusion at a dose of 0.025 to 0.05 μg / kg / min for 2-3 days before the surgery. Significant changes in the degree of MD, TD, PH, FI and the level of natriuretic peptide B-type (BNP) were evaluated.

Results. All the patients were divided into two groups according to their reaction to levosimendan. In group A (17 people) had significantly (p = 0.001) reduction of MD grade - from 3 to 2 (in 87% of patients), TD by 1 grade (in 92% of patients), PH to grade 1 (in 97% of patients), 28±4% increasing of FI at from initial value was fixed in 59% patients, also there was registered a significant (100 and more pg / ml) reduction of BNP level in 65% of patients. 70.6% of group A suffered from dilated cardiomyopathy of various origin. In group B (13 patients) reduction of valvular insufficiency degree (MD in 62%, TD in 40%) and PH (in 71%) was not statistically significant. In 31% of patients FI increased by 13 ± 3%, which was significantly (p = 0.045) less than in group A. BNP levels decreased by 100 or more pg / ml in 23% (p = 0.03) of patients. A subsequent analysis indicated that significantly more patients in group B than in group A had postinfarction cardiosclerosis (PICS) (84,6 and 35,3%, respectively), angina of 3-4 FC (84,6 and 17.6%, respectively). In group B the CHF was often associated with ischemic myocardial injury (84.6% of patients). Due to it patients of group B underwent surgery (coronary artery bypass and / or heart valve prosthesis) under preventive intra-aortic balloon counterpulsation (IABC). Patients of group A and B stayed in the intensive care unit for 3,7 ± 0,4 and 4,7 ± 0,5 days (p = 0.035) respectively, the doses of cardiotonics were 4,8 ± 0,1 and 5,8 ± 0,3 μg / kg / min (p = 0.002) respectively, IABP was used for 39 ± 6 hours. Mortality between the two groups did not differ significantly - 5,9 and 7,7%.

Conclusions. The preventive use of pharmacological and/or mechanical circulatory support is recommended in patients with chronic heart failure, associated with a low PI

(less than 35%), hemodynamically significant heart valve insufficiency, PH, PICS 3.4 and CH 3-4 FC. The choice of method can be done the basis of preoperative functional tests with the use of levosimendan infusion. If the above mentioned diseases are indicted but the reaction to infusion of levosimendan is mild (increasing of FI less than 25-30%, reduction in BNP) the combined circulatory support is recommended.

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RISK FACTORS FOR THE DEVELOPMENT OF POSTPARTUM HEMORRHAGES AMONG MULTIPAROUS WOMEN

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Obstetrical hemorrhages remain one of the main reasons of maternal mortality. In the Republic of Kazakhstan, according to the official statistics, the proportion of abstetrical hemorrhages in the structure of maternal mortality in 2009-2010 made up 20,3% and 11,9%, respectively, and according to confidential sources, 30,7% and 29,0%. A large proportion (50%) in the structure of obstetrical hemorrhages is connected to multiparous women.

The objective of the research was to study clinical and anamnestic data and carry out a correlation analysis in order to determine risk factors for postpartum hemorrhages among multiparous women.

We studied 754 birth reports of multiparous women. Postpartum hemorrhage occured in case of 93 patients (12,3%), which made the main group. The control group consisted of 661 multiparous women without a postpartum hemorrhage.

We studied clinical and anamnestic data (birth parity, extragenital pathology, pregnancy and birth complication among multiparous women, visits to antenatal clinic).

During the correlation analysis we found the main risk factors for the development of postpartum obstetrical hemorrhages such as cardiovascular diseases, disiases of urinary system, hypertension condition, oligoamnios, hydramnios, antepartum discharge of amniotic fluid, anaemia, birth parity (6 and more), age older than 40, multiple pregnancy.

We calculated diagnostic coefficients for each risk factor. They provide an opportunity to predict the development of postpartum hemorrhages in case of multiparous women in 80% of cases.

The detection of the risk group in regard to obstetrical hemorrhages among multiparous women makes it possible to diferentially carry out preventive measures to postpartum hemorrhages in the given group of women.

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INFLUENCE OF PROPRANOLOL ON THE CONNECTION PATTERN BETWEEN THE DIASTOLIC TRANS-MITRAL BLOOD FLOW AND DURATION OF THE PRECEDING CARDIAC CYCLE IN PATIENTS WITH ATRIAL FIBRILLATION AND CHRONIC HEART FAILURE

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Introduction. Atrial fibrillation is one of the most wide-spread rhythm disturbances. High variability of cardiac cycle duration leads to a decrease in the ejection fraction of the left ventricle and an increase of the final systolic pressure in its cavity, which inevitable causes development of chronic heart failure. The determination of the connection pattern between the variability of rhythm and the corresponding changes in the volumetric diastolic trans-mitral blood flow makes it possible to evaluate the condition of the Frank-Sterling-Straub mechanism which plays one of the most important parts in the recovery of the function of the heart, alongside with the heart rate.

The objective of the research is to evaluate the influence of the decrease in the heart rate cause by propranolol on the connection pattern between the volumetric diastolic trans-mitral blood flow with the duration of the cardiac cycle in patients with atrial fibrillation and chronic heart failure.

Materials and methods. The research included 41 patients with atrial fibrillation and chronic heart failure in the age between 37 and 80 (on average - 66±10.4). In order to reduce their heart rate, the patients received propranolol in the dose between 10 and 40 mg. On average, the dose was 16.6 mg. In order to evaluate the connection pattern of the volumetric diastolic trans-mitral blood flow with the duration of the preceding cardiac cycle, we calculated a correlation coefficient (r) of the linear rate integral (VTI) of diastolic trans-mitral blood flow, which we determined with the help of an ultrasound machine SIM 5000 D PLUS from the company "Ros-Biomedica". The calculations were carried out by means of a software package Statistica 6.0. The correlation was statistically significant, if the rated value was > 0.24.

Results of the research. Among 13 patients with the initial direct connection, after a reduction of the heart rate by means of anaprilin, 7 patients had a decrease of the heart rate by 18.2%, from 88 to 72 ($p=0.0003$) heartbeats per minute, which led to positive dynamics of the correlation coefficient r, which grew from 0.42 to 0.5 ($p<0.05$). One patient with the initial value of r=0.64 demonstrated a back reaction (r made up 0.38) while the heart rate went down from 142 to 67 (53%). The connection disappeared in the case of 5 patients with the initial value of r=0.4 (r made up 0.08) due to a significant decrease of heart rate (for these patients) from82 to 67 ($p<0.05$).

In the case of 7 patients with the initial back reaction, the decrease of the heart rate led to positive dynamics of the correlation coefficient. There was a statistically significant direct connection in the case of 2 patients, when their heart rate was reduced from 95 to 71 (25%), and the correlation coefficient became positive (r=0.15, p=0.1) in the case of 5 patients, however, there was a significant difference in comparison to the initial value.

Due to the decrease of the heart rate 10 patients with no connection in the initial condition had a significant increase of r from 0.06 with the heart rate of 93 heartbeats per minute to 0.39 with the heart rate of 70 heartbeats per minute. 3 patients received a back reaction and 8 patients remained in the same condition in the absence of the statistically significant pulse-reducing propranolol effect.

This way, among 41 patients, a single dose of the pulse-correcting drug caused an optimum heart rate reduction in the case of 24 (58.5%) patients and led to an excessive heart rate reduction in the case of 9 (21.9%) patients. 8 patients (19.5%) did not experience any significant change in their heart rate. The presented data shows the necessity to choose an individual drug dose (personal approach to treatment of patients with atrial fibrillation with chronic heart failure) by means of the dose titration of the pulse-correcting drug while monitoring the dynamics evaluation of the Frank-Sterling-Straub mechanism.

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THE IMPORTANCE OF OFFICE MEASUREMENT AND DAILY MONITORING METHOD OF BLOOD PRESSURE FOR THE ESTIMATION OF EFFICIENCY OF ANTIHYPERTENSIVE THERAPY RECEIVED BY PREGNANT WOMEN

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An effective therapy of the arterial hypertension among pregnant women is one of the main cardiology problems. According to numerous researches, the general situation of the arterial hypertension treatment among pregnant women is far from being perfect worldwide. It is mainly connected to the fact that there are only limited methods of selecting an individual hypotensive therapy, and the choice of a drug in practice is still made by trial and error. In spite of the fact that there is a strong recommendation to carry out daily monitoring of arterial blood pressure in case of women with a higher level of it, the main method of detection and control of arterial blood pressure up to this day remains the office blood pressure method.

The objective of the research was to determine the adequacy of methods applied for the effectiveness control of antihypertensive therapy among pregnant women.

Materials and methods of the research. The first group for the estimation of efficiency of antihypertensive therapy by means of office blood pressure measurement was made up

by 37 pregnant women in the age of 28.5±5.6. The second group, where the treatment efficiency was assessed with the help of daily monitoring of arterial blood pressure, was made up by 43 pregnant women in the age of 29±6.1. The studied women did not have any statistically significant differences regarding age, birth parity, pregnancy term, percentage ratio of clinical forms, arterial blood pressure level and stage, extragenital pathology or the implemented antihypertensive therapy.

The results of the research. The effectiveness control of antihypertensive therapy among pregnant women by means of office blood pressure measurement has shown that after a week of treating pregnant women with methyldopa, on average, all patients had a normalized arterial blood pressure level of < 140/90 mmHg. When monitoring the therapy efficiency by means of daily monitoring of arterial blood pressure, after approximately a week since the start of the treatment, 8 (18.6%) women had to receive a correction of the original therapy, which included an increase in the methyldopa dosage. A repeated daily monitoring of blood pressure has shown a normal level of blood pressure (< 130/80 mmHg) among all patients.

Complications during pregnancy, labour and unfavourable perinatal outcome were monitored both in the group of women with office blood pressure measurement and in the group of women who have received an additional daily monitoring of blood pressure. In the first group, there were statistically more cases of chronic foetal placental insufficiency (27 against 2.3%, p = 0.0021) and intrauterine delayed foetal development (27 against 7%, p = 0.0304). When analysing the condition of newborns in the early neonatal period, there were no obvious differences between the two groups in regard to weight, height, weight-height parameters and scores according to the Apgar score during the 1st and 5th minutes.

Conclusion. This way, in order to estimate the effectiveness of the antihypertensive therapy among pregnant women, it is necessary to apply the daily monitoring of arterial blood pressure, which, in comparison to the office blood pressure measurement, reflects the efficiency of the applied drugs in a more precise way. This fact is confirmed by a decrease in the number of cases of the chronic foetal and placental insufficiency and intrauterine delayed foetal development.

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CIRCADIAN PATTERN IN THE ONSET OF MYOCARDIAL INFARCTION

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Objective: To evaluate whether there is a circadian pattern in the onset of acute myocardial infarction (MI).

Methods. This study included 60 patients. Diagnosis of MI was by ECG and/or enzyme abnormalities. Patients were sub-grouped based on age, sex, prior history of

ischaemic heart disease, hypertension, and diabetes mellitus. Time of onset of symptoms was noted. For calculation of frequency of onset of symptoms, the day was divided into 4 periods: 00.01 – 06.00 Hours (1st period), 06.01 – 12.00 Hours (2nd period), 12.01 – 18.00 Hours (3rd period), 18.01 – 24.00 Hours (4th period).

Results. Out of the 60 patients, 40 were males and 20 were females. 25 patients were below the age of 60 years and 35 were above the age of 60 years. 11 patients had previous history of ischemic heart disease. Diabetes mellitus was present in 12 patients, and 19 patients were hypertensives. The incidence of onset of MI was almost equally distributed in the second and third quarters of the day. The circadian distribution of the onset of the event in relation to 6 hours periods as plotted a significant peak ($p<0,001$) in the second period and also in the third period ($p<0,05$), accounting for 46,67% and 43,33% of all cases respectively. Highest frequency was found in the 2nd period (morning hours), and it was statistically highly significant when compared with the average of other three periods combined ($p<0,001$). The incidence of onset of events in the second period was 1,64 times greater than the average incidence during the other three periods. The peak in the second period was also statistically significant ($p<0,05$). The incidence in the third period was 1,3 times greater than the average incidence during the other periods. The sub-group analysis showed the same distribution of onset of symptoms in females (60% and 35%), patients above 60 years (48,5% and 45,7%), patients below 60 years (44% and 40%), patients with past history of ischemic heart disease (54,4% and 36,53%), diabetes mellitus (50% and 33,3%), and hypertension (52,6% and 47,3%). But in males, statistically significant peak was observed in 3rd period of the day (40% and 47,5%) ($p<0,05$). Statistically highly significant peak in the 2nd period was observed in females ($p<0,001$) and it was also significant in the group above 60 years ($p<0,05$). In other sub-groups analysis, periods with the highest frequency did not show statistical significance ($>0,05$). The hourly frequency of onset of MI revealed that 13,33% of patients had the onset of symptoms between 11 am and 12 noons, and between 4 to 5 pm which is around4 to 5 times more than average. The incidence was also out of proportion between 8 to 9 am, 10 to 11 am, 5 to 6 pm, and 6 to 7 pm being13,3%, 11,6%, 13,3%, and 13,3% respectively. Out of 60 patients, 17 patients came to the hospital within 1 hour of onset of symptoms, 16 patients delayed between 1 to 6 hours and 27 took more than 6 hours to reach the hospital. Patients who delayed their arrival to hospital for more than 6 hours were mainly males ($p=0162$, statistically significant). Patients above 60 years who delayed to arrive at hospital were also more, but the number is statistically not significant ($p=0,782$). Four out of 17 patients who arrived at hospital within 1 hour, 4 out of 16 patients who delayed between 1 - 6 hours to arrive, and 4 out of 27 patients who took more than 6 hours to arrive at hospital died.

Conclusions. There was significant increase in the frequency of onset of MI in the morning hours as well as in the third period (evening hours). Incidence was equally distributed in the 2nd and 3rd period of the day. A much larger sample may be required to draw definite conclusions. An important research goal is the identification

of the rhythmic processes that drive the marked changes in susceptibility to myocardial infarction during the course of the study. The characteristic circadian pattern may be a clue to the identity of underlying physiologic or pathophysiologic processes that could be modified by pharmacologic or other means, thereby delaying or preventing the occurrence of infarction.

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MODERN ASPECTS OF TREATMENT OF GIARDIASIS

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Despite great progress in the development of highly effective antiparasitic drugs, the treatment of giardiasis remains one of the unresolved and complex issues.

The purpose of the study – to investigate the therapeutic efficacy of herbal drug Sausalin (Kazakhstan, Scientific-Production Center "Phytochemistry") for Giardiasis.

Materials and Methods. We studied 84 patients from 12 to 50 years who were hospitalized for inpatient treatment in the regional infectious diseases hospital with giardiasis.

Verification of the diagnosis was based on clinical and medical history and laboratory and instrumental methods of examination. All patients were divided randomly into 2 groups for the antiparasitic therapy. The data obtained were subjected to statistical analysis using the t-test.

Results and discussion. Among the clinical forms, as in the study group and the comparison group was dominated by intestinal form, respectively, 58.1% and 80.0% ($p \leq 0,05$). Mixed forms of giardiasis identified in 41.8% patients of comparison group and 20.0% of the patients in the control group ($p \leq 0,05$). Major manifestations of giardiasis were anorexia (60.6%, $p \leq 0,05$), coated tongue (66.7%, $p \leq 0,05$), sunken abdomen (63.6%, $p \leq 0,05$) and diarrhea with abnormal impurities (63.6%, $p \leq 0,05$). bdominal pain have been observed in patients in 43.4% ($p \leq 0,05$), usually in the right upper quadrant. These patients had significantly increased and moderately painful liver. Violations of basic liver function tests is not observed.

Patients with chronic giardiasis were divided into two groups randomly.

In first group was 43 patients with giardiasis, they used the drug of plant origin - Sausalin (0.12g) in a therapeutic dose of 2 tablets 3 times a day for 10 days (study group). In second group were 40 patients which used antiparasitic drug metronidazole (0.5g) 1 tablets 3 times a day for 7 days (control group). The criteria for evaluating the therapeutic efficacy of the therapy was the term of the reverse of the main manifestations of the disease.

Patients of the study group was stopped nausea, vomiting, epigastric pain completely. Patients control group during treatment with metronidazole (6±1,9) respectively periodically disturbed nausea, related and unrelated to food intake and pain. Nausea, vomiting, pain,

mainly in the epigastrium and in the right upper quadrant in patients second group (9,6±1,6; 7,1±0,8; 9,1±0,8) we have seen not only as a manifestation of the disease and as a side effects of the drug, as was the case intensification of these symptoms after treatment. Abdominal pain persisted in both groups: in the first group at 3,1±0,95, and in second group at 9,1 ± 0,8 patients.

After treatment with metronidazole in patients of second group continued weakness, apathy and especially irritability (8,1±0,91; 3,1±0,8; 9,7±1,1%). In the first group all symptoms except apathy stoped (3,1±0,91).

Skin (allergic) syndrome as pruritus regressed, and rash preserved only in (3,1 ± 0,8) cases in the first group monitoring in patients receiving treatment Sausalin. In second group patients with the treatment of metronidazole rash and itching persisted, respectively (8,1±1,1: 4,3±1,1). Dynamics of the main syndromes and symptoms of giardiasis in the background of the two treatments showed clinical efficacy of Sausalin. In this group was stopped completely dyspeptic syndrome, and only 3,1 ± 0,8% were abdominal pain, fatigue, rash.

After treatment these drugs, we conducted control parasitological examination to confirm the effectiveness of treatment. Monitoring was conducted on the basis of the disappearance of the parasites in the feces three times: after treatment and at 1 months.

The study of fecal two days after stopping of the drug in almost all patients in the study group was observed eradication of Giardia cysts, compared with the control group.

The study on the stool Giardia cysts was conducted 21 days after treatment. In the study group noted reclaim lamblia cysts in only 3 (5.7%) with scatological study of feces, and in the control group - 12 (30%). The scatological study of feces for detect Giardia cysts was conducted repeatedly on 21 days after treatment. In the study group noted recovery lamblia cysts in only 3 (5.7%), and in the control group - 12 (30%).

The results of the present study suggest clinical and parasitological efficacy of Sausalin.

Sausalin has biological activity of due to the presence of sesquiterpene lactones that has antiparasitic, antimicrobial, anti-inflammatory, choleretic effects.

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THE INFLUENCE OF ENVIRONMENTAL SITUATION ON THE DEVELOPMENT OF HUMAN RESOURCES IN LABOR-SURPLUS REGIONS OF KAZAKHSTAN

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The formation and development of the labor market in labor-surplus regions of Kazakhstan is largely dependent on environmental conditions, which formed the demographic behavior and labor potential of human resources.

A systematic approach to health and safety and provides simultaneous monitoring of

the diverse risks. The development of a systematic approach involves three components of "industrial ecosystem": the ecological balance in the surrounding environment, enterprise, environmental health jobs within the company and the health of staff.

Health human resources are particularly dangerous toxic emissions into the atmosphere. Industrial regions of the South Kazakhstan Region (SKR) suffer from air pollution generated by motor vehicles, emissions of metallurgical plants and oil refineries, thermal power plants. In most of the thermal power SKO operate on coal and oil. As the industry is constantly growing amount of industrial waste, with areas affected by groundwater contamination by heavy metals.

Great harm to the environment and generate carbon monoxide emissions from the burning of fossil fuels, cement production and gas flaring.

In areas of land desertification observed systemic health disorders and pathological conditions that can be traced from the beginning of the formation of the body from disorders of immunity to diseases of the blood and blood-forming organs. Accumulation of heavy metals in the body are not uncommon in industrial areas. All this certainly leads to nervous and mental abnormalities, diseases of the respiratory system. This dramatically increases the risk of a population in the region and affect the reproduction of the labor potential and decreasing its quality. Urban air pollution is the cause of the increasing number of respiratory diseases.

South Kazakhstan region, by definition, "National Report on the conservation and sustainable use of biological diversity" (1997), included in the second group of regions of Kazakhstan for environmental risk. The region is one of six ecologically disadvantaged regions of Kazakhstan.

In South Kazakhstan has seen a large number of dying from respiratory diseases,

the incidence of anemia in the region more than in the republic. Cardiovascular disease is one of the most pressing problems and acquire public importance, as more than half of the annual mortality and disability of the population comes from diseases of the circulatory system, the highest rates among those of working age. Increased mortality from malignant neoplasms.

Solutions. Increasing of ecological requirements to businesses polluting the environment, according to the latest scientific and technical progress, providing

The establishment of regulatory-required sanitary protection zone and continuous monitoring;

- Replacement and renovation of outdated production technologies and inefficient dust and gas cleaning plants;
- Improve the quality of fuel burned;
- The introduction of renewable and alternative energy sources.

Streamlining vehicular movement in the city. Permanent monitoring toxicity and smoke exhaust.

Translation of public transport for environmentally friendly forms of energy.

Development and implementation of geographic information system monitoring.

Polygon construction of warehousing industrial toxic waste in Shymkent. The introduction of modern science-based methods of distribution and storage of solid waste at the projected range.

Integrated solution for the processing and disposal of toxic chemicals. Centralize the collection and sending of not buried orphan sources of ionizing radiation have expired.

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ON THE RELEVANCE OF MONITORING THE SAFETY OF MEDICINES

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In the dynamic conditions of society at the same time the reorganization and improvement of public health take place accordingly to the material level of the country development. This also applies to the medicines' policy. One of the important aspects of the national medicines' policy is the development of an effective mechanism of medicines' supply to population and public health institutions. Special attention in conditions of healthcare reorganization requires the pharmaceutical supplies, due to its high economic component in the cost. Great attention around the world is devoted to the issues of selection and proper prescribing of medicines.

In Kazakhstan, this issue was sharply raised since the early 90s of the last century, when unfavorable trends in public health indicators occurred simultaneously, and numerous foreign medicines, sometimes not always of proper quality appeared in the market. Constant growth of the prices for all services, including those for medical ones and the medicines have led to a situation when "in no other country there are sufficient funds for health care costs" (WHO, 1995).

The most important part of practical health care, providing the high-quality medical care to the population of the Republic of Kazakhstan, are health centers of stationary type. Despite the introduction of restrictive measures to improve the quality of care into the practice of health centers recently, important issues of the safety of pharmacotherapy remain unresolved. Introduction of clinical protocols for treatment and diagnosis only to a certain extent streamlined the medical staff and hospitals in general, however, this measure has not led to the achievement of progressive results in clinical and, moreover, in the economic scale. The application of such recommendations by itself is not sufficient to change the behavior of doctors. Medicinal budgets of health care institutions today are not able to provide the full need of hospitalized patients in the medicinal therapy. At the same time there is an acute issue of searching for effective ways to optimize pharmacotherapy. Apart from this problem the issues of rational antibiotic therapy should be highlighted. The currently ongoing reform in Kazakhstan medicines' supply and updating of national medicinal policy requires introduction of modern scientific approaches to solving the

problem of rational use of medicines.

According to WHO, "the rational use of medicines requires that patients receive medications appropriate to their clinical needs, in doses that meet their individual needs, for an adequate period of time and at the lowest cost to them and to society."

Thus, during security monitoring of the conducted pharmacotherapy attention should be paid to the system of rational use of medicines which provides the most cost-effective medicine for the treatment of the individual patient sickness in order to obtain the maximum therapeutic effect.

Implementation of the system of rational medicines use provides the opportunity to simultaneously solve the problems of the clinical and economic nature in practical medicine. Pharmacoeconomic analysis is a tool for determining the costs and benefits associated with different methods of treatment, which makes effective use of medicines budgets and health care budgets in general.

Rational medicines use is primarily directed to the selection and proper use of medications with proven clinical efficacy and safety. Economic evaluation of the use of medication assumes the analysis of all clinical effects of treatment with the given medication and quantitative assessment of the direct and indirect costs associated with its use.

Many government policies in various countries limit the use of expensive drugs. Often, however, only the cost of the medication is taken into account, but the potential effectiveness of therapy with these drugs is not assessed. At the same time, from the point of pharmacoeconomics application of more expensive, but more effective and safer medication can ultimately lead to better therapeutic result and thus reduce the potential costs associated with the duration of treatment and hospitalization, treatment of complications of pharmacotherapy, prevention of side effects of medicines, including antibiotics/.

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PRECARDIAL VECTORCARDIOGRAPHY IN THE DIAGNOSIS OF ACUTE MYOCARDIAL INFARCTION, COMBINED WITH NON-ALCOHOLIC FATTY LIVER DISEASE

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In morbidity rate, acute myocardial infarction (M.I.) and non-alcoholic fatty liver disease ranks first. Their comorbid clinical course, changes the clinical course of nosological forms, which requires their early diagnosis optimization. At a long course of liver disease, dystrophic changes in the heart muscle develop, compounded by coronary circulation problems in acute M.I. A promising diagnostic method for diagnosing changes in electrical activity of the heart is vectorcardiography (V.C.G.). It is a modern invention, that changes our perception of the parameters of the electromotive force of heart disorders, performs

high accuracy automatic in situ diagnosis monitoring of changes in the affected area of the heart, and recording the results of the research on a screen. It has a new polygraph which displays sections of the loops' route that show possible disease process, with an increase of up to 3000 times, which allows us to identify previously unknown components of heart muscle damage.

The purpose of this write-up is to show the features of V.C.G. in the acute period of M.I., in combination with hepatic steatosis or nonalcoholic steatohepatitis (N.A.S.H).

Materials and methods. 148 patients with acute MI of the left ventricle (L.V.) were examined, of which the research included 15 patients with acute Q-positive posterior-inferior M.I., combined with hepatic steatosis and N.A.S.H. with ages ranging from 36 to 88 years (the average age being 62±4 years). Patients with M.I. were hospitalized in the first 24 hours of onset. M.I. was diagnosed based on the clinical, electrocardiographic and biochemical data. Hepatic steatosis was confirmed with ultrasonographic evidence of fatty liver and negative serological markers of hepatitis B and C in the absence of alcohol and hepatotoxic medications intake. N.A.S.H. was diagnosed based on persistent hypertransaminazemia at a ratio of alanineaminotransferase to aspartataminotransferase of more than 1. Instrumental study included an electrocardiogram with additional inclusions of V_{7-9}, V_{3R}, V_{4R}, liver ultrasound and V.C.G. in five different views (BA_{1-5}) on a multifunction complex cardiodiagnostic MTM-SCM.

Results. Q-positive acute M.I. in 8 patients combined with Ist stage hepatic steatosis; 7 patients with IInd stage. N.A.S.H. was diagnosed in one patient with acute M.I. V.C.G.-changes at posterior-inferior M.I. combined with liver disease showed in $BA_{2,3}$ with QRS loop displacement in the opposite direction from the area of the damaged myocardium, with 2.5 times decrease; slow excitation in the myocardium ($p<0,001$); non-closed QRS loop with damaged vector ST directed downwards, left, and backwards. T-loops were located outside of QRS loop with a decrease in the maximum T loop vector in BA_2 ($p<0,01$), the angular divergence of loops QRS-T in BA_3 and the speed of impulse spread over T loops in $BA_{2,3}$ ($p<0,001$). Outside the necrosis zone in these patients maximum QRS vector elongation was revealed at first V.C.G. view; in $BA_{1,4,5}$ – the opposite speed marker changes (there is increased rate of excitation spread as a reflection of compensatory hemodynamic load in the front wall of the L.V., apex, ventricular base; and slow impulse spread in the front wall of the L.V. and ventricular base ($p<0,01$). In addition, the maximum T-loops vector is reduced ($p<0,01$); impairment of the impulse conduction through T loops ($p<0,001$); and in BA1,4 – there is increased angular divergence of QRS-T loops ($p<0,01$). The area of P-loops increased by 2.3 times in the first four views of V.C.G. and the maximum P-loop vector was in BA_5.When there are opposite changes of speed markers in all views ($p<0,001$), it indicates an increased load on the atrium. Repolarization problems in the atria were determined as a decrease in the angular divergence of QRS-P loops in the first three views and as an increase in $BA_{4,5}$ ($p<0,01$).

Conclusions. The new technique of V.C.G.-study of the heart gives us additional qualitative and quantitative information both in the zone of necrobiotic changes in the

myocardium and outside the affected area. The use of new version of vector studies expands the diagnostic capabilities to objectificate and to document the changes in cardiovascular comorbidity.

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POLISENSORISCHE ENTSPANNUNG ALS BEHANDLUNG VON PATIENTINNEN MIT ARTERIELLER HYPERTONIE BEIM KLIMAKTERIUM

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Anwendung nichtmedikamentösen Methoden in Behandlung arterieller Hypertonie beim Klimakterium ist ein wesentliches fachübergreifendes Problem moderner Medizin, das von großer medizinischer, sozialer und wirtschaftlicher Bedeutung ist. Stress bei arterieller Hypertonie beeinflusst den Krankheitsverlauf beim Klimakterium, wenn Frauen sich Sorgen wegen psychologischer Probleme mit Altersveränderungen des Körpers haben. Deswegen bleibt Einführung audiovisueller Technologien, die für diese Patientengruppe für Erhöhung der Arbeitsfähigkeit und Lebensqualität beim Präklimakterium und Klimakterium patogenetisch erforderlich sind, eine der wesentlichen Aufgaben.

Wir haben 62 Frauen im Alter von 45-60 Jahren mit arterieller Hypertonie der 2. Stufe beim Klimakterium untersucht, darunter 52% im Alter von 45-50 Jahren und 48% im Alter von 51-60 Jahren, 43% bei Premenopause, 47% bei Menopause und 10% bei Postmenopause. Die Dauer des Klimakteriums von 69% Frauen beträgt nicht mehr als 5 Jahre, von 18% - 5-10 Jahre und von 13% - mehr als 10 Jahre.Die 1. Gruppe besteht aus 20 Patientinnen mit arterieller Hypertonie 2. Stufe beim typischen komplikationslosen Klimakterium des leichten und mittleren Schweregrads, für deren nichtmedikamentöse Behandlung Polisensorische Entspannung angewandt worden ist. Die 2. Gruppe besteht aus 20 Personen und ist neben Antihypertensiva mit polisensorischer Entspannung und komplexer Pharmakopunktur (Cerebrum compositum, Coenzyme compositum und Ubichinon compositum der Fa. Heel, Deutschland) behandelt worden. Die 3. Gruppe besteht aus 22 Frauen, die mit konventioneller Elektrotherapie mit Brom und Massage der Nackenwirbelsäule behandelt worden sind. Patientinnen aller Gruppen sind mit erforderlichen Antihypertensiva (Klimadynon) behandelt worden. Die Effizienz der Behandlung ist durch folgende Methoden eingeschätzt: objektive somatische Untersuchung,

Psychodiagnostik (Prüfung „Befinden, Aktivität, Stimmung“, Prüfung „Ängstlichkeit und Depression“, Depressionsskala), Untersuchung des vegetativen Status (Umfrage vegetativer Entwicklungen usw.), Rheoenzephalographie, Elektrokardiogramm und Holter-Elektrokardiogramm und Untersuchung des Hormonstatus. Die Untersuchungen sind sofort nach der Behandlung und 1,5-3 Monate danach durchgeführt.Die Behandlung von Patientinnen der 2. Gruppe hat sich als die effektivste aufgewiesen. Die Patientinnen fühlen sich besser und haben niedrigeren Arteriendruck sogar nach 2-3 Akten der polisensorischen Entspannung und 2-3 Pharmakopunkturen. Nach polisensorischer Entspannung haben sie weniger intensive oder gar keine Kopfschmerzen, guten Schlaf, sowie keine Ärgerlichkeit und Unruhe. In der 1. und 2. Gruppen haben sich die objektiven und subjektiven Merkmale der arteriellen Hypertonie und des Klimakteriums mehr als bei Patientinnen der 3. Vergleichsgruppe reduziert.Stabilisierungswerte der 1. Gruppe sind etwas niedriger als diejenigen der 2. Gruppe, die Differenz dazwischen aber hat das Validitätsniveau nicht erreicht. Die Untersuchungsergebnisse sprechen von hoher Klinikeffizienz des Behandlungskomplexes in der 1. und 2. Gruppen.Komplexe Wiederherstellung erlaubt Effizienz der konventionellen Pharmakotherapie auf 15-25% zu erhöhen. Deswegen erlaubt Einführung polisensorischer Entspannung neben Pharmakopunktur mit Antihypertensiva und konventioneller Therapie wesentliche Reduzierung von Klimakteriumssyndromen bei arterieller Hypertonie 2. Stufe. Unsere Methode ist hocheffizient, erhöht Toleranz zu konventioneller Therapie und ermöglicht deren Optimierung; sie ist effektiv, patogenetisch begründet, günstig und perspektivreich.

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NICHTMEDIKAMENTÖSE WIEDERHERSTELLUNG: PROBLEME UND PERSPEKTIVEN

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Modernes Wiederherstellungssystem stellt eine Reihe aufeinander folgender Behandlungsstufen dar, die von Ausprägung klinischer und pathomorphofunktioneller Krankheitssymptome abhängen, wobei eine bestimmte Kombination und Folge von Regimen, Diäten, medikamentösen und nichtmedikamentösen Methoden angewendet wird.

Anwendung nichtmedikamentöser Methoden und deren Kombinierung mit grundsätzlicher Pharmakotherapie ist ein wesentliches Problem der Wiederherstellung. Es muss unterstrichen werden, dass trotz praktischer Aktualität der medizinischen Wiederherstellung nach bestimmten Krankheiten werden meistens die allgemeingültigen Methoden angewandt, wobei die modernen Methoden medizinischer Wiederherstellung, deren Einwirkung auf das Organismus schonend und nach dem Behandlungsende langfristig effektiv ist, nicht berücksichtigt werden. Das Problem wird immer

komplizierter, da die Wiederherstellungsmethoden im Rahmen verschiedener Disziplinen studiert werden. Die Teammethode kann in allen Stufen der Wiederherstellung von Patienten mit neurologischen, kardiologischen, traumatologischen und orthopädischen Krankheiten gerechtfertigt werden, doch muss der Behandler gründliche Kenntnisse über alle modernen nichtmedikamentösen Wiederherstellungsmethoden haben. Es ist bekannt, dass die meisten nichtmedikamentösen Wiederherstellungsmethoden sich gut mit standardisierter Pharmakotherapie kombinieren lassen. Es ist üblich, die nichtmedikamentösen Wiederherstellungsmethoden zusätzlich anzuwenden, um akutes und abklingendes Aufflammen zu behandeln, Heilung zu beschleunigen und mögliche Komplikationen zu vermeiden. Wenn es im voraus bekannt ist, dass eine Krankheit zu Versehrtheit führen wird, sind solche Methoden notwendig, um den Ausbau der Versehrtheit im Laufe der frühen, verschobenen und späterer Wiederherstellung, die auf Wiedererlangen und Aufrechterhaltung der verlorenen Funktionen gerichtet ist, zu reduzieren. Deswegen ist es wichtig die Klassifikation nichtmedikamentöser Technologien ständig zu vervollständigen und deren wichtigsten Charakteristiken nicht nur im Rahmen entsprechender Fächer (Physiotherapie, Kinesiologie usw.) aufzuführen, sondern auch diese Kenntnisse in standardisiertes Program der Arztbildung (Neurologen, Kardiologen, Traumatologen und Orthopäden, Pädiater usw.) einzuschließen, damit sie einzelne Komponente der allgemeinen medikamentösen Wiederherstellungsprogramme für Erhöhung deren Effizienz flexibel ändern könnten.

Heutzutage besteht das Bedarf in vertiefter Arztbildung im Bereich verschiedener nichtmedikamentösen Wiederherstellungstechnologien (Physiotherapie, Kinesiologie, Reflexotherapie, manuelle Therapie, medizinischer Massage, Diätologie, Rythmologie, Fitofaunomineralotherapie, Homöopathie, Homotoxikologie usw.). Anwendung aktualisierter Klassifikationen für jeden Bereich nichtmedikamentöser Technologien, die an bestimmtes Profil (Neurologie, Kardiologie, Traumatologie und Orthopädie) angepasst sind, erlaubt die Arbeit der Wiedererstellungsärzte zu optimieren, ihnen zu helfen individuelle Wiederherstellungsalgorithmen auf Grund vorhandener Musterprogramme der Wiederherstellung zu erarbeiten und Effizienz medizinischer Wiederherstellung zu erhöhen.

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COMPARISON OF ONE-STAGE VERSUS TWO-STAGE MANAGEMENT OF PATIENTS WITH GALLSTONE DISEASE AND COMMON BILE DUCT STONES

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Choledocholithiasis is concomitant with gallstones in approximately 3%-15% of the patients. Endoscopic retrograde cholangiopancreatography with sphincterotomy

(ERCP/S) has traditionally been performed prior to laparoscopy cholecystectomy (LC) in patients with gallstones and common bile duct (CBD) stones. Single-stage laparoscopic cholecystectomy and common bile duct exploration has not yet become standard management. There are only a few randomized trials available comparing the single-stage versus two-stage management of patients with concomitant gallstones and common bile duct stones.

We carried out this prospective randomized study to compare the two modalities of treatment – laparoscopic cholecystectomy and CBD exploration in the same sitting versus preoperative CBD clearance by endoscopic techniques followed later by laparoscopic cholecystectomy. Both groups were clinically comparable in terms of age, sex, and ASA scoring.

Material and methods. This study was carried out between January 1, 2005 and March 30, 2011 in the Department of Surgery at Emergency Hospital, Dushanbe, Tajikistan.

The aim of research: To evaluate the results of the treatment of CBD stones in 204 patients undergoing single-stage laparoscopic management of gallstones and CBD stones (89) compared to the two-stage endoscopic sphincterotomy followed by laparoscopic cholecystectomy (115).

Results. In the one-stage group ductal exploration was attempted via the cystic duct that was successful in 30 patients, (33.7%) and required a choledochotomy in 59 patients (66.3%) because of the following reasons: the cystic duct was too small or flare, the stones were larger than 1 cm or in a number greater than five or proximal to the confluence into the hepatic duct.

In group I, laparoscopic choledocholithotomy with cholecystectomy was successful in 87 out of 89 patients (97.6% success rate). There were two conversions due to a bile duct stone impacted at the major duodenal papilla.

In group II, endoscopic papillotomy with ductal clearance could be achieved in 112 out of 115 patients (97.9% success rate). There were tree failures because of large impacted stones at lower end. Laparoscopic cholecystectomy was done in 110 out of 112 patients. In this group there were two conversions because of dense adhesions and unclear anatomy. The overall success rate of the intended treatment in group II was 95.6%.

All patients underwent a control cholangiogram to ensure that duct's clearance was successfully done and that the papilla was patent to contrast dye passage into the duodenum.

Conclusion. It is stated, that one-stage laparoscopic management of enabled 2,5 folds decrease of postoperative morbidity and 1,5 folds mortality in comparison with two-stage approach. Laparoscopic approach seems to be favorable because of the smaller number of procedures and hospital visits.

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A CORRELATION OF THE CLINICOMORPHOLOGICAL CHARACTERISTICS OF THE COURSE OF CONGENITAL ANOMALIES IN THE LARGE INTESTINE WITH TRACE ELEMENT DEFICIENCY IN CHILDREN

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An increase of the case rate of congenital anomalies in the large intestine (CALI) has been marked among the pathology of the gastrointestinal tract in children in recent years. These particular anomalies, despite the differences in the localization of changes in the large intestine (LI), are united by a characteristic clinical sing - the presence of chronic constipation. Chronic constipation organic origin (CCOO) in children due to CALI: dolihosigmoid, dolichocolon, megadolichocolon and others remain one of the most serious problems in modern gastroenterology, since they are characterized by an undulating course, late diagnosis, the development of local and systemic complications, an unfavorable prognosis and invalidism. Children suffering from this serious chronic pathology as a rule have a deficit of the body weight with a decrease of the subcutaneous fat and diminished tissue a stunt is often observed in them. Disturbances of the nutritive in case CALI are stipulated by a number of case: the development of intestinal dysbacteriosis, reduction of the absorptive surface of the mucous membrane due to an inflammatory and/or atrophic processes, absence of appetite or refusal of food intake view of arising pains in the abdomen after meals, meteorism; and increase energy consumption in connection with the development of the phenomena of intoxication.

Methods. We have carried out multimodality clinicolaboratory examination of 40 children with CALI (dolihosigmoid), the control group was made up of 35 apparently healthy children, all the examinees have been living since birth in city of Chernivtsy. The method of mass-spectrometry with inductively associated plasma was used for a quantitative assessment of the blood serum trace elements (TEs) (selenium - Se, zinc - Zn, manganese - Mn). Blood samples in the patients with CCOO performed prior to the inception of the treatment.

Results. The obtained findings are indicative of a direct correlation between the blood serum concentration of Se, Zn and Mn and the intensity of pain syndrome, the duration of the absence of independent defecation as well as the indication of well-being of a sick child. When analyzing the findings a direct dependence of a reduced blood serum concentration of Se, Zn, Mn and progression of the pathological process in the LI was detected, since the children with decompensated stage of the CCOO course were characterized by significant ($p^*0,05$) reduction of the concentration of TEs as compared with both apparently healthy children and with children suffering CCOO at the stages in compensation and subcompensation.

An inverse correlation relationship ($r=-0.72$) between the duration of the anamnesis

of CCOO and the concentration of trace elements has been marked. A strong direct correlation has been revealed between a reduced content of Se (r=0.76), Zn (r=0.75) and Mn (r=0.69) in the blood serum and the degree of intestinal dysbacteriosis. A correlation has disclosed and inverse correlation between the signs of atrophy of the mucous coat of the large intestine and the content of Se (r=-0.59), Zn (r=-0.79) and Mn (r=-0.56).

Conclusions. Thus, the blood serum concentration of Se, Zn and Mn reflects indirectly a progression of the pathological processes in the large intestine, the duration and stage the course, the degree of intestinal dysbacteriosis, presents of complications and may serve as marginally invasive criteria of evaluation the degree of the severity of CCOO in children.

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DYNAMISCHE SEGMENTÄRE DIAGNOSTIK BEI MEDIZINISCHER REHABILITATION VON PATIENTEN MIT DORSOPATHIEN

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Die Verstärkung von sympathoadrenalen Einwirkungen auf dem Mikrozirkulationssystem im vertebralen motorischen Segment (VMS), sowie die Reduktion der sympathischen Innervation in VMS-Geweben führen zur Gewebehypoxie in Elementen der VMS-Struktur. Dabei sinkt nicht nur die Fähigkeit der normalen Geweben, tägliche Belastungen zu ertragen, sondern auch die trophische Fähigkeit der beschädigten vertebralen Strukturen zur Regeneration. Im Zusammenhang damit gilt die Untersuchung des Zustandes des vegetativen Nervensystem, insbesondere seines segmentären sympathischen Glieds auf dem Niveau der vertebralen motorischen Segmente, als notwendige Bedingung der effektiven Therapie von Dorsopathien.

Die Methode der dynamischen segmentären Diagnostik bzw. DSD-Testierung besteht in der schwach aktiven Stimulation mit elektrischem Strom von Nervenrezeptoren der Haut in paravertebralen Projektionen mit nachfolgenden Einschätzung der Intensivität von initiierten sympathischen Hautreaktionen (SHR), die vegetative Zusammenwirkungen in den vertebralen motorischen Segmenten wiederspiegeln. Auf der Basis der Parameter von DSD-Testierung wird regionale und segmentäre Intensivität der SHR eingeschätzt.

Die Regeneration der sympathischen Versorgung der Gewebe in den vertebralen motorischen Segmenten wird mit Hilfe von Prozeduren der Interferenz-Therapie realisiert. Die Parameter dafür werden aufgrund der vorgeschlagenen Kriterien zur Einschätzung der Intensivität der sympathischen Hautreaktionen bestimmt. Als Kriterien gelten: 1) das Niveau der Pathologie (zervikales, thorakales, lumbosakrales Niveau); 2) die Manifestation der Pathologie (regionale. bzw. segmentäre Pathologie); 3) der Charakter der sympathischen Versorgung des segmentären Niveaus des VMS (die Erhöhung der sympathischen Einwirkung auf die VMS-Gewebe oder die Reduktion der sympathischen

Versorgung der VMS-Strukturelemente).

Aufgrund der obengenannten Kriterien werden die Dauer der Prozedur, das Frequenzspektrum der Interferenzströme, die Abmessungen der Elektroden und das Ort der Elektrodeneinstellung optimiert. Die Dauer der Behandlung und die Kontrolle ihrer Effektivität werden aufgrund der wiederholten DSD-Testierungen eingeschätzt.

Schlussfolgerung: Die Ergebnisse der dynamischen segmentären Diagnostik erlauben uns die Elektrotherapie in Patienten mit Dorsopathien zu optimieren, die Effektivität dieser Therapie zu prognosieren, die Charakteristik des pathologischen Verlaufes während der Therapie und der medizinischen Rehabilitation zu bestimmen und damit die Dauer der stationären Behandlung zu verkürzen und die klinische Effektivität der Therapie dieser Patientengruppe zu erhöhen.

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ABC/VEN-ANALYSIS OF EXPENSES ON MEDICINES FOR TREATMENT OF THE CHRONIC OBSTRUCTIVE PULMONARY DISEASE DUE TO OCCUPATIONAL CAUSES

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Chronic obstructive pulmonary disease (COPD) is among the most costly diseases. In connection with this study is highly relevant rational use of budget funds for supply of drugs in COPD professional etiology in a hospital at the regional level. One of the most efficient methods for drug coverage is an ABC / VEN-analysis of the cost of medicines.

Purpose: To analyze the rationality of the use of budget funds for supply of drugs in COPD professional etiology in a hospital.

Materials and Methods: ABC / VEN- analysis of the cost of medicines prescribed to patients with COPD professional etiology treated at Municipal Clinical Hospital Nr. 2 in Novosibirsk in 2009 to 2011. Medicines are divided into three groups: A - 80% of all costs,B - 15% of all costs,C - 5% of all costs. Achieved ranking medicines by the presence/ absence of the recommendations GOLD: V - medicines is listed GOLD; N - missing.

Results: the total cost of all medicines (58 for international nonproprietary names) were 266,885.23 rubles. The most costly group A was 6 drugs. Among them, 38.43% of costs occurred in the tiotropium bromide, 9.58% - for budesonide, 8.49% - for formoterol, 7.58% - on telmisartan, 6.43% - budesonide + formoterol and 5.38% in the salmeterol + fluticasone. 5 of them belong to the category V and 1 - to the category N (telmisartan). Group B consisted of 12 medicines, occupying 15% of the total cost, including the category V have only 4 of the medicines (30%). The maximum number of medicines was observed in the group C- 40 medicines, including the category V are 3 medicinal product (cefatoksim, ciprofloxacin and prednisolone), the total expenditure on them is equal to 0.47% of the total cost.

Conclusions: in expenditure on medicines leading place anticholinergics, β2-agonists,

inhibitors corticosteroids and their combinations. They accounted for 68.32% of all costs. These groups of preparations are classified as V, which confirms the validity of such costs. However, some deficiencies noted by irrational use of resources for medicines that must be considered to optimize the costs during the treatment of COPD.

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THE DYNAMICS OF INTRA-ABDOMINAL PRESSURE AMONG PATIENTS WITH LARGE AND GIANT POSTOPERATIVE VENTRAL HERNIAS

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Aim of research: is to study the dynamics of intra-abdominal pressure among patients with large and giant postoperative ventral hernias in the intraoperative period.

Research methods and materials: 32 patients with large and giant postoperative hernias (W3 – 21 people and W4 – 11 people) were examined to reveal the dynamics of intra-abdominal pressure before the operation, intraoperatively and in the early postoperative period. The indirect method was used to measure the intra-abdominal pressure placing the "open" catheter in the bladder. The level of intra-abdominal pressure shown by the intraoperative measurement determined the optimal choice of surgery.

Results and their discussion: Before the operation patients with large and giant postoperative ventral hernias had a higher level of intra-abdominal pressure – 12,2±0,6 mmhg, which was not accompanied by any clinical signs of organ dysfunctions.

After performing the herniotomy, during the trial hernia ring closure 4 (12,5 %) patients had the increase in intra-abdominal pressure up to 13,7±0,5 mmhg (stage 1 of intra-abdominal hypertension), 7 (21,8%) patients – up to 18,2±0,3 mmhg (stage 2), 3 (9,3%) patients – up to 23,0±0,4 mmhg (stage 3) and 1 (3,1%) patient – up to 26 mmhg (stage 4). In all these cases the tension-free hernioplastics with anatomical reconstruction of the abdominal wall (the operation Ramiraz) was applied. The appropriate selection of hernioplasty method was confirmed by the control measurement of intra-abdominal pressure after the operation. The average pressure was 11,8±0,5 mmhg (the increase of the original pressure should not be of more than 2 mmhg).

Conclusion:

Thus, patients with large and giant postoperative ventral hernias have initial increase in intra-abdominal pressure which has no clinical manifestations. Such patients are adapted to higher levels of intra-abdominal pressure.

Carrying out surgical correction of large and giant postoperative ventral hernias the important criterion to choose the way of abdominal wall plasty is the intra-abdominal pressure level: it should not lead to the increase in intra-abdominal pressure of more than 2 mmhg comparing to the original level.

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CORRECTION OF POSTURAL STATE TO OPTIMIZE INTERMAXILLARY SPACE

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Implantology is a progressive method to rehabilitate patients with chewing function and aesthetics disturbances.

At present, there are still many unsolved problems in this field of knowledge. Requirements for implant dentures raise a lot of questions among gnathologists, posturologists, osteopathologists, and kinesiologists. For example, maximum reduced height of artificial teeth tubercles, reduced area of the occlusal surface up to 50%, lack of occlusal compass reconstruction at teeth restoration, and many other problems.

In stomatology, it is assumed to consider human maxillodental unit and skull to be a closed kinematic system. In our opinion, this results from too narrow specialization in medicine. Human body is an integrated system with complex interconnections at biomechanics, physiology, and biochemistry levels. In course of human life there takes place an age-dependent adaptation of musculoskeletal system in order to retain vertical position of the body for its normal functioning. Therefore, the most important problem arises: Where an implant should be placed to? At suitable place or only when alveolar portion is reconstructed?

The lower jaw is composed of two parts: alveolar and basilar. Some authors consider alveolar part as a component of teeth-alveolar complex. And it's logical! After odontectomy the alveolar part atrophies and implant installation in the extracted tooth area slows down the bone tissue atrophy. Basilar part is not subjected to atrophy. In upper jaw the contreforts, which correspond to teeth axes, function as the basilar part.

Basing on research made by Gelb, Harold: Clinical Management of Head, Neck and TMJ Pain and Dysfunction. 1963, on precision meeting of teeth axes of the upper and lower jaw in the area of ethmoid bone and cockscomb, implant planning and placement shall be made according to individual axes of missing teeth with orientation to the above mentioned instructions.

Implants shall be placed with immersion into basilar part of low jaw and into contreforts' area of upper jaw. Such placement helps to prevent the bone atrophy. For example, Gordon-Popov phenomenon, when displacement of a teeth in direction of extracted antagonist causes cone atrophy of alveolar part. Individual occlusion forces are transmitted along teeth axes, which are not in the least perpendicular to occlusion plane. The load on scull bones shall be distributed as adjusted to human physiology. This makes the scull similar to other bones carrying the load, pelvis bones, for example. Occlusion forces may reach tens of kilos per square centimeter. Normal functioning of scull structures will depend, to a large extent, on their direction.

Reflectory matching of tooth-alveolar segment to a definite inner organ was described in Oriental medicine several centuries ago. It was verified by introduction of radioisotope,

horseradish peroxidase, to cat's pulp and its further scanning. The preparation was revealed in trigeminal nuclei in 30 seconds after its introduction. This is a direct proof that the body is an integral system. Therefore, each tooth-alveolar segment has its own representation in central nervous system, and it shall be considered when planning and placing the implants.

Researches made by Fenar and Landuzi, 1986, showed that low jaw hinge point was around top of axis. Biomechanical bonds of lingual bone functioning as "a messenger" between dentofacial system, scull, shoulder girdle and visceral system directly impact the state and function of intermaxillary space and underlying parts of body. Age-related deformation of low jaw resulting in angle increase between body and branch and Spee arc circle radius causes compensatory reactions of locomotor system. Therefore, doctors should take into account biomechanical bonds of locomotor system and dentofacial system in rehabilitation of stomatological patient.

The change of occlusion as a result of low-quality restoration, prosthesis, bruxism, dental abrasion and odontectomy leads to changes in masticatory muscles function included in muscular-facial bonds coming from foot and resulting in compensatory reactions.

When planning implant placement and at further prosthesis there should be considered posturological status of a patient. For rehabilitation it is important to identify the body type – front, back, feet state and function, compensatory mechanisms of locomotor system at all levels in statics and dynamics. Studies showed that a certain postural type corresponded to an Angle class. Therefore, at rehabilitation of intermaxillary space all locomotor system is required to be corrected to create optimal occlusion. It is very important to carry out correction and reprogramming of muscles of all locomotor system including maxillofacial area and provide optimal jaw relation for the purpose to create optimal individual occlusive surface.

One way to solve these problems is pre-operative preparation and post-operative rehabilitation of a patient using manual medicine techniques, such as osteopathy, kinesiology, and podology. In our clinic we developed a complex of intermaxillary space preparation using techniques of osteopathy, kinesiology, podology to optimize the locomotor system.

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PLASTIC OPERATIONS AND NEW APPROACHES OF RECONSTRUCTION OF THE MAMMARY GLAND

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Due to mammography, the number of patients with «small» forms of a cancer at which «classical» removal of all fabrics of a breast in many cases is "superfluous" operation sharply

increases. Working out of new technologies of diagnostics possibilities to carry out the plastic operations substituting defect of a breast by own fabrics or its reconstruction implants have led. The set of means of reconstruction of a breast from which in the practice we used the TRAM-rag, toracodorsal, the big gland after radical resections of a mammary gland, toracodorsal in a combination to the big gland and-or artificial implants Is offered.

The work purpose: to make an assessment of efficacy of results of a new method in comparison with traditional methods of a plasticity of a mammary gland.

Reconstruction of a mammary gland after radical mastectomy us is used by the TRAM-rag at the circumscribed number of patients (13 women) on a feeding vascular leg. For preventive maintenance of hernias of belly wall on aponeurosis in all cases sewed the polypropylene grid. Complications from belly wall it was not observed. At the same time in one case there has come a necrosis of the grafted fabrics forming a mammary gland at the expense of insufficient blood supply.

Toracodorsal rag routinely use in respect of a combination with silicone artificial limbs. However it is represented to us that indications for toracodorsal a method can be considerably amplate: after radical resections of a breast when it is required to balance volumes of mammary glands, after performance of full or subtotal removal of a breast with completion by two histic components, in particular, toracodorsal a rag and the big gland mobilised and held through the tunnel at a laparoscopy. Last method is developed and implanted in our clinic (the Priority demand for the invention No 20012129411 from 11.07.12 years).

The mammary gland reconstruction, including «the big gland + toracodorsal rag» carried out two brigades. By the end of end mastectomy made a video laparoscopy. Under laporoscopic control through bottom edge postmastectomic wounds below a costal arch on 2 sm manufactured a crosswise cut aponeurosis. In a belly lumen introduced the device for circular suturing guts (without brackets) as the powerful and convenient tool for turning abdominal wall into “roll” and its deducing on chest wall. Abdominal wall twisted in “roll” and raised to forward belly wall, pulling the leaves of a peritoneum bound to a cross colon. The last easily made cuts, and pots coagulated, using device “Garmonica”. As a result of abdominal wall have mobilised on all extent from a cross colon to the big curvature of a stomach. Then, if the right mammary gland have mobilised left edge abdominal wall at the big curvature of a stomach, if left have mobilised right edge abdominal wall also with device “Garmonica” application is amazed.

In our opinion, this method is more simple, is reliable, reduces duration lymphorrhoe for the account draining functions and a good vascularisation of the big gland. The special indications the yielded method has at the positive estrogen and progesterone receptors at which it is shown simultaneous laporoscopic ovaryectomy.

Abdominal wall creates not only missing volume of a mammary gland, but also represents unique plastic material for a vascularization and drainage to lymphatic fluid (the centre volume has compounded 748,4±20,0 ml) at centre quantity of days 6,0±1,3.

Table 1. The duration characteristic chylorrhea and stay of patients in a hospital

depending on use of a stuff for a plasticity

Character of operative intervention	Number	Chylorrhea		Centre stay days
		2 weeks and less	More 2 weeks	
RRB with plasticity TDR	15	8	7	9,3±2,5
mastectomy with plasticity TDR +abdominal wall	19	19	-	8,2±2,3
BRCA with a plasticity implant	22	18	4	12,3±3,4
In total	56	45	11	

The note: RRB – a radical resection of a breast (mammary gland); mastectomy – radical mastectomy; TDR – toracodorsal rag

At reconstruction of a mammary gland after mastectomy in a combination with abdominal wall as "sandwich" in all cases healing has come a primary tension. It is necessary to carry to method contraindications: tolerated before operation in the top floor of the belly lumen, bound to formation of adhesive process or removal abdominal wall; metachronic cancer of ovaries or other members.

All women subjected plastic by own fabrics are tracked from 3 till 5 and more years in the plan disease free survival rate taking into account DNA-flow cytometry parameters.

At 2 patients after a radical resection with plasticity toracodorsal rag later 3 and 4 years are revealed relapses of a cancer at 2 women in the remained fabric of a mammary gland. To one woman the repeated sectoral resection, and the second mastectomy in full is executed. In both cases the tumour had high proliferative activity (SPF> 5,0 %) and aneuploidy in this connection, by it is follow-up made chemotherapy in volume of 6 courses.

Thus, there is a wide spectrum of the procedures, allowing to carry out an individual choice of reconstruction of a mammary gland. The mean of reconstruction of mammary gland toracodorsal rag developed by us in a combination with abdominal wall as "sandwich" in all cases has allowed to reach volume opposite a mammary gland, to reduce duration chylorrhea and centre stay on a stationary cot on 4,1±1,3 day in comparison with a plasticity implants. In the presence of high proliferation (> 5,0%) and aneuploidy it is necessary for activity to begin treatment with chemotherapy.

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NEW APPROACH TO REMOVAL OF MINOR BREAST TUMORS

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Background. Programs for breast cancer screening allow to detect tumors in early stages, which can be treated with breast-conserving surgery or radical mastectomy with immediate or delayed breast reconstruction.

It is important to provide morphological verification of different radiological findings on mammograms. There are routine methods such as FNA (Fine Needle Aspiration) and core-biopsy. These methods are widely used, but up to 20% of results can be false-negative.

We worked out a device for performing cryolumpectomy, a new method for morphological assessment and treatment of breast tumors and tumor-like processes in the breast.

Objective. The purpose of this investigation is to compare effectiveness of cryolumpectomy with other methods of breast biopsy.

Results. Different methods of biopsy of non-palpable breast masses were compared (Table 1).

	Type of biopsy				
	US-guided FNA		Core-biopsy > 1cm	Vacuum biopsy	Cryobiopsy
	< 1 cm	> 1cm			
Quantity	31	41	32	11	41
Positive	19	28	25	7	2
Negative	7	4	4	3	39
False-negative	5	4	3	1	0
False-positive	1	1	0	0	0
Sensitivity, %	79,4	93,3	89,3	87,5	100,0
Specifity, %	87,5	96,5	100,0	100,0	100,0
Accuracy, %	66,6	78,0	90,6	90,9	100,0

The most simple method is US-guided FNA, but results of cytological investigation can't be a reliable characteristic of pathological changes in the breast. Sensitivity and specificity rates of this test are low (79.4% and 87.5%). Core-biopsy is more accurate (90,6%), but considering increasing requirement to perform surgical procedures (breast resection) for removal of the pathological focus, we introduce a new method of cryolumpectomy.

The first step is US-guided determination of skin projection of tumor or tumor-like process. General anesthesia was used to perform 15-20 mm skin incision and insertion of device for cryolumpectomy. Cryoprobe was conducted to the focus and "ERBE cryo6" provided decreasing of the temperature to -130C. After the "iceball" was formed special convex knives excise it using diathermocoagulation. Urgent morphological investigation is essential. In case of malignant tumor (breast cancer), margins status should be assessed.

41 patient were treated with cryolumpectomy. In all cases tumors were excised successfully. In 1 patient carcinoma in situ was diagnosed and one patient had invasive ductal carcinoma (required to perform wide excision to achieve clear margins and axillary lymphodissection).

Conclusion. Cryolumpectomy can be recommended as effective and safe method of morphological assessment and treatment of breast tumors. Rates of sensitivity, specificity and accuracy can reach 100% using this method.

O.B. Chertukhina

CRITERIA OF QUALITY ASSESSMENT OF MEDICAL AID

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In regard to the new law "About fundamentals of health protection of the citizens in the Russian Federation" [1] there was a chance in the approach towards the quality assessment of medical aid. The law now includes a requirement for the obligatory implementation of medical aid standards. Furthermore, quality criteria for each medical profile have to be developed on the basis of standards and methods of medical aid.

The following statements were introduced during the development process of criteria of quality assessment of medical aid in different countries: minimization of mistakes and optimum use of financial resources as well as obligatory standardization of medical aid processes. The most objective (and direct) criteria of the quality assessment of medical aid remains the condition of the patient (and his life quality).

The analysis of various factors which influence the quality assessment of medical aid makes it possible to put them into two large groups. The first group only unites criteria which characterize the medical institution, its staff, material resources etc. In spite of their importance, these criteria must be used during the complex quality assessment of medical aid. However, during the quality assessment of a specific medical aid, they must rather be treated as information and not as a quality assessment criterion.

The criteria of the second group are more important for the solution of the problem of quality requirements. These criteria must include the characteristics of the medical aid itself and its results. The quality assessment of medical aid in this case includes both the subjective component, i.e. how the patient perceives the process and the result of aid, and the objective component, i.e. the qualification of the doctor, the compliance with the diagnostics and treatment technique, the result of medical aid in regard to the patient's health etc.

The assessment of medical aid is carried out at different levels, e.g. country, region and individual medical institutions. Therefore, it leads to various assessment criteria at different levels. For example, the criteria of quality assessment of medical aid at the national level may include demographic criteria, data about the disease and other report data of medical institutions.

Conclusion. It is necessary to note that today there is an urgent necessity to create a unified approach towards the assessment of medical aid based on conventional principles, criteria and parameters, which, in their turn, have to be included into professional standards and the law.

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FEATURES OF IMMUNOCITES INTERACTION IN PVH INFECCHIONS

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[Introduction] Despite the huge number of studies on PVH infection, the development of PVH prevention in women of different age groups, the issue of early detection of carcinogenesis in the structures of the female reproductive system have not been solved yet. Moreover, 98% spontaneously recover without treatment PVH - infection suggest some speculative to get vaccinated, and the lack of comprehensive evidence that certain strains are more common against cancer of the cervix is more pathogenic than others. Not resolved the issue, on which the depth of contamination in the epithelial layer of the virus. Given that about 30 percent of women are infected and have symptoms of the virus - genital warts, the relevance of the study of mucosal immune homeostasis of the cervix is extremely high.

The purpose of the study. Our research is devoted to the study of immune homeostasis mucous membrane of the cervix of women and the interaction of cells with different cluster immune phagocytic level of differentiation in the transition zone of stratified squamous epithelium of the cervix in a single-layer cylindrical.

[Methods] The paper material used mucous membrane of the cervix in women aged 18 to 78 years. For clinical and patient consent is extracted material lining the cervix against papilloma warts. Additionally performed PCR-reaction to the identification and proof of strains of HPV. Immunohistochemistry to detect CD4, CD8, CD10, CD68, CD163, CD204 made phenotyping of immune cells and analyzed their quantitative relations, especially the topography of immune cells in PVH. Studied for comparison composition and topography immunocytes with PVH human skin. Analysis of the results was performed using a microscope Olympus BX51, illustrations derived from the digital camera CD x 25, the statistical treatment of the material is produced using proprietary software by Olympus.

[Results and discussion] We found that in the lamina propria mucosa of the cervical canal and papillary dermis identified CD phenotypes: CD4, CD8, CD10, CD68, CD163, CD204. We observed that infection with papilloma CD68 antigen presenting cells are identified in large numbers only in the lamina propria of the mucous membrane, and completely absent in the epithelial plate. This indicates that the papilloma infection one of

the key moments in the pathogenesis of dysgenesis and disruption recovery reservoir may be a perversion antigen presentation and subsequent immune cell interactions.

Conclusion. The mucous membrane of the cervix and the human skin with PVH violation stroke physiological regulation and the appearance of growths in the form of warts and genital warts due to a violation of antigen presentation CD68, their position in the underlying epithelium, connective tissue and the complete lack of epithelial layers.

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TONGUE STIMULATION AT INFANTILE AUTISM

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Today medical support to the children with autism moves forward from the later age to earlier one (to the age of 1,5 - 2,5), is enriched not only at the expense of application of psychotropic preparations, but also various physiotherapeutic and general health-improving procedures. Among the last ones pneumomassage, game kinesitherapy, Tomatis's method, dolphin-, canine - and hyppotherapy and a diet are applied. All these methods promote sensory integration and the entrance of the child-autist in the micro- and macrosociety.

Unexpectedly in recent years the interest of parents and doctors to electrical treatment of children-autists increased. The history of use of electrostimulation in treatment of children goes back to the middle of the 20th century when the method of electrodream was very popular in the USSR. It is necessary to tell that by today this method was forgotten in boundary psychiatry, but it was being applied in children's psychiatry for a long time until the devices didn't disappear yet.

The return of electrotreatment to children's psychiatry happened thanks to researches A.M. Sheliakina and the coauthors (1993-2007) who have applied micro-polarization (tDCS) in treatment of mental development retardation at children, and also at the organic brain affection. Not only in Russia, but also in Ukraine this method is applied rather widely though it is necessary to admit that substantiality of its efficiency wasn't studied yet.

Our attention was drawn by the works of the known neurosurgeon Paul Bach-y-Rita who in the 60th years of the 20th century has created the BrainPort device which main function was the creation of the tactile images on the tongue. Presently Y.P. Danilov (2006, 2007), using this device, carried out electrostimulation of the various zones of the tongue of the patients with the central and peripheral vestibulopathy. In our hospital since 2012 the children with autism and speech development retardation are applied transcranial direct current stimulation (tDCS), or the tongue micropolarization, placing an active electrode on the child's tongue. Passive electrodes are taken into the mastoidal and other areas of the head.

The first results show that efficiency of this method significantly increases in comparison

with the traditional therapy. The children's signs of motor alalia are gradually overcome, they become more sociable, more cheerful; perceive the information better, game activity becomes more complicated.

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ABOUT GENESIS OF THE ADVERSE IMPACT OF SINISTRAL OF EPILEPSY OF CHILDREN AND ADOLESCENTS

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It was detected that 184 children and adolescents who are ill with epilepsy, sinisterly (21.7%) is 4,5 times as large than 1093 children and adolescents in the control studies (4,8%) (p<0,001). The frequency of these patients of left-handedness (8.7%) and ambidexterity (13.0%) increased respectively in 3.2 and 6.2 times compared to the control group (2.7 and 2,1%) (p< 0.01). Sinisterly of 101 boys (23.8%) and 83 girls (19.3%) suffered with epilepsy, was observed at 3.8 and 6.0 times higher than that of 556 boys (6.3%) and 537 girls (3.2%) in the control groups (p <0,001). 4.This is mainly due to an increase of 4.0 and 10.5 times the frequency of ambidexterity in groups of boys (10.9%) and of girls (15.7%) of patients with epilepsy compared with control groups (p<0,05).

Sinisterly of frequency 65 patients with progredient chronic epilepsy (29.2%) has a pronounced tendency to increase (1.7 times) in comparison with 119 patients with a relatively benign course (17,6%). Ambidexterity of patients with progredient chronic epilepsy (21.5%) had in 2.6 times higher than the control group of patients (8.4%) (p<0,05). Patients with progredient chronic epilepsy have frequency of organic brain lesions, abortion pregnant with their maternal and prenatal hazards higher than that of patients with a relatively benign course of the disease.

Handedness is inherited as a monogenic trait. Homozygous condition by a dominant and recessive genes is determined by the right-handedness (RR) and left-handedness (LL). Ambidexterity is defined by heterozygous genotype (RL). Increase of the frequency of the heterozygote genotype penetrance ambidexterity (RL) of these patients contributes to exogenous hazards and sexual dimorphism.

Thus, prenatal and perinatal exogenous hazards, genotypic characteristics associated with sexual dimorphism, increase penetrance heterozygous genotype ambidexterity. Features functional asymmetry of the hemispheres of the brain, associated with left-handedness and ambidexterity, and exogenous hazard ability exist an increased incidence of epilepsy and its progredients courses.

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THE PRIMARY ECHINOCOCCOSIS OF THE LIVER: THE CHOICE OF THE VOLUME OF SURGERY

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The purpose of the research work - to analyze the effect of modern technologies on the choice of operation volume by the primary echinococcosis of the liver.

Clinical content. The research is devoted to the analysis of the results of treatment of 88 patients with the primary liver echinococcosis. In order to improve treatment outcomes and to evaluate the assessment of the modern surgical technologies for the short and long-term outcomes, patients were divided into two groups: control and basic. Control group included 43 patients with the primary liver echinococcosis, basic group consisted of 45 patients. The basis of the division into groups is the introduction of modern technologies into the practice of the liver surgery: ultrasound destructor-aspirator «CUSA Excel-8», ultrasound scalpel «Ultracision», electrothermal apparatus «LigaSure», haemostatic cover «Tachocomb», surgical scalpel

«C-350RCH Alligator» with argon-enhanced coagulator and intraoperative ultrasound navigation with using the apparatus «ProFocus», which allowed us to change the tactical approaches to the selection of the operation volume, preferring pericystectomy and liver resection. The distribution of patients with the primary liver echinococcosis was statistically comparable ($p > 0.05$) in both groups for all parameters.

Results. Most patients of the control group had closed echinococcectomy, it was made in 53.5% of cases. In the case of festering cysts used open echinococcectomy, it took place in 4.6% of cases. The share of radical operations (ideal echinococcectomy, total pericystectomy and liver resection) was 16.3%.The partial pericystectomy was perfomed in 20.9% of cases, when it was technical impossible to make total pericystectomy because of the presence of only traditional intraoperative technologies and subjective evaluation of a possible connection between the fibrous tunic and vascular-secretory elements.

The technical aspects of the operations in the basic group are standardized. The capsule of the liver was dissected by ultrasound scalpel «Ultracision»; section of the liver parenchyma was performed with using of ultrasound destructor aspirator «CUSA Excel-8», followed by brewing of skeletal vessels and ducts by electrothermal apparatus for "welding" tubular structures «LigaSure» or clipping. The wound surface of the liver was treated by argon-enhanced coagulator and sheltered by «Tachocomb» plates. Patients of the basic group had: closed echinococcectomy - in 15.6% of all cases, and total pericystectomy was perfomed at 31.1%, partial pericystectomy - at 22.2%, the ideal echinococcectomy - at 8.9%, liver resection - in 22.2% of cases.

Conclusion. Thus, the experience of the surgical hepatology in combination with modern surgical and diagnostic technologies allowed to optimize the problems of intraoperative surgical approaches: to increase the share of the radical surgical operations from 46.6% to 75.5%, including operations without opening of the lumen of the cyst

(resection and ideal echinococcectomy) in patients with the primary liver echinococcosis, regardless of the parasite life phases and complications from 11.6% to 31 , 1%, and completely deny from the execution of open echinococcectomy. We consider that resection of the liver with the primary echinococcosis is indicated for the boundary location of the cysts, the localization of the cysts in the left lateral sector, as well as in cases of the extensive lesion by giant or multilocular cyst of the liver within the anatomical share or sector.

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CELL CYCLE INHIBITORS IN THE PATHOGENESIS OF PSORIASIS AND COMPLEX THERAPY OF THE REVEALED CHANGES

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Psoriasis is recurrent dermatosis, whose share in the total structure of skin diseases equals 5-7%. The etiology of psoriasis still remains unclear, his pathogenesis being actively studied by many scientists.

The treatment of psoriasis is a difficult task. Particularly interesting are the works dealing with the study of oncomarkers in psoriasis. There are isolated reports that the affected skin of psoriatic patients develops an increased expression of nuclear proto-oncogenes mys and fos to a greater degree than that of membrane abl and Ki-ras. It has been revealed that the mitotic activity of cells is characterized by participation of genes, which encode receptors on the cell membrane and take part in the transmission of mitotic regulation signals.

Purpose. Study of the state of cell cycle inhibitor metabolism in the pathogenesis of psoriasis and assessment of the efficacy of pathogenetic mechanisms of therapy.

In our opinion, Glutoxim is one of promising drugs. This represents a new class of pharmaceutical substances, thiopoetins, and produces unique biological effects owing to its modulating influence on intracellular processes of thiol exchange, the latter playing an important part in the regulation of metabolic processes in cells and tissues. The effect of the drug is realized via depression of redox potential in transformed cells. It is shown that the redox potential depression can cause apoptosis owing to both an increase of the half lifetime of p53 protein and with help of its influence on the cascade of phosphoprotein kinases of the Ras signalling pathway. Thus, Glutoxim produces its effect on cell immunity, normalizes cell metabolism and has cytoprotective effect.

Materials and methods. The study involved 120 patients with psoriasis. The basic group included 100 patients, of them: 50 cases with the stationary stage and 50 with the progressive one. The control group consisted of patients (50 cases) with the same diagnoses.

When cytological characteristics of hyperproliferative processes on the level of cell cycle inhibitors were studied, immunohistochemistry revealed a high expression of p16, p19, p21 and p53 proteins. In patients with the stationary stage of psoriasis their protein expression was somewhat lower than in the progressive stage. The conducted studies make it possible to state that the expression of cell cycle inhibitors in psoriasis increases.

Patients from the control group underwent standard therapy. Against this background, the basic group of patients received Glutoxim in the form of intramuscular injections of 1 % solution by 1 ml, No. 10.

The rates of the disease decline were assessed by the following signs: infiltration, erythema, oedema, esquamation, itching, excoriation.

Discussion. Against a background of the treatment of patients from the basic group, their itching significantly alleviated; the patients developed decreases of erythema and skin infiltration in their lesion foci as early as on the 5th day of therapy, and on the 15th day of integrated therapy their infiltration and erythema regressed almost completely. After the end of therapy, secondary pigmentation remained in the foci. The duration of the in-patient staying was: in the control group of patients – 25 ± 0.2 bed days; in the basic group of patients, whose course of treatment included Glutoxim – 20 ± 0.2 bed days.

Conclusions. Thus, the use of Glutoxim in integrated therapy of patients with psoriasis normalizes expression of p16, p19, p21 and p53 proteins, accelerates regression of psoriatic eruptions, and reduces the duration of the in-patient staying of patients.

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MODERN ASPECTS OF THE CLINICAL MANIFESTATIONS OF LEPROSY

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Leprosy - a chronic infectious granulomatous disease of the skin caused by Mycobacterium leprae. It is characterized by a long incubation period, a variety of clinical manifestations, with involvement in the pathological process of many organs and systems. In the formation and progress of the disease the main role belongs to the susceptibility of the microorganism, due to the level of cellular immunity against the pathogen.

Most people resistance to leprosy, and therefore the relative ease of transmission is combined with a relatively low incidence. In Russia, on the background of a significant reduction in morbidity and attrition of patients continues to record new cases of the disease and its recurrence. In the Russian Federation, at the beginning of 2013 is registered leprosy patients.

As with other infectious diseases, the diagnosis of leprosy, verified by laboratory studies,

namely the detection of Mycobacterium leprae in the scrapings from the nasal mucosa, skarifikatah the affected skin (painting on goal-Nilsson) and pathomorphological study. First, however, a clinician the diagnosis should be based primarily on morphological and functional parameters on patients.

The analysis of the vast literature on the description of the clinical manifestations of leprosy in the time of initial treatment of the patient to the doctor, shows that in recent years, the clinical picture of this dermatosis morphological manifestations in the skin have undergone major changes. These changes are not unique to this dermatosis and other acutely, chronically occurring disease of the skin. This variability of the clinical picture, many authors attribute to a variety of factors acting on the macro-organism. The most frequently discussed three main reasons for this adverse social and environmental factors that increase neuroendocrine and immunodeficiency, a genetic mutation of the pathogen.

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SOME ASPECTS OF SEPSIS IN PEDIATRIC CLINIC AND IN EXPERIMENTAL STUDY ON RABBITS

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At the present time huge interest of scientists and clinicians is focused on the problem of sepsis causing significant mortality. In this work a clinical-experimental study was carried out. The clinical part of work included 157 pediatric patients aged 0-12 years (newborns, infants , 3-7 and 7-12 years of age), admitted at Tbilisi State Medical University Pediatric Hospital in 2001 – 2005, with severe sepsis, septic shock and/or Multiple Organ Dysfunction Syndrome (MODS). Informed consent was obtained from the parents or supervisors of all involved patients. The relative risk of mortality in patients who received plasamapheresis with standard treatment of sepsis (82 patients), in comparison to patients who received standard treatment alone (75 patients) was determinated. Plasmapheresis was initiated within 3 hours after the diagnosis were established. This procedure performed using centrifugation technique. Catheterization of femoral vein used for venous access. Extracorporeal circuit was constructed from single use parts at the patient bedside using aseptic technique. Heparin used for regional stabilization of blood in extracorporeal circuit. 40% of plasma was exchanged during single session. Sessions were repeated in 18 hours. So, during whole operation 120 % of body plasma was exchanged in 3 days. Fresh-frozen plasma was used as replacement fluid. Primary endpoint was intrahospital survival. Statistical Analysis performed using SPSS for windows v. 11.5. Summaries of numeric data are presented as Mean ±SD, categorical – by proportions and percents. Multiple

logistic regression was used to assess the effect of baseline variables on survival. Differences were considered significant at p values less than 0.05. Experimental part of work was carried out on 60 rabbits with sepsis caused by staphylococcus aureus and with sepsis of the mixed etiology, caused by simultaneous infection of animals by staphylococcus aureus and staphylococcus epidermidis: intravenous injection of staphylococcal toxin (0.06ml) has been performed, which after 48h was followed by intraperitoneal injection of bacterial culture. After having sacrificed the animals (on 9th, 10th, 13th, 14th and 17th days after bacterial contamination) morphological study of liver and spleen of the rabbits in dynamic of experimental staphylococcal sepsis were conducted using histological, morphometric and electron-microscopical techniques. Experiments complied with regulations concerning the use of animals for research purposes. Obtained data shows that plasmapheresis has an effective influence on treatment of pediatric patients with septic infection but expression degree of results differ each other in different age groups; all cause mortality rate was 37.8% (31/82) in consolidated plasmapheresis group and 54.7% (41/75) in control group. This represents relative risk of fatal outcome in plasmapheresis group of 0.69 and absolute risk reduction 16.9%. Relative risk of mortality associated with plasmapheresis was the lowest in newborn patients (Risk Ratio – 0.18). The morphological reaction of liver and spleen to the bacterial intoxication in dynamic of experimental staphylococcal sepsis were also established; the similar increasing changes like microcirculatory disturbances and dystrophic-necrotic changes were observed, expression degree of those differ each other a little in experimental sepsis of different ethyology. Comparative morphological study of stellate macrophages in different regions of the liver lobules of the rabbits in sepsis shows local peculiarities: higher expression of distrophic-necrotic changes of Kupffer cells in the centrilobular regions of the liver were observed. Increasing thrombohemorrhagic disorders of vessels and parenchyma of the liver and spleen were established. Noteworthy, that according to the literature data the endothelial injury, hemostasis disturbances and microcirculatory failure play key role in progression of septic process. Several recent works show efficacy of plasma exchange during thrombotic microangiopathies in pediatric patients - plasamapheresis could remove excessive cytokines and other pro- and anti-inflammatory mediators from blood and restore levels of deficient substances in case of using fresh-frozen plasma as replacement fluid.

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ADVANTAGES AND DISADVANTAGES OF BOLOGNA EDUCATION SYSTEM

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By the 40-50s of the twentieth century, Soviet medicine was exemplary and it has been the subject of a role model for many countries. In terms of total devastation of the war years the country has managed to improve the health of soldiers and return them to the

2-million-strong army.

The country has not known epidemics and science-based nutrition standards have saved the people from the total hunger even in conditions of crop failure.

The existing three levels system of medical care provided the continuity of treatment in all phases of medical care.

That was possible only in the presence of uniformity in training, both the performers and organizers.

We can confidently say that the existing system of medical training was the prototype of the Bologna system of education.

Based on these experiences we can try to give a preliminary assessment of the effectiveness of the Bologna system of higher medical training.

To the obvious merits of the Bologna system of education could be referred:

1. The uniformity of the educational process for each specific profession (in terms of volume and content);
2. The creation of optimal conditions for acquiring knowledge by students (initial solution of typical problems and examples with their subsequent complication);
3. The transferring all the difficulty of works in the field of basic research, as well as research and development activities to the universities.

The obvious disadvantages of the Bologna system of education are:

1. The emergence of new scientific results requires the introduction of simultaneous changes in the curricula of all the participants of the Bologna system of education, which leads to a sharp increase in the time of publication of the notice in scientific journals to inclusion it in the learning process;
2. The establishment of a uniform educational process requires a uniform system of teachers' payment. Hence, there is no incentive value in increasing knowledge of the teaching staff;
3. Due to the reduction of compulsory instruction time and increased independent training there is a lack of real control mechanism for efficient use of this time;
4. Establishing a fixed time allocated to various sections of the sciences (it leads to the failure of the knowledge on the part of students);
5. Accepted system of education system returns "egalitarianism" and inhibits the activity of the individual, both teachers and students;
6. Serious doubts remain that the Bologna system of "de facto" promotes migration of intelligence;
7. Bologna system for its implementation requires large, both one-time and ongoing costs, which excludes the full implementation of the Bologna system in countries with economies in transition;
8. Bologna education does not promote recovery of the intellectual potential of Ukraine (until 1991 - 40000 copyright applications a year).
9. It does not provide training of the highest qualifications.

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NEUTROPHIL EXTRACELLULAR DNA NETWORKS RESTRAIN GROWTH OF TUMOR CELLS

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In recent years in response to microbial and antimicrobial stimuli neutrophils were shown to actively generate web-like structures composed of nucleic acids and enzymes in the extracellular medium (Fuches T.A., Abed U. et al., 2007; Urban C.F., Reichard U. et al., 2006). It was noticed that extracellular DNA was distributed diffusely and in clusters in the paracancrosis area of breast carcinoma. It has been suggested that extracellular DNA is neutrophilic by origin and tumor cells stimulate the genesis of extracellular networks by neutrophils.

The objective of the study is to assess the viability and functional status of neutrophil granulocytes in contact with tumor cells in vitro.

A pure fraction of neutrophilic granulocytes (at concentration 5×10^6 cells/ml), isolated on a double density gradient (1.075-1.077 and 1.093-1.095 g/ml) of Ficoll-Urografin sterile solution (Pharmacia, Sweden; Schering, Germany) from donors' peripheral blood and the suspension of trypsinized continuous cell lines of tumor cells HEp-2 (human laryngeal epidermoid carcinoma) and RD (human rhabdomyosarcoma) which were cultured in α-MEM liquid medium with L-glutamine (Biolot) (at concentration 1×10^6 cells/ml) were applied in the experiment. Due to the co-incubation of neutrophils and tumor cells at 37°C for 30-60 minutes, oxygen-dependent metabolism was revealed to enhance greatly (NST-test) in neutrophils in 30 minutes, and the absence of neutrophilic granulocytes was recorded in an hour, only light green DNA neutrophils threads were visualized by staining of native preparation with methylene blue Evans Sytox Green fluorescent dyes, at the same time the morphology of the tumor cells did not change and there was a significant oxygen-dependent metabolism of tumor cells (NST-test).

To study the fixed preparation, the received suspension (100 ul) was placed on a glass slide, air-dried at a temperature of 22°C, fixed with 96% ethanol alcohol in 16-18 hours, and stained with Romanovsky-Giemsa dries. Microscopy has shown monolayer of tumor cells, neutrophils were not visualized; alsoa monolayer of tumor cells was noted to belimited to the strands of DNA neutrophils, some peripheral tumor cells were completely wrapped with strands of nuclear matter.

Thus, the experiment proved the neutrophils trapping the tumor cells to be activated

and die, forming networks of DNA strands, which are likely to limit the peripheral and tumor cell proliferation.

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STUDY OF ADJUSTMENT MECHANISMS ON VARIOUS STAGES OF ORTHODONTIC TREATMENT BASED ON CRUDE PROTEIN AND ORAL LIQUID ALBUMIN

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The widespread use of apparatus-based treatments in orthodontics makes it possible to resolve various issues related not only to improper development and interrelation of jaw bones, yet also issues implying disturbed position of individual teeth, at the same time causing an optimal impact on jaw growth at certain periods of the dentoalveolar evolution.

A comprehensive assessment of crude protein (CP) and albumin in non-stimulated oral liquid (NOL) would allow an objective evaluation of the adjustment mechanisms efficiency after applying orthodontic devices, while the findings could be of importance to dentistry.

The aim – to assess – through the biochemical indices of crude protein and albumin – the impact that orthodontic appliances have on the adjustment capacity of oral liquid.

The biochemical study of NOL crude protein and albumin was done in 73 children aged 4,5–8 yrs demonstrating average and good oral hygiene. The patients were divided into a control group and three major groups under out-patient control. The control group included 19 children with orthognathic occlusion and no dentition defect; these children went through regular examination and did not need orthodontic treatment. Group 1 included 18 patients with abnormal teeth position and no dentition defect. They had 23 orthodontic appliances made for them of base rapid-hardening cold-cured polymethylmethacrylate plastic (PMMA) «Triplex cold». Group 2 was 19 patients with abnormal teeth position and no dentition defect with 22 base hot-polymerization PMMA plastic devices «Characterized Lucitone». Group 3 included 17 patients with abnormal teeth position and no dentition defect, where they had 21 orthodontic devices prepared for them made of light-cured base material «Versyo». The NOL samples were taken in a clinical setting, on an empty stomach, at 8–9 am, four times (prior to starting the treatment; 14 days after; 30 days after; 60 days after the start of the orthodontic treatment). The NOL samples were centrifuged on a biochemical analyzer CEYSIS (Bochringer Mannhein, Germany) with processed digital data obtained from the supernatant with control sets and calibrators produced by Roche Diagnostics (Switzerland).

An examination of the control group showed that the variability of the NOL CP index went between 0,79±0,08 and 0,83±0,09 μmol/l. The averaged NOL CP index (0,81±0,09 μmol/l) was taken as a conditional norm, which is an optimal reflection of its share in non-stimulated mixed saliva in children. The NOL CP index in Group 1 was: prior to the treatment – 0,68±0,02 μmol/l; after 14 days – 0,72±0,01 μmol/l; after 30 days – 0,97±0,01 μmol/l; after 60 days – 1,17±0,01 μmol/l. The NOL CP index in Group 2 was: prior to the treatment – 0,72±0,03 μmol/l; after 14 days – 0,68±0,02 μmol/l; after 30 days – 0,89±0,01 μmol/l; after 60 days – 1,03±0,01 μmol/l. The NOL CP index in Group 3 was: prior to the treatment – 0,71±0,03 μmol/l; after 14 days – 0,69±0,02 μmol/l; after 30 days – 0,83±0,01 μmol/l; after 60 days – 0,92±0,01 μmol/l. An analysis of the control group showed variations in NOL albumin between 0,59±0,1 and 0,63±0,1 μmol/l. The averaged NOL albumin index (0,61±0,1 μmol/l) was taken as a conditional norm, demonstrating its optimal content in children's non-stimulated mixed saliva. The NOL albumin index in Group 1 was: prior to the treatment - 0,78±0,09 μmol/l; after 14 days - 1,12±0,1 μmol/l; after 30 days - 1,23±0,1 μmol/l; after 60 days - 1,35±0,1 μmol/l. The NOL albumin index in Group 2 was: prior to the treatment – 0,76±0,09 μmol/l; after 14 days – 1,05±0,1 μmol/l; after 30 days – 1,13±0,1 μmol/l; after 60 days – 1,18±0,01 μmol/l. The NOL albumin index in Group 3 was: prior to the treatment – 0,75±0,09 μmol/l; after 14 days – 0,94±0,1 μmol/l; after 30 days – 1,03±0,1 μmol/l; after 60 days – 1,12±0,1 μmol/l.

A qualitative analysis of the NOL CP and albumin in the children after two months of the orthodontic treatment showed that the largest increase (72,1±2,87% – 73,1±2,89%) was found in the appliances manufactured from base rapid-hardening cold-cured plastic. The minimum value increase (29,6±1,17% – 49,3±1,94%) closest to the biochemical parameters in children with no dentoalveolar disorder was found in the base light-polymerization materials. Here we can suggest that the gradual increase in the NOL CP and albumin detected between Day 1 and Day 60 (the treatment involving base materials various in their cure types and chemical composition) was a sign of inflammation in the prosthetic bed tissues caused by the appliances.

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ADJUSTMENT TERMS IN ORTHODONTIC TREATMENT BY BIOCHEMICAL INDICES OF MIXED SALIVA ACTIVITY

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The issues related to taking blood from children as well as widespread transmissible diseases determine the relevance of the research into scientific argumentation for implementing newer non-invasive diagnostics in child dentistry.

Justified use of base materials for orthodontic appliances, based on an objective

evaluation of enzyme activity recovery in alanine aminotransferase (ALT) and aspartate aminotransferase (AST) of non-stimulated oral liquid (NOL) will contribute to homeostasis maintenance at the beginning of treatment, reduction of adjustment period, and optimal recovery of biochemical properties of mixed saliva.

The aim – to assess the adjustment period in case of orthodontic treatment with various base materials in children on the basis of mixed saliva enzyme activity biochemical normalization.

The research into the biochemical factors of NOL ALT and AST involved 86 children aged 4,5–8 yrs demonstrating average and good oral hygiene. The patients were divided into a control group and three major groups under out-patient control. The control group included 20 children with orthognathic occlusion and no dentition defect; these children went through regular examination and did not need orthodontic treatment. Group 1 included 22 patients with abnormal teeth position and no dentition defect. They had 26 orthodontic appliances made for them of base cold-cured polymethylmethacrylate (PMMA) «Vertex self curing». Group 2 was 23 patients with abnormal teeth position and no dentition defect with 28 base hot-polymerization PMMA plastic devices «Prothyl Hot». Group 3 included 21 patients with abnormal teeth position and no dentition defect, where they had 25 orthodontic devices prepared for them made of light-cured base material «Versyo». The NOL samples were taken in a clinical setting, on an empty stomach, at 8–9 am, four times (prior to starting the treatment; 14 days after; 30 days after; 60 days after the start of the orthodontic treatment). The NOL samples were centrifuged with processed digital data on the ALT and AST activity obtained from the supernatant on the StatFax 1904 plus spectrophotometer.

An examination of the control group showed that the variability of the NOL ALT index went between 2,31±0,09 and 2,37±0,10 IU/l. The averaged NOL ALT index (2,34±0,09 IU/l) was taken as a conditional norm, which is an optimal reflection of its share in non-stimulated mixed saliva in children. The NOL ALT index in Group 1 was: prior to the treatment – 2,42±0,11 IU/l; after 14 days – 4,33±0,21 IU/l; after 30 days – 3,95±0,19 IU/l; after 60 days – 3,11±0,15 IU/l. The NOL ALT index in Group 2 was: prior to the treatment – 2,37±0,11 IU/l; after 14 days – 4,06±0,20 IU/l; after 30 days – 3,68±0,18 IU/l; after 60 days – 2,90±0,14 IU/l. The NOL ALT index in Group 3 was: prior to the treatment – 2,45±0,11 IU/l; after 14 days – 3,92±0,19 IU/l; after 30 days – 3,39±0,16 IU/l; after 60 days – 2,66±0,12 IU/l. The variability of the NOL AST index in the control group went between 8,23±0,39 and 9,33±0,43 IU/l. The averaged NOL AST index (8,78±0,39 IU/l) was taken as a conditional norm, demonstrating the optimal AST content in children's non-stimulated mixed saliva. The NOL AST index in Group 1 was: prior to the treatment – 9,70±0,47 IU/l; after 14 days – 19,07±0,94 IU/l; after 30 days – 15,57±0,74 IU/l; after 60 days – 11,18±0,52 IU/l. The NOL AST index in Group 2 was: prior to the treatment – 9,54±0,46 IU/l; after 14 days – 17,86±0,81 IU/l; after 30 days – 13,29±0,62 IU/l; after 60 days – 10,47±0,49 IU/l. The NOL AST index in Group 3 was: prior to the treatment – 9,83±0,48 IU/l; after 14 days – 15,13±0,75 IU/l; after 30

days – 11,88±0,58 IU/l; after 60 days – 10,04±0,47 IU/l.

An analysis of the NOL ALT and AST qualitative indices in the children of the examined groups after two months of the orthodontic treatment showed that the largest gap between the original and final indices (15,26±0,75% – 28,51±1,41%) was found in the appliances manufactured from base rapid-hardening cold-cured plastic. The linear-volume vertical basis alterations related to significant polymerization shrinkage cause elastic inner tension in case of mismatch between the prosthesis shape and the prosthetic bed tissues. This may lead to prosthesis pressure points as well as disturbances in compensatory mechanisms due to long-term adjustment to excessive loads. The minimum gap (2,14±0,11% – 8,57%±0,43%) closest to the biochemical parameters in children with no dentoalveolar disorder was found in the light-polymerization base materials. This is seen from the good congruence of orthodontic appliances and the prosthetic bed tissues due to the special features in the materials structure and the manufacturing technologies.

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EVALUATION OF BASE MATERIALS COLONIZATION FOR ORTHODONTIC APPLIANCES IN CHILDREN AND ADOLESCENTS

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Increased efficiency with optimized time of instrumental treatment, significantly higher requirements to the quality of orthodontic appliances, remote clinical results forecast while ensuring optimal conditions for maintaining the oral cavity homeostasis determined the relevance of further research into individual prescription of dental products in orthodontics. It has been proven and confirmed through clinical tests that improved physical and mechanical, technological and biological properties in base materials can significantly reduce the side effects as well as toxic and allergic impact of removable orthodontic appliances.

The research into the qualitative and quantitative composition of the microflora from the base materials involved 43 children and adolescents who demonstrated average and good oral hygiene with 49 orthodontic appliances produced for them, namely: 14 appliances made of base cold-cured polymethylmethacrylate (PMMA) plastic devices «Triplex cold»; 17 base hot-polymerization PMMA plastic devices «Prothyl Hot»; 18 base light-cured devices «Triad Denture Base».

A standardized cylindrical drill was used to get the sample cuttings (weight – 50,0±1,0 mg) for studying the microbial colonization in the deeper (1,0 mm) layers of the orthodontic appliances. Prior to sampling the area was thoroughly cleaned with a sterile cotton wad soaked in isotonic sodium chloride and further washed with sterile distilled water. Within 1 hour the samples were delivered to the laboratory and dissolved in isotonic

sodium chloride down to 10^{-2}, 10^{-4}. Inoculation onto solid culture media was performed from each of the solutions following the conventional methods according to the current applicable regulations on microbiology. For fungi selection the microorganism cultivation was done successively under aerobic, anaerobic, and microaerophilic conditions in an incubator: for 24 hours at 37°C, and for 48 hours – at 25–30°C.

In the aerobic and anaerobic microflora comprehensive studies the inoculations were performed using domestic growth media as well as the media produced by the company BBL® (USA): vitelline-salt agar to select Staphylococci, Endo's medium for Enterobacteriaceae, Sabouraud Dextrose Agar (BBL®) to culture yeast-like fungi, Schaedler Agar (BBL®) with blood and MRS Agar (BBL®) to select anaerobic bacteria, modernized Columbia Agar (BBL®) with blood for the cultivation of H. pylori.

Enterobacteriaceae identification was done with the identification systems Enterotube II and Oxi/Ferm Tube (BBL®), while the fungi were identified with the Mycotube (BBL®). The anaerobic bacteria identification was performed with the API systems (Bio Mérieux, (France)) (API 20 A), Streptococci – with the API 20 Strept, and Staphylococci – with the API 20 Staph. Schaedler Agar and Columbia Agar were used to study the hemolytic activity, and vitelline-salt agar – to study the lecithinase activity. Besides, the ability of bacteria to inactivate lysozyme, produce catalase, ribonuclease, caseinase, and urease was also studied. In a quantitative study of bacteria and evaluation of colonization degrees (based on the number of colonies grown in primary inoculations) the content of each bacteria species per 1 cm^2 of adhesive films for the sampling (CFU/cm^2) were measured.

The identification of the species colonizing the surface of orthodontic appliances from cold-cured base plastics showed 16 genera of microorganisms: Staphylococcus, Streptococcus, Lactobacillus, Bacillus, Peptococcus, Peptostreptococcus, Porfiromonas, Bifidobacterium, Veillonella, Micrococcus, Leptotrichium, Fusobacterium, Prevotella, Actinomyces, yeast-like fungi of the Candida genus, and Enterobacteriaceae, five of which may be of etiological importance (Staphylococcus, Bacillus, Peptostreptococcus, Fusobacterium, Prevotella). In the depth of the cold-cured plastics four kinds of opportunistic or etiologically important bacteria with lecithinase, ribonuclease, and proteolytic activity were detected.

The study of the surface microbial contamination of the orthodontic appliances made of hot polymerization base materials showed 14 genera of microorganisms: Staphylococcus, Streptococcus, Lactobacillus, Bacillus, Peptococcus, Peptostreptococcus, Porfiromonas, Bifidobacterium, Veillonella, Micrococcus, Leptotrichium, Actinomyces, yeast-like fungi of the genus Candida and Enterobacteriaceae, including three etiologically significant (Staphylococcus, Bacillus, and Peptostreptococcus). In the depth of hot-cured plastic three kinds of opportunistic bacteria with lecithinase, ribonuclease, and proteolytic activity were found.

The study of surface microbial contamination of the orthodontic appliances made of light-cured base materials identified 7 genera of microorganisms: Staphylococcus, Lactobacillus, Bacillus, Peptococcus, Peptostreptococcus, yeast-like fungi of the genus

Candida and Enterobacteriaceae; there were not any pathogens found. In the depth of a light-cured plastic prosthesis there was only one etiologically significant genus of bacteria with ribonuclease and proteolytic activity.

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STUDY OF THE NONSPECIFIC RESISTANCE LEVEL OF ORAL MUCOSA TO ASSESS THE EFFECTIVENESS OF ADAPTATION MECHANISMS OF MIXED SALIVA AT THE STAGE OF APPARATUS TREATMENT IN CHILDREN

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Currently, the issues of improving the biophysical studies, determining physiological parameters of unstimulated oral fluid (UOF) at the stages of orthodontic treatment, are of considerable interest. It is found that at the initial stages of apparatus treatment microcirculation in tissues of periodontal complex deteriorates, local and humoral immunity is disrupted, the equilibrium state in the enamel / saliva system changes, tooth decay increases and gingivitis develops. Determination of the level of non-specific resistance of oral mucosa (OM) by epithelial cells adhesion and their changes in the stages of orthodontic treatment will objectively assess the effectiveness of adaptation mechanisms of mixed saliva, having obtained significant results for children's dentistry.

Determination of microorganisms adsorption reaction (MAR) on the surface of OM epithelial cells was performed in 65 children aged from 4.5 to 8 with satisfactory and good oral hygiene characteristics. Patients were divided into one control group and three groups of follow-up. The control group included 15 children with orthognatic bite without defects of dentition, registered at preventive examination and not requiring orthodontic treatment. The first group included 17 patients with abnormalities of the teeth without defects of dentition, for whom 19 orthodontic appliances were made of fast curing base plastic material of cold cure on the basis of polymethylmethacrylate (PMMA) «Protakril-M». The second group included 16 patients with abnormalities of the teeth position without defects of dentition, for whom 18 orthodontic appliances were made of base plastic of hot polymerization on the basis of PMMA «Prothyl Hot». The third group consisted of 17 patients with abnormalities of the teeth without defects of dentition, for which 20 orthodontic appliances were made of the base material «Triad» of light curing. Collection of UOF was performed at the clinic on an empty stomach from 8 a.m. to 9 a.m., four times (before treatment, 14 days, 30 days, 60 days after the start of orthodontic treatment). Definition of MAR, demonstrating the non-specific resistance of OM was performed by counting the number of bacteria adsorbed on the surface of each of the epithelial cells (the calculation was performed per 100

cells) by the method of Belenchuk T.A. modified by Tokmakova S.I. et al. According to this technique, smears-imprints of epithelial cells were examined under a light microscope «Levenhuk 320» (Russia) in the transmitted light by a light field method at low magnification and the number of microorganisms adsorbed on the surface of OM epithelial cells was counted.

Comparative evaluation of the survey in the control group allows determining the prevalence of a positive MAR on the surface of OM epithelial cells (more than 70% of epithelial cells in a smear-imprint). Fluctuations in the positive MAR range from 73,1 ± 3,7 to 74,9 ± 3,6%; negative MAR – from 25,1 ± 1,2 to 26,9 ± 1,2%. The average value of the positive MAR (74,0 ± 3,6%) and negative MAR (26,0 ± 1,2%) of the epithelial cells in a smear-imprint was taken as the conventional standard that objectively reflects adhesive bacterial activity of the OM epithelial cells in children. MAR on the surface of OM epithelial cells in the observation group 1: before treatment - «+» - 72,7 ± 3,5%; «–» - 27,3 ± 1,3%; in 14 days - «+» - 63,6 ± 3,1%; «–» - 36,4 ± 1,7%; in 30 days - «+» - 66,1 ± 3,2%; «–» - 33,9 ± 1,6 %; after 60 days - «+» - 71,2 ± 3,4%; «–» - 28,8 ± 1,4%. MAR on the surface of OM epithelial cells in the 2nd group of observations: before treatment - «+» - 73,3 ± 3,4%; «–» - 26,7 ± 1,2%; in 14 days - «+»- 67,1 ± 3,1%;«–»- 32,9 ± 1,6%; in 30 days -« + »- 68,8 ± 3,2;« – »- 31,2 ± 1, 5%; in 60 days - «+» - 72,3 ± 3,4%; «–» - 27,7 ± 1,2%. MAR on the surface of OM epithelial cells in the third group of observations: before treatment - «+» - 73,6 ± 3,3%; «–» - 26,4 ± 1,3%; in 14 days - «+» - 68,6 ± 3,2%; «–» - 31,4 ± 1,4%; in 30 days - «+» - 70,7 ± 3,3%; «–» - 29,3 ± 1,4 %; after 60 days - «+» - 74,1 ± 3,4%; «–» - 25,9 ± 1,2%.

The most significant decrease in positive MAR (14,1 ± 0,7%) at expressed negative increase of MAR (40,0 ± 1,9%) is observed when using the apparatus made of the base plastics of cold cure. Minimum reduction of positive MAR (7,3 ± 0,4%) with the lest increase of the negative RAM (20,7 ± 1,1%), consistent with the biophysical indicators of children without dentofacial anomalies, is provided by base materials of light polymerization. In our opinion, the predictive value of assessment of nonspecific resistance of OM by counting the number of bacteria adsorbed on the surface of epithelial cells, determines expediency of further research in this direction. Reduction of the threshold value (70%) of OM epithelial cells adhesion activity is likely to cause disruption of the normal microbiocenosis of the oral cavity. This increases the risk of inflammatory or allergic reactions of the prosthetic bed tissue, reduces compensatory ability of microecological system, reduces the effectiveness of sanitation mechanisms, disturbs physiological ways of maintaining homeostasis, leading, eventually, to the development of dysbacteriosis. Prolonged and progressive reduction in adhesion of OM epithelial cells gives an indication of a substantial reduction in efficiency of digestive, regulatory, mineralizing, excretory, protective and buffer functions of saliva.

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ESTIMATION OF MIXED SALIVA MICROCRYSTALLIZATION FOR ASSESSMENT OF ADAPTATION PERIOD ON THE STAGES OF ORTHODONTIC TREATMENT IN CHILDREN

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In the recent years, oral fluid is increasingly being used, along with other body fluids, as an indicator of the state of the body. Numerous studies of the diagnostic potential of saliva determined the spectrum of use of its indices as markers of a number of somatic diseases. Unstimulated oral fluid (UOF) draws the attention of researchers to its accessibility to produce practically unlimited quantity under physiological conditions. Estimation of mixed saliva microcrystallization will objectively assess the effectiveness of adaptation mechanisms after the overlay of orthodontic appliances, having obtained the results meaningful for pediatric dentistry. Individual indications at the based selection of materials for orthodontic appliances will help to reduce adaptation during optimal restoring of UOF biophysical parameters.

UOF microcrystallization study was conducted in 58 children aged from 4.5 to 8 with satisfactory and good oral hygiene characteristics. Patients were divided into one control group and three follow-up groups. The control group included 14 children with orthognatic bite without defects of dentition, registered at preventive examination and not requiring orthodontic treatment. The first group included 15 patients with abnormalities of the teeth without defects of dentition, for whom 18 orthodontic appliances were made of fast curing base plastic material of cold cure on the basis of polymethylmethacrylate (PMMA) «Rebaron». The second group included 14 patients with abnormalities of the teeth position without defects of dentition, for whom 16 orthodontic appliances were made of base plastic of hot polymerization on the basis of PMMA «ProBase Hot». The third group consisted of 15 patients with abnormalities of the teeth position without defects of dentition, for which 19 orthodontic appliances were made of the base material «Triad» of light curing. Collection of UOF was performed at the clinic on an empty stomach from 8 a.m. to 9 a.m., four times (before treatment, 14 days, 30 days, 60 days after the start of orthodontic treatment). Microcrystallization was investigated by the method proposed by Leus P.A. (1977). On a glass slide, using a pipette, 3 drops of saliva were applied and then were dried at t 37° C. The specimens were examined under the light microscope «Levenhuk 320» (Russia) in the transmitted light by a light field method at low magnification. Dried drops of oral fluid were examined by binocular stereo zoom microscope «MSPE-1» (Russia) in the reflected light with the lateral and vertical shadowless illumination at low magnification.

Analysis of the survey results of the control group suggests that the type I microcrystallization is predominant in UOF. Variability in the type I crystals content

ranges from 58,6 ± 2,6 to 59,8 ± 2,7%; II type – 34,3 ± 1,6 to 35,7 ± 1,6%; III type – 5.1 ± 0,2 to 7,1 ± 0,3%. We accepted the average value (I type – 59,2 ± 2,6; II type – 35,0 ± 1,6; III type – 6,1 ± 0,2%) for a conditional norm that best characterizes the type of microcrystallization of unstimulated mixed saliva in children. The content of the UOF microcrystals in the observation group 1: before treatment - I type - 58,9 ± 2,6%; II type - 33,6 ± 1,5%; III type - 7,5 ± 0,3%; in 14 days - I type - 42,2 ± 2,1%; II type - 38,4 ± 1,9%; III type - 19,4 ± 0,8%; in 30 days - I type - 47,1 ± 2,3%; II type - 36,7 ± 1,7%; III type - 16,2 ± 0,7%; in 60 days - I type - 53,3 ± 2,5%; II type - 34 5 ± 1,5%; III type - 12,2 ± 0,5%. The UOF microcrystals level in the 2nd group of observations: before the treatment - I type - 58,2 ± 2,5%; II type - 33,1 ± 1,6%; III type - 8,7 ± 0,4% , after 14 days - I type - 46,8 ± 2,3%; II type - 37,1 ± 1,8%; III type - 16,1 ± 0,8%; in 30 days - I type - 50, 3 ± 2,4%; II type - 35,6 ± 1,7%; III type - 14,1 ± 0,7%; in 60 days - I type - 56,6 ± 2,5%; II type - 35,3 ± 1,6%; III type - 8,1 ± 0,4%. Distribution of UOF microcrystals in the third group of observations: before the treatment - I type - 59,3 ± 2,7%; II type - 33,9 ± 1,6%; III type - 6,8 ± 0,3%; in 14 days - I type - 49,4 ± 2,4%; II type - 37,0 ± 1,7%; III type - 13,6 ± 0,6%; in 30 days - I type - 53,3 ± 2,6%; II type - 35,9 ± 1,7%; III type - 10,8 ± 0,5%; in 60 days - I type - 59,7 ± 2,6%; II type - 34 8 ± 1,5%; III type - 5,5 ± 0,2%.

Comparative analysis of UOF microcrystallization in patients of the studied groups after two months of orthodontic treatment permits the conclusion that the most pronounced decrease in crystals content of type I (28,7 ± 1,4%) with a significant increase of crystals of type III (218,1 ± 8,7%) is observed at application of apparatuses made of cold cure base plastic. Minimum reduction of crystals of type I (16,5 ± 0,8%) with the smallest increase in the content of crystals of type III (122,9 ± 6,1%), consistent with the biophysical indicators of children without dentofacial anomalies, is provided by base materials of light polymerization. Published scientific data do not give complete information concerning the relation of types of microcrystals in UOF and their changes at the stages of orthodontic treatment in children. In our opinion, a significant increase of mixed saliva type III microcrystallization in a complex with other diagnostic features clearly demonstrated a higher probability of occurrence and decompensated character of the caries process of deciduous and permanent teeth. The set of prognostics associated with a significant increase of type III microcrystals in UOF, suggests a reduction of the regulatory, mineralizing, protective and buffer functions of saliva.

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POSSIBILITIES OF ECOLOGICAL MEDICINE IN THE COMPLEX THERAPY OF BRAINSTEM INSULT AT A YOUNG AGE

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Brainstem insult at the age of 18-30 years becomes a major problem in modern medicine and its frequency increases. In case of brainstem insult, death is about 70%.

Severe disability is in 30% of the cases due to damage of the brainstem, where vital centers are located(respiratory, circulatory, swallowing.) Very often persons with this disorder are unable to breathe independently and completely depend on artificial lung ventilation apparatus. They have completely broken motion activity of extremities, they have disturbance of speech, coordination and thermoregulation. In addition, long-term hospital treatment results in such complications as congestive pneumonia, which significantly increases the fatality.

In my experience, there is now a patient who has had severe brainstem insult for 1 year 9 months. Prognosis concerning this patient was negative. On July 21, 2011 I was invited to the dying patient Ya., 25 years old.

Diagnosis: ACVA with ischemic (thrombotic type) in VBB dated 19.06.11. Thrombosis of BA dated 19.06.11.

Complications: Brain edema (jugulated). Thrombosis of the left femoral vein to the level of CFH.

Left-sided pleuropneumonia dated 18.07.11. Radiological resolution dated 29.07.11 Catarrhal endobronchitis. Chronic gastritis. Yeast sepsis.

Related: Chronic non-acute pyelonephritis. Chronic moderate anemia.

At the time of my arrival at the hospital the patient has already been in a semi-conscious state for 20 days (syndrome of "locked man"), tetraparesis, dysarthria, breathing through a tracheotomy tube were registered. Stagnant pneumonia and congestive yeast sepsis were developed. After examination and assessment of severity of her condition she was prescribed a treatment program, including hyperthermia intestinal dialysis, intravenous injection of sodium thiosulfate, homeopathic medicines: Traumeel S, Echinacea compositum, tserebrum, Coenzyme compositum, Platzena compositum, eksmikel D5, notakel D5, mukokel D5, nigersanD5 in injections and drops for 10 days. Visceral massage of breast promoted faster resorption of congestive pneumonia. Upon detection of pneumonia in the patient an increase of yeast in the urine at 4 + was recorded, and antibiotics were canceled.

Rg of lungs dated 22.07.11: at the left, at the lung level the diaphragm dome is fuzzy. Above it in the lower lobe of the lung there is infiltration portion of heterogeneous nature. Conclusion: left-side lower lobe pneumonia.

Rg of lungs dated 29.07.11: at the left in the lower part infiltrative changes were not revealed. The diaphragm dome is clear. Signs of stagnation in the lungs.

Rg of lungs dated 15.08.11: The diaphragm dome is clear. The sinuses are free. Infiltrative changes were not found. Signs of stagnation.

In a month objectively on 26.08.2011: The patient's condition is moderately severe, stable. In consciousness, awake, violent emotions. 3p.D=S, photoreaction (+). Gaze paresis in both directions. The face without gross asymmetry. Soft bulbar syndrome. Deep tetraparesis. Deep reflexes D^S, lively; ankle jerk S>D. Muscle tone is moderately increased. Coordination and sensitivity disorders are not evaluated. Pathological foot signs (+) with 2. No meningeal symptoms. Somatically stable. T 36.7. Skin integument is moderately

pale, slimy is wet. BP 90-105/60-70mm Hg, Ps 90-95 per minute, rhythm. Breathing is independent, effective, respiratory rate 18-20 per minute. Auscultation breathing is hard, weakened in the lower part, singular rales in the lower part. MRT of brain + MR-angiography dated 19.08.11: picture of postischemic glial cystic changes in the part of brainstem and left cerebellar hemisphere.

MR-signs of multiple lesions of the brain substance, likely of vascular origin. Aplasia of the intracranial segment of the right vertebral artery. Basilar artery thrombosis (we cannot exclude the thrombosed fusiform aneurysm of the basilar artery). Bilateral mastoiditis.

Clinical blood analysis dated 2.08.11: RBC - 3.2710el2/l, L-7.28 10e9/l, Hb-95.5gl., NEUT.-62, STAB - 2, LYMPH. -23, MONO. - 8, EOZ. -4; GIPOHR. 0/1, ANISOCYT. 0/1.

Clinical blood analysis dated 23.08.11: RBC - 4.19 10el2 /1, L-8.75 10e9 /1, Hb-121g / 1. NEUT.-84, STAB - 5, LYMPH. -9, MONO. - 1, EOZ. - 0; GIPOHR.0, ANISOCYT.O

Clinical urine analysis dated 23.08.11: sal/yellow, 1007, glyukozaO, proteinO, leukocytes 2-3 in p/z, other cell.2, Coagulation 8/23/11: PTI 108% Fib. 3.22 g/1, aPTT 22.7 sec.

Biochemical blood analysis: 2.08.Ig: ALT 15 U|l, ACaT 15 U|l, cholesterol 4.22 mmol/1, creatinine 35 umol|l, glucose 4.96 mmol/1, total protein 64 g/1, bilirubin 9,3 umol/1, coeffic.of atherogenicity 4.05;

Biochemical blood analysis: : 23.08.1 lg: ALT 11 U|l, ACaT 16U|1, Cholesterol 4.31 mmol/1, creatinine 37 umol|l, glucose 6.96 mmol/1, total protein 71 g/1, bilirubin 8,3 umol/1, coeffic.of atherogenicity 3.95; urea, 2.9 mmol/1, triglycerides 1.09 mmol/1, HDL 0.87mmol/l, LDL 2.69 mmol/1, + 4.6 mmol/1; Na + 136mmol/l, Ca2 + 2,68mmol/l.

The treatment provided: thrombo ASS, bidop, glycine, thienam, berlitioni, aciloc, cereton, magnesium, omez, aminophylline, ceraxon, fortum, edicin, cosmofer, gliatilin, semax, fraxiparine, mexicor;

Oxygen therapy, physical therapy for diseases of the central nervous system, limb massage, magnetic therapy, speech therapy sessions, verticalization.

During follow up there are considerable positive changes. The patient preserves intellectual ability, memory, her speech was recovered, limb movement disorder was significantly reduced, she can stand independently.

Conclusion dated December 2012: MRT- signs of ACVA (brain stem) of ischemic type in VBB, in the area of two vertebral arteries, basilar artery. Cystic restructuring of pineal gland. Moderate internal hydrocephalus. Area of hypoperfusion of the brain in the area of ACVA and in the left hemisphere of the cerebellum.

Date of examination: 28.02.2013 Conclusion:

MR signs of the effects of ACVA as cystic glious atrophic changes in the structure of Pons varolii. Single lesions in the white matter of the brain, most likely of vascular genesis. Moderately expressed widening of lateral ventricles and external cerebrospinal fluid spaces. Cystic transformation of the pineal gland. MR signs of partial destruction and depletion of tracts

that pass through the structure of Pons varolii, including the corticospinal tracts and fibers of middle cerebellar peduncle.

Thus, the use of ecological medicine methods in the complex therapy of brainstem insult has a positive effect, reduces fatality, promotes rapid resolution of pulmonary engorgement, gives a positive effect on microflora, preventing yeast sepsis. Improves of blood the rheological properties, activates the processes of self-regeneration.

A.A. Dvirsky

COMORBIDITY OF SCHIZOPHRENIA AND DIABETES MELLITUS TYPE II AS A FACTOR FAVORABLE COURSE AND REDUCE RISK PENETRANCE

S.I. Georgievsky Crimean State Medical University, Simferopol, Crimea, Ukraine

The combination of two such multifactorial diseases like schizophrenia and diabetes mellitus type II is considered by us as a model, created by nature, to analyze the hypothesis of the pathogenesis, clinical study of singularities and the risk of occurrence of this psychosis. In 2386 adult patients with schizophrenia diabetes mellitus type II (1.1%) was detected in 3.1 times less as than the general population (3,4%) (P<0,001). Generalized theoretical frequency of comorbidity of schizophrenia with diabetes mellitus type II, excluding the sequence of these diseases (4.4%) to 4.0 times higher than the actual frequency of these combinations (1,1%) (P<0,001). Patients suffering from type II diabetes or predisposing to it, have a risk of developing schizophrenia in 4.0 times less as than those who havens the predisposition to this endocrine disease.

Comparing the sequence of manifestation of these diseases it have been found that patients with schizophrenia manifest diabetes mellitus type II (92,3%) were 12 times higher than at patients with the endocrine disease manifested schizophrenia (7.7%) (p <0.001). The results confirm the hypothesis of a reduction of the energy potential in schizophrenia K. Conrad (1958).

155 patients with schizophrenia with diabetes mellitus type II, had this psychosis in age from 35 to 59 years (56.8%) in 3.0 times more as, compared to 310 in the control group (19.3%) (p <0.001). The average age of onset of psychosis was 35.8 years, and this endocrine disease – 49,3 years. Schizophrenia, coupled with type II diabetes, recurrent (26.5%) was observed in 3.0 times more often a progredients (23.9%) is 1.8 times less than in the controls (p <0.001).

Thus, schizophrenia with comorbid diabetes mellitus type II, for these diseases is favorable. Schizophrenia rarely manifests at individuals with latent or manifest diabetes mellitus type II.

A.E Dvirsky

IMPACT OF GENOTYPIC AND SOCIO-CULTURAL FACTORS ON THE EVOLUTION AND PATHOMORPHOSIS MULTIFACTORIAL DISEASE (ON THE MODEL OF SCHIZOPHRENIA)

S.I. Georgievsky Crimean State Medical University, Simferopol, Ukraine

Prior to the advent of antibiotics W. Helpach (1929) found a persistent of the change in clinical manifestations of syphilis, which he called the term pathomorphosis. Since the 60-s of the 20th century persistent favorable manifestations clinical symptoms of schizophrenia and the most common multifactorial diseases (MFD) have been called pathomorphosis, while some authors called their evolution. Analyzing the causes of pathomorphosis MFD it was paid attention that for this period the phenomenon of acceleration was described, which is mostly observed young men living in the cities compared with rural areas.

Hypothesis suggested that pathomorphosis of schizophrenia and other MFD due to the changes of the genetic structure of populations as a result of the increase of migration for the period of scientific and technological progress. They formed two groups of men with schizophrenia. The first group consisted of 192 patients with clinical symptoms of schizophrenia which corresponded symptoms discovered during its pathomorphosis. The second group of 172 patients was presented by patients with clinical of schizophrenia prevailing before the period pathomorphosis to this disease.

In this group of patients with schizophrenia the level of homo-and heterozygosis was determined by share of recessive genes among the 35 monogenic traits (A.E. Dvirsky, 2012). Patients with schizophrenia group I level of heterozygosis of the (0,42) is 1.3 times higher than in group II (0,32), which prevailed in 1.3 times the level of homozygosis (0,64) ($p < 0,001$).

Pathomorphosis of schizophrenia - is one of the most pronounced evolution stages of the disease, characterized by persistent, favorable changes in its clinical manifestations, inextricably linked with the change of the genotype and schizophrenic genocomplex upward extent heterozygous. This is due to a sharp increase in migration in the population due to the development of scientific-technical and social-cultural progress and other factors, as a result of the entry of humanity into a higher stage of evolution, the noosphere.

N.V. Dvornikov

INNOVATIVE TECHNIQUES IN PSYCHOANALYSIS: HARDWARE-SOFTWARE COMPLEX "HOME PSYCHOANALYST"

Centre of Psychological Studies of Abilities, Moscow, Russia

Since the moment Sigmund Freud, founder of psychoanalysis, discovered

"unconscious area", it became clear where unreason, irrationality and psychological problems in the society took their roots.

In the modern world, millions of people suffer from psychic disorders. These people do not just have elementary disorders; they suffer from diseases arising from mind disorders.

Modern psychoanalysis has a series of techniques to assist people in solving their psychological problems.

I would like to present an innovative project on psychological rehabilitation, developed by me, a hardware-software complex "Home psychoanalyst".

The innovative technology "Home psychoanalyst" is able to solve inner psychological problems by itself. The complex has been developed to solve a number of problems connected to stress, nervous break-downs and complexes.

By means of the hardware-software complex "Home psychoanalyst" it is possible to achieve great progress in self-improvement, restoration of psychological health and abilities within a short period of time. "Home psychoanalyst" strictly follows the relationship ethics "psychoanalyst – client".

It can be used both in the work of practicing psychologist and specialists researching in the area of human mind.

The working principle of "Home psychoanalyst" is based on the implementation of 4 special standard questions, programmed in the software. These questions are read by the psychoanalyst from the screen. During the session, the client has a sensitive element in his hands, with the help of which he can control his current psychological and physical condition on the computer screen. Depending on the indications on the screen, he can determine how important or painful the current question is for him.

The hardware-software complex "Home psychoanalyst" has established a good reputation when used in individual work. Specialists in the human mind are well aware that sometimes it is really difficult for a person to open himself in front of the specialist. I personally have not had many cases like that in my practice – that someone tried to hide his problems. The time spent on the solution of these problems was sufficient for the specialist to think what to do next. I am sure that this question is asked by many people who touch upon problems of the psychological state. In this case our hardware-software complex can be of real help.

No doubt that a person cannot fully free himself from the impacts of his unconscious mind, but he can free himself of its influence. What does it mean? It means to be self-determined, to restore lost abilities, see the world as it is and minimise psychosomatic diseases.

This opportunity is offered by the hardware-software complex "Home psychoanalyst".

R.T. Dzumasheva
G.G. Bedelbayeva
G.G. Kapanova
Zh.M. Nurmahanova
S.A. Mukhambetyarova

MORPHOLOGY OF THE LUNGS IN CONDITIONS OF PROLONGED EXPOSURE TO INDUSTRIAL DUST OF URANIUM ORE (EXPERIMENTAL STUDY)

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Results of the experimental research of 320 white outbreed rats which were subjected to prolonged inhalation of uranium ore dust (UOD) at doses of 5-10 and 50 MPC and the application of extract of licorice root. An integrated approach that includes research on the cellular, subcellular levels was used to elucidate the patterns of dose-dependent structural changes in the lung tissue. The studies have revealed that the highest expression of the structural changes in the lung tissue was observed in the later stages of the experiment, when radiotoxic elements were accumulated in the lungs. With an increase of the UOD doses, distortions in the lung structure were detected 30 to 60 days earlier. Compensatory and adaptive reactions of the lung tissue were characterized by staging, i.e. compensation periods were alternated with the periods of relative compensation with signs of decompensation, in the later periods.

The dynamic particularities of changes in quantitative characteristics of the structural components of the lungs for extended inhalation of uranium dust were determined: at a dose of 5 MPC the volumetric figures of vessels in the lungs increase for 41% and 61% on the 30th and the 60th days, respectively; and decrease for 26% on the 120th day. The volumetric fraction of alveolar epithelium consistently decreased, falling on the 90th and the 120th day by 34 % to 40% which was congruent with 25-65% thickening of interalveolar septa in different time periods; double increase in the lumen of the alveoli by the 90th day and 24% increase in the lumen of the alveoli by the 120th day, as well as 8,3 to 17 times increased fibrosis. At till 10 MPC the distortions of the volumetric fraction of alveolar epithelium, interalveolar septa, and fibrous tissue were growing. At 50 MPC, the period of maximal display of the morphometric indices declined and revealed: for vessels - on 60th day; for the interalveolar septa, epithelium and alveolar lumen – on 3rd to 7th day, with approximately equal rates of proliferation of fibrous tissue. Morphometric changes in the bronchial structures intensify with increasing dose-time load of UOD. At a dose of 5 MPC, the signs of thickening of the bronchi walls increase approximately twice and three times by the 60th and the 120th days, respectively; the volume fraction of bronchial epithelium in the same period increases in 2 to 2.5 times; bronchi associated lymphoid tissue increases in 3 to 4 times. At doses of 10 and 50 MPC similar distortions develop at earlier stages and have a lingering process. At a dose of 10 MPC on the 3rd day noted are the signs of progression of dystrophic changes in the components of aerogematic barrier, which are replaced to compensatory processes after 7-30 days. The destructive stage revealed after 60 days is protracted and extends for 90 days of the exposure. The beginning of the

recovery phase shifts to the 120th day. The increase in radiation dose up to 50 MPC leads to noted submicroscopic changes in lung tissue up to the destruction of the alveolar epithelium as early as on the 3rd day. On the 7th, 30th and 60th days the compensatory signs of regeneration of the alveoli epithelium, the overlap of the capillaries lumen, the restoration of endothelial lining, and the activation of phagocytic function of alveolar macrophages develop against destructive changes; however, the respiratory surface of the respiratory part of the lungs decreases and fibrosis of the connective tissue amplifies. Respective dose-timed parallel structural metabolic disorders are revealed in the lung tissue. Periods of maximal strengthening of the destructive changes in the respiratory part coincide with the activation in the lung tissue of the lipid peroxidation (LPO) and the suppression of antioxidant protection (AOP), as evidenced by 3.5-4 times increased formation of malondialdehyde, and 2-5.8 times decreased activity of superoxide dismutase during these periods. It is proved that the aqueous extract of licorice root has a corrective effect when exposed to UOD, enhances compensatory reactions of alveolar and bronchial epithelium, reduces signs of productive inflammation, prevents pulmonary fibrosis, and improves balance relations of LPO and AOP in the lungs.

B.B.Ergashev
N.K.Egamnazarov

PRENATAL DIAGNOSIS AND SURGICAL TREATMENT OF OBSTRUCTIVE UROPATHIES IN NEWBORNS

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The aim of present study was analysis of prenatal diagnosis and nearest results of correction obstructive uropathies.

Material and methods: For the period from September 2002 to December 2006 in RPC USI studies were carried out of 23667 pregnant women in terms from 4 to 40 weeks of gestation. Among them in 135 pregnancies at USI the urological defects of fetus were revealed, those were 6 cases to 1000 examined women. Among them postnatally the diagnosis was proved in 91 cases. For this period in RPC 11894 children were born. By the relation to the last the revealed defects of organs in urinary system they were 8 cases to 1000 newborns.

In postnatal period there were 41 patients under our observation with congenital hydronephrosis (CH) of III-IV degree at the age from 0 to 3 months. To all patients in different combinations were used: USI, pharmacoechography, dopplerography, pharmaco dopplerography, excretory and infusion urography, ascending cystography, renostintigraphy, and also neurosonography and echocardiography

Results and their discussion:

From 135 pregnants with antenatally revealed CD kidneys and UEW in 125 (92.6%) fetuses hydronephrosis of fetus was revealed, and, the rest 10 (7.4%) had other urological

defects (RMD were 5, uretherhydronephrosis were 3, polycystosis was 1, two sided kidneys agenesia was 1).

The most often (51.2%) in underlabor period hydronephrosis (pyeloectasia) of fetus for I level was revealed. Hydronephrosis of fetus for II level was revealed in 22.4%, for III level was in 19,2% , for IV level was in 5.6% and for V level was in 1.6% cases. Stable hydronephrosis, at that size of pelvis for all period of pregnancy stays in initial values was revealed in 49 (80.3%) fetuses. Regressing course of hydrinephrosis was was marked in 2 (3.3%) fetuses. In 10 (16.4%) cases hydronephrosis of fetus , being found on 28-34 weeks of pregnancy with II and III level of severity by the end of pregnancy was characterized with progressing (progressing hydronephrosis) and crossing to IV level, and in one case to V level.

In all in postnatal period operative treatment was performed 41 patients with obstruction PUS. In period of the birth 14 (34.1%) were operated in early breast age (under 3 months) they were 27 (65.9%) patients. All 41 patients with CH were performed radical organ saving operations, and none of one case nephroectomy was not performed. In 8 (14.2%) cases children were preliminary performed transcutaneous punctual nephrostomy under control of ultrasound.

For correction CH as operational choice we used resection PUS by Hynes-Anderson – Kucer. Complications, being connected with the operative technique we don't mark with narcosis. The term of being children in reanimational department was average 1-2 days. From 41 patients with CH, having resection PUS 40 (97.5%) for the nearest postoperative period adequate possibility of anastomosis area was stated , and pyelostomic drenage was removed on 9+_ 2 days. Only 1 (2.5%) child in early postoperative period was revealed disorder of urodynamics in area of again formed anastomosis, in connection with that, the removing drenage was delayed to 3 weeks.

Conclusions: 1) USI fetus in pregnancies allows to carry out early diagnosis obstructive uropathies before development of their clinical displays, that promotes timely transfer the newborn to the surgical hospital for purposeful urological examination.

2) analysis of the treatment results for surgical treatment CH in newborn showed authorizing early correction of defect at absence high anestesiological risk and unfavourable somatic backroud.

B.B. Ergashev
A. J. Khamraev
Sh.D. Eshkabilov

DIAGNOSIS AND FOR SURGICAL TREATMENT OF FISTULAR FORMS AT ATRESIA OF ESOPHAGUS IN THE NEWBORN

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In spite of successes, being achieved in surgical correction of esophagus atresia (EA), there are served great number of postoperative complications, that requires development

of more effective methods of treatment. The aim of study has analysis of diagnostics results and comparative evaluation of ways anastomosis apply at fistula forms of esophagus atresia in newborns.

Materials and ways: in department of neonatal surgery in RPC and 1-UKPH 98 children with fistula forms of esophagus atresia were operated. Among them boys were 63 (64,3%), girls were 35 (35,7%), fetus maturity was 85 (86,7%), in maturations was 13 (13,3%). At admitting the general clinical ways of study, tubage of esophagus, Elephant probe, contrast roengenological examination of esophagus and review roentgenography of abdominal cavity, also USI inner organs, echocardiography and neurosonography were carried out.

Results and discussion: from 98 children with fistula forms of EA on the 1-st life day 12 (12,2%), on 2-3 days 48 (49%), on 6-9 days 10 (10,2%), on 10 and more 5 (5,1%) children were admitted. From them only in 6 (6,1%) antenatally was suspicion on EA that was proved in postnatal period in all causes. Among our patients in 93 (94.9%) EA with low tracheoesophageal fistula (TEF) was marked, in 5 (5.1%) had upper and low (two) TEF. From 98 newborns with fistula forms Ea 95 (96.9%) patients was performed primary non-straight anastomosis of esophagus, and in 3 (3.1%) because of large diastasis between proximal and distal ends, gastrostoma with prolong oral and distal end of the esophagus after liquidation distal TEF. From 95 newborns, who was applied primary straight anastomosis of esophagus, in 65 (68.4%) children it was performed with use one raw knot of sutures through all layers of esophagus (vicryl 6/0), and 30 (31.6%) newborns with use one raw continious sutures. By that the insolvent of anastomosis in the nearest postoperative period in group of children with use one raw knot of sutures was marked in 15 (23%) cases, and in patients with continious suture of esophagus only in 2 (6.6%) cases. It is known, that in children with EA gastro-esophagial reflux in early postoperative period, that is unfavorably acted in the area of anastomosis and it leads to insolvent of anastomosis. For preventing it we carried out methodic of stomach probe, where catheter Foley – 6 Fr/Ch is used that safely defend area of anastomosis from coming stomach content, and, by that reduces the risk of insolvent. In all at postoperative period 55 (56%) died, survived 43 (44%) newborns. From them only in 6 (6.1%) children the direct causes of lethal outcomes were insolvent of anastomosis and mediastinitis. In other cases the mortality was caused by aspirational bronchopneumonia and its, sepsis, birth traumas and multiple congenital anomalies of development (MCAD).

Conclusions: 1) Anterlabour diagnosis of EA allows to prevent different kinds of complications, the leading one from them is aspirational bronchopneumonia.

2) Use one raw continious suture for creation interesophagus anastomosis at fistula forms EA allows considerably to reduce postoperative insolvent.

3) Probe of stomach with use catheter Foley – 6 Fr/Ch is used that safely defend area of anastomosis from coming stomach content and by that to reduce risk of insolvent.

S.N. Eroshkin

EFFECTIVENESS OF REVASCULARISING OSTEOTREPANATION WHEN TREATING PURULO-NECROTIC FORMS OF DIABETIC FOOT SYNDROME DEPENDING ON LOWER LIMB BLOOD OXYGENT CONTENT

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Diabetic foot syndrome (DFS) is one of the main reasons for high amputations of lower extremities. In order to improve the treatment effectiveness of patients who cannot have reconstructive vessel surgery, it is possible to apply revascularising osteotrepanation of cylindrical bones. The opinions of experts regarding this method are very controversial, which can be explained by the fact that there are no methods to predict the results of revascularising osteotrepanation and therefore, to select patients for this operation.

The objective of the research is to analyse the effectiveness of revascularising osteotrepanation (ROT) of the shin bone in patients with purulo-necrotic forms of DFS depending on the partial pressure of oxygen in the venous blood (P_vO_2) of the lower extremity.

Materials and methods. The research has been carried out among 50 patients of both sexes with DFS. The patients were aged 54-68 (Me=60, LQ=57.6; UQ=64.1), 29 men and 21 women. All the patients had severe polysegmental lesions of blood vessels of lower limbs and lesions of distal vessel segments, which prevented reconstructive vessel surgery. All the patients received complex treatment including partial foot amputations and ROT. A blood gas analyser Radiometer ABL-700 (Denmark) was used to determine the partial pressure of oxygen in blood taken from the shin vein of the affected extremity. The quantity of high amputations of lower extremities was used as an evaluation indicator for the treatment effectiveness. The patients were observed in the course of 2 years. The statistical estimate of the obtained results was made with the help of the chi-square criterion.

Results. The value of P_vO_2 of the patients before surgery was in the range from 12.8 mmHg to 88.9 mmHg (Me=36.9 mmHg; LQ=29.5; UQ=43.1). The patients were divided into 2 groups depending on the value of P_vO_2.: the first group consisted of 27 patients with a low value of P_vO_2. (lower than the median); the second group consisted of 23 patients with a value of P_vO_2. higher than the median. The patients of both groups had the same clinical data and instrumental research techniques. After a year of observation there were 6 high amputations in the first group, comprising 22.2 %. There was only 1 high amputation (4.3%) in the second group. 2 years after the beginning of observation there were 13 (48.1%) high amputations in the first group and 3 (13%) high amputations in the second group.

Conclusion. The number of high amputations is significantly larger among patients with purulo-necrotic forms of DFS with a low presurgical value of P_vO_2. than among

ones with a high presurgical value of P_vO_2. Thus, the presurgical value of P_vO_2. can be treated as a favourable prognostic test in the estimation of remote results among patients with DFS who must have ROT as part of their treatment.

A.V.Fedoseev
S.Y. Muraviev
V.V. Zatsarenny
A.S. Inyutin

FUNCTIONAL STATE OF THE ANTERIOR ABDOMINAL WALL DURING ABDOMINAL HERNIA SURGERY

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According to literature and our own experience, it is possible to single out the following pronciples of hernia surgery: anatomical correctness, noninvasiveness, physiology and functionality. At the same time, a treatment result is considered satisfactory only in case of the full active function of the abdominal wall and a relapse-free course of the postoperative period. The dysplasia intensity of the connective tissue of a hernia patient is determined according to the symptoms complex, because its various phenotypical manifestations were detected in 68% of hernia patients as a single version and in 24% of patients as a combination.

In turn, the loss of the firm connective tissue abdominal muscles fixation during their contraction leads to a reduction in their functional readiness. During electromyography of the rectus abdominis muscle of 66 hernia patients, the basal potention (while inhaling with breathholding) was reduced to 3-20 μV in the case of 17 (25.8%) patients and was only 1-10 times larger in case of 58 (87.9%) patients during a conditional movement (bending of the body with lifting of the upper part to a 30° angle) and only 1-22 times larger after an unconditional contraction.

As a result of the functional insufficiency of the abdominal tension in patients with ventral hernias various disorders of the lung ventilation function (vital capacity, FVC, FEV11, FEV1/FVC ratio) were detected in 50 (75.8%) patients out of 66. 41 (82%) patients had a hearnia sized larger than average. 8 (12.1%) patients had hypercapnic ventilator failure with a PetCO2 content of 46-48 mm Hg. Furthermore, 15 (22.7%) hernia patients had an increased share of the dead space in the alveolar ventilation up to 48.25 + 7.0204% on average.

During ultrasound examination of 38 patients with omphalexoche we noticed that the size of the hernia outpouching and the thickness of the rectus abdominis muscle increase while the distance between their nearest limiting points decreases, however, the sizes of the umbilical ring remain the same.

Yu.I. Feshchenko

PECULIARITIES OF TUBERCULOSIS IN HIV-INFECTED CHILDREN IN UKRAINE

National Institute of Phthisiology and Pulmonology named after F.G. Yanovsky, National Academy of Medical Sciences of Ukraine, Kiev, Ukraine

Aim-analysis of co-infection TB and HIV among children with newly diagnosed tuberculosis (NDTB).

Method – analysis of reports from the regions of Ukraine for 2006–2009.

Results. The incidence of all forms of TB in HIV-infected children under 14 years had increased by 2,3 times (from 0,3 in 2005 to 0,71 per 100000 children in the population in 2009). The incidence of TB among HIV-infected children (0 – 14 years) ranged from 1640 to 1900 per 100000 of HIV-infected children. In HIV-infected children primary tuberculous complex was predominant – 34,2 %, lymph nodes TB – 25,3 %, multiple organs TB – in 5,1 %. Miliary TB was in 27,8 %, that almost 7 times higher than the frequency of this form in HIV-negative children, ($P < 0,05$). In HIV-negative children aged 0 – 14 years from 1367 persons in 470 children (34,4 %) had detected pulmonary TB, in 646 (47,3 %) – extrapulmonary TB of organs of breathing, in 251 (18,3 %) – extrapulmonary TB of other organs. HIV / TB was more often in chilgren up to 4 years (46,8 % of total number of children with HIV / TB), children aged 5 – 9 years – in 30,4 %, children under 1 year – 12,7 %. In HIV-negative children with and without perinatal exposure to HIV infection often were intrathoracic lymph nodes TB (54,2 % and 38,1 %, respectively), in 41,7 % and 16,0 % respectively – primary tuberculous complex, in 4 % – miliary TB. In 78,5 % of cases children with TB and HIV infection had detected at appeal to medical aid, in 21,5 % – after the tuberculin skin test.

Conclusion. The TB incidence among HIV-infected children in 200 times higher than in children in the population. In the structure of clinical forms of TB in HIV-infected children with NDTB as distinct from HIV-negative children was more often primary tuberculous complex, miliary tuberculosis and multiple organs TB, that affirm late detection the disease, and confirm need for improvement of early detection of tuberculosis among HIV-infected children.

O.I. Fomenko
L.A. Kostina

URGENT ASPECTS OF THE EVALUATION OF PHYSICAL HEALTH OF STUDENTS OF ASTRAKHAN MEDICAL ACADEMY

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Modern conditions of life make high demands of the health, intellectual capabilities of

young people and their way of life.

The development of higher education in modern conditions is accompanied by further intensification of teaching loads, increasing the flow of varied information, introduction of technical equipment in the learning process, a strong socio-economic pressing in all aspects of educational life that aspects require from students significant intellectual and neuro-emotional efforts. Future specialists must have a high professional qualifications, a high efficiency, be healthy, exercise tolerance.

There are problems of socialization in the new learning environment. In this period of study personality changes, which promote the establishment of professionalism, occur. At the same time the technology of formation of health saving in the socialization of students at the medical school are not systematic.

Using a special developed complex medical and social program a questionnaire design of first- and second years students of Astrakhan State Medical Academy at the age of 17-23 years old in the amount of 643 people, united by a common social status and occupation of one activity - learning was made.

Analysis of the health status of students indicates a deterioration of most indicators of physical development, callisthenics and indicators of their health.

There are only only 41.3% (45.5% - in the first year and 37.1% in the second year) of the healthy students or of the students with insignificant deviation in the health who have sport in the basic medical group and who have an average or above average physical development.

In the group of healthy students or of students with insignificant deviation in the health status was 24.9% of respondents (27.5% - the first-year students and 22.4% - second-year students). One disease was recorded in 31.9% of the first-year students and in 30.7% of the second year students. Two or more diseases were recorded in 46.3% of the first-year students and in 47.3% -of the second year students, i.e. nearly than in a half of the students.

Almost every second student of medical academy due to his health condition was allocated to a specific category for physical training, as he had a chronic disease, what does not allow him to do exercises in full amount, according to the training program. “Nosological portrait” of medical students of the Academy has also changed: in the first place we have disorders of the musculoskeletal system (26.7%), myopia of various degrees (20.8%), cardiovascular diseases (19.9%) and diseases of digestive systems (18.8%) etc.

Thus, chronic diseases occupy dominant position in the structure of morbidity at the present time the. This occurs not only due to the social and economic changes, but also to the fact that the amount of preventive care was reduced, there is no systematic approach in the organization and delivery of medical aid, we have poor detection of students, which must be under medical monitoring.

Following aspects can be called as negative effects of the lack of attention to health problems of students: the threat of further reducing of the health degree of the students, worsening of their life quality, a significant decrease in the ability to study and work, a significant decrease in the ability to social opportunities, decrease of the quality of training

of highly qualified specialists in the medical school and decrease of the level of their competitiveness in the market of employers.

Wolfgang Fischer

HIRNORGANISCHE PSYCHOSYNDROME ALS KOMPLIKATIONEN ANDERER GRUNDERKRANKUNGEN

Neurologie der Kliniken Beelitz GmbH, Beelitz; Katholischen Universität, Eichstätt, Deutschland

Untereinem hirnorganischen Psychosyndrom (alternativ organischem Psychosyndrom) versteht man psychische Störungen und Veränderungen des Menschen als Folge einer organischen Erkrankung des Gehirns bzw. oder einer Krankheit mit Gehirnbeteiligung. Ursachen für ein solches organisches Psychosyndrom sind z. B. Schädel-Hirn-Traumata, Verletzungen mit Schädelbeteiligung, Alkoholsucht, Drogenabhängigkeit, Medikamente, Hirntumore bzw. Metastasen des Gehirns, Durchblutungsstörungen oder Infektionen.

Klinisch praktikabel erscheint eine Unterteilung in 3 Hauptformen der organischen Psychosyndrome:

1. Akutes organisches Psychosyndrom
    a) mit Bewusstseinsstörungen
    b) ohne Bewusstseinsstörungen
2. Chronische organische Psychosyndrom
3. Organisches Psychosyndrom im Rahmen der Intensivmedizin.

Die Diagnostik organisch-psychischer Störungen erfolgt auf der klinischen psychopathologischen Ebene durch Erhebung der Anamnese im psychopathologischen Befund, internistische Untersuchung, neurologische Untersuchung und Testpsychologie. Diese wird ergänzt durch die funktionelle morphologische Ebene, Elektroenzephalographie, Laboruntersuchung von Serum und Liquor, cerebrale Bildgebung sowie Funktionsuntersuchungen wie SPECT oder PET beinhaltet.

Eine Besonderheit der organischen Psychosyndrome sind die neuropsychiatrischen Störungen in Zusammenhang mit intensiv-medizinischer Behandlung, hier finden wir insbesondere:

1. Besondere Koma-Formen und pseudokomatöse Zustände
2. Organische (körperlich begründbare) Psychosen
3. Psychoreaktive Störungen im Rahmen der Intensivbehandlung.

Zu den besonderen Koma-Formen und psychokomatösen Zuständen zählt das Apallische Syndrom, das Locked-in-Syndrom, der Akinetische Mutismus.

Als organisch körperlich begründbaren Psychosen, sind insbesondere das Delir als Entzugssyndrom bei Sucht und als Begleitsyndrom bei diffusen Hypoxien und Intoxikationen aber auch die Halluzinose und die amnestischen Syndrome zu nennen.

Recht häufig sind psychoreaktive Störungen im Rahmen der Intensivbehandlung, insbesondere

1. Angst als Reaktion auf die besondere Umgebung, als Reaktion auf die lebensbedrohliche Krankheitssituation, als Reaktion auf die ungewisse medizinische und soziale Prognose,

2. Depression und

3. Verdrängung ergänzen den Komplex der psychoreaktiven Störungen im Rahmen der Intensivbehandlung.

Selten, aber durchaus ernst zu nehmen ist

4. das Problem der Suizidalität,

welches in der Selbstwahrnehmung des betroffenen durch Ausweglosigkeit und Einengung der Eigenwahrnehmung als Reaktion auf lebensbedrohliche Krankheitszustände mit geänderter Lebensplanung, insbesondere nach Myokardinfarkt, Schlaganfall, Malignomen und bei Langzeitbeatmung ohne Bewusstseinsstörung, relevant wird.

Die Pathogense und Besonderheit neuropsychiatrischer Störungen im Rahmen der Intensivmedizin begründet sich aus

a) primär cerebralen Ursachen oder

b) sekundären Störungen cerebraler Funktionen bei primär extracerebralen Erkrankungen.

c) Dekompensierte Multimorbidität in der Extremsituation der klinisch apparativen Behandlung akzentuiert die Eigenwahrnehmung, mobilisiert Schutz- und Abwehrreflexe und-handlungen und triggert somit eine besondere Psychopathologie hirnorganischer Psychosyndrome in der Intensivmedizin

Grundsätze der Behandlung:

Beim akuten organischen Psychosyndrom steht die Behandlung der Ursache an erster Stelle, dies ist für die Prognose entscheidend.

Bei neu aufgetretenen chronischen organischen Psychosyndromen sollte zunächst eine Rehabilitation bedacht werden.

Ansonsten bleibt nur die Behandlung belastender Symptome, z. B. einer Depression oder auch die Behandlung von Halluzinationen oder Unruhezuständen.

Neben der Behandlung der das Gehirn schädigenden Grunderkrankung ist auch im Schwerpunkt der Behandlung selektiv die psychiatrische und neurologische Zielsymptomatik zu bedenken.

Kurz- und mittelfristig - gelegentlich auch langfristig ist der Einsatz von Psychopharmaka notwendig und sinnvoll.

Prognose:

Die Prognose der organischen Psychosyndrome ist von der Ursache abhängig.

Je schneller die Ursache der Schädigung des Gehirns behoben wird, desto besser ist die Chance auf Erholung der Hirnsubstanz.

Rasches Handeln, insbesondere im Rahmen intensiv-medizinischer Maßnahmen und rasch einsetzende rehabilitative Trainingsmethoden sind also eine Grundvoraussetzung zur Verbesserung der Prognose.

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THE USE OF COLLAGEN IN SOFT TISSUE WOUND HEALING

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Introduction. Wound healing is one of the most important issues of surgery the value of which increases with the number of natural disasters, industrial and domestic traumas and war conflict.

Research objective was the improvement of soft tissue wound treatment results by appliqué and injection introduction of collagen hydrolyzate.

Materials and methods. Collagen hydrolyzate in the treatment was used with solid content of 16% (patent Nr. RU 2409216 C1 from12.05.2009). The studies were performed on 96 white laboratory rats in 4 groups of studies with 24 animals per group: 1 control and 3 experimental. In the I control group the treatment wasn't carried out. In the I experimental group the wounds treatment was carried out by applications of collagen hydrolyzate on a wound surface covering the all surface of a wound at the rate of 2 ml on 1 cm^2. In the II experimental group the treatment was carried out by injections of collagen hydrolyzate into the wound edges perpendicularly to the plane of wound surface, at a depth of 0,5 cm, at the rate of 2 ml on 1 cm^3. Wound treatment in the third experimental group was performed by application and injection of wounds with collagen hydrolyzate. Applications and injections were performed once on the first day of the beginning of wounds modeling. Efficiency collagen hydrolyzate application was estimated daily. For the assessment of dynamics of wound healing the following clinical control methods were used: evaluation of hyperemia and swelling of tissue in the wound area, the size of the wound, the amount and nature of the discharge, the general condition of the animals.

Results. On the 1st day after the start of the treatment the behavior of the experimental animals in all groups had no significant differences. In all experimental groups, there was a trend to a decrease in the inflammation. On the third day the I experimental group edema were arrested by an average of 1,67±0,38 day, in the II experimental group- 1,83±0,29 day, in the III experimental group- on 1,50 ±0,40 day. Hyperemia of the skin around the wound area remained in the I experimental group up to 1,33±0,38 days, in II the experimental group - up to 1,50±0,40 days in the III experimental group - up to 1,17±0,29 days . In the I control group the wound healing process were less intense. The relief of edema was observed 2,17±0,29 day, hyperemia - 1,83 ± 0,55 day. The absence of wound discharge was observed in the I experimental group 1,67 ± 0,38 day

on average, in II experimental- 1,83 ± 0,29 day, III experimental- on 1,50±0,40 day. In the I control group, the rate was 2,67 ± 0,38 day. By the end of the 3 day since the time it was difficult to evaluate the clinical feateres of the wound healing process. As the wounds in all groups were not visually different from each other: the signs of edema and hyperemia were not determined, the healing was going on under a scab. The average area of the wound before the treatment was 25,85 ± 0,52 mm^2 In the I control group the wound area from the beginning of the experiment on day 1 was 19,5 ± 0,29 mm^2, on the third day 8,8 ± 0,38 mm^2 on average on day 7 to 3, 2 ± 0,17 mm^2.On the first day after the treatment in the I experimental group the wound area decreased an average to 12,46 ± 0,58 mm^2, in the II experimental group - to 13,30 ± 0,47 mm^2, in III experimental group - 11,8 ± 0 9 mm^2. On the third day after the initiation of the treatment in the area of the wound I experimental group was 6,0 ± 0,29 mm^2, in the II experimental group 6,2 ± 0,48 mm^2, and in the III experimental group - 5,5 ± 0,5 mm^2. The wounds area on the 7th day of treatment in the I experimental group was 1,71 ± 0,3 mm^2, in the II experimental group - 1,8 ± 0,38 mm^2, in the III experimental group - 1,4 ± 0,28 mm^2. By the 11th days in all groups a fully formed scar was observed.

Conclusion. The use of collagen hydrolyzate in the soft tissue wounds treatment helps to accelerate healing processes. The highest treatment efficacy was observed in the group with appliqué and injection of collagen hydrolyzate, which is confirmed by the clinical data.

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SOURCES OF HUMAN EYE LENS DEVELOPMENT

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[Introduction] Available data on the morphology and the modern concept of the lens development does not explain the clinical diversity of cataracts. Currently existing treatments of lens opacity is mainly surgical, that dictates the need to find non-invasive treatments designed to reversible processes cataract. But this is possible only on the basis of correct ideas on histophysiology of lens. Mechanisms of physiological regeneration of the lens are less clear, as well as the mechanisms of development of cataracts. Cellular interactions in the development of structures anterior pole of the eye and its role in these processes immune and phagocytes level is unknown, as in the available literature, we have not met work on phenotyping of cells involved in laying, development and isolation of the lens in the development of the human eye.

[Methods]. We studied 171 eyes of human embryos and fetuses. Used classical histological staining methods with Victoriablue and silver impregnation, Ironhematoxilin, NADFH-diaphorase and immunohistochemical methods to detect CD4, CD8, CD 68, CD163, CD 204, TUNEL-method to identify apoptosis of cells, Ki67 to identify proliferative capsular cells.

[Results] According to our data, in the early stages of development the lens represented by a group of cells ectodermal placode, sunken for invaginating the front wall of the optic cup. At the level of light-optical cells are morphologically identical to a group with a strong basophilic and high nuclear-cytoplasmic ratio. Lens placode contacts with the area of the future of the cornea and the ectoderm. Cells combine to form placodal pyramid, where the top and the deepening of the optic cup is cord cells have higher chromophilic in compare with cells of the vitreous. They are directed to the site of the presumption of macula luteal. Also observed a sub capsular migration of anterior epithelium of lens, at the posterior pole and the side surfaces of the lens inside the bubble migrates glia. Lens epithelium is chromophilic and glia is not colored, the cells are spindle-shaped. Inside the bubble extends horizontally, and at the posterior pole in the sagittal center of placode of lens. According to the classical conception of the development of lens of the human eye lens placode after conversion to lenticular vesicle distally invaginates, and in the equatorial zone of the peripheral cells, as you go deeper into the lens, turn into lenticular fibers. This concept does not provide information about the sources of the back of the lens capsule and the features of its structure, the sagittal orientation of lens fibers, does not explain the variety of clinical forms of cataracts. Based on our data, at week 6 in the lens are identified: 1) capsular epithelium of anterior and equatorial poles; 2) formed cells from the anterior capsular epithelium; 3) equatorial zone of the adjacent anterior and posterior poles of the lens transverse and sagittal located glia; 4) formation of back glial membrane; 5) onset of vascular bags of lens. On the 7th week all of the eye coats and lens are penetrated with radial glial cells. We comsider that its role is to coordinate the direction of lens fibers, preventing angiogenesis within the lens by inhibiting this process properties (production by stromal cells of hyaluronic acid.

[Discussion] Following confirmation of participation of glial in the formation lens is based on the fact that in the experiments with the lens vesicle, isolated from optic cup preserving humoral influence, formed lenticular fibers. Consequently, only contact with the eye-glass and the migration of glial lead to fiber formation. Unlike Guntersson (1996), who asserts that amelanotic epithelium of the ciliary body is involved in the formation of the posterior pole of the lens, in our studies laid the lens and the posterior pole of the formation takes place long before the separation of fibrous and vascular membranes, and especially processes of the ciliary body. In these terms identified back glial capsule of the lens, hyaloid artery and two-layer epithelial capsule of the lens in the anterior pole.

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INTEGRAL, THORACIC RHEOGRAPHY AND INTEGRAL TWO-FREQUENCY IMPEDANCEMETRY ONE-STAGE APPLICATION METHOD FOR PROPHYLAXIS OF SUDDEN DEATH IN SPORTS

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The sudden death in sports causes the great interest according to the data of the medical scientific literature. The factors determining a degree of cardiovascular complications risk at engage in sports: specificity of cardiovascular diseases and boundary congenital changes CVS and reaction CVS to go in for sport. Prophylaxis of sudden death in sports is primary prophylaxis – screening, and secondary prophylaxis – conducting CPR.

Therefore on the basis of our long-term researches of application of integral, thoracic rheography and two-frequency impedancmetry method before and after of dosed activity for revealing of central hemodynamics and hemodynamics of blood circulation of small circle violation at doing sport and diagnostics of a myocardium dystrophy owing to the physical overstrain, proceeding with the latent contractile violation. Training influence should be carefully proportioned with real opportunities of organism and a level of development of functions to influence will be directed. Therefore exact, correct and adequate means of the control of dynamics efficiency is necessary.

In our investigation in the rest group of sportsmen with CMP were valid larger parameters HR, BPS, SV, SI, CO, peripheral resistance, CIT, factor of a reserve and IST for comparison with the control. This changes testified about insufficient economization functions of blood circulation system and smaller adaptable opportunities of cardiorespiratory systems at sportsmen with CMP in comparison with the control.

Aukinetic type of blood circulation, optimum from the point of view of adaptation to physical activity, occurrence in 69 % of cases in the control and almost in 2 times less often (38,5 %) at persons with CMP ($p < 0{,}001$).

After physical activity of sportsmen with CMP valid increased BPS ($p < 0{,}05$) whereas in the control it was insignificantly reduced. Increase of intensity of breath parameter at athletes with CMP composed 47 % against 10 % in the control ($p < 0{,}001$). After activity of persons with CMP, SV fell on 7,4 % that it was not observed in the control and was the proof of disturbance of contractive abilities of a myocardium at sportsmen with CMP. Besides in group of sportsmen with CMP it was not observed decrease peripheral resistance (7,7 % in comparison with 18 % in the control, _< 0,05), and the CIT raised, while in the control it fell. It testified to disturbance of a vascular tone and increase of elastic resistance of arterial system at persons with CMP, to lead to increase in total afterload of heart. SI, CO and, accordingly, the reserve factor to a lesser degree increased. Above-listed signs testified to inadequate reaction of blood circulation system of sportsmen with CMP in response to physical activity. The valid increased of value IST at 15 % (at its falling on 8,5 % in the

control) also specified to disturbance of contractile abilities of a myocardium at persons with CMP.

On the whole changes of rheographic parameters in group of sportsmen with CMP could be treated as inadequate reaction CVS to the physical activity expressing in decrease contractile ability of a myocardium, increased of heart afterload and the expressed pressure of respiratory system.

These data have formed the basis for allocation of group of the risk requiring in examination before the admission of sportsmen to training-competitive process with constant physical and psychoemotional activity.

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PSYCHOPUNCTURE AS A SYNTHESIS OF EASTERN AND WESTERN MEDICINE

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Psychopuncture literally translates as puncture of the psyche. In other words, it combines body and spirit, physical and mental, and allows us to consider the whole person in the unity of mind and body.

Psychopuncture - a synthesis of Eastern and Western medical science, associated with the main directions of Oriental medicine, and also with psychiatry, psychology, psychoanalysis, psychotherapy and allowing us to achieve health with the use of acupuncture, homeopathy, herbal medicine, Ayurveda, litoterapia (treatment of stones), qigong, yoga, aromatherapy, music therapy, diet, etc.

The purpose of psychopuncture is to give health and prevent disease at an early stage.

Psychopuncture well is used for the treatment of neuroses, psychoses, psychosomatic diseases, for treatment of alcoholism, Smoking, obesity and almost all diseases.

The founder of the psychopuncture is Indonesian scientist Professor Hallym Kalehr. He suggested a very simple and objective diagnostic test BEST, identifying basic emotional structure of the person.

In BEST allocate 10 main types and 90 subtypes that allows you to more fully disclose the identity of the person and choose the optimal treatment. This allows the approach to the treatment at the highest emotional level and only then go down to the level of the body and the symptoms.

The individual must choose only one figure from 10, nice for him, and one antipathic for him. On the basis of this are certain conclusions.

From the point of view of Oriental medicine and psychopuncture our emotions are closely linked to the internal organs.

For example, the Liver depending on the energy state of the bears elements of aggression

or depression, the heart is responsible for the joy and sorrow, Pancreas and Spleen for love and obsession, Lungs provide the seriousness and vitality, the Kidneys will and fear.

All agencies may also carry elements of fatigue, and neurosis. For example, liver, fatigue and liver neurosis, pulmonary asthenia and pulmonary neurosis, etc. From this point of view any violation in internal organs leads to emotional interpretation and on the contrary, all our emotions are reflected in the internal organs.

The peak is of all-is the psyche. Psyche has an impact on emotions and the emotions of the body. On the other hand, the body has an impact on emotions and psyche.

Thus, if we want to achieve high results of treatment it is necessary to examine and act on all the components - the mind, emotions and body.

The process of mental status changes and transfer it from one emotional level to another is called transformation.

Thanks to the transformation can be naturally influence on the personality, to neutralize the negative emotions, including those, which are in the subconscious, and to have a more effective treatment.

One of the most important features of psychopuncture is that, due to the test you can determine the defeat of energy channels, and knowing what channels amazed to select the optimal combination of points of the acupuncture.

We have developed an integrated approach to the treatment of many diseases on the basis of mental activity points on the basis of own developments and data on the mental activity of points, taken from ancient treatises.

This leads to high results of treatment. Especially great is the role of Psychopuncture in the treatment of alcoholism, Smoking, obesity, diseases of the nervous system.

In addition to treatment, knowing psychotypes, psychopuncture helps to define the human complexes, relations between people, psychological consultations, assist in the selection of spouses, partners in the business, putting on positions within the Department and the enterprise and many others where it is necessary to use psychology.

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INFLUENCE OF CARBON NANOTUBES ON THE VISCERAL SYSTEM OF RATS WHEN ADMINISTERED IN THE GASTROINTESTINAL TRACT

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[Introduction] The main researches of toxicokinetic and nanoparticles focus on studies related to the assessment of biological and toxic effects of nanoparticles, as well as possible

future use as a means of drug delivery and diagnostic purposes.

Study the most general laws of the biological and toxic effects of nanoparticles, depending on their shape, size, form factor, the source material, surface area, surface charge, impurities and other physical and chemical characteristics of the structure and the mechanisms of their effects on cells and tissues, consider topical issues nanotoxicology. Equally important are the studies that determine the dose, route of delivering and the concentration of nanoparticles in the target organ, duration of exposure.

The purpose of this study was to investigate the reactions of the structure of the mucosa of the gastrointestinal tract in CBA mice at inserting of oral multi-walled carbon nanotubes, and also consider the features of overcoming the epithelial barrier, intestinal absorption and renal responses.

[Methods]. During the study the different parts of the gastrointestinal tract and kidneys 60 CBA mice (vivarium TIBOH FEB RAS) after oral inserting of nanotubes for 1, 2, 3, 4, 5, 6 days. To eliminate the effect on the proliferative activity of epithelial cells of the mucous membrane of the gastrointestinal tract of estrogen in the experiments involved only male mice. Biopsy specimens were carried out in accordance with the "Rules of the work with experimental animals" from 12/08/77. Gastric biopsies were taken in accordance with the gold standard of WHO cardia, fundus and antrum. The collected material was sliced to semithin tissue sections of gastrointestinal tract and kidneys, which were stained with hematoxylin-eosin. Analysis of the material held on the microscope Olympus Bx51 (Japan) with a digital camera, CD 25, and proprietary software for morphometric studies.

[Results] During the experiment, there was a migration of nanotubes through mucosal barrier, the epithelium and its basement membrane. Nanotubes on the first day of the experiment are identified at the level of mucosal mucosal barrier wall of the esophagus, cardiac, fundal and antral. On the second and third days in the wall of the mucosa of the duodenum, small intestine and colon nanoparticles overcome mucosal, epithelial barrier, where they are identifiable by light microscope. The second face of nanotubes passing through the stage of the epithelial barrier is directly cytoplasm of the epithelium.

[Discussion] First nanotubes occupy border position in the apical part of the epithelium, then they reach the basement membrane of the epithelium, where they are arranged in a line parallel to the basal membrane. In case of oral insertion of nanotubes reaction and permeability of the epithelium of the mucous membrane of the intestine is most pronounced compared to epithelial cells of the mucous membrane of the stomach, duodenum, small intestine and colon. According to our data, the morphological picture of the distribution of nanotubes in the epithelium is similar to that in the microbial contamination of Helicobacter pylori of mucosa shells of the gastrointestinal tract. In the absence of receptor recognition of nanotubes due to the presence of certain chemical properties, as part of a short-term experiment, there is only contamination of nanoparticles in epithelial cells.

In this case, we have noted as a defensive reaction of the mucous membrane increased

secretory activity of the glandular epithelium. In general, we observed that the multi-walled carbon nanotubes do not have a pronounced toxic effect on the body CBA mice with short-term experiment. Despite this, it is necessary to point out some of the nanomaterial immunogenicity and increased migratory activity of the cells, which is manifested in the lymphoid infiltration.

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THE OZONETHERAPY EFFECT ON STRUCTURE AND FUNCTION OF THE LYMPH NODE IN OLD AGE

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So study of changes in regional lymph node is very important for understanding of pathogenesis and sanogenesis and also for search of effective methods to become longer age useful for active and creative human life. In this connection the most interested method is ozone therapy because of positive influence on organism. But lymphatic component of the action of ozone therapy isn't studied yet. So it is necessary to give scientific base for using ozone therapy to inhibit aging lymphoid and lymphatic systems. The results of the study have practical meaning for optimal rehabilitation in elder and old patients.

The aim of the present work is to study structural and functional reaction of lymph nodes of old rats in reply to ozone therapy.

Method. 160 white rats-male of Wistar breed of different ages (young rats were 3-5 months, old rats were 12-15 months) in the conditions of Novosibirsk city have been used in experiment. Animals were given extruded mixed feed PK-120-1 and unlimited quantity of water. Ozone application with ozonizated olive oil during 15-20 minutes every other day was made on the region of lymph accumulation of groin lymph nodules, course was 14 applications. Ozone saturation of olive oil was made with apparatus OP1-M with device for ozonization. Groin lymph nodes were studied with histological method. Obtained data were statistically processed with program of statistical analysis StatPlus Pro 2009, AnalystSoft Inc.

Results and discussion. Lymphatic nodes are the part of lymphaticstream and change with age because of sclerotic process. This process is accompanied with thickening of capsule, appearing of connective tissue around vessels and sinuses in lymphoid parenchyma of lymphatic nodes of old animals. At the same time subcapsular sclerosis parallel to boundary sinus of peripheral cortex is localized. We think that subcapsular sclerosis is a result of unfavorable ecologic environment and makes difficult to pass lymph in compartment of lymph node. Area of structural and functional zones of lymph node responsible for cellular and humoral immunity is changed in lymphatic node of old rats. These changes show disproportion between inflow of lymph in lymph node and outflow of

lymph from lymph node. Extended sinuses are structural prerequisite for slowing down of flow of lymph, lowering of drainage and detoxication functions and lowering of immune functions of lymph node. Functionally lymph node is in the compensation state that is the sign of unfavorable ecologic environment, thus lymph node is an indicator of state of external and internal media.

Ozone therapy may be prophylactic of early aging of lymphoid and lymphatic systems. Transdermal effect of ozone application contributes the changing of structural and functional zones of lymph node changed with age and environment. Peculiarities of effect of ozone application are the increase of area of cortical plateau and maintained high lymphopoiesis in germinative centers of young rats and the decrease of cortical plateau, paracortex and lowered lymphopoiesis in germinative centers of old rats. Optimization of sinus system of lymph node is a result of ozone application that is very important for drainage and detoxication function of lymph node under the unfavorable environment. Modulating effect of ozone therapy namely decrease of high indexes and increase of low indexes of area of structural and functional zones of lymph node may be supposed on the base of character of change of area of cortical plateau in young and old rats. This regularity is appeared for the most of structural and functional zones of lymph node of old rats after ozone application

Conclusion. Ozone correction cause different in intensity structural response of lymph node and have modulating effect. Old rats show the increase of immune potential and drainage function of lymph node. This conclusion is based on character of changes of structural and functional zones of lymph node. This fact defines expediency of using of ozone therapy in old age in program of endoecologic rehabilitation and measures against aging under the unfavorable environment conditions.

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EXPERIENCE IN THE APPLICATION OF WORK QUALITY ASSESSMENT CRITERIA OF MEDICAL STAFF IN A 24-HOUR HOSPITAL

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In 2011 the Healthcare of the Russian Federation introduced a new system of payment. One of the objectives of this system is to increase the salary level of medical staff. This increase is directly connected to the task to improve the quality of medical aid, which would result in a higher satisfaction level of patients and a decrease in the mortality caused by some diseases.

A material bonus for medical staff is a powerful incentive to use their work potential in a better way. In regard to the statements above, the stimulating payments to medical

staff within the frame of the new system of payment must be carried out in cases of quality administration of medical aid. In the Togliatti City clinical hospital No.1, we have developed a system to assess the work quality of medical staff who work in the departments of the 24-hour hospital. Doctors, nurses and junior medical staff receive a monthly additional payment for their work depending on the work quality of the whole department and the assessment of the work results of each individual person. When assessing the work quality of doctors and other medical staff, we have stopped to use extensive criteria which were implemented in the past. Today, the assessment practice of work conducted by medical stud includes the following indicators and criteria of quality assessment of medical aid:

- Reasons for hospitalization (or not hospitalization);
- An accurate clinical diagnosis and an accompanying diagnosis and their correspondence to modern classifications;
- Appropriately carried out examination and its correspondence to modern approaches (protocols) in medicine;
- Timely and appropriate therapy and its correspondence to modern scientific statements (protocols);
- Absence of unpredictable complications during treatment or surgery;
- Absence of complaints from the patient, his relatives, department staff and hospital administration;
- Discrepancies between clinical and post-mortem diagnoses;
- Clear, timely and competent medical documentation;
- Untimely and poor intradepartmental examination of medical history;
- Violations during issuing of medical certificates and certificates from clinical-medical commission;
- Absence of violations of labour discipline.

Parameters of the assessment of work of average medical staff are as follows:

Qualitative and timely execution of medical recommendations;

Clear and competent medical documentation including medical history in the electronic form;

Absence of complications caused by nurses (subcutaneous ingress of medicine during intravenous introduction, haematomas, abscesses etc.);

Violations regarding issuing terms of medical certificates and work terms of clinical-medical commission (for senior nurses);

Absence of complaints from the patient, his relatives, department staff and hospital administration;

Intensity and complexity of work, professional versatility of nurses;

Absence of violations of labour discipline, compliance with ethics and deontology;

Work with patients from “risk groups” (Z-21, HCV);

Knowledge and compliance with regulations (infection control, pharmaceutical control).

Every criterion has its own level of importance depending on the position and work volume of the corresponding staff member. In total, the maximum value is 1.

The assessment of doctors is done by executives of organisation departments. The assessment of nurses and junior medical staff is carried out by the senior nurse and the executive of the organisation department.

Within 2 years of the healthcare modernisation programme, the number of conflict situations between medical staff, patients and their relatives decreased substantially. Serious complaints of the hospital administrations to its staff are basically non-existent. The examination of medical histories showed an increased quality of medical documentation.

Having analysed the work of medical staff, we came to the conclusion that additional financial payments motivate medical staff to better implement their work potential, which has a direct influence on the quality of medical aid in a 24-hour hospital.

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THE ROLE OF INTERLEUKIN-6 IN PREDICTING THE COURSE AND OUTCOME OF DIFFUSE PERITONITIS

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In recent years, mortality for diffuse peritonitis (DP) varies from 6.2 to 42.2%, and in patients with multiple organ failure reaches 90-100%.

These days there is an increased interest of researchers to cytokine system in different pathologies, including diffuse peritonitis. Therefore, a comparative study of cytokines in blood serum, in natural liquid - urine, as well as in pathological exudate of the abdomen is more important and appropriate for assessing the effectiveness of the treatment and prognosis of the disease.

The purpose of the study – is to determine the diagnostic value of the level of interleukin-6 (IL-6) in various biological fluids to assess of prognosis and outcome of peritonitis.

The investigation of blood serum, peritoneal fluid, and urine collected from 60 patients with DP, depending on the severity of pathological process. The severity of illness was evaluatied by Mannheim peritonitis index (MPI): MPI-I - in 17 patients, MPI-II - in 23 and MPI-III - in 20 patients. Postoperatively, from 60 patients 12 (20%) was died: for MPI II - 5 (21.7%) and MPI-III - 7 (35%). The level of IL-6 in serum, peritoneal exudate and in urine were measured by ELISA method. On admission of patients, the highest content of IL-6 in serum was detected in patients with MPI-I - by 48.7%. In peritoneal exudate of the same patients collected in operation, IL-6 was 79,2±3,7 pg/ml, and in urine its level was 29,5±1,6 pg/ml, i.e. 8.6 times greater ($p < 0.001$) than the normal. On MPI-II was found that preoperative level of IL-6 in blood serum - 27.5% higher than the control.

The highest content of IL-6 in peritoneal exudate found in the first day - 116,0±5,8 pg/ml, in following days, there was a decrease of the indicator in dynamics. In these patients, preoperative level of IL-6 in urine exceeded the norm - 12.3 times ($p < 0.001$). On admission to the hospital in patients with MPI-III, the content of IL-6 in serum was 11.9% less than the normal value, in peritoneal exudate at first collection was 135,4 ± 6,8 pg/ml, and in urine 52 1±3,8 pg/ml.

In the study of parallel samples of serum, urine, and peritoneal fluid (dialysate) in dynamics, we found differences in the content of IL-6 in these biological fluids during the entire period of observation: the level of this cytokine in peritoneal exudate (dialysate) and in urine was significantly greater than in serum. On the other hand, the level of pro-inflammatory cytokine - IL-6 in the studied biological environment was depended on the severity of diffuse peritonitis by MPI.

Also, it was carried out a comparative analysis of the level of IL-6 in patients with MPI-II and MPI-III, depending on the outcome. The mean value of IL-6 in peritoneal exudate on patients which died with severity of MPI-II, was significantly higher, but in the blood and urine was significantly less than recovered patients. Before surgery, the level of IL-6 in the urine of patients who have died with severity of MPI-II was 8.4 times ($p<0.001$), and in recovered 13.4 times ($p<0.001$) higher than normal.

Thus, on the basis of the research can be argued that a comparative study of the concentration of IL-6 in the peritoneal fluid, blood and urine in patients with peritonitis in dynamics, is one of the objective criteria for assessing the clinical course. Improving the parameters of peritoneal exudate in postoperative period demonstrates the continuation of systemic inflammatory response. Recovery of the patients is accompanied by a decreasing of natural level of IL-6 in peritoneal exudate, increasing in the blood and increased elimination in the urine.

Lutz Harms

LIMBISCHE ENZEPHALITIDEN

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Limbische Enzephalitiden gehen mit vielfältiger Symptomatik einher, die sowohl ein weites neurologisches als auch psychiatrisches Spektrum umfassen.

Insbesondere die medialen Temporallappen und der orbitofrontale Kortex sind von einem enztzündlichen Prozess betroffen. Kernsymptome sind Verhaltensauffälligkeiten bis hin zu psychotischen Symptomen, Gedächtnis-und Bewußtseinsstörungen sowie epileptische Anfälle.

Die Ursachen sind vielfältig. Neurotrope Vieren, speziell Herpes simplex, oder eine klassische paraneoplastische Ätiologie unter Nachweis entsprechender Antikörper gegen onkoneurale Antigene (Hu, Ma2, CV2/CRMP5, Amphiphysin, GAD) sind zu

berücksichtigen. Zudem müssen weitere autoimmune Enzephalitiden wie z.B. die SREAT (steroid-responsive encephalopathy associated with autoimmune thyroiditis - "Hashimoto-Enzephalitis) bedacht werden. Während die Zielantigene der onkoneuralen Antikörper intrazellär liegen, rückten in den vergangenen Jahren pathogenetisch bedeutsame Antikörper in den Blickpunkt, die an zellmembranständige oder synaptische Antigene bzw. neurotransmittergesteuerte Ionenkanäle des zentralen Nervensystems binden. Dabei handelt es sich um Antikörper gegen NMDA (N-Methyl-D-Aspartat) -, AMPA-(α-Amino-3-Hydroxy-5-Methyl-4-Isoxazol-Propionsäure) GABAB- (γ-Amino-Buttersäure-B) oder Glycin-Rezeptoren) bzw. Proteine, wie LGI1 (leucine-rich glioma-inactivated 1).

Antikörper gegen NMDA-Rezeptoren kommen am häufigsten vor und betreffen in der Mehrzahl junge Frauen und sind häufig mit einem Ovarialteratom assoziiert. Aber auch Kinder und Männer erkranken. Nicht selten erfolgt initial die Einweisung in psychiatrische Kliniken. Die Erkrankungen können dramatische Verläufe aufweisen bis hin zur Intensitherapiepflichtigkeit oder letalem Ausgängen. Da diese Enzephalitiden einer Immuntherapie zugänglich sind, ist eine schnelle differenzialdiagnostische Zuordnung und Therapieeinleitung notwendig. Neben dem Antikörpernachweis ist die MRT, die Liquordiagnostik und das EEG erforderlich. Therapeutische Optionen stellen neben einer symptomatischen Therapie Kortikosteroidgaben, Aphereseverfahren oder intravenöse Immunglobulingaben dar, als Rückfallprophylaxe ggf. Cyclophosphamid oder Rituximab.

Überwiegend ist die Prognose bei adäquater Therapie gut, residuale Defizite sind aber nicht selten.

Fallbeispiele sollen exemplarisch die klinischen, diagnostischen und therapeutischen Besonderheiten veranschaulichen.

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EFFECTIVENESS OF SPECTROSCOPY IN UROLITHIASIS DIAGNOSTICS

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An increasingly complicated ecological change of microbial cenosis both inside and outside the body has a significant influence on the distribution of urolithiasis, its severity and complications. Nowadays there are many methods to diagnose urolithiasis; one of early diagnostics methods is infrared spectroscopy (IR-spectroscopy).

The objective of this research is to develop diagnostic and prognostic criteria of urolithiasis development by using IR-spectroscopy.

Materials and methods. We have tested blood plasma of 70 patients in the age between 15 and 70 by means of IR-spectroscopy. The patients have been admitted to the urological department of the National Medical Centre. The patients were divided into 4 groups:

solitary stones – 25, multiple stones – 20, coral-like multiple stones – 15 and two-sided stones - 10. All patients had a general clinical examination including general blood test, urine test, tests for urea, creatinine, glucose and electrolyte content in blood serum.

Roentgenological examination included a general image of urinary system and excretory urography. Ultrasound examination of kidneys and urinary tracts was carried out on "FUKUDA – 1410". We also determined lithogenic substances in blood serum, i.e. oxalic, uric and phosphoric acid. For this purpose, we used the method of IR-spectroscopy on "SPEKORD 75 IR".

Results. The spectroscopy method makes it possible to study the possibility of stone formation at an early stage. For spectral analysis, blood was taken from the ulnar vein, and then plasma was isolated by using thin film methods. The IR-spectra were noted. The analysis of molecular-dynamic characteristics of IR-spectra of blood plasma in patients with urolithiasis shows itself by a series of bands of different intensity, the peak of which lies in the frequency range between 3400 – 3660 cm-1 and is caused by stretching vibrations O – H and N – H bonds. The remaining absorption part is situated in the frequency range of 1640, 1160 and 840 cm-1, which are caused by stretching vibrations of C – H, C – C and C – O bonds. The comparative analysis of IR-stretches in the frequency range of 3750 – 2700 cm-1, the blood plasma of patients with nephrolithiasis show that depending on the kind of stones there is a change in the shape, integral intensity and enlargement of the band. Firstly, in the maximum region the OH-group band is enlarged and becomes flatter, and there is a change in the ratio between the band intensity of 3315 (±25) cm-1 (OH – groups) and 2930 cm-1 (CH2-groups). Secondly, there is a general increase of intensity and band enlargement.

In the case of urolithiasis, there is a slight shift of Vmax, band of 1550 cm-1 in the direction of high frequencies by 10±2 cm-1. The band intensity of 1640 cm-1 is decreased by 15±3%, and the band intensity of 1550 cm-1 is, on the contrary, increased by 25±2%. Against the background of the general band intensity increase, patients have a decrease of weak peaks from Vmax, 1450 and 1396 cm-1. There is basically a smoothing of peaks from Vmax, 1295 and 1230 cm-1; however, there is a new weak peak in the frequency range of 1100± cm-1.

In order to study the interdependence of physicochemical contents of the concrement type and their reflection on spectral blood plasma characteristics, we have also studied IR-spectra of stones removed during the surgery. It is well-known that stone samples vary greatly in their shape, colour and size. The blood plasma analysis in patients with nephrolithiasis with the presence of solitary stones shows that they are reflected differently on the physicochemical blood properties depending on the location of the stone in the kidney and the stage of calculous pyelonephritis. Therefore, the observed differenced in the IR-spectra of blood serum of patients might be connected to this factor or to the nature of concrements.

We have analysed blood plasma of 20 patients with multiple stones in kidneys. The comparative analysis of IR blood plasma spectra shows that they differ from each other in

shape and the location of Vmax. In the case of patients with multiple stones for bands in frequency ranges of 3700- 2500 cm-1 and in the IR-spectra in comparison to the blood plasma spectrum of patients with solitary stones, there is an increase of band intensity of 3300 cm-1 by 15±5% and a shift of Vmax into the high-frequency range up to 10 cm-1. There is also a slight increase in the intensity of the weak band 2920 cm-1.

This way, the analysis of IR-spectra of blood plasma of patients show that in case of nephrolithiasis there is not only a change in the absorption band shapes but also a new band that is only characteristic for this disease type. In general, the analysis of the IR blood plasma absorption bands show that there is a change in the blood composition of patients with nephrolithiasis, which reveals itself as new bands in the spectrogram. The analysis of the blood plasma of patients by means of IR-spectroscopy makes it possible to determine the type and composition of concrements, the stage of calculous pyelonephritis with the help of changes of shape and intensity ration of characteristics bands and carry out object-oriented treatment.

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SPHINCTEROPLASTY FOR FECAL INCONTINENCE IN CHILDREN

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13 children with fecal incontinence years were examined and treated by us from 2006 – 2011. Their age ranged from 3 to 14 years. All patients had been previously operated on: anal atresia, 4, atresia of the anus and rectum 6, rectal atresia 3. From the 13 children in 9 was produced peritoneum surgery - perineal proctoplasty, and 4 perianal rectoplasty. In 7 patients had partial retention of solid stool, and 6 children constant outflow of feces. The research showed coagulative hemostasis ($p < 0.01$) reduction in domestic clotting factors. It manifested anticoagulation with minor changes in vascular - platelet hemostasis. We used Faerman operation (2), sphincteroplasty gluteal muscle (5), plastic sphincter muscles external and internal sphincter (2) and sphincteroplasty Faerman method to modify TIPMT Clinic of Pediatric Surgery (4). Faerman operation in pediatric surgery clinic modification is: the first stage selection m. gracilis muscle blood flow to the conservation, the second phase of the subcutaneous tunnel around the anus, and the third stage of the dissection that gracilis into two equal half the length and carrying it through the established tunnel on both sides around the anus and the end of the stitching both muscles in the tendon of each other. Thus produces two muscle rings. All the patients of the main group carried therapy designed to improve blood rheology, promoting regeneration and immune stimulation, physiotherapy. Studied long-term outcomes in 13 patients during the period from 5 to 10 years. Postoperative complications after surgery Faerman - relapse fecal incontinence (1), sphincteroplasty gluteal muscles - recurrent incontinence (3), plastic sphincter muscles of external and internal sphincter-recurrence of the disease (2),

and 4 children sphincteroplasty method to modify Faerman clinic of Pediatric Surgery TIPMT, were not complication.

Thus, sphincteroplasty for fecal incontinence in children on how to modify Faerman gives good results. This operation is useful in children over 13 - 14 years. With the purpose to prevent complications we used medical ozone and physical therapy in combination with a drug therapy before and after surgery.

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COMPLEX TREATMENT CALCULOUS PYELONEPHRITIS MEDICAL OZONE IN CHILDREN WITH UROLITHIASIS

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The purpose of work. Improving the results of treatment of calculous pyelonephritis (CP) in children with nephrolithiasis using medical ozone (MO).

Materials and methods. Analyzes the results of the treatment of 54 children with a mean age of 7, 8 ± 2,6 years (range, 4 to 12 years) with bilateral CP amid bilateral nephrolithiasis. Bilateral solitary stones were observed in 12 patients, coral stones - in 24 and coral-set - in 18 patients. The patients were divided into two randomized groups. Patients first group - 24 children in pre-and postoperatively received etiotropic and pathogenetic therapy (infusion therapy, anti- antibiotictherapy uroseptic, restorative, desensitizing, a vitamin and immunotherapy, metabolic support, postoperative factional irrigation of pielochashechnoy system antiseptic solutions - dioxide or dekasan).Patients of second group - 30 children received similar etiotropic and pathogenetic therapy and an additional before and postoperative period intravenous drip received medical ozone by 0.9% sodium chloride - 200 ml and after surgery drip irrigation system solution pielochashechnoy medical ozone - a course treatment was 6-8 sessions. 54 patients with 110 operations were carried out in stages (first group - 50, the second group - 60): pelviolithotomy - 38 (20 and 18 respectively), nephrolithotomy - 28 (12 and 16 respectively), nephrolithotomy with intrarenal plastic - 32 (14 and 18, respectively) and neopielouretroanastomoz - 12 (4 and 8 respectively). All patients observed CP the 1st degree 15 - (8 and 7, respectively), grade 2 - 27 - (13 and 14, respectively) and 3 degrees. 12 - (3 and 9 respectively). At admission, all patients with CP were in the active phase. Effectiveness of the treatment CP manual were conducted in terms of total blood and urine, immunological status (cellular and humoral immunity), endogenous intoxication (EI) in terms of average molecular mass (MSM), LII and life paramecia renal blood flow (sample Rehberg-Tareeva, Doppler), glomerular filtration rate (GFR) by Kunahana-Barratt, coagulation unified program. The study was conducted at admission, before

surgery, after surgery on 2,- 7 day, and before discharge.

Results and discussion. All patients on admission reliable observed dysfunction respiratory, cardiovascular system and kidneys, with no statistical validity between groups (P <0.05). Infections of the upper urinary tract were considered more reliable if in 1 ml of urine over 5 thousand white blood cells. This treatment is correlated with the clinical data, ultrasound and radiographic changes. Children with 1 degree CP in total urine was observed 30,0 ± 5,2 leukocytes to Nechyporenko - 10500,0 ± 520, Grade 2. CP - 55 ± 7,6, to Nechyporenko - 45000 ± 2200 and 3 degrees. CP - 85,5 ± 5,5 and Nechiporenko - 67000,0 ± 1500 (P <0.001). It should be noted that all patients in renal function compared (P <0.01) with indicators of healthy children decreased in the trunk (decrease V max. degree to 14,5 ± 1,7%> - 12 to 18% , V KD - 13,8 ± 2,2% - from 11 to 16%, increase in R & D (resistance index) - 15,3 ± 1,8% from 13 to 18%) and in parenchymal renal artery (or max. degree V - 16,1 ± 2,1%) - 14 to 19%, V KD - 15,9 ± 1,5% - from 14 to 18%> and RI - 16,6 ± 1,8%> - 14 to 19%>). Renal blood flow disturbance characterized by reduced volume of blood vessels, increased tone and an increase in their resistance, due to edema and inflammatory activity of vascular spasm. All the phenomena of hypercoagulability, reduced cellular and humoral immunity, and 2 and 3 of the degree of EI. In children of first group of patients in all stages of the study were impaired renal function and blood flow in comparison (P <0.05) with the second groups of patients before surgery and recovered from 12 to 20%. The average postoperative period ranged from 12 to 17 days (15,3 ± 1,5). In 9 (37.5% o) of the 24 children remained first degree EI. In 6 of the 24 children had obstructive uropathy, so the children operated on a delayed basis. In the postoperative period in 7 (29.2%) children had worsening CP. In 5 (20.7%) of 24 postoperative complications were observed in the form festering wounds and purulent obstructive pyelonephritis 3, urinary fistula - 1 and urosepsis - 1. The average bed-days ranged from 38 to 65 days (52 ± 12). The second groups of patients before surgery was a statistically significant improvement in renal function and blood flow, reducing the activity of the inflammatory process. Only 3 (10.0%>) of 30 children remained one degree EI. The remaining 90% of the> children of chronic endogenous intoxication savings. Mean duration of preoperative ranged from 7 to 12 (9,6 ± 1,8) days, or reduced by 1.6 times compared to children first group (P <0.01). Postoperative exacerbation of CP was observed. In 1 (3.3%) children were observed postoperative complications in the form of bleeding and pyonephrosis. Average bed days were 32,5 ± 2,8 (29 to 36 days). Complications associated with intravenous and in kidney using medical ozone are not marked.

Therefore, all children with bilateral nephrolithiasis accompanied calculous pyelonephritis in the active phase, which is the main cause of post-operative complications. CP treatment in combination with intravenous and in kidney using medical ozone from 0.9%> a solution of sodium chloride is effective due to its antiseptic, antioxidant, improves microcirculation rheology of blood and immune stimulating properties.

M.S. Iskakova

PROPERTIES OF THE INFORMATION AND BIOLOGICAL FIELD OF THE PERSON

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Generating an internal and external biofield, the brain of the person works on the one hand as a source and the biofield transmitter in space surrounding it.

For generation of own biofield, reception of an information and biological field of other sources, their strengthening and secondary generation of information in surrounding space of this field, neutral domains answer. Remarkable property of neutral domains, and, therefore, and all brain, that in their work there is no selectivity is. But degree of perfection of internal self-organization of a human brain still quite low and therefore this process generally goes at uncontrollable level which we call a subconscious condition.

Hypnosis- is the simplest property of the brain consisting in ability to make influence, by means of a biofield, for functional work of a brain of other people or animals. Already now this property many people possess.

Telekinesis - property of contactless movement of subjects by the directed mental efforts.

Clairvoyance is a property of a human brain to see events or fragments of events without any devices or the devices occurring at present at a great distance from the subject, and also to reproduce in the imagination of an event last, without being their direct witness. The fifth property still little-known, but the basic on the value, is based on ability of a brain to create an external information and biological field, consists in the following, a biofield of the specific person, irrespective of consciousness, his desire or any other factors, is perceived by a brain of other person or a brain of any number of people, amplifies and is again radiated in surrounding space. The brain of the same specific person in turn accepts, strengthens and again radiates a biofield of other people. The biofield of certain people develops and forms a uniform planetary information and biological field of Earth.

Now the general information and biological field of Earth has no that value which it is urged to play in destiny of all mankind.

Communication of the certain person with a general field, way of reception by a brain of the person of all information from a general field, its strengthening and the return return of this information in the field, leaves information on the person in this field.

The brain or intellectual essence of each person has the display in a general field. Soul in the standard understanding — a thing conditional, and information display of essence of the person in the field, a thing real.

Information reception from a field a brain, strengthening by its neutral domains and the return radiation in the field, happens at uncontrollable subconscious level. Possessing property of reception radiation of a biofield, the human brain will manage to accept and directly to translate over time in an acquired form and all range of other electromagnetic

wave band. One of really visible opportunities of realization of these abilities lies through closer interaction between a biofield and an organism biofield. Here the biofield can act as the receiver, a peculiar heterodyne, and also a damper protecting a biofield and a brain from possible powerful overloads.

Closer interaction of two biofields of an organism will lead to emergence of abilities to perceive and adequately to react, at conscious level, to manifestation of stationary magnetic and electric fields.

It is well-known that at a number of animals and birds at instinctive level these abilities are shown. Now, because of them it is insignificant low power, there are no physical devices capable to carry out their reception and detecting. It is impossible to slow down the speed of technogenic acceleration, can cardinally change all system of life of people. All this performance requires only one — the steady growth and achievement of a certain intellectual and spiritual level of all mankind.

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PROGNOSTISCHE BEDEUTUNG DER CHRONISCHEN NIERENINSUFFIZIENZ BEI PATIENTEN NACH ACVB

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Die Abnahme der glomerulären Filtrationsrate über mehr als 3 Monate wird unabhängig von der Ursache als chronische Niereninsuffizienz bezeichnet. Die kardiovaskulären Erkrankungen und die chronische Niereninsuffizienz sind häufig komorbide Erkrankungen mit gemeinsamen Risikofaktoren und Progressionsprozessen und wirken sich negativ auf die kardiorenale Prognose aus.

Ziel der Studie: Einschätzung der prognostischen Bedeutung der chronischen Niereninsuffizienz bei Patienten nach ACVB.

Patienten und Methoden. Untersucht wurden 236 Patienten (139 Männer, 97 Frauen) von 43 bis 69 Jahren (mittleres Alter 58,3±5,6 Jahre), bei denen eine elektive ACVB mit der Herz-Lungen-Maschine durchgeführt wurde. Von diesen hatten 103 Patienten einen Myokardinfarkt in der Anamnese, 32 Patienten hatten ein Stent der Koronargefäße gehabt. Vor und nach der ACVB bestimmten wir den Serum-Kreatininwert und rechneten die GFR nach der MDRD-Formel aus. Präoperativ war die GFR bei 80 von 236 Patienten (33,9%) im Normbereich, bei 156 Patienten (66,1%) stellten wir die Diagnose einer Niereninsuffizienz, darunter bei 92 Patienten Stadium II, bei 64 Patienten Stadium III. Die Diagnose eines akuten postoperativen Nierenversagen stellten wir nach dem Serum-Kreatinin-Wert und teilten nach der RIFLE-Klassifikation ein.

Ergebnisse. In den ersten 7 Tagen post-OP entwickelten von 156 Patienten mit chronischer Niereninsuffizienz 119 ein ANV (76,3%), von den nierengesunden Patienten nur 21 (26,3%). Dazu muss man anmerken, dass unter den nierengesunden Patienten 11 (52,4%) ein leichtes ANV hatten, 7 (33,3%) eine mittelschweres und 3 (14,3%) ein schweres

ANV. Allerdings war bei den Patienten mit chronischer Niereninsuffizienz ein leichtes ANV bei 24 Patienten (20,2%), mittelschweres bei 61 Patienten (51,3%) und schweres ANV bei 34 Patienten (28,6%) anzutreffen.

Früh postoperativ traten Antiarrhythmika-pflichtige ventrikuläre Herzrhythmusstörungen bei den Patienten mit chronischer Niereninsuffizienz und leichtem ANV in 16,7% der Fälle auf, bei den Patienten mit mittelschwerem ANV in 21,3%, beim schweren ANV bei 35,3%. Postoperativer Myokardinfarkt trat bei 5 Patienten mit einem mittelschweren ANV (8,2%) und bei 6 Patienten mit schwerem ANV (17,6%) auf. Deswegen haben diese Patienten einen notfallmäßigen Stent der Koronararterien erhalten. Eine progressive chronische Herzinsuffizienz war bei leichtem ANV bei 9,5% zu beobachten, bei mittelschwerem ANV bei 14,8% und bei schwerem ANV bei 29,4%.

Die Häufigkeit der ischämischen Schlaganfälle betrug bei den verglichenen Gruppen 4,8%, 8,2% und 17,6%. Innerhalb 12 Monate postoperativ lag die kardiovaskuläre Mortalität bei den Patienten mit leichtem ANV bei 4,8%, bei mittelschwerem ANV bei 6,6% und bei Patienten mit schwerem ANV bei 11,8%.

Fazit. Wir haben gesehen, dass bei den Patienten mit chronischer Niereninsuffizienz nach einem ACVB ein akutes Nierenversagen 3 Mal häufiger als bei nierengesunden Patienten auftritt (76,3% gegen 26,3%). Außerdem litten die Patienten mit chronischer Niereninsuffizienz häufiger an mittelschwerem und schwerem ANV. Wir konnten zeigen, dass bei Patienten mit akut auf chronischen postoperativen Nierenversagen die kardiovaskuläre Prognose deutlich ungünstiger ist.

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RISIKOFAKTOREN UND VERLÄUFE DES AKUTEN NIERENVERSAGENS BEI PATIENTEN NACH KORONARARTERIEN-BYPASS-OP

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Akutes Nierenversagen (ANV) ist eine häufige Komplikation der kardiochirurgischen Eingriffe. ANV hat einen signifikanten Einfluss auf langfristige Mortalität, der mit der Schwere des Nierenversagens korelliert. Obwohl ein ACVB in der Mehrzahl der Fälle die langfristige Prognose für Patienten im Zustand nach Myokardinfarkt verbessert, gehören manche Patienten nach wie vor zu der Hochrisiko-Gruppe.

Die Fragestellung unserer Studie war, die Risikofaktoren für eine ANV zu bestimmen sowie die typischen postoperativen Verläufe bei Patienten mit einer erhaltenen Nierenfunktion nach ACVB zu erforschen.

Patienten und Methoden. Wir haben 548 Patienten (331 Männer, 217 Frauen) im Alter von 42 bis 68 Jahren (mittleres Alter 57,9± 8,3 Jahre) untersucht, die einen elektiven Koronarbypass erhalten haben. Der Ausschlusskriterium war eine renale Dysfunktion (unabhängig von der auslösenden Ursache), die präoperativ festgestellt wurde. Akutes

Nierenversagen diagnostierten wir nach dem Kreatinin-Spiegel im Serum und teilten nach den RIFLE-Kriterien ein. Von 548 Patienten hatten 132 (24,1 %) ein ANV erlitten, darunter 71 (13%) Patienten im Stadium Risk, 42 Patienten (7,7%) im Stadium Injury und 19 Patienten (3,5%) im Stadium Failure.

Ergebnisse der Studie. Es gab signifikant mehr Frauen mit ANV (49,2% gegen 36,5%, $\chi 2 = 6,24$; p=0,013). Das mittlere Alter der Patienten mit ANV ist signifikant höher als der Patienten ohne dieser Erkrankung (entsprechend 61,3±4,5 und 54,1±3,5 Jahre (p=0,01). Das Risiko der kardialen Ereignisse nach EuroSCORE-Index lag bei Patienten mit ANV signifikant höher als bei Patienten ohne ANV: 9,4±1,0 und 5,6±0,8 (p=0,003). Außerdem war das Auftreten des akuten Nierenversagens assoziiert mit Zustand nach Myokardinfarkt in der Anamnese ($\chi 2=9,57$; p=0,002), arterieller Hypertonie ($\chi 2=8,16$; p=0,004), chronischem Vorhofflimmern ($\chi 2=7,64$; p=0,006), Herzinsuffizienz ($\chi 2=9,70$; p=0,002), Diabetes mellitus Typ II ($\chi 2=7,32$; p=0,007), sowie Adipositas ($\chi 2=5,56$; p=0,018) und COPD ($\chi 2 = 4,90$; p=0,027). Zusätzlich fanden wir chirurgische Prädiktionsfaktoren des ANV: Beatmung über 48 Stunden post-OP ($\chi 2 =18,34$; p<0,001), Katecholamin-Pflichtigkeit über 24 Stunden nach OP ($\chi 2 =65,76$; p<0,001), Dauer der ACVB und Zeit an der Herz-Lungen-Maschine.

Unter Berücksichtigung des zeitlichen Verlaufs der Kreatinin-Werte während des stationären Aufenthalts hatten wir ein passageres ANV bei 59,1% der Patienten nachgewiesen, persistierendes ANV bei 38,6% und irreversibles ANV bei 2,3% der Patienten. Die Mortalität während des stationären Aufenthalts betrug bei Patienten ohne ANV 2,2%, bei Patienten mit ANV 7,6% ($\chi 2=7,23$; p=0,007). Hämodialysepflichtig waren 7 Patienten (36,8%). Der Dauer des stationären Aufenthalts war bei Patienten ohne ANV signifikant kürzer (entsprechend 11,9±1,4 sowie 17,0±4,9 Tage; p<0,001). Bei den Patienten mit dem ANV korellierte der Serumkreatinin-Wert mit Alter über 60 Jahren (R=0,240; p=0,006), Herzinsuffizienz (R=0,264; p=0,002), Vorhofflimmern (R=0,233; p=0,007), pathologischem EuroSCORE Index(R=0,284; p=0,001) sowie arteriellen Hypertonie (R=0,223; p=0,01).

Fazit. Bei Patienten mit intakter Nierenfunktion tritt nach einem Koronarbypass in 24,1% der Fälle ein akutes Nierenversagen auf. Prädisponierende Faktoren für ein ANV sind schwere Komorbiditäten sowie postoperative chirurgische Komplikationen.

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TO A QUESTION OF TOLERANCE FORMATION IN MODERN ETHNO-CULTURAL SPACE

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Modern Kazakhstan is multinational, polyconfessional, polycultural country and represents original synthesis of the cultures distinguished both external forms, and the

internal contents. In a modern society there is an essential updating education which not only prepares for the future experts, but also teaches youth to bear the responsibility for, the acts to build harmonious relations with itself, other people, with the world. On the foreground the need of formation of the whole pictures of world around at rising generation, spiritual, cultural, moral values in their national and universal understanding is put forward. Accordingly in such conditions requirements and tasks of education of rising generation become complicated.

Other approach proceeds from interaction of nations in political, religious, economic and cultural space during which the countries and the states become not only mutually rich, but also interdependent. The relations which have arisen in a similar way demand from each person of emotional forces and the personal qualities allowing peacefully to coexist people of various races and ethnoses, creeds and outlooks, customs and traditions, habits and tastes. One of personal qualities, which draw ethnoses together and promoting adaptation in modern society is tolerance.

V.V. Shalin investigates a problem of tolerance in a direction of social philosophy and analyzes a correlation of tolerance in conditions of the modern world with culture values, politic, education and with the globalization processes. Exactly the modern world globalization and transformation of the Russian society, according to V.V.Shalin's statement, « have put on the agenda transition to new tolerant type of social relations». R.R.Valitova marks, that tolerance - « is a position calling for activity, to an establishment of spiritual connection with another ». Being guided by tolerance as a principle of humane dialogue, the person comes to understanding of another person, to a recognition of his rights, to expansion of the social experience and valuable orientations.

In the English-Russian psychological dictionary translation of the English word tolerance means: the acquired stability, a limit of stability (endurance) of the person; stability to stress; stability to the conflict; stability to behavioural deviations.

In A.G.Asmolov's researches, the term "tolerance" is submitted in three crossed values: 1) stability, endurance; 2) patience; 3) the admission, a maximum deviation.

During the analysis of sources it is possible to allocate the following criteria of tolerance:

- Equality of people;
- Mutual respect, goodwill and the tolerant attitude to the representatives of various groups and groups as a whole;
- Equal opportunities for participation in public and political life of all members of a society;
- Preservation and development of cultural originality and languages of all ethnos;
- An opportunity of observance of the own traditions and customs;
- A freedom of worship;
- Cooperation and solidarity in the decision of the common problems;
- Positive terminology in interpersonal and interethnic relations.

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HORMONAL AND IMMUNOLOGICAL PREDICTORS OF THYROID CANCER IN PATIENTS WITH NODAL TYPES OF AUTOIMMUNE THYROIDITIS

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Topicality. It is known that autoimmune thyroiditis can be accompanied by thyroid cancer. The role of the autoimmune inflammation in the formation of cancer has not been properly understood up to this day. The estimation of occurrence of autoimmune thyroiditis in combination with thyroid cancer as well as hormonal status in combination with other manifestations of tissue changes in the thyroid with mixed pathology offers new knowledge about ethyopathogenic formation factors of the associated course of autoimmune thyroiditis and thyroid cancer.

Materials and methods. We have observed 62 patients with nodal types of autoimmune thyroiditis and mixed pathology. There was an examination of the concentration dynamics of antibodies to thyroperoxidase and thyroglobulin and cytokines - IL4, IL10, TNFa, INFγ of blood serum by means of ELISA. The comparison of the parameters was carried out between the patients and healthy donors.

Results. During our research it was determined that in the group of patients with nodal types of autoimmune thyroiditis at euthyreosis and hypothyroidism stage without associated pathology and with tumour associated nodal types of autoimmune thyroiditis the level of antibodies to thyroperoxidase was equally increased, which reflects the activity of the autoimmune process.

We have determined that patients with nodal types of autoimmune thyroiditis at euthyreosis and hypothyroidism stage the INFγ and IL10 levels are increased. It is known that IL10 is an immunoregulatory product of Th2, Th3 and T reg and can be characterised as an anti-inflammatory/suppressor cytokine. At the same time, patients with nodal types of autoimmune thyroiditis with hypothyroidism have absolute values of INF_ higher than those in the group of patients at euthyreosis stage. Furthermore, patients with nodal types of autoimmune thyroiditis with hypothyroidism had higher IL4 and TNFa levels in comparison to the other two groups. It is probably connected to a different activity algorithm of the cellular immunity and prevailing participation of proinflammatory cytokines, products of Th1 type lymphocytes.

Patients with mixed pathology had a more marked increase of INF_ concentration in blood, which correlated with an increased thyroglobulin level and thyroxin and triidoditronine deficiency (gr=-0,249, p=0,044). This can be a result of destructive changes and the associated hypofunction of the thyroid under the influence of tumour-associated hyperproduction of cytokines, activated by NK cells and lymphocytes converted to secretion of INFγ CCR6+ Th 17 /Thl-lymphocytes.

Conclusions. Concentration changes of anti-inflammatory and proinflammatory cytokines IL4, IL10, TNFa and INFγ in blood serum of patients with mixed pathology are similar to those of patients with nodal types of autoimmune thyroiditis without thyroid cancer. The tumour-associated type of autoimmune inflammation of the thyroid showed the highest INFγ content with the correlation of average values of thyroglobulin and thyroid hormones in blood serum.

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MORPHOLOGICAL CHANGES OF TISSUES IN THE PRESENCE OF BOVINE PERICARDIUM AND POLYPROPYLENE NET IMPLANTATION AT THE OPERATION AREA

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It was conducted a comparative study of distinctive features of a reparative process at the operation area. It was used tissue specimens of 15 mature rabbits. These specimens were taken out of the area of bovine pericardium and polypropylene net implantation in 3, 6, and12 months after the operation.

According to the study results, the quantity of lymphocytes at the area of polypropylene net implantation increased in 1,4 times in comparison with that one at the area of bovine pericardium net using in 3 months after the operation. In 6 months after the operation the quantity of lymphocytes of both areas decreased. However, the rate of drawdown was higher at the area of bovine pericardium implantation. At this area the quantity of lymphocytes decreased in 3, 5 times and numbered 50,05±5,51 cells per field of vision. At the same time, at the area of polypropylene net implantation the quantity of lymphocytes decreased in 2,5 times and numbered 96,81±14,12 cells. In a year the lymphocytes were not found in the tissues, surrounding the bovine pericardium net. But the tissues, surrounding the polypropylene net, still had the lymphocytes numbered 24,64±2,77 cells per field of vision.

In 3 months after the operation the quantity of macrophages at the area of polypropylene net implantation outnumbered that one at the territory of bovine pericardium implantation in1,7 times. By the 6th month after the operation the quantity of macrophages of tissues, surrounding the synthetical net, decreased in 1,3 times and numbered 39,38±2,54 cells per field of vision. The quantity of macrophages of tissues, surrounding the bovine pericardium, decreased in 3 times and numbered 9,70±2,62 cells. In a year after the operation the quantity of macrophages at the area of polypropylene net kept decreasing. At the area of bovine pericardium macrophages were not found at all.

In 3 and 6 months after the operation the quantity of fibroblasts at the area of bovine pericardium increased that one at the area of synthetical net in 1,5 times. In a year after the operation the quantity of fibroblasts near the synthetical net decreased. At the same

time, their quantity kept increasing at the area of bovine pericardium and outnumbered the previous result in 5 times.

The index of correlation between fibroblasts and fibrocytes, which shows the synthetical activity during different periods after the operation, was higher at the area of bovine pericardium implantation. In a year after the polypropylene net implantation this index was about 1. At the same time the quantity of fibroblasts in tissues, surrounding bovine pericardium, did not change. The index was 1,39.

In 3 months after the operation the fibers of connective tissues began to grow into the bovine pericardium. Collagen and elastic fibers were loose-lying at the area of the propylene net. In 6 months connective tissues became firm and thick at the area of synthetical net implantation. But they did not interweave with the net fibers. The same time bovine pericardium totally sprouted up with its own connective tissue. In 12 months a part of propylene net fibers was in fibers of connective tissue. Another part was loose-lying in tissues, surrounded by "empty" spaces. One more part of propylene net fibers was encapsulated. In a year bovine pericardium fibers became thinner and were substituted with own collagen and elastic fibers. Bovine pericardium implant grew together with own connective tissue. It became impossible to find the borders. In different periods after the operation the total area of fibers near bovine pericardium exceeded the fiber area of the net in 1,2 times. At both implantation areas there was a gradual growth of connective tissue area. However, the rate of growth at the bovine pericardium area is higher: in the period from the 3rd to 12th months the total fiber area has grown in 1,4 times in comparison with 1,3 times near the synthetical net. The area of collagen and elastic fibers changed with the same rate.

Thus, at the area of bovine pericardium implantation the signs of proliferative inflammation totally disappear in a year after the operation. But these signs didn't disappear at the area of polypropylene net. The growth of connective tissue is more active near the bovine pericardium. This fact can be proved by a large quantity of cells and fibers of connective tissue on the one hand, and higher correlation between fibroblasts and fibrocytes.

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RISK FACTORS FOR UPPER GASTROINTESTINAL BLEEDING IN CORONARY ARTERY DISEASE

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Objective: Identify risk factors of upper gastrointestinal bleeding (UGIB) in patients with coronary artery disease (CAD) receiving dual therapy (aspirin and clopidogrel).

Methods. Patients who received dual therapy due to acute coronary syndrome (ACS)

or postpercutaneous coronary intervention (elective, primary, or urgent) were enrolled retrospectively. We assessed the occurrence of UGIB and identified the risk factors for UGIB at early stage (dual therapy ≤ 2 weeks) and late stage (> 2 weeks) by Cox regression analysis.

Results. 157 patients used antiplatelet agents (136 aspirin, 21clopidogrel), 26 used Non-steroidal anti-inflammatory drug (NSAIDs), including coxibs, eight - used H_2-receptor antagonists (H_2RA), and 20 used inhibitors of a proton pomp (PPI). Eighty-one were smokers, 25 consumed alcohol, and 39 had a past history of endoscopic proven peptic ulcer disease (PUD). Regarding the coronary artery condition: 52,2% patients received elective percutaneous coronary intervention (PCI), and 47,8% patients had ACS. 13,9% patients received glycoprotein IIb/IIIa receptor antagonists, and 36,0% patients received enoxaparin. 10,5% patients needed mechanical ventilation, 16,9% patients had hypotension, During the follow-up period, 6,2% smoked, 2,6% consumed alcohol, 8,8% patients used PPI once daily, 9,0% patients used oral H2RA, 0,6% patients used warfarin, 5,2% patients used non-selective NSAIDs, 1,1% patients received coxib, and 4,9% received glucocorticoid. After 125±107 days of follow-up, a total of 12,5% patients developed UGIB, 32 within 2 weeks (1e14 days) and 35 after 2 weeks. Another 2,1% patients had non-UGIB. 7,5% patients died during the follow-up period. When comparing the 67 patients with UGIB without GIB, patients with UGIB were significantly older in age, had a higher rate of past history of PUD, more frequently used mechanical ventilation, had a higher incidence of hypotension and ACS, were more likely to use enoxaparin, and used PPI less frequently after dual therapy than patients without UGIB ($p<0,05$). There were no significant differences between these two groups with regards to sex, INR value, platelet counts, drinking or smoking habits before and after dual therapy, use of H2RA, use of NSAIDs before and after dual therapy, use of aspirin, clopidogrel, or PPI before dual therapy, use of glycoprotein IIb/IIIa receptor antagonists, coxib, warfarin, and steroid after dual therapy, or use of ECMO, IABC, and post-CPR. Cox multivariate regression analysis including risk factors of age (>75 years), smoking after dual therapy, past history of PUD, use of enoxaparin, use of PPI, mechanical ventilation, status of hypotension, and ACS showed that patients with age >75 years, past history of PUD, ACS, mechanical ventilation were independent risk factors for UGIB in patients with CAD receiving dual therapy, while use of PPIs was a protective factor for UGIB in these patients. The mean length of hospitalization in the intensive care unit after dual therapy ACS in our study was 7±6 days, so we chose 2 weeks as a staging cutoff point. In order to identify whether different risk factors existed for UGIB at the early and late stages in patients with CAD receiving dual therapy, we divided patients with UGIB into early (≤2 weeks) and late (>2 weeks) stages. Cox regression analysis showed that ACS and use of mechanical ventilation were important risk factors for developing UGIB at the early stage of dual therapy. Furthermore, patients with age >75 years, a past history of PUD, and mechanical ventilation were important risk factors for developing UGIB at late stage of dual therapy.

Conclusions. ACS and mechanical ventilation are important risk factors of UGIB at the early stage (≤2 weeks). Additionally, old age (>75 years), past peptic ulcer disease history, and the use of mechanical ventilation play important roles in the occurrence of UGIB at late stage (>2 weeks). However, it was also noted that use of PPI plays a protective role in patients with CAD receiving aspirin and clopidogrel therapy.

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MORPHOLOGICAL STUDY OF THE INTESTINAL WALL AS A PREDICTION METHOD FOR THE COURSE OF NECROTIZING ENTEROCOLITIS IN NEWBORNS

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One of the most difficult diseases detection in newborns and infants is an ulcero-necrotic intestinal process, necrotizing enterocolitis (NEC). The absence of pathognomonic symptoms at the start of the disease complicates the timely disease detection. The issues of prediction and further course of the necrotizing enterocolitis are not touched upon in specialist literature.

In practice paediatric surgeons are more frequently faced with necrotizing enterocolitis at the stage of peritonitis, when the life prognosis is worse and mortality reaches up to 70%, and 100% in case of extensive intestinal necrosis.

323 patients with necrotizing enterocolitis were observed in the State Budget Health Institution of Nizhny Novgorod Region "Children's City Clinical Hospital _1" in the period between 1984 and 2011. There were 185 (57%) boys and 138 (43%) girls in the age between 1and 13 days.

At admission the condition of the patients was assessed as poor and corresponded to stages IIB, IIIA and IIIB (according to M.Walsh and R.Kiegmann, 1986).

A gynaecological, obstetric and somatic medical history of mothers of sick children was complicated (chronic uteroplacental insufficiency, foetal hypoxia, early and late toxicosis, threatened miscarriage, infectious and inflammatory diseases, bad habits of parents). During the obstetric care there were 89 cases of weak uterine contractions; caesarean section was performed in 65 (20%) cases.

At admission to the hospital all these children received instrumental examination of organs of abdominal cavity (plan radiography and ultrasonography) and clinical and laboratory control.

There were indications for surgical treatment in 94 (29%) cases, conservative treatment in 229 (71%) cases led to a favourable outcome of the disease.

40 histologic specimen, prepared from the resected intestinal wall, were inspected morphologically (application No. 2011113288/14 from 7.04.2011), where the patients were divided into 2 groups: group I – survived patients (n=25), group II – deceased patients (n=15).

Lymphangiectasia in the subserous layer of the small intestine and stasis of lymphocytes in the vessels of the proper mucus plate of the small intestine and/or presence of lymphangiectasia in the submucous layer of the large intestine with stasis of lymphocytes in them were determined in the histopathologic pattern of sections of the resected intestinal parts among patients of group II.

The patients of group I did not have the morphological characters mentioned above, which was an evidence of the preservation of the drainage function of the lymphatic channel.

The fatal outcome in the group of patients with surgery was 47 (50%).

As a rule, the leading role in the tanatogenesis was taken by the extensive necrosis of the distal section of the ileum and the descending colon of the large intestine with the development of general purulent peritonitis, endotoxic shock and polyorganic insufficiency (as a cause of the admission to the hospital of patients with NEC of stage IIIB).

This way, the morphological method is informative, because due to it the objective histological criteria of NEC were singled out for the first time, thus enabling a timely disease prediction, higher treatment effectiveness and lower mortality.

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MODERN TREATMENT METHODS OF PAIN SYNDROMES ON THE SPINE AND CEPHALALGIA

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Topicality. Today the abundance of pain syndromes among the population makes up approximately 65%. The leading role among them is given to ain syndromes of the spine. In their lives, approximately 80% of people experience lumbago and in 10-20% of cases this pain syndrome turns into a chronic condition. It often leads to disability among able-bodied population. Medicamentous treatment methods are only effective in 20-40% of cases. Headaches also represent a serious problem. Being a constant companion, it leads to a decrease in the working capacity and the quality of life. Pain will cause suffering until its cause is eliminated. Already in ancient times people suffering from headaches were considered to be the unhappiest. Most common causes of cephalalgia are traumatic brain injuries, stress, cervical spine pathology and cerebral vascular crises, neuroses.

Conservative treatment methods, including hospital, ambulatory and health resort stages, are very costly and not sufficiently efficient. Periods of temporary disabilities, however, are considerably long. For this reason, new medical technologies, including the method of interstitial electrostimulation (IES) and transcraneal electrical stimulation (TES) deserve our attention.

Materials and methods of the research. The treatment using the method of interstitial electrostimulation with the help of the machine „ESP-01" (by A.A. Gerasimov) has

been applied in our hospital since 2009. Since then we have treated 153 patients with pain syndromes which accompany spinal osteochondrosis. There were 85 men and 68 women, the average age of which was between 30 and 65 years. The method of interstitial electrostimulation was the only treatment method used in the main group.

The control group consisted of 179 patients with symptoms similar to those in the first group. These patients were treated in hospitals and in the outpatient setting using traditional methods, including medicamentous treatment (analgetics, NSAIDs, steroidal drugs in form of blocks, vascular and vitamin therapy) and physiotherapy (magnetotherapy, cutaneous electrotherapy, ultrasound therapy, barotherapy). All patients had a clinical, neurological and roentgenological examination.

The course of treatment by means of the interstitial electrostimulation lasted 3-10 sessions, 5-8 sessions on average. The sessions took place every 1-2 days. The duration of the procedure was 20-60 minutes, 40 minutes on average. The treatment was carried out according to the methods suggested by Professor A.A. Gerasimov and lasted up to the moment when the pain syndrome was reduced or eliminated.

Transcraneal electrical stimulation (TES) was used in case of 54 patients aged between 17 and 64 years. There were 20 men and 34 women. These were patients with verterobrogenic cephalalgia, long-term effects of closed traumatic brain injury and discirculatory encephalopathy (DEP) of stage II. The patients were divided into 2 groups with 27 patients each. The patients of the main group received standard medicamentous treatment with the use of transcraneal electrical stimulation (machine "Transair-05") according to the frontal-mastoid method, bipolar and unipolar current, 30 minutes daily, 10 sessions. The patients of the control group only received medicamentous treatment. All patients before and after treatment had a general clinical, paraclinical, vertebral and neurological and psychological examination.

Results of the research. As a result of the interstitial electrostimulation (IES) the majority of patients – 104 (68%) had a full relief from the pain syndrome, 32 patients (21%) had positive dynamics, 11 (7%) had slightly positive dynamics and 6 (4%) patients didn't experience any effect. None of the patients felt worse after the treatment.

In the control group the full elimination of the pain syndrome was achieved in the case of 106 patients (59%), 73 patients (41%) had pain relief. However, when applying the method of the interstitial electrostimulation, the elimination of the pain syndrome took place considerably earlier and was more efficient than among the patients of the control group. According to the visual analogue scale (VAS), there was pain regression from 9 and 2 scores in the main group and from 9 to 4 in the control group.

After the course of transcraneal electrical stimulation (TES) in the main group there was a considerable improvement in the case of 23 patients (85%) and improvement in case of 4 patients (15 %). The result in the control group was as follows: considerable improvement in the case of 14 patients (52%) and improvement in the case of 12 patients (44%). There were no changes in the case of 1 patient. However, there was a much earlier (2-3 day of treatment) positive dynamics, pain relief, sleep improvement and normalisation

of arterial blood pressure among the patients of the main group. In the second group, these changes only took place towards the middle of the treatment. There was also a considerably larger reduction of anxiety and depression level.

Conclusions. The application of modern methods of the interstitial electrostimulation (IES) and transcraneal electrical stimulation (TES) for the treatment of patients with spine pain syndromes and cephalalgia:

1. Contributes to the regression of exacerbation of chronic diseases of inflammatory or degenerative kind and a full relief from the pain syndrome.
2. Accelerates the recovery process and is more economical in comparison to traditional treatment methods due to the reduction of costs for the medicamentous therapy and the decrease in the period of temporary disability.
3. Does not cause any side effects or complications, which are characteristic for a long-term medicamentous therapy.
4. Improves the emotional background and the quality of life of a patient.

Everything stated above allows us to recommend these treatment methods for the wide application both in hospital and out-patient environment.

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PRENATAL DIAGNOSIS AND TREATMENT DUODENAL OBSTRUCTION IN THE NEWBORNS

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The aim of study was analysis of results for prenatal diagnosis and choice of optimal way for surgical correction duodenal obstruction in the newborns.

Material and methods: From 2008 to September 2011 in the department of neonatal surgery at RPC and 1-UKPH were 48 children with different forms of duodenal obstruction. Among them boys were 26 (54%), girls were 22 (46%), matures were 34 (70.8%), inmatures were 14 (29.2%). Multiple and combined congenital defects (Down syndrome, CDD, esophagus atresia, anorectal anomalies) were revealed in 8 (16.6%) cases.

Diagnosis included USI of fetus, and in postnatal period USI, DD and other inner organs, review roentgenography of abdomen cavity, at suspicious situation with introduction of contrast, and, also neurosonography and echocardiography for excluding the accompanied growth anomalies.

Results and their discussion: Antenatal USI of fetus was carried out in the second and third trimester of pregnancy. By that the “double-bubble” was revealed in 32 fetuses, polyhydroamnion was in 25 (78%). Antenatally combined defects were revealed in 3 (9%) fetuses. At study maternal anamnesis in 22 (68.7%) pregnant women had extragenital pathology, in 3 (9%) women the congenital development defects was marked in early childbirths. Data of antenatal fetus USI were proved postnatally in all 32 newborns with

obstruction of DD. The leading part in diagnosis of congenital intestinal obstruction in many cases for confirmation diagnosis it was taken enough review roentgenography of abdomen cavity, being carried out in vertical position. On review roentgenogram at high intestinal obstruction two horizontal levels of liquid with gas bubble on them were determined, at all length of intestinal tract the gas was absent.

Operative treatment of newborns with full high intestinal obstruction was performed on 2-5 days after admitting, depending on state of patient and volume of preoperative readiness.

So, 20 (42%) patients were taken duodeno – duodenoanastomosis side – by - side by Koher, 8 (16%) children were performed duodeno – duodenoanastomosis by Kimur technology, and in 4 (8%) cases bypass duodeno – duodenoanastomosis ending to side, 2 (4%) children were performed duodeno – jejunum anastomosis, 3(6%) children were performed resection of membrane in duodenum, in 3 (6%) cases duodenotomy with crossed duodenorraphy and in 8 (16%) cases the operation by Ledda. The level of obstrucnion in 44 (91%) children was located lower than duodenal papilla, in 4 (9%) newborn had upper position.

The lethality was 43.7% (21 children). The causes of lethal outcomes were: MCAD was in 8 (38%) children, childbirth trauma in 4 (19%) cases, joining or sepsis realization, necrotic enterocolitis was in 4(19%) patients, immaturity and severe somati

Conclusion: 1. Prenatal USI is high informative method of diagnosis for congenital duodenal obstruction in fetus, that was proved postnatally in 100) cases.

2. The operation of choice at full duodenal obstruction should be consideral duodeno – duodenoanastomosis by Koher and Kimur.

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CLINICAL AND PSYCHOLOGICAL ANALYSIS OF EATING DISORDERS IN PATIENTS WITH METABOLIC SYNDROME

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The aim of the study was to examine the types of eating disorders in patients with metabolic syndrome.

We surveyed 882 patients aged 18-40 years with the metabolic syndrome using the Dutch Eating Questionnaire DEBQ. Men (44.9%) and women (55.1%) were asked to respond to questions about various aspects of the meal.

Considered three types of eating behavior. Restrictive eating behaviors (normal 2.4 points) is characterized by deliberate efforts to achieve or maintain a desired weight through self-limiting in the diet. When the emotion-eating behavior have a desire to eat in response to negative emotional states (normal, 1.8 points). When externalities feeding behavior stimulates the urge to eat is not a real sense of hunger, and the appearance of the food, the smell, the texture or appearance of others, eating (the norm - 2.7 points).

Results of the survey showed that eating disorders were found in 623 (70.6%) of all surveyed men and women. Among men, eating disorders were found in 302 people (76.3%), which is 10.2% more than in women (321 - 66.0%). In the analysis of questionnaires revealed that of 132 women dominated the emotion (41.1%), type of feeding behavior. Restrictive (in 98 patients - 30.5%) and externalities (in 93 women - 29.0%) types of eating disorders occurred with equal frequency.

Unlike women in men prevailed externalities type eating disorders, representing 60.3% (182 people). It is not specific to the male population restrictive type (32 people - 10.6%). In 88 patients (29.1%) met the emotion type. Decrease feelings of self-control in eating behavior also occurred 5 times more often in women than in men. Most men appreciate the nutritional self-sustained.

Thus eating disorders are differing from sex. For women the most typical type of emotion-behavior which is reflected in the high dissatisfaction with the quality of life in contrast to men including the more common type of externalities.

Neglect of their feeding behavior helps patients with metabolic syndrome aggravation of this disease and the development of cardiovascular complications.

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Tatjana Shpiks

TEMPORAL LOBE PERSONALITY AS THE COMPONENT OF THE SPECTRUM OF THE EPILEPTIFORM STATES

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Phenomenon of Temporal Lobe Personality was assessed and analyzed by authors Korolenko Ts, Dmitrieva, 2006; Korolenko, Ts., Korolenko,T., 2011; Korolenko, Ts., Shpiks, Dmitrieva (2012). It was shown that persons defined by this term manifest the collection of such traits as the active function of the creativity, developed and intensive imagination, and color dreams with the content of flying, daydreams, and oversensitivity to smells, tendency to meditate on the fire, intuition, self-fulfilling prophecies, and the appearance of often déjà vu phenomenon.

It is suggested that the psychology of temporal personality presents the variant of mental health and must be analyzed in the field of psychological approaches without the tendency to include this state in the sphere of pathology.

On the other side, the phenomenon of the temporal lobe personality disorder was also observed, analyzed and coined up by the authors (Korolenko, Dmitrieva, 2006). The last condition included all characteristics of temporal lobe personality but involves simultaneously the disturbances of social adjustment, involuntary isolation and alienation, the tendency for the development of various dissociative states.

The cases of temporal epilepsy were assessed on the base of the EEG and others

neurophysiological data. These category of patients revealed usually the appearance of epileptic fits and/or the development of the short periods of the disturbance of the consciousness that was characterized by the presence of the traits similar to the twilight states (sudden appearance, disorder of the orientation in time and in the perception of surrounding reality, unrecognizing of familiar people, including relatives, and disorientation in own personality). In the cases of temporal epilepsy additionally to the signs and the symptoms typical for the persons with temporal lobe personality and temporal lobe personality disorder, the long duration of the night enuresis and sleep-walking were presented as rather typical disorders.

The revealing of the epileptiform spectrum of the psychic states that includes both the variant of mental health in the form of the temporal lobe personality, the category of personality disorder in the form of temporal lobe personality disorder and on the end of spectrum temporal lobe epilepsy creates the condition for the objective limitation of the possibility to mistakenly expanding of the diagnose of the temporal lobe epilepsy that leads to the stigmatization of the mental healthy clients with temporal lobe personality disorder through the labeling them as suffering with illness of temporal epilepsy.

In some way, the situation with the proposed by authors spectrum of epileptiform states can be compare with the situation with the schizopreniform spectrum that includes the asocial introvertive personality types (as the variant of mental health, according to Jungian classification of personality types), schizoid personality disorder, schizotypical personality disorder (included in classifications, partly, as the mean to escape from the specifically psychiatric seduction for an assessing too widely some clients as the patients suffering from the malignant endogenous psychosis), and schizophrenia on the end of this spectrum.

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A STUDY OF ANTIBIOTIC TISSUE CONCENTRATION IN PATIENTS WITH ULCERONECROTIC COMPLICATIONS OF CHRONIC LOWER LIMB ISCHEMIA

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We have studied cefotaxime tissue concentrations in the focus of suppurative and septic processes in 279 patients suffering from ulceronecrotic lesions against the background of chronic lower limb ischemia. The cause of the ischemia in 172 (61.6%) patients was atherosclerosis and in 107 (38.4%) patients a combination of atherosclerosis and neuroischeamic diabetic foot. All patients were divided into 3 groups. The first group included 106 (38%) patients with a systemic intravenous administration of antibiotic. The second group was made up by 77 (27.6%) patients with an intra-arterial drip-fed cefotaxime administration with the help of a catheter in the a. epigastrica inferior.

The third group consisted of 96 (34.4%) patients who were treated by an indirect endolymphatic method in combination with an intra-arterial infusion. Cefotaxime tissue concentrations were determined 4 hours after the administration by means of high-precision liquid chromatography using the system of capillary electrophoresis "Kapel 104 RT". When analysing the results of the bacteriological tests, we have found out that the agents of suppurative-necrotic process in 167 (59.9%) cases were represented by a monoculture with the prevalence of staphylococcus – 81 (48.5%) strains, agents of the family Enterobactericae – 59 (35.3%) strains and Ps. aurogenosa – 17 (10.2%) strains. Microorganism associations were determined in the case of 112 (40.1%) patients. The level of the total microbial load at the time of the surgical treatment was 7.7±0.2.106 CFU/g of tissue on average. The Fontaine-Pokrovski stage II lower limb ischemia was detected in 26 (9.3 %) patients, stage III in 93 (33.3 %) patients and stage IV in 160 (57.4 %) patients. When analysing the cefotaxime concentrations in the tissues of the affected limb, we have established a connection between the ischemia degree of manifestation and antibiotic tissue concentrations. Thus, the cefotaxime tissue concentration in patients with stage II, who received a systemic antibiotic administration, was 3.2±0.3 μg/ml, with stage III – 1.9 μg/ml and with stage IV – 0.9±0.2 μg/ml. In all observations, the parameters of antibiotic tissue concentration were much smaller than the MIC values for the actual agents of the suppurative-necrotic process. The cefotaxime concentration after 4 hours of administration in the second group of patients with state II was 17.1±0.3 μg/ml, with stage III – 8.8±0.5 μg/ml and with stage IV – 2.7±0.2 μg/ml, which correspond to the MIC values for Enterobacteriaceae spp. and Staphylococcus aureus, but are much lower than the MIC values for P.aeruginosa. The antibiotic tissue concentrations in the case of lower limb ischemia of stage IV were lower than MIC values for the actual agents of the suppurative-necrotic process. In the group of patients with the arteriolymphatic administration of cefotaxime, the concentration of the latter in the peripheral blood serum after 4 hours of administration was 103.1±5.2 μg/ml. The cefotaxime tissue concentration in the affected limb in patients with stage II ischemia was 67.7±2.2 μg/ml, with stage III – 46.5±3.3 μg/ml and with stage IV 26.6±2.6 μg/ml.

Thus, the level of antibiotic tissue concentrations depends on the irregularity of the arterial circulation in the lower limb and the ischemia stage. A systemic antibiotic application in the case of patients with suppurative-necrotic complications of chronic ischemia is not able to create an effective antibiotic concentration for the majority of microorganisms (according to the MIC values) taken from the wound in the affected zone. Arteriolymphatic administration of cefotaxime guarantees the highest antibiotic concentrations in the tissues of the affected limb with stages II and III ischemia. It is possible to predict low treatment efficiency in regard to P. aeruginosa in the case of stage IV ischemia.

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POSSIBILITIES OF INCREASING THE EFFECTIVENESS OF PREVENTIVE RADIOGRAPHY OF THE CHEST

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Purpose. The reduction in preventive X-ray studies of the chest has led to a great decreasing of their effectiveness. Early detection of tuberculosis and bronchopulmonary cancer has decreased by more than 3 times in the transition to preventive examinations only at risk groups. The aim of the work is to analyze the possibilities of increasing the effectiveness of preventive radiographic chest examinations using the modern digital technology.

Materials and methods. We used the statistical results of preventive radiographic chest examinations in Kiev and Chisinau for the last 15 years, the statistical and comparative analysis of fluorography and digital radiographic studies in 1996 - 2012, performed in the Center of Family Physicians No. 11 in Chisinau on the basis of statistical reviews.

Results. Since 1999 in Ukraine and 2008 in Moldova preventive fluorography was replaced by preventive screening digital radiography. Opportunities to increase the effectiveness of preventive radiographic chest examinations considered by the example of Center of Family Physicians No. 11 in Chisinau, where the basic digital radiography system with a resolution of digital receiver by 4.0 pl/mm has been used instead of fluorography system from 2008. The digital diagnostic images do not yield plain film by informative volume, and the cost of the digital chest X-ray image is less than the cost of fluorogram. The transition to digital x-ray imaging technology has reduced the room space required for the examinations: as a result of redevelopment of X-ray department two areas were exempted (developing and registry rooms), which are currently used as doctors `rooms. The number of chest X-ray examinations in 2009-2012 compared with 2007 has been increased almost in two times. In this case, the exposure of patients is reduced considerably. Since the radiologist receives diagnostic information in 15-20 seconds after the examination, there was a timely opportunity to make additional examination of the patient in case of suspicion for the presence of disease, and, if necessary, promptly send it to the treatment, and effectively carry out a retrospective analysis: radiologist for a few seconds could found in the electronic archive all previous X-ray images of the patient and at the same time put them on the screen. Introduced a system of personal registration and inspection of really examined population.

Conclusions. Replacement of fluorography by digital X-ray screening has improved the effectiveness of preventive radiological chest examinations: the number of diagnostic information based on a single x-ray image increased, the performance of X-ray room has increased, the number of additional examinations, the cost of research and exposure of patients decreased. Using a computerized system of personal accounting preventive

radiological chest examinations allowed to establish control over the passage of the survey the risk groups and decreed segment of the population and more reliable assessment of their effectiveness.

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POSTOPERATIVE FUNCTIONAL AND SOUND SCORE ARTERIES LOWER LIMBS REVASCULARIZATION

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About 1/10 of the world's population suffers from obliterative diseases of the arteries of the lower limbs. The proportion of patients with severe Arterial ischemia among all these patients is 5-10%. Among patients with ischemic lesions of the lower limbs, the largest proportion of 80% occur in patients with atherosclerosis, the remaining, approximately equal parts in patients with CD, ANA and other obliterative diseases.

Outcome of ischemic lesions in arteries lower limbs are severe complications, which eventually lead to amputation, disability of patients, including those of working age and not infrequently lethal outcomes. When a critical Arterial ischemia in the doctor actually remains one task is to save the limb.

Aim: to determine the usefulness of ultrasound data arteries of lower extremities in patients with severe arterial ischemia before and after endovascular surgery.

Material and methods. Surveyed 71 patients aged from 42 to 81 years (mean age 67), 34 men and 37 women receiving treatment in surgery Department of GBUZ SO "SOKB No. 1". The patients were identified by pathology are divided into three groups: 19 patients with verified diagnosis of diabetes mellitus (DM) type 1, 29 are diagnosed with type 2 diabetes and 23 patients diagnosed with atherosclerosis. All patients had multilevel defeat, clinically-IV stage of ischemia by A.V.Pokrovskiy. All patients had angioplastic balloon operation of lower extremities arteries. In pre-op, early and late postoperative period (six months) conducted a study on the ultrasonic system PHILLIPS HD-11 linear sensor 7-12MGc. The following indicators were evaluated: peak systolic blood flow rate (Vps), end diastolic velocity (Ved), time-average maximum speed (TAMAX), pulse jet index (PI), peripheral resistance index (RI) distal of the affected segment of artery and ankle-brachial index (ABI). In the control group (21pacient) included patients with critical ischemia of the neuroischemic form with diabetic foot syndrome.

The Results. As a result of operative treatment of evolution is marked by the following indicators: PI, RI and ABI. The Group of patients with type 2 diabetes the following indicators: ABI ATA 0.335 ± 0.8 before surgery; 0.303 ± 1 after surgery; (R = 0.027709). ATA PI ± 0.75 0.576769 prior to the operation; After the surgery, 3.285 ± 1.150959; (R = 0.011719) RI ATA 0.160 ± 0.67 before surgery; post-op 0.805 0.288 ±; (R = 0.168808). The Group of patients with an obliterating atherosclerosis has the following values: ABI

ATA 0.68 ± 0.2 before surgery; After the surgery, 0.9 ± 0.21; (R = 0.004439). PI ATA 0.895 ± 1.77 before surgery; post-op 2.425 ± 1.02; (R = 0.012793). RI ATA 0.695 ± 0.27 before surgery; After the surgery, 0.81 ± 0.28; (R = 0.02313). The question remains of endovascular treatment outcome evaluation methodology, as described in the group of patients with type 1 diabetes, since the indexes in the specified group had no statistically significant differences before and after treatment. In the control group dynamics was not denote.

Conclusions.

1. In the postoperative period was significantly changed parameters: pulse jet index (PI) and resistive index (RI) regardless of the etiology of the disease. PI (r 0.000087 on ATA <) Ri (RV 0.002672 PBBA < on).
2. Change the values of the index pulse jet in patients with diabetes, may be the greatest diagnostic significance in comparison with the values of the ankle-shoulder index in assessing the effectiveness of surgical treatment. This may be due to the increased rigidity of the vascular wall, against the backdrop of the developing mediakal_cinoza in diabetic makroangiopatii, making difficult the full artery compression necessary when measuring blood pressure.
3. To assess the effectiveness of revascularization may be well advised to study indicators such as pulse jet index, resistive index.

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INTRACELLULAR WATER STATE DETERMINES ENERGY INFORMATION EXCHANGE IN THE BODY OFHUMANS AND ANIMALS

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At present there is a considerable amount of experimental data in order to determine dynamics of information entropy in the implementation process of various medical technologies (hirudotherapy, osteopathy, high-frequency treatment, "regulated breathing") or various kinds of art therapy (music, dance).

The results of these experiments can be presents as a formalised chaos criterion (K_{ch}) or order criterion (Ko).

As a result of this work, we have received a series of new experimental data, which make it possible to suggest that the "final point of application" of various medical technologies can be an influence of the water structure in the human body.

This hypothesis comes from numerous experiments with the use of gas discharge visualization (GDV or Kirlian photography) when studying the influence of hirudotherapy method on the human body.

Nowadays there is a large number of experimental works which make it possible to make a conclusion that GDV is determined by the state of water in epithelial cells of human fingers and water in the intercellular space or skin sweat glands.

In the works of Professor K.G. Korotkov it is stated that in order to assess the influence of skin as an organ on the GDV parameters, it is necessary to consider the following factors:

1. Structure inhomogeneity of surface and volume;
2. Surface and volume conductivity with special consideration of biological active points (BAPs);
3. Humidity and degree of dirtiness of the surface;
4. Gas composition above the surface;
5. Gas emission of the object itself.

It is logical to suggest that when examining fingers of the patients before and after a hirudotherapy session, the most significant point is point 3 – Humidity, because the degree of dirtiness of the epithelial surface does not change. Points 1,2,4,5 do not change or change insignificantly.

In the Institute of Hydrodynamics of the Siberian Department of the Russian Science Academy G.N. Sankin and V.S. Teslenko conducted model research of corona discharges according to the GDV method on artificial multiple capillaries from polymethylmethacrylat with the inner diameter of 50 μm, filled with a water solution of NaCl 0.3. The similarity of photographs of luminescence on the finger tips and artificial capillaries was striking.

The authors come to the conclusion that the observed luminescence on the contour of human fingers is a corona discharge on open pores of the sweat glands.

These observations correlate with the work of Y.V. Korkin, who showed that an increase in sweat secretion by means of processing the skin surface with acetylcholine increases the GDV signal area. When the skin is processed with formalin, it suppresses sweat secretion and leads to a decrease of the GDV signal area.

Why is there a different picture of the corona discharge on fingers (the luminescence area is larger) when the hirudotherapy method is applied?

A discovery of the wave effect of hirudotherapy helps to answer this question.

A leech in the process of blood sucking generates up to 500 – 550 impulses in the ultrasound range, which can influence structural changes of the intracellular and intercellular water (state of associates and clusters), which in its turn can influence the GDV signal area.

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TREATMENT OF INFANTILE CEREBRAL PALSY BY MEANS OF HIRUDOTHERAPY

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The first work on treating infantile cerebral palsy in the world practice was published in 1994 (A.I. Krashenyuk, S.V. Krashenyuk, 1994).

This work did not attract attention of specialists probably due to poor access to the materials of the IV conference of the Association of Hirudologists of Russia, where it was published.

A discovery of the neurotrophic effect of hirudotherapy 2 years later (A.I. Krashenyuk, S.V. Krashenyuk, N.I. Chalisova, 1996) stimulated neurologists and paediatricians to use hirudotherapy in treatment of infantile cerebral palsy (ICP).

Furthermore, doctors started to use hirudotherapy as an ethiopathogenetic factor in the treatment of various diseases of the nervous system in children and adults, e.g. ICP, minimal brain dysfunctions, alalia, dysarthria, autism, Parkinson`s disease, stroke consequences, Alzheimer`s disease and others.

We would like to present the therapy of ICP.

It is known that spastic diplegia (one of ICP forms), which primarily affects legs, progresses more favourably in regard to overcoming psychological and speech disorders, but less favourably in respect to establishing motor functions.

In the beginning we were observing 5 patients (observation period of 12 months) in the age of 3-6 years diagnosed with spastic diplegia of lower extremities (Little's disease). Earlier all patients received complex therapy aimed at normalisation of metabolism, dehydration and anti-inflammatory therapy, physiotherapy, massage. As a rule, the treatment provided short-term improvement by reducing spasticity; however, after the treatment the condition quickly returned to its initial level.

Treatment with leaches was carried out according to our own methodology. 1-3 leaches per session were applied in the area of the spine. Attention was paid to haemoglobin concentration of the patient as well as main urine and blood biochemical parameters of urine and blood. The bioenergetic condition of patients was monitored by means of a thermopuncture test (Akabane test).

Without exception, towards the 3rd treatment month all children who received hirudotherapy treatment showed positive dynamics in regard to a reduction of spasticity of muscles of upper and lower extremities. By month 5 of treatment one patient received a possibility of steady movement on lower extremities when being supported by the hand. Before hirudotherapy this child was only able to crawl – up to the age of 5.

The change of motor dynamics of this patient was recorded, which lets specialists to witness a considerable progress in the treatment of spasticity of muscles of upper and lower extremities and notice a sudden change in his psychological and emotional development. Particularly remarkable is the progress of the speech improvement. It is important to stress

that children with ICP normally have a considerable degree of somatic pathology.

The findings of treatment of children with ICP by means of hirudotherapy make it possible to positively evaluate the results of different somatic pathology in children with this diagnosis. We talk about accompanying diseases of kidneys, intestine, liver, lungs and other organs.

The results of treatment of spastic diplegia in children with ICP make it possible to optimistically evaluate the hirudotherapy potential suggested by the authors. Without exception, all patients also showed an improvement of the bioenergetic status.

The results of our work have been confirmed by our students from different countries. These are specialists from the US; Finland, Germany, Turkey, Poland, Great Britain, Iran, Mongolia, Sudan and other countries.

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DIAGNOSTIC ULTRASOUND AND THE STATE OF THE CHANNEL (MERIDIONAL) SYSTEM OF THE HUMAN BODY

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The objective of this research was to study the influence of the diagnostic ultrasound on man and the state of his channel (meridian) system. The essentially new aspect of this research was the evaluation of the change in the state of the human channel system under the influence of ultrasound examinations.

Methods of the research. The following methods were used for the objectification of the research: thermopuncture test (Akabane test) on the machine "Reflexomaster" designed by V.G. Muzhikov and ultrasonography on the stationary ultrasound scanner DP-9900 Plus Mindray.

Results of the research. Measurements of the condition of patients during the ultrasound irradiation carried out on "Reflexomaster" showed significant changes in the state of the human channel system. According to the results of the Akabane test, many patients had changes in the channels of spleen and pancreas (RP), stomach (E), kidneys (R) and lungs (P) after the diagnostic ultrasound. This is quite logical, taking into account the topography of the channels and the localisation of the area exposed to the ultrasound.

At the same time, there were frequent changes in the state of the urinary bladder channel (V), although the points of this channel are situated at the back and in the lower extremities.

Canonical sources say that the urinary bladder meridian (V) influences all liquids of the body by taking part in their regulation.

Taking into consideration that the urinary bladder meridian (V) has very tight functional connections to the kidney meridian (R), it becomes clear why there are disorders

(imbalances) in this channel when there is an ultrasound effect in the area of the kidney channel (R). The mechanism of information transfer between the related channels takes place via LUO points.

In this context our research confirms the ancient concept about interconnection between separate channels via LUO points and the connection based on the principle of "five primal elements".

The results of all experiments show a strong influence of the ultrasound irradiation during ultrasound examinations on the state of the channels.

What are long-term consequences of this influence on the human body?

How dangerous are they for early embryogenesis during ultrasonography?

These questions remain unanswered up to this day.

Conclusion. For the first time it was shown that the effect of the diagnostic ultrasound during ultrasonography of mammary and thyroid glands can change the state of the channels topologically close to the area of the ultrasound irradiation: spleen and pancreas channels (RP), stomach (E), lungs (P), kidney (R) and urinary bladder channels, which pass along the back body surface.

The mechanism of this effect can be explained on the basis of the concept "Aquaparadigm", which was suggested by Russian scientists V.I. Slesarev and V.A. Shabrov in 2001.

According to this concept, channels (meridians) are aqua guides and react to any disturbance of the intracellular water, including ultrasound.

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ISCHEMIC HEART DISEASE, ANGINA VOLTAGE IN PATIENTS AT CITY CLINICAL

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Urgency. Ischemic heart disease (ischemic heart disease, atherosclerosis of the coronary arteries) is one of the leading and actual problems of medicine, until recently, she was ranked by frequency of occurrence and mortality second place, for the last years it has become socially significant-the disease.

Objectives. To study: 1. the age, sex, nationality patients cardiology Department of clinical hospital #1 with ischemic heart disease; 2. peculiarities of the course of ischemic heart disease stenocardia voltage in patients cardiology; 3. indicators of laboratory-instrumental traditional methods of the study in patients cardiology with exertional angina voltage.

Materials and methods. The analysis of 300 clinical histories of patients cardiology Department of clinical hospital N1, Almaty in 2011. In our work we used the classification

of ischemic heart disease, stenocardia (who).

Results and discussion. In the cardiology Department of city clinical hospital # 1 in 2011, the treated patients placed in a planned way on the portal with a diagnosis of ischemic heart disease, stenocardia voltage» with the indication of functional classes and the degree of heart failure.

Among the patients of the men were (55,3%), women - 44.7%, aged 50-69 years (63,9%), Kazakh and Uighurs nationality (69%). Duration of disease ischemic heart disease was more than 3 years in 94,6%.

The objective examination often revealed: acrocyanosis in 100% of cases, the expansion of the borders of the heart - in 96,8%, increase in blood pressure and in 75%, a rhythm disturbance of the heart noted in 8.6 % of the cases-teas.

Survey: the KLA, OAM, ECG, biochemical analysis (prothrombin index, level of creatinine, urea, fibrinogen, AST, Alt), Echocardiogram.

In the KLA in 36% of patients showed an increase of hemoglobin and erythrocytes, OAM considerable pathology was identified.

In biochemical analyses: moderate hypercoagulation, increase of fibrinogen to 4.4-4.8 g/l in 86 % of cases, hypercholesterolemia, increase of cholesterol LDL cholesterol and decrease HDL in 66%.

The ECG prevailed sinus rhythm, the right to 89.3% of the cases, among rhythm disturbances often observed atrial fibrillation (4.3%), with 55.7% of patients marked depression of the ST segment and by 21.6% - cicatricial changes in the posterior wall of the left ventricle.

On Echocardiography in 90% of patients had left ventricular hypertrophy.

According to the classification of ischemic heart disease, angina (who), among our patients angina-bution FCZ was observed in 95.6% of the cases, CHF 2A stage (FC 2) - the 204 (68%) patients.

Thus, we established that routinely sent for treatment to the cardiological department of hospital #1, Almaty patients primarily with ischemic heart disease, stenocardia voltage FKZ, CHF 2A stage (FC 2).

Conclusions:

1. Often IHD, exertional angina was observed in men (55%) aged 50-69 years (63,9%),
2. Prevailed III FC stenocardia voltage (95.6 per cent) and CHF IIA (68%),
3. In the ECG has 55.7% of patients marked depression of the ST segment, the 34,2% - cicatricial changes in the posterior wall of the left ventricle,
4. Echocardiography often observed hypertrophy of the left ventricle (90%).

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DIABETES, ANGINA ACCORDING TO THE CARDIAC PROCEDURES FROM DIVISION 1 GKB

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Relevance: diabetes is one of the leading and actual problems of the copper-medico, he takes the third place in the morbidity and mortality rate in the world after cardiovascular simple and oncological diseases. In the 90 - 92% meets type 2 diabetes. As a rule, to establish the diagnosis is already there are laboratory signs of the disease and even vascular complications. Therefore, a not diagnosed disease (because of the absence of clinical signs) can be found in the presence of complications (gangrene limbs, myocardial infarction and stroke). In the treatment of diabetes is widely used Metformin, which on the one hand contributes to the compensation of the disease, due to its mechanism of action, on the other hand can, stimulating anaerobic glycolysis, cause the development of lactic acidosis, which reinforces the status of hypoxia. Objective: to study peculiarities of the course of diabetes mellitus in patients with angina at-voltage, to explore the use of Metformin in the treatment of diabetes mellitus in patients with stenocardic voltage with chronic heart failure.

Materials and methods. Patients cardiology 1 GKB with angina voltage on the background of diabetes mellitus with circulatory failure of varying degrees.

The analysis of the obtained results. In the cardiology Department in the two years were examined 158 patients with exertional angina voltage on the background of diabetes mellitus to the lack of blood circulation of different degree. All patients enrolled in the plan for the direction of the district clinics. The men were 32 (20%), women 126 (80%), at the age of 49 to 89 years. Infringement of tolerance to carbohydrates were found in 6 patients, hyperglycemia on an empty stomach - in 3, mild course of the disease - in 12, severe course (insulin stage of pancreatic diabetes) - a 23, in other cases-from 77.8% of the cases (123 patients) diabetes was of medium severity. Duration of disease diabetes mellitus was the first document-by up to 27 years. For the first time diagnosed diabetes in 32 patients (20%), from 1 to 5 years - from 28 (18%), from 6 to 10 years - in 65 (41%), more than 10 years - with 33 (21%). Duration of disease with angina: for the first time detected in 9 patients (6.5%), from 1 to 5 years - from 21 (13.5%), from 6 to 10 years - in 97 (61%), more than 10 years - from 31 (19%). Circulatory insufficiency was noted at 122 (77.2%) patients process HK2a, at 21 (13.3%) HK2b, 15 (9.5%) HK3. Good control of blood glucose was observed in 8 patients, which amounted to 5.6%, on an empty stomach blood glucose ranged from 5.0% to 5.8 mmol/l. In 56 patients (36%) diabetes mellitus was in a state of satisfactory control, fasting blood glucose was from 6.0 to 6.5 mmol/l, in the course of the day - from 7.3 to 7.6 mmol/l. The majority of patients 94 (58.4%) entered with diabetes in the state research Institute of bad control, fasting blood glucose was 16,0 - 19,6 mmol/l, in the course of the day - 17,2 - 26,0 mmol/l. All

patients with diabetes mellitus of the average degree received Metformin in combination-combined with sulfonylureas drugs in the dose of 1000-3000 mg / day.

For patients with diabetes in a state of bad control, especially in the presence of heart failure HK2b-3, was insulin therapy or combination therapy (sulfonylurea drugs+short insulin action). At normalization of the level of blood glucose, insulin was cancelled. When such therapy patient's condition quickly improved, disappeared shortness of breath, swelling. At that Metformin therapy was continued, but on a lower dose (1000 mg / day).

Conclusions:

1. In patients on admission prevailed status of poor blood glucose control (58.4%).
2. In case of abolition of Metformin and the appointment of insulin accelerated the process of liquidation is not insufficiency of blood circulation.

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EIGENE ERFAHRUNGEN BEI DER KLUMPFUSSBEHANDLUNG NACH PONSETI

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Angeborener Klumpfuß ist die häufigste Missbildung der unterer Extremität und somit eine der wichtigsten Ursachen der Behinderung bei Kindern weltweit. Durch eine starke Verbreiterung der Behandlungsmethode nach Ponseti hat sich die kinderorthopädische Behandlung des Klumpfußes qualitativ verbessert. In den letzten Jahren gewinnt bei unseren Orthopäden diese schonende und schmerzlose Klumpfußtherapie zunehmend an Bedeutung, da es in kürzester Zeit gute Ergebnisse zeigt.

Wir hatten eine 30-jährige Erfahrung in der Behandlung des angeborenen Klumpfußes nach Zatsepin in unserem Klinikum und hatten bei der ambulanten Behandlung eine 70% Erfolgsquote. Seit 2009 haben wir mit der Behandlungsmethode nach Ponseti angefangen und erhalten damit qualitativ bessere Ergebnisse. Wir haben heute die Erfahrungen bei der Behadlung von 252 Klumpfüße bei Kindern im Alter zwischen 5 Tagen und 4 Jahren gesammelt. Dank der breiten Spezialisierung unseren Klinikums, zu der unter anderem ein neonatologischer Zentrum gehört, ist ein großer Teil unserer Patienten Frühgeborene, unterentwickelte Kinder mit verschiedenen somatischen und neurologischen Erkrankungen, kombinierten Entwicklungsstörungen, syndromalen Erkrankungen (AMC, Myelodysplasie, Amnioninfektionssyndrom etc).

Eine zusammen mit unseren Anästhesiologen durchgeführte Studie half uns, die Kriterien für Analgesie- und Sedationseinschätzung bei Kindern in den ersten Lebensmonaten auszuarbeiten (bei einer Achillotomie, die in den meisten Fällen unabdingbar ist). So haben wir optimale Schmerztherapie ermöglicht, um somit einen

Zustand der Hyperalgesie bei der Patienten in der Perinatalperiode zu vermeiden.

Als Ergebnis unserer jahrelangen Erfahrung in der Behandlung der dysplastischen Hüftluxation entwickelten wir im Filatov-Zentrum für ambulante Chirurgie im Kinderkrankenhaus Nr. 13 eine simultane Therapie der kombinierter Missbildung der unteren Extremität (Patentnr. 120564 vom 27.09.2012), die wir bereits bei 14 Patienten angewendet haben. Dabei werden die Verbände mit zusätzlichen Gipsspreizschienen nach Art der David-Schiene gemacht, die für die Behandlung der Hüftluxation mit einer langsamen Steigerung der Abduktion in Hüftgelenken und dem notwendigen Winkel in der frontalen Ebene entwickelt sind (dabei verfahren wir stets nach Ponseti-Prinzip), was die Behandlungsdauer bei diesen Patienten deutlich reduzierte.

Die Behandlungsergebnisse zeigen bei der Hüftdysplasie einen guten kosmetischen Effekt in 96%, unter anderem bei Kindern mit kombinierten Missbildungen und syndromalen Pathologien. Wir finden es sinnvoll, die Behandlungsmethode nach Ponseti anderen Kliniken weiterzuempfehlen.

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DIAGNOSTIK UND THERAPIE DER HÜFTGELENKSDYSPLASIE BEI KINDERN

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Zu den am schwersten verlaufenden dysplastischen Erkrankungen des Bewegungssystem bei Kindern gehört die angeborene Hüftdysplasie. Diese Missbildung besteht aus der Unterentwicklung aller Bestandteile des Hüftgelenks.

Die hohe Rate der Missbildung (5-16 pro 1000 Neugeborene), schwierige Erstdiagnostik, lange Behandlungsdauer (3-4 Monate bei Dysplasie, 4-6 Monate bei Dysplasie mit Fehlstellung, 6-18 Monate bei Hüftluxation) sowie die Komplikationen bei falscher oder verspäteter Therapie erfordern die Notwendigkeit der frühst möglichen Behandlung dieser Pathologie.

In diesem Zusammenhang ist die Frage der Verbesserung und Verkürzung der Therapie der Hüftdysplasie ausgesprochen wichtig.

Die Behandlung der angeborenen Hüftdysplasie bei den Säuglingen basiert in der Regel auf funktionellen Geräten sowie Physiotherapie. Da während der Entwicklung der dysplastischen Hüftgelenke eine Durchblutungsstörung nachgewiesen wurde, ist es pathogenetisch sinnvoll die Mikrozirkulation anregende physiotherapeutische Behandlung anzuwenden. Heute werden bei der Behandlung der angeborenen Hüftluxation (nach der Reposition der Luxation) unter anderem Elektrophorese mit Kalzium und Phosphor,

Magnettherapie, Phototherapie, Massage und Krankengymnastik eingesetzt. Häufig fällt allerdings eine zu langsame Entwicklung der Leitstrukturen des Hüftgelenks auf, insbesondere des Acetabulums. Um diese Entwicklung zu beschleunigen, wenden wir moderne physiotherapeutische Therapien an (Polarisationslicht, Magnetfeldtherapie), die wegen der Unschädlichkeit und der Wirksamkeit schon im ersten Lebensmonat angewendet werden können.

Damit ist die Suche nach neuen vielversprechenden Therapiemöglichkeiten wichtig für eine wirksamere Therapie der angeborenen Hüftluxation, und somit für die Lösung dieses anspruchsvollen und sozial wichtigen Problems der Kinderorthopädie.

T.V. Kulemzina

OZONOTHERAPY AS AN ALTERNATIVE TO REFLEXOLOGY IN REHABILITATION OF FOOTBALLERS AFTER INJURIES

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In modern sport, related to a high level of achievement, there is a constant increase of physical load in order to reach better results. The requirements to sportsmen and their functional shape are permanently growing, therefore, there is a growing risk of injuries. A search for new rehabilitation methods is conditioned by many factors, one of which is doping control.

As a rule, standard rehabilitation regimen is applied in the treatment of musculoskeletal system injuries of highly skilled sportsmen. There is analgising and dehydration therapy as well as other therapy kinds or surgery and use of drugs, which all help to remove changes in the affected segment, restore initial levels of general and specific sports performance and carry out readaptation to maximally powerful, intensive and long physical loads.

In complex rehabilitation programmes, we offer application of ozonotherapy as an alternative to reflexology at the training stage. Having high reactivity, ozone reacts with various biological objects, including cell structures, and has a systemic metabolic effect on tissues and cells. It also reduces lactate and pyruvate content in blood.

Ozonotherapy is characterized by easy application, high efficiency and good tolerance as well as nearly complete absence of side effects.

Ozone introduction into biological points makes it possible to combine two factors of medical influence, a mechanical and biological one. Mechanical irritation enables reduction of pain syndrome, adequate relaxation of muscular system and improvement of microcirculation in the affected tissue. The biological effect takes place due to oxygen transportation to the somatic tissues and its accelerated release out of red cells, which, in its turn, is the most effective stimulation method of antioxidant system and reduction of intensity of lipid peroxidation. The choice of points and composition of prescriptions

were carried out on the basis of the principles of the traditional Chinese medicine. It was an individualised process, taking into consideration the age of a sportsman, nature of injury, earlier treatment methods and prescription of injury and characterological characteristics of the sportsman.

We have studied 38 highly qualified sportsmen with knee joint injuries. The footballers were divided into 2 groups by random choice. The first group had 18 footballers, whose rehabilitation consisted of the standard rehabilitation regimen. The second group was made up by 20 sportsmen, whose rehabilitation included ozonotherapy as an alternative to reflexology. The age of the footballers was between 18 and 26.

The application of ozonotherapy in complex rehabilitation made it possible to shorten the treatment and complete recovery period considerably, to start training much earlier and adapt the body to physical loads.

Important results of the applied treatment were an increased performance and acceleration of recovery processes after maximum training and competition loads due to the systemic influence of ozone on homeostasis. There was a stimulation of oxygen transport by blood, restoration of microcirculation and peripheral circulation, blood formation stimulation and optimisation of body's biological substrates.

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MINIMALINVASIVE EINGRIFFE BEI CHOLEDOCHOLITHIASIS

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Fragestellung. Eine der wichtigsten Fragen der biliären Chirurgie ist die Frage nach der optimalen Eingriffsmethode für jeden einzelnen Patienten, der eine Drainage der Gallenwege bei mechanischem Ikterus wegen Choledocholithiasis benötigt.

Methoden. Die vorgestellte Studie basiert auf den klinischen Verläufen von 70 Patienten, die im Städtischen Klinischen Notfallkrankenhaus in Duschanbe zwischen 2001 und 2011 wegen Choledocholithiasis mit mechanischem Ikterus behandelt wurden. Dabei wurden der Bilirubinspiegel, Dauer des Ikterus, Durchmesser des Ductus choledochus, Alter der Patienten sowie Komorbiditäten berücksichtigt. Neben der klinischen und laborchemischen Untersuchung wendeten wir für eine erweiterte Diagnostik auch Sonographie, ÖGD, Laparoskopie, intraoperative faseroptische Choledochoskopie, ERCP, PTC, intraoperative Cholangiographie, CT und MRT an.

Ergebnisse und Diskussion. Für die Dekompression wendeten wir innere, äußere und doppelte Drainage der Gallenwege an. Zur inneren Drainage der Gallenwege bei Choledocholithiasis gehörten die endoskopische Papillotomie und die Anlage der biliodigestiven Anastomose. EPT in der üblichen Vorgehensweise wurde bei 95,4% der Patienten angewendet. Nach der Durchführung der EPT wurden bei 64,9% der Patienten die Konkremente mechanisch mit einem Dormia-Körbchen durch den Biopsiekanal des

Endoskops entfernt. Bei den Patienten, bei denen wir nach EPT und nach Revision des Ductus choledochus mit Dormia-Körbchen die Konkremente nicht bergen konnten, führten wir eine nasobiliäre Drainage des Ductus choledochus mit der Anlage des Dormia-Körbchens für 5-7 Tage durch. Außerdem gehören zu der äußeren Drainage auch die nasobiliäre Drainage, PTC-Anlage unter endosonographischer Kontrolle und eine T-Drainage des Choledochus.

Somit ist die Anwendung der diagnostischen und therapeutischen Maßnahmen mit optimaler Verteilung der Maßnahmen über die Zeit und Reihenfolge, Spezifität und deren Potential der einzig richtige Weg, um die Rolle und den Zeitpunkt der endoskopischen und der chirurgischen Eingriffe festzulegen, damit bestmöglichen Ergebnisse erreicht werden können.

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POSTOPERATIVE PICTURE OF PORTAL HYPERTENSION IN THE HEPATOPANCREATOBILIARY REGION

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Objective. Problems related to various complications in patients after surgeries in the hepatopancreatobiliary (HPB) organs, connected to portal hypertension (PH), remain pressing in our times and reach up to 10 % in the structure of postoperative mortality.

Materials and methods. Medical history analysis of 1119 patients in the period between 2000 and 2010 made it possible to determine that the overwhelming majority of postoperative complications are haemorrhages from the upper gastrointestinal tract which occur in patients after extensive surgical interventions in the organs of the hepatobiliary region. A visual pattern during an endoscopic examination shows an enlargement of oesophagus submucous veins, gastric fundus and subcardial stomach sections as well as a marked plethora of the mucous membrane caused by the disturbance of the venous drainage in the portal system.

Results and their discussion. According to our observations, the pressure change in the portal system takes place in the postoperative period in patients after HPB surgeries, and the degree of its manifestation is directly proportional to the volume of the surgery. In the case of noncomplicated HPB surgeries, ultrasound duplex examinations show an abrupt decrease in the hepatic blood flow in the course of the first 5 days, and the recovery is achieved on 7-12 day. In the case of complications or associated pathologies, the terms of PH grow considerably. A PH reflection is also spleen enlargement and significant enlargement of visceral veins, which comes back to normal sizes after HPB organs regeneration.

This way, during an endoscopic examination, the disturbance of the venous drainage in the portal system accompanied by acute portal hypertension demonstrates itself as

an enlargement of oesophagus submucous veins, gastric fundus and subcardial stomach sections as well as a marked plethora of the mucous membrane, which plays an important role in the pathogenesis of postoperative gastrointestinal haemorrhages in the organs of the hepatopancreatobiliary region.

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SOME OF THE RISK FACTORS FOR CONGENITAL HEART DISEASE IN CHILDREN IN TAJIKISTAN

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The purpose of this study was to determine the risk factors for congenital heart defects in children in Tajikistan.

Materials and methods. The examination of 200 children aged 2 months to 15 years with congenital heart defects. Study group included 170 children, the control group - 30 children

The results of the study. As a result of observation revealed that healthy children are mostly (45%) were born from mothers aged 20-29 years. Material living conditions of almost all the children of the control group were satisfactory. Results of the study group of healthy children showed that there were a five mother who had sextragenital pathology. Three of them were anemic mothers, kidney disease - two mothers, endocrine diseases - three mothers. Only 13 mothers who had no negative impact on the fetus suffered toxicosis in the first half of pregnancy. Other complications in mothers of healthy children were not observed during their pregnancy. In contrast to the healthy group, the children were born in the core group from mostly mothers aged 30-40 years (60%). One of the risk factors for CHD in children is extragenital pathology in women, which was observed in 75% of the mothers in this group. Thus, 75% of the mothers of the main group observed anemia, 65.8% had a kidney disease, which accounted for the bulk of pyelonephritis. Endocrine diseases were identified in 53% of women. Less common diseases bronchopulmonary, gastrointestinal and cardio - vascular system. Among antenatal risk factors for CHD in children is the role of the serial number of pregnancy and childbirth. Studies have shown that the most common form in the UPU first three pregnancies and births (45%). Importance in causing CHD in children is abnormal during pregnancy (threatened miscarriage - 53%, anemia - 95.2% toxemia - 70.5%, 50% nephropathy, acute diseases - 58.8%, worsening of chronic diseases - 47 %, medication - 32.9%. in 31.7% of the mothers during pregnancy were observed in the I trimester of acute illness, exacerbation of chronic infection in 58.8%. drugs from antibiotics accounted for 36%, fever and pain - 28% . Anti-inflammatory drugs were used in 6.2% of cases, other drugs - in 29%. inbreeding occurred in 32% of women. Observance of religious fasting “Eid” is found in 30% of the mothers of sick children. presence of intrauterine infection - in 31.7% of patients

children. These factors can be taken into account to predict a high risk of developing CHD in the fetus. Thus, our results suggest an important role of teratogenic effects in the ante-intrapartum period in the formation of the UPU in the presence of a genetic predisposition to this disease. Among them are the following risk factors the development of CHD, which are statistically independent of Denote hereditary predisposition for CHD, such as: age of the parents (at the time of birth) over 30 years, mother, pregnancy complications (anemia, toxemia, acute respiratory infections and exacerbation of chronic), related to marriage, pre-natal infection.

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SURFACTANT PROTEIN A – NEW PROGNOSTIC BIOMARKER OF ACUTE RESPIRATORY DISTRESS SYNDROME IN SEPTIC PATIENTS

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The objective of the investigation was to estimate the informativity of plasma surfactant protein A (SP-A) as a prognostic biomarker of acute respiratory distress syndrome in septic patients.

Materials and methods. The observational study in intensive care unit mechanically ventilated septic patients with severe intraabdominal surgical infections was done at the V.A. Negovsky research institute of general reanimatology in 2010-2012. ARDS was diagnosed and staged according to the research institute criteria and the American-European criteria. Plasma concentrations of SP-A were measured on ARDS diagnosis (day 0) and days 3, 5, 7 by immunoenzyme essay (Bio Vendor, USA). Data were statistically analyzed by STATISTICA 7.0, ANOVA method, and presented as $M \pm \sigma$, ng/ml. A $p<0,05$ was considered statistically significant. Areas under the receiver operating curves (ROC) were calculated.

Results. Fifty five patients (out of 250 screened) were enrolled according to the inclusion/exclusion criteria. Patients were assigned into groups: ARDS [n=30; subgroups - ARDS stage 1 (n=15), stage 2 (n=15)] and noARDS (n=25). In ARDS group SP-A was higher at all points than in noARDS group. There were no differences between plasma SP-A in patients with the 1st and 2nd stages of ARDS. Moderate positive correlations between the plasma SP-A and APACHE-II score were detected in ARDS patients on days 1, 3, 5 (r +0,57, +0,51, +0,40, $p<0,05$). Plasma SP-A was significantly higher during all the study in the group of patients who died of ARDS. Plasma SP-A had a good prognostic capacity for the lethal outcome in ARDS patients: SP-A on day 0 ≥38,8 ng/ml yielded a sensitivity of 65,0% and a specificity of 80,0% (AUC 0,74; 95% CI 0,577-0,866; p=0,0026). Plasma SP-A on day 1 had a good prognostic capacity

for the development of ARDS on days 4-5 in septic patients: SP-A on day 1 ≥24,5 ng/ml yielded a sensitivity of 60,0% and a specificity of 85,0% (AUC 0,74; 95% CI 0,527-0,871; p=0,0034).

Conclusions. In ARDS septic patients plasma surfactant protein A on day 0 ≥38,8 ng/ml may serve as a good biomarker of lethal outcome. In intensive care unit septic patients plasma surfactant protein A on day 0 ≥24,5 ng/ml may serve as a good prognostic biomarker of development of ARDS on days 4-5.

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INHALED TOBRAMYCIN AS AN ADJUNCT TO SYSTEMIC ANTIBIOTICS FOR TREATMENT OF SEVERE NOSOCOMIAL PNEUMONIA: A RANDOMIZED STUDY

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The objective of the investigation was to estimate the efficacy of inhaled tobramycin (IT) as an adjunct to systemic antibiotics in the treatment of severe nosocomial pneumonia (NP).

Materials and methods. Fifty mechanically ventilated patients (out of 165 screened) were enrolled in the current single-center randomized study. They were randomized to receive either IT (300 mg, BID; group 1, n=25) as an adjunct to systemic antibiotics or for a correction of the regimen of systemic antibiotics (group 2, n=25). The primary outcome measure was resolution of NP and acute respiratory insufficiency. The microbiological, X-ray, CPIS, signs of systemic inflammation and oxygenation index were used as objective indicators of the clinical progress. Data were statistically analyzed by means of Statistica 7,0 pack. $p<0,05$ was considered statistically significant.

Results. Inhaled tobramycin promoted a rapid reliable resolution of SIRS and acute respiratory insufficiency signs (within 2,3±1,1 days from the treatment start); decrease of the titer of microbes in BAL in 80% of patients on days 5 and 7 (even in the absence of in vitro sensitivity to tobramycin in 30% of cases); weaning from mechanical ventilation in 40% of patients. It was also associated with a non-significant positive chest X-ray dynamics in 80% of patients and a low incidence of side effects. No serious side effects of IT were observed.

Conclusions. Administration of the inhaled tobramycin 300 mg BID as an adjunct to systemic antibiotics is efficient in treatment of severe nosocomial pneumonia caused by multiresistant gram-negative bacteria.

Key words – pneumonia, nosocomial infections, tobramycin, inhaled

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IMPACT OF A-TOCOPHEROL ON THE ADRENAL GLANDS OF CHRONICALLY ALCOHOLIZED RATS

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The purpose of the experimental study was to evaluate the influence of the alcohol intoxication of rats on the morphometric parameters of the cortex of the suprarenal glands in the treatment by antioxidants. Five groups of animals were formed: group 1 - compulsory alcohol intoxication within 60 days; group 2 - forced intoxication for 60 days, combined with the intraperitoneal injection of α-tocopherol (0.1 mg per 100 g of body weight of 20% oil solution daily) from the 41st to the 60th day of alcoholization; group 3 - forced intoxication within 80 days, group 4 – compulsory alcohol intoxication within 80 days, combined with the intraperitoneal administration of _-tocopherol from the 61st to the 80th day of alcoholization. The fifth group consisted of the animals that were kept in the vivarium conditions with free access to water (vivarium control). The animals were taken from the experiment on the 80th day. Then macroscopic, histological, histochemical studies of the adrenal glands were performed. Based on the obtained data it can be concluded that the adrenal glands of the control animals are characterized by the signs of moderate secretory activity (moderate content of lipids and cholesterol, prevalence of homogeneous nuclei). The study found that the lowest weight of the adrenal glands was observed in chronic alcoholics. The cortical reorganization, consisting in the thinning of the zona glomerulosa and the significant expansion of the zona reticularis, was detected microscopically. Atrophic changes in the cortex, subcapsular focal sclerosis and thickening of the walls of the venous sinuses of the medullary substance were noticed in the animals of the first and the third group. In the zona fasciculata multiple small foci of cytolysis were observed. Specific leaching out of lipids from the cortex is characteristic for alcohol intoxication. Transition boundary among the parts of the cortex, deprived of lipids and contained them, often has the character of a more or less flat horizontal line. The degree of leaching out of cholesterol was often not consistent with the sudanophilous depletion of the cortex. More or less parallel decrease of sudanophilous lipids and cholesterol in the animals of the first group was noted. In preparations of the animals in group 3 the discrepancy among the degree of leaching out of lipids, which was toward obvious prevalence of cholesterol depletion of the cortex, was clearly observed. With increasing delipidization in the lower regions of the cortex of the suprarenal glands, the number of so-called «dark» hyperfunctioning cells, from which the lipids (steroids) disappeared due to increased demand of the organism in these hormones, was elevated. After the introduction of _-tocopherol, morphological reorganization in the structure of the adrenal cortex in the animals of the second group was not observed. In the group 4 the process of the partial restoration of lipid content was marked. In the cytoplasm of the «dark» cells of the cortex the accumulation of the granules of phospholipids, the number of

which is inversely proportional to the cholesterol content in the cell, was revealed. In the adrenal glands of the chronically alcoholized rats marked atrophic and sclerotic changes were noticed, weight of the adrenal glands was below normal. Our research confirms the conception of the morphological and functional autonomy of the individual zones of the adrenal glands. Antioxidant α-tocopherol has a modifying effect on the changes in the cells of the adrenal cortex as the result of alcoholization. The degree and direction of this effect depends essentially on whether the alcohol consumption continues.

Katrin Lehmacher

TRAUMA UND PSYCHISCHE KRANKHEIT. TRAUMAKONZEPTE IM HISTORISCHEN WANDEL: EIN BEITRAG ZUR MEDIZIN- UND WISSENSCHAFTSGESCHICHTE.

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Der medizinhistorische Beitrag verfolgt das Anliegen die kontextabhängige dynamische Wandelbarkeit des Traumabegriffes und zugehöriger Konzepte aufzuzeigen und deren enge Verwobenheit von politischen, sozialen und kulturellen Gegebenheiten mit den sich verändernden Denkweisen über Trauma und psychische Krankheit darzustellen. Der Traumabegriff lässt sich dabei nicht nach allgemeingültigen Kriterien definieren und ist auch nicht als eine historisch konstante Begrifflichkeit zu verstehen. Vielmehr variierten Bedeutungsinhalte des Begriffes entsprechend den sich wandelnden Konzepten zu Trauma und psychischer Krankheit.

Summary Die Geschichte der wissenschaftlichen Diskussion um Trauma und psychische Krankheit nimmt etwa Mitte des 19. Jahrhunderts ihren Ursprung. In dieser Zeit wurde dem Begriff Trauma, der aus dem Griechischen kommt und _Wunde_ bedeutet, zunächst nur zur Beschreibung von körperlichen Verletzungen diente, eine weitere Bedeutung beigemessen _ er wurde erstmals auch im Sinne einer seelischen Verletzung verwendet. Im Laufe der Geschichte wurde immer wieder kontrovers über psychische Traumatisierung diskutiert, wobei es im Wesentlichen um zwei Kernfragen ging: Gibt es einen ursächlichen Zusammenhang zwischen einem Trauma und etwaigen Symptomen? Wenn ja, wie lässt sich dieser erklären? Liegt eine organische Erkrankung oder eine psychische Störung vor? Die Position, die zu diesen Fragen bezogen wurde, hatte weit reichende Konsequenzen für Rechtsprechung, Gesundheits-, Finanz-, Innen- und Außenpolitik und sorgte somit für eine außerordentliche Brisanz der Kontroversen. Entsprechend dem historischen Kontext und sozialpolitischer Gegebenheiten wurden diese Fragen in der Vergangenheit unterschiedlich bewertet. Wurde das Konzept einer durch Traumata verursachten psychischen Krankheit bejaht, waren die Vorteile, die sich hieraus für Patienten ergaben evident. Sie hatten nunmehr ein Anrecht auf medizinische

Versorgung, Krankenversicherung, gegebenenfalls Entschädigung oder die Gewährung einer Rente. Doch physische Korrelate der Störung ließen sich nicht nachweisen. Auch die Traumata ließen sich nicht objektivieren. Wie war sicher zu stellen, dass die Symptome der Patienten nicht bloß simuliert waren? Trotz der fast 150 jährigen Begriffsgeschichte des psychischen Traumas und den in Deutschland zum Teil heftig geführten Diskussionen hatte sich das Konzept einer durch Traumata verursachten psychischen Erkrankung lange nicht durchsetzen können. Im Gegensatz hierzu wurde in den 1970er Jahren in den USA durch den Vietnamkrieg und die hierauf folgende Antikriegsbewegung der Weg geebnet, Platz für die diagnostische Kategorie Post-Traumatic Stress Disorder (kurz PTSD) zu schaffen. Hiermit kam die amerikanische Regierung vor dem Hintergrund der innenpolitisch angespannten Situation ihrer Verpflichtung nach, Verantwortung für die amerikanischen Kriegsveteranen zu übernehmen. Durch Aufnahme der PTSD als diagnostische Kategorie wurde den Kriegsveteranen Zugang zu medizinischer Versorgung, Renten und Entschädigung gewährt, worauf sie andernfalls keinen Anspruch gehabt hätten.

Mittlerweile ist das Konzept längst in der gesamten westlichen Welt, so auch in Deutschland, angekommen. 1991 wurde eine entsprechende Diagnose, die Posttraumatische Belastungsstörung (kurz PTBS), in das internationale Diagnosenhandbuch, das ICD, aufgenommen.

Dieser medizinhistorische Beitrag verfolgt das Anliegen die kontextabhängige dynamische Wandelbarkeit des Traumabegriffes und zugehöriger Konzepte aufzuzeigen und deren enge Verwobenheit von politischen, sozialen und kulturellen Gegebenheiten mit den sich verändernden Denkweisen über Trauma und psychische Krankheit darzustellen.

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METABOLISCHES SYNDROM

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Es wird der Begriff des metabolischen Syndroms definiert. Die Frage nach dem Sinn einer solchen Definition wird diskutiert.

Die historische Entwicklung der Auseinandersetzung mit dem Krankheitsbild wird hierbei dargestellt und dabei auf die gesellschaftlichen und geografischen Einflüsse eingegangen.

Die wesentlichen Komponenten des metabolischen Syndroms, wie Adipositas, Diabetes mellitus, Fettstoffwechselstörung und Hypertonie werden mit dem Schwerpunkt der Adipositas und des Diabetes mellitus erörtert. Hierbei werden die Pathophysiologie, die Klinik und die Therapie dieser Erkrankung dargestellt und die wechselseitigen Zusammenhänge aufgezeigt. Als bedeutender Risikofaktor für das Herz- und Gefäßsystem werden die Folgen des metabolischen Syndroms anhand bedeutender arteriosklerotischer

Folgeerkrankungen, wie koronare Herzerkrankung, Apoplex und periphere arterielle Durchblutungsstörung dargestellt.

Zusamenfassend wird auf die Möglichkeiten der Senkung des Aufkommens an Patienten mit metabolischen Syndromen eingegangen und es werden die individuellen und gesellschaftlich- systemischen Einflüsse zur Erreichung dieses Ziels diskutiert.

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METHODS OF CORRECTION OF HIPOXIA IN PATIENTS WITH SEVERE COMPLICATIONS OF THORACIC TRAUMA

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Introduction: Quite often ALI is followed by development of unilateral or bilateral pneumothoraces either as a result of the traumatic injury to lung tissue or as a result of CMV. In this situation, clinicians are faced with two problems. On the one hand, it may be necessary to utilize high airway pressure to provide a satisfactory oxygenation. On the other hand, these high airway pressures may worse the underlying pneumothorax and delays its evacuation. Poor pulmonary compliance prevents the use of modern highly effective methods of respiratory therapy such as alveoli recruitment maneuvers, prone position and others. Objectives: To study the efficiency of BIPAP and SIMV with alveolar recruitment maneuvers (ARM) in patients with acute lung injury and concomitant pneumothorax. Methods: 74 patients with ALI and concomitant pneumothorax secondary to blunt thoracic injury were studied. All patients fulfilled criteria for the first stage of acute respiratory distress syndrome (ARDS), which consisted of acute onset dyspnea, isolated rales, an extravascular lung water index >7 ml/kg, and an oxygenation index < 300 mmHg in the absence of left-ventricular dysfunction. After evacuation of the pneumothorax, ARM were performed using BIPAP or SIMV 3-5 times a day with a peak pressure of 33.4±0.2 cm H_2O and a PEEP 16,1.±0.2 cm H_2O. We defined the groups and subgroups as follows: Group A: BIPAP (n =38), Group B: SIMV (n =36), Subgroup A1: BIPAP+ARM (n =19), Subgroup A2: BIPAP without ARM (n =19), Subgroup B1: SIMV+ARM (n =18), Subgroup B2: SIMV without ARM(n=18). RESULTS: The use of BIPAP in patients with ALI and concomitant pneumothorax reduced the time to resolution of the air leak allowing application of earlier ARM. M with peak pressures of 35-40 cm H_2O effectively improved oxygenation and biomechanical properties of lungs in patients with serious complicated thoracic trauma and did not cause pneumothorax relapse thus reducing the rate of complications and the duration of controlled ventilation. Conclusions: Since BIPAP allowed for spontaneous ventilation during the breathing

cycle and limited Ppeak, its use was associated with more rapid sealing of air leaks with the ability to conduct earlier alveolar recruitment. The use of BIPAP compared with SIMV improved outcome in the presence of complex thoracic trauma.

T.V. Melenberg

STEOPLASTY IN THE TREATMENT OF PERIODONTITIS

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A great number of osteoplastic materials used today prove the absence of a universal preparation for osseous cavity fillings (A. Ostrovsky, 2001; A.Y. Fevraleva et.al., 2007; A.I. Grudyanov et.al., 2007; G.P. Ter-Asaturov et.al., 2009; M. Camelo et al., 2001; H.-P. Müller, 2004; B. Wenz, 2006). Immunodeficiency state has a considerable influence on the duration and severity of inflammatory diseases of oral cavity, it complicates their diagnosis and treatment (A.I. Grudyanov et.al., 2006, 2007). With consideration for this, treatment of chronic periodontitis must be accompanied by immunocorrection. Besides active immunocorrection there is passive immunocorrection (R.M.Haitov, 2006). Platelet-rich fibrin (PRF), suggested by F. Adda, D. Choukroun (2004) is particularly attractive. Based on PRF, we have proposed a transplantation mixture (patent of the Russian Federation _ 2301684 from 27.06.2007.).

The objective was to carry out a comparative osteoplasty analysis with the application of the lyophilised allogenic cancellous bone tissue “Lyoplast S”® and the proposed transplantation mixture.

Materials and methods. We have used “Lyoplast S”® (registration No. FS 01032004/1567-05 from 29.04.2005), transplantation mixture, centrifuge “EVA 20” (Deutschland), Bone-mill KM 3. Patients were divided into 2groups.The first group consisted of 42 patients, who had osteoplasty with “Lyoplast S”® only. The second group was made up by 18 patients, the treatment of which included the transplantation mixture proposed by us, the main components of which are “Lyoplast S”® and PRF. The control group included 15 patients with intact periodontitis. There were no immunomodulators prescribed. We have studied the dynamics of Ig A, G, sIgA and IL-1α, -β, IL-8, TNF-α in the oral fluid. The assessment of the clinical condition of the oral cavity was carried out by means of Silness-Loe plaque index, mobility index Miller-Fleszar and Sulcus Bleeding Index according to Mühlemann. The depth of the periodontal pocket was assessed with the help of the graduated periodontal probe. Examinations took place before treatment, 28-30, 84-90 and 168-180 days after treatment. The statistical analysis was carried out by means of SPSS 11.5 and Statistica 6.0.

Results. The analysis of the results showed that there are no statistically significant

differences between the second and control groups, patients with intact periodontitis, whereas there are statistically significant differences of high (p<0,01) and very high (p<0,001) importance between the first and the second group as well as between the first and the control group. This proves the positive dynamics of the process and achievement of steady remission in patients of the second group. The active positive dynamics correlates with the clinical symptoms. These data shows an increase of the local humoral immunity in the oral cavity of patients with periodontitis after osteoplasty with the use of the transplantation mixture proposed by us, which, in its turn, confirms the presence of immunotherapeutic properties of PRF. Thus it is possible to recommend the use of this method in order to increase local immunity of oral cavity during complex treatment of patients with chronic periodontitis.

Conclusions: 1. The use of the transplantation mixture used by us in osteoplasty accelerates healing processes of soft tissues and osteointegration and contributes to a longer remission.

2. Introduction of PRF into the transplantation mixture makes it possible to improve the local humoral immunity in the oral cavity of patients with periodontitis after osteoplasty.

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DYNAMICS OF ARTERIAL STIFFNESS IN HYPERTENSIVE PATIENTS WITH OVERWEIGHT DEPENDING ON PHYSICAL REHABILITATION

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Abstract: In the development of effective treatments and preventive measures for patients with hypertension, one should both evaluate the effect of physical rehabilitation programs on the dynamics of risk factors for heart disease, and consider the state of arterial stiffness (account for the changes of arterial stiffness).

Key words: hypertension, physical activity, arterial stiffness

BACKGROUND:

Physical activity has beneficial effects on arterial stiffness among healthy adults. There is a lack of data on this relationship in adults with hypertension. The majority of studies which have examined physical activity and arterial stiffness have used subjective measures of activity. The aim of this study was to investigate the relationship between objectively measured habitual physical activity and arterial stiffness in individuals with newly diagnosed essential hypertension.

Materials and Methods 39 hypertensive patients (12 men and 27 women, age 60 ± 2,1 years), overweight (BMI - 27 ± 2,1 kg / m²). Stage 1 hypertension was in 29 (75%), stage 2 hypertension - 10 (25%). Systolic blood pressure (SBP) was 142 ± 3,6

mm Hg, diastolic blood pressure (DBP) - 91, 3 ± 2,4 mm Hg. Patients did not received antihypertensive treatment (at the time of research). Blood sugar 4,3 ± 0,6 mmol / l, total cholesterol - 4,8 ± 0,7 mmol /l.

Patients were divided into two groups: group 1 - 19 people (7 men, 12 women) 2 months 3 times a week for 60 minutes get aerobic exercise, group 2 - 20 people (5 men, 15 women) had an exercise on static and dynamic stretching for 60 minutes in the same period of time. Patients were assessed before and after a cycle of training, identify risk factors for heart disease (questionnaires, tests).Exercise tolerance was assessed by the Harvard step test (IGST, points). Arterial stiffness and endothelial function were measured by photoplethysmography («Angionskan-01, professional», Russia) and calculated stiffness index (SI), the reflection index (RI) and augmentation index (Alp75).

Results: In patients of group 1and 2 during the performance of the contour analysis of pulse wave the average index of rigidity of the large arteries (SI) comes to 9,58±0,06 m/s, the index of reflection of the resistant arteries (RI) - 43,81±6,9%, the augmentation index (Alp) - 48,98± 7,0%; herewith in 65% of patients the type of wave "A" was recorded reflecting the highest rigidity of the vessels but in 15% - the type "B" characterizing the lower degree of reduction of vascular elasticity. On estimation of endothelial function in 69% examined patients the dysfunction of endothelium was recorded which leads to the increase of the amplitude of the pulse waves in 1,51±0,02 times and to the shift of the phases between channels (C2 - C1) before and after occlusion - 4,7±0,3 ms. All patients had low exercise capacity (IGST - less than 60 points).The average systolic arterial pressure (ASAP) was 144,3± 6,2 mm H., the average diastolic arterial pressure (ADAP.) - 72,4 ±2,2 mm H.

After cycle of exercises patients of group 1 in compare with group 2: SI - 7,9 ±0,3 m/s (r<0,001), RI - 35,74±6,7% (r<0,5), Alp - 41,55 ± 6,8% (r<0,5); the type of the wave "B" was registered in 50% events, the type of the wave "C" was registered in 30% events. The endothelial dysfunction was marked in 30% examined patients which show reduced of the amplitude of the pulse waves - in 1,74±0,2 (r=0,05) and reduced the shift of the phases between channel (C2 - C1) before and after occlusion- 8,2±0,2 ms (r<0,001); ASAP was 140,7±7,2 mm Hg., DAP - 81,7± 4, mm Hg. Group 1 also showed a decrease in BMI (24 ± 2,1 kg /m ²) and increased exercise capacity (IGST – 65 points). Arterial stiffness and endothelial dysfunction in patients group 2 did not change significantly.

Conclusion: Thus, the inclusion in the rehabilitation of patients with hypertension dosage regular aerobic exercise not only promotes weight loss, increased exercise tolerance, but also accompanied by a significant improving the elastic properties of the vascular pool, a significant reduction in endothelial dysfunction in arterial vessels, which must be considered when the treatment and prevention cardiovascular disease.

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MORPHOLOGICAL EVALUATION OF PLATELET-RICH PLASMA USE IN THE TREATMENT OF CHRONIC EXPERIMENTAL OSTEOMYELITIS

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The purpose of this study was to evaluate the selective and combined use of platelet-rich plasma (PRP) effectiveness in chronic experimental osteomyelitis.

Materials and methods. The study was performed on 42 white mongrel male rats on which the modeling of chronic osteomyelitis was made. The animals were divided into control and two experimental groups. In the control group, treatment was carried out. In the experimental group initially the surgical sanitation of the hearth was done, then performed a combined treatment using PRP at a concentration of platelets 1 million / ml (I experimental group), which include an jet sanation of injury with 0.9% sodium chloride solution and making PRP (II experimental group). Histological evaluation of the data was performed on 7 and day 28 of the study. The technique used for staining with hematoxylin and eosin and Van Gieson.

Results. In the control group at day 7, unformed, loose connective tissue between the seizures are detected. Cellular component is represented mainly by a number of inflammatory cells. Against the background of a proliferation of inflammation along the nutritional and Haversian canals the passing through them blood vessels thrombosis developed. Notes the presence of seizures, surrounded by cavity with necrotic content. From the cavity are fistulous passages, reaching the periosteum. In preparations of the experimental group I inflammatory response which manifests intense leukocyte infiltration, subperiosteal abscesses are marked. Foci of granulation tissue with fibrosis fill the space between the seizures. Vessels are dilated, with stasis of red blood cells. Endosteum edges are serrated. Indicated moderate staining fuchsinophilia during Van Gisone. In the experimental group II in the bone defect shows signs of purulent-necrotic reaction. Sequestered bone, between some fragments retikulofibroze fabric varying degrees of maturity is determined, marked inflammatory cell component vessels are dilated with signs of stasis of erythrocytes. Periosteum is thickened.

On 28th day within the control group, local inflammatory-necrotic foci still existed, preserved bone cavity filled with granulation tissue with marked inflammatory infiltration, against which determined mikrosekvestry. Determined septic foci, continuing in fistulous passages. There are single sections made retikulofibroze cloth. In the experimental group I the granulation tissue of varying degrees of maturity is determined. Bony trabeculae surrounded by proliferating osteoblasts, there are areas of resorption. Granulation tissue with prominent manifestations of angiogenesis contains randomly placed fibers, cellular component represented by macrophages, lymphocytes, and fibroblastic cells. Periosteal

reaction is characterized by the proliferation of chondrocytes with areas of bone formation, is expressed in the thickened periosteum. In the experimental group II purulent process in granulation tissue is characterized by foci. In areas with a predominance of mature granulation increases the number of fibroblastic elements with significant collagenogenesis. Against the background of fibrosis determined zone of osteogenesis. Individual beams are dominated by osteoclast resorption, areas sclerosal bone are defined.

Conclusions. In the treatment of experimental chronic osteomyelitis greatest effect was obtained with the combined use of jet sanation and platelet-rich plasma consisting in the reducing relief term of inflammation and stimulation of regenerative processes.

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COMPLEX RADIOLOGICAL DIAGNOSTICS AT THE PRIMARY STAGE OF MEDICAL CARE

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Purpose. The main requirements for radiological diagnostics at the primary stage of care are objectivity, simplicity, efficiency, and availability. At present in CIS countries radiology is divided according to methods: X-Ray and ultrasound examinations are performed by different people in different rooms and even departments. The purpose of the study is to rationale for transition to rooms of complex radiological diagnostics at the primary stage of medical care.

Materials and methods. The advantages of the complex radiological diagnostics on the basis of analysis of statistical data on the incidence of the Ukrainian population and performance of radiological services in the country, and the generalization of experience combining digital radiography and ultrasound in children's hospitals in Kiev are shown.

Results. Radiography provides high contrast information about lungs and bones, ultrasound – about the soft tissues. The presence of both methods in the hands of one radiologist allows to have a quality diagnostic information about the status of all the tissues of the patient. X-ray diagnostics is used in more than 70% of patients. More than 30% of radiological examinations are X-ray examinations of the chest, and almost 40% - X-ray examinations of the musculoskeletal system. In chest examinations ultrasound may be useful in the diagnostics of pleural effusions, the presence of free fluid in pleural cavity, and sometimes for determining of rib fractures. When musculoskeletal system is damaged radiography evaluates bone status, and ultrasound examination of the injured area allows to confirm the presence of hemarthrosis and to assess the damage of soft tissues. Almost half of ultrasound examinations falls on the studying of abdominal organs. In this field radiography helps to identify lung metastases in the cases of abdominal cancer, in cases of

acute abdomen – to exclude perforation and intestinal obstruction, in chronic pancreatitis may show calcified duct stones, etc. Thus, digital radiography, which allows to receive diagnostic information for a few seconds, and ultrasound examinations complement each other well, as illustrated by clinical cases.

Conclusions. Complex X-ray & ultrasound diagnostics in the primary stage of the patient's examination, performed by one radiologist allows to improve the a correct diagnosis and therefore the effectiveness of treatment and reduce the radiation dose to the patient by eliminating the need for additional X-ray examinations and repeated studies at persistent complaints. In connection with this transition to the rooms of integrated primary radiological diagnostics is appropriate.

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USING OZONIZED PERFLUOROCARBON EMULSION FOR TREATMENT OF SEPTIC WOUNDS

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Background

The goal of this study was to estimate effectiveness of local application of ozonized perfluorocarbon emulsions in a purulent wounds treatment.

Methods

On a group of 118 patients have been studied a course of a wound process and results treatment of wounds gotten after opening a pus focus at purulent-inflammatory diseases external localization (an soft tissues abscess, a furuncle, a carbuncle, a purulent hidradenitis, a purulent atheroma, a purulent coccygeal cyst, a purulent mastitis, a felon, a purulent lymphadenitis, purulent traumatic wounds). All patients were divided into three groups equivalent at gender, age and nosological structure. The first group I of patients (36) were treated locally with application a perfluorocarbon emulsion (medicine Perftoran), the second group II (34) underwent application an ozonized Perftoran, the third (48) control group in the first phase of a wound process got an application ointments on a hydrophilic base (levomicol, levosin) and in the regeneration phase - ointments on a vaseline base. As the criteria for estimating were used the following: the degree of visual signs of inflammation (estimated with a special point scale), a skin temperature index at the wound site, the wound healing speed in accordance with the wound square decreasing and the duration of the treatment.

Results.

The following results were demonstrated in the current of the inflammatory reactions in the zone healing wound. The point scale demonstrating the expressiveness of the local inflammation gradually decreased in time in all the three groups. On the fifth day after operation this parameter in group II (5,6±0,1) was authentically less than in group I (6,6±0,2) and group III (7,0±0,2) ($P<0,01$) that showed advantages of using ozonized

Perftoran for resolving the inflammatory process during the wound treatment in comparison with using a clear Perftoran and a traditional local treatment.

In accordance with the results there was identified gradual decreasing of the local skin temperature at the zone operation. From the first to the fifth days after the operation the temperature index at group I patients (Perftoran) decreased from 9,6±0,8 to 6,6±0,6; in group II (ozonized Perftoran) – from 6,6±0,6 to 4,8±0,8; in control group from - 12,1±1,5 to 10,4±1,4 (in all cases P<0,01). In groups I and II the final values of the index were authentically less than in control group (P<0,01).

The wound healing speed for the period from the first to the fifth days in group I (Perftoran) – 43,1±7,8 mm^2/day was higher than in control group – 30,6±4,6 mm^2/day. The difference between the values of control and group II (ozonized Perftoran) was statistically reliable (P<0,01). The wound healing speed parameter for the period after the fifth day from operation made it plain decreasing this value as compared with the period from the first to the fifth day both in group I (Perftoran) – 30,5±4,1 mm^2/day and in group II (ozonized Perftoran) – 21,5±4,2 mm^2/day which is possibly connected with unsufficient the influence of Perftoran on the tissues regeneration process.

The treatment time analyses showed the greatest time for the patients recovering was spent when using the traditional bandaging scheme (13,1±0,8), at treating with Perftoran the patients recovered on 2,0±0,9 days earlier, when using the ozonized Perftoran on 4,0±0,4 days faster. The treatment time difference between using the ozonized Perftoran and the traditional scheme was authentic (P<0,01).

Conclusion.

The gotten results demonstrate the effectiveness of the local treatment purulent wounds with an ozonized Perftoran in comparison with a clear Perftoran and a traditional treatment scheme.

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THE MORPHOLOGY OF RED BLOOD CELLS IN PATIENTS WITH SEVERE TRAUMA

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Introduction. Acute massive blood loss due to trauma is often a cause of the development of critical states. Composition and structure of red blood cells in massive blood loss can change and affect their function. Goal: To study the changes in the structure and shape of red blood cells in patients with severe trauma (ST) and different amounts of blood loss used by light-optical and atomic force microscopy (AFM). Materials and methods. A total of 17 patients (9 men, 8 women) aged 48±19 (27-79) years with ST and different volumes of blood loss 23,5 ± 15,9 ml/kg (3.3 to 46.1 ml / kg), and hemodynamic instability. All the patients were divided into three groups in depending on

the amount of blood loss: 1st stage - blood loss <750 ml (<10.7 ml/kg - I degree of blood loss (dbl)) - 6 patients, 2nd - 750-1500 ml (10,7-21,4 ml / kg – II dbl) - 2 injured, 3rd -> 2000 mL (> 28.6 mL/kg – IV dbl) - 9 patients. Dynamics of clinical and laboratory parameters was performed at admission to the intensive care unit, at 3, 5, 7, and 15 day. The control group included five healthy volunteers, age was 26,4±2,7 years. Red cells monolayers were prepared with a device «V-sampler» (Vision, Austria). Analysis of blood cells was performed using light-optical microscopy (OLYMPUSCX 41, Japan) and AFM («NTEGRAprima», NT-MDT, Russia). Anisocytosis and poykilocytosis erythrocytes evaluated by counting 1000, 300, 200 and 100 cells. Results. Control group, light-optical microscopy and AFM. Number of normocytes in a field containing 300 cells, was 71,6±3,4% and was significantly different from the number of normocytes, that were counted in field of 1000 (63,8±4,0%, p<0,05) and 200 (61,6±4,5%, p<0,05) cells. Number of macrocytes in field of 1000 cells was 19±4,6% and 300 cells - 20,0±3,0% and was significantly different from the number of macrocytes, that were counted in field of 200 (29,2±3,8%, p<0.05) and 100 (27,0±9,9%, p<0,05) cells. Number of microcytes in field of 1000 cells was 16,8±3,9% and was significantly different from the number of microcytes, that were counted in field of 300 (7,8±1,3%, p<0,05) and 200 (8,6±1,1%, p<0,05) cells. Significant differences in the calculation of normocytes (60,0-73,5%), macrocytes (18,3-30,8%) and microcytes (6,3-8,3%) the same blood samples from the control group with AFM in a field of 100, 200, 300 and 1000 cells were not found. The distribution of the size of red blood cells were counted by light-optical microscopy and AFM, respectively, were: normocytes - 63,8%±4,1% and 60,0%±2,4%, macrocytes - 19,0%±4,6% and 30,7%±1,7%, p<0.05, microcytes - 16,8%±3,8% and 8,3%±0,9%, p<0.05. Group of patients, light-optical microscopy and AFM. In the group of patients with ST were founded 7,5±2,5% (I dbl), 7,9±4,3% (II dbl), and 8.3±4,2% (IV dbl) deep (deepening is 1944 nm, against 288 nm in the control group) diskocytes with outgrowth in the center used by AFM. At the first days after trauma in the patients group were obtained by using light-optical microscopy and AFM, the number of normocytes is reduced (46,2±4,5% and 44,8±18,3%) with compare to control (63,6±9,2 and 73,5±3,1); the number of macrocytes is increased (34±11,3% and 33,4±19,2%) with compare to control (27,0±9,9 and 18,2±2,2) and the number of microcytes (19,2±10,1% and 25,6±15,2%) with compare to control (9,2±3,8 and 7,0±1,8). Significant differences in comparison to the control group were not revealed. By the 15th day of observation is observed the increase in the number of macrocytes to 40,5±7,8% used by light-optical microscopy and 45,3±23,7% used by ACM; and reduction of microcytes to 13,5±4,9% (light-optical microscopy), 12,7±8,0% (AFM). Changes of anisocytosis, were found using by AFM, depended on the degree of blood loss: the number of normocytes in the I dbl was 51,3±19,9%, and in the IV dbl - 37,6±19,3%; the number of macrocytes in the I dbl was 36,7±28,0%, and in IV dbl - 33,5±20,3%; the number of microcytes of I dbl was 12±10,5%, and in IV dbl - 35,6±32,5%. Conclusion. Higher resolution of atomic force microscopy provides an assessment of erythrocyte anisocytosis in the field of 100x100 mm (about 100 cells).

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PERFLUOROCARBON EMULSIONS OF NEW GENERATION

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The medical preparation "Perftoran" (Russia) based on perfluorocarbons has an array of advantages, but has some disadvantages: the necessity of storage under low temperatures (not more than -180°) and long defrosting time, which is unapplicable in emergency stuations.

The aim of the investigation was to develop the medical perfluorocarbon emulsion of new generation, which is characterized with gas-transporting, rheological, cytoprotective, immune-modulating properties and which preserves them within prolonged time periods under the room temperature.

Materials and methods. Emulgators of new generation (know-how) were used to develop the new generation of perfluorocarbons. Experiments on acute toxicity of surface agents and emulsion were carried out on 80 white outbred rats. Tissue samples were fixated in neutral 10% formalin and imbedded in paraffin. Histological cuts were stained with hematoxyline-eosine and investigated under light microscopy (Olimpus BX 41).

Results. Perfuorocarbon emulsions of new generation were stable within 12 months of storage under the room temperature. Histological examination revealed no cell or tissue damages or circulation disturbances. The properties of emulsions were as follows: absence of toxicity, sterility, particle size 100±20 nm, viscosity 1,33 centipoise, pH 7,3, emulgator content 1-4%, perfluorocarbon content 10 vol%, duration of storage of up to one year.

Conclusions. The new generation of perfluorocarbon emulsion is non-toxic in therapeutic dosages, stable under the room temperature and may present a background for the development of new drugs. The developed perfluorocarbon emulsions are protected with the patent.

Key words: perfluorocarbon emulsions.

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A RARE CLINICAL CASE OF POSTENCEPHALITIC CERVICAL DYSTONIA

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Introduction. According to the specialist literature, cervical dystonia is one of the rare versions of encephalitis of viral etiology as a result of lesions in oral sections of brain

stem and subcortical structures.

The objective was to describe a clinical case of the secondary cervical dystonia as a possible outcome of the acute meningoencephalitis.

Materials and methods. We have carried out a retrospective analysis of the medical history of the patient L.P.D., 58 years of age, who was a patient at the neurological department of the State Budget Educational Institution for Higher Professional Education "Siberian State Medical University", Ministry of Healthcare of the Russian Federation in February of 2012.

Results. Based on the medical history analysis we found out that in autumn 2011 the patient had acute viral meningoencephalitis of medium severity. Already during the acute period of the disease the patient exhibited spontaneous uncontrolled throwing back of her head. There was also a gait and movement coordination disorder, she could not move on her own due to the marked retrocollis.

When she was hospitalised, we noticed that the patient walks with great caution, holding on to the surrounding objects due to the marked condition of drawing her head back. The palpation showed a marked muscle tension of the back surface of the neck. The Romberg test showed a moderate shaking from side to side. We also determined postural hand tremor, which was more significant on the right, and resting tremor in the right hand. In regard to cranial nerves, there was a steady small swinging nystagmus with a rotary component while looking to all sides. The nystagmus grew when the postural pose was changed. There was diplopia during extreme abductions of the eyeball. There was also a rough lip reflex and Marinescu-Radovici reflex on both sides. The limb reflexes are revived and even. The limb tonus is increased according to the plastic type. During examination the patients startled recurrently as a reaction to any stimulation. When changing the postural pose, there was hyperaemia of face. The patient was diagnosed with the consequences of viral meningoencephalitis with the predominant brain stem and subcortical structure lesion in the form of nervus oculomotorius lesions, pseudobulbar syndrome, high-grade secondary cervical dystonia (retrocollis), subcompensation stage.

During the basic (vascular, neuroprotective and metabolic) treatment the patient received a botulinum toxin treatment with Xeomin with the dose of 200 units in the neck muscles. Before being released out of the hospital, the patient's condition improved considerably. There was a regress of the neurological symptomatology and a decrease in the degree of retrocollis. The patient receives botulinum toxin (Disport or Xeomin) up to this day on a regular basis, once in 6months.

Conclusion. We have presented a rare clinical case of postencephalitic cervical dystonia and offered an alternative treatment method of secondary cervical dystonia by means of regular administration of botulinum toxin of type A.

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OPTIMIZATION OF PREOPERATIVE PREPARATION IN YOUNG CHILDREN WITH ACUTE RENAL FAILURE

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Keywords: Acute renal failure, children, urolithiasis, endogenous intoxication.

Relevance. Acute renal failure (ARF) in children is multiple organ dysfunction observed with a frequency of 1.4 cases per 100 000 children.

It should also be noted that the importance in the development of acute renal failure in urological diseases in children has a degree of violation of the urodynamics of the upper urinary tract [1]. Exerting a direct effect on renal blood and lymph circulation, urodynamic disorders hasten the start of the terminal stage of ARF, especially in the secondary chronic pyelonephritis [2, 3].

Studies in recent years show that the anomalies of the upper urinary tract, not complicated by pyelonephritis, functional disorders of the kidney glomerular disorders begin with processes. The main pathogenetic factor in disorders of the kidney glomerular apparatus is a violation of urodynamics in these malformations with a subsequent increase hydrostatic pressure in the cavities of the kidney and ureter [4].

Urological patients arrive with significant disorders of the barrier function of the body, especially the kidney-liver device. Preparing the patient for anesthesia is an integral part of the overall preoperative preparation. Correct evaluation of the severity of the patient, the risk of anesthesia and surgery depends on the volume and nature of preoperative preparation.

The purpose of the study. Optimizing preoperative and intensive therapy in acute renal failure in children.

Materials and methods. In the pediatric intensive care unit NMC RT for the period 2008-2012 examined and conducted surveillance in 43 patients aged 3y.o. with ARF and severe manifestations of uremia and hyperhydration.

Distribution of the patients by age

No.	Age	The number of patients	%
1	0-1	11	25,6
2	1-2	19	44,2
3	2-3	13	30,2
	total	43	100

Character of post-operative preparation depended on the time of arrival of the child to the hospital, the presence of complications or comorbidities.

The children were admitted to hospital with acute renal failure on the background of the ICD, which is diagnosed based on clinical and laboratory data and additional imaging studies. All patients on admission were in need of pre-operative preparation for a period of 14 hours to 14 days. In 18 (41.9%) of the 43 patients had adverse somatic background. The

most frequently observed anemia, toxic hepatitis and malnutrition II-III degree. 19 (44.2%) of 43 patients in need of elective surgery. These patients underwent examination, including general and biochemical blood tests, urinalysis, stool, ultrasound, X-ray contrast study.

The purpose of preoperative preparation included the elimination of existing moderate hemodynamic and metabolic disorders, desensitizing and restorative treatment.

Optimal and principled method to reduce infectious complications in the pre- and postoperative period was the appointment of a parenteral antibiotics, and oral (to decontaminate and reduce bacteremia).

During the preoperative children with ICD, going for planned surgery, we attach great importance to improve the function of the liver, its antitoxic function of the excretory function of the kidneys - two physiological processes that complement each other. The liver breaks down toxins, and the kidneys produce products of this destruction and partially separate. For the reduction and elimination of functional renal hepatic failure underwent complex intensive therapy, including metabolic disorders, which has a protective effect against liver cells. In violation of the renal blood flow were treated with vasodilators, in combination with diuretics aminophylline, papaverine, no-spa, Lasix, mannitol, 20% glucose with insulin. To reduce endogenous intoxication against invasive therapy - enterosorbit.

In 23 (74.1%) of 31 patients had metabolic acidosis. Of metabolic acidosis in patients with urological associated with dehydration, fever, intoxication, and all kinds of tubular failure. During correction of metabolic acidosis, we preoperatively assign 4% sodium bicarbonate at the rate of 4-6 mg / kg body weight to increase the reserve of the body.

Acute renal failure expressed uremic intoxication, uremic breath. Private shallow breathing leads to hypocapnia, where PCO2 is less than 3 mm Hg and hypoxemia - PO2 less than 80 mm Hg. To remedy these violations use of conventional analgesics was not enough. In this case we use hydroxybutyrate sodium 50-100 mg / kg of the patient. This type of therapy helps normalize analgesia respiratory function and stabilizes the hemodynamic parameter.

Output. Thus, through an adequate preoperative preparation, patients successfully underwent a serious surgery (nefrolitostomiya, nephrostomy, epitsistotomiya etc.) and discharged to their homes in good condition, from 43 patients died 7 (16.3%).

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MORPHOLOGICAL JUSTIFICATION OF ENTEROSORPTION IN THE TREATMENT OF SEVERE THERMAL INJURY

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The objective was to study the condition of intestine during the acute period of the burn disease.

Materials and methods. Experiments with simulations of the thermal influence on the body were carried out on 30 white rats (Wistar group, weight 220±20 g). The rats were divided into two equal groups, the main and the control one. All the animals

received a full-fledged balanced feed, equal for all the experiment participants during the whole course of the experiment. The laboratory animals from the main group received an enterosorbent on the basis of the colloidal silicon dioxide in the dose of 0.15 g per 1 kilogramme of weight per day during all the experiment. The thermal injury was simulated by putting a preprepared segment of the back skin with the area of 20% into a tank with hot water for 30 seconds. The seizure of the parts of the small and large intestine for the purpose of a histological analysis was carried out by means of median laparotomy under the ether narcosis on the 7th, 10th and 14th day after the injury. The histological samples were coloured by haematoxylin and eosin.

Results of the experiment. On the 7th day of the experiment there was a larger infiltration by the cells of the leucocytal and macrophagal row in the mucous membrane of the small and large intestine in the main group. On the same day, in the control group there was oedema with dilatation and hyperaemia in the proper mucous plate of the small intestine. There were sludged erythrocytes in the capillaries. There was diffuse eosinophilia and excrescence of the connective tissue in the proper mucous plate, in the crypta tunicae mucosae. There were foci of perivascular protein sediment and oedema. In the muscular tunic there was also oedema and dissociation of smooth muscle fibres, especially around Meissner and Auerbach's plexuses. There was also an infiltration by the cells of the leucocytal and macrophagal row in the proper mucous plate of the large intestine. The orientation of the crypta tunicae mucosae was damaged. The submucous membrane was also oedematous and infiltrated by the cells of the leucocytal and macrophagal row. The muscular membranes were also oedematous and showed dissociation of smooth muscle fibres. The intermuscular space was enlarged due to the oedema; it often had a mesenchymal cell assembly; the vessels were dilated and plethoric. On day 10 after the burn injury there was a decrease in the oedema and restoration of the orientation in the connective tissue of the proper mucous plate in the main group. There was a smaller infiltration in both the proper mucous plate and intraepithelial space. There was a more intense colouring of apical poles of enterocytes in the small intestine. On day 10, in the control group there was still a stasis in minute vessels both in the mucous and submucous membranes. Furthermore, there were small haemorrhages in the mucous membrane of the small intestine. There was vacuolization in the form of the irregularly coloured cytoplasm in the enterocytes. On day 14, there was oedema of the interstitial tissue in only some villi and crypts and an even smaller infiltration by the cells of the leucocytal and macrophagal row in the main group. In the control group, the mucous membrane of the small and large intestine only had a slight decrease of infiltration, oedema and plethora. The submucous membrane remained oedematous and infiltrated by mesenchymal cells.

Conclusion. This way, the results of the conducted experiment show that the application of the enterosorbent on the basis of the colloidal silicon dioxide during treatment of experimental animals after a thermal injury leads to the decrease in the small and large intestine injury in the acute period of the burn disease.

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THE USE OF LOW-TEMPERATURE ARGON PLASMA DURING HERNIOTOMY OF TRAPPED POSTOPERATIVE HERNIAS WITH THE USE OF MESH ENDOPROSTHESES

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According to the statistics of both domestic and foreign authors, after herniotomies performed in regard to the trapped postoperative hernias, there is a relapse of the postoperative hernia in 68.4% cases. One of the main reasons for the relapse development of the postoperative hernia of the front abdominal wall is a formation pathology of the connective tissue in the area of the postoperative scar, connected to the activity of various etiological factors. The main etiological factors at present remain pyoinflammatory complications in the postoperative period. A defocused low-temperature argon stream is widely used as a preventive method of pyoinflammatory complications in various areas of medicine. Based on the physical and biological properties of the low-temperature plasma, we have suggested and developed a method of low-temperature argon plasma stream in urgent surgery of trapped postoperative ventral hernias of the front abdominal wall. We have received a patent for an invention RU 2449820 C1 "Prevention method of pyoinflammatory wound complications during alloplasty of trapped postoperative ventral hernias". The method suggested by us has been successfully applied in the treatment of 50 patients with trapped postoperative ventral hernias (group 1). In order to assess the effectiveness of the results, we have chosen 50 patients (group 2) out of 217 patients with trapped postoperative ventral hernias with the same significant characteristics as the patients of group 1, whose treatment did not include a defocused low-temperature argon plasma stream. Local pyoinflammatory complications of the first group included an infected postoperative seroma in case of 1 patient (2%), infiltrates of the postoperative wound in 2 patients (4%); there was no suppuration in group 1. Local pyoinflammatory complications of the second group included an infected postoperative seroma in case of 3 patients (6%) and infiltrates of the postoperative wound in 6 patients (12%). The use of this method of intraoperative prevention of pyoinflammatory postoperative wound complications made it possible to reduce the number of days the patient had to spend in the hospital. This can be explained both due to the reduction in the number of local pyoinflammatory postoperative wound complications and a much faster pain syndrome relief in the projection of the postoperative wound, early drain removal in the postoperative wound in comparison to the patients of group 2. On average, a patient's stay in the hospital lasted 11.9 days in group 1 and 15.3 days in group 2. Conclusions: 1. The use of the defocused low-temperature argon plasma stream during herniotomy of trapped postoperative hernias with the use of mesh endoprostheses clearly reduces the number of

local postoperative pyoinflammatory wound complications. 2. The use of our method of intraoperative prevention of pyoinflammatory postoperative wound complications makes it possible to achieve a better socio-economical effect due to the reduction of the total duration of patients' incapacity for work.

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IMPORTANCE OF ULTRASONOGRAPHIC MUSCLE EXAMINATIONS WITH PELVIC FLOOR LIFTING IN ORDER TO DETECT PELVIC PAIN MECHANISMS IN MEN

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Pelvic pain manifestations in men have a negative influence on the quality of life and damage both physical and psychological health.

The objective of our scientific research was to study the structure and hemodynamic processes in the musculus levator ani. The idea was that pain was possible due to chronic subacute pathological processes, injuries, neurological disorders causing stagnation in the vascular system of the small pelvis or arteriospasms of muscles lifting the pelvic floor.

In order to determine the etiological starting mechanism, we have suggested a methodology, which was patented in 2012 (patent MPK _61_8/00), to diagnose the pain syndrome. Musculi levator ani were examined on the ultrasound scanner 2102 Hawk B-K Medical with the transrectal transducer with 7.8 MHz in B-mode by using the Doppler effect and duplex scanning. The scanning surface of the musculi levator is transverse; the long axis of the transducer is situated perpendicular to the cephalocaudal axis of the patient. The muscles are shaped as strip-bands, widening upwards like a fan. When retracting the anus inwards or exerting, the muscles contract and thicken, which helps to locate them. The structure, echogenicity, speed properties of the muscles were studied. The duplex scanning detected the following parameters: Vps, cm/s — peak systolic speed, Ved, cm/s — final diastolic speed, Ri — resistance index, Pi — pulse index. The main importance of the indexes is in the quantitative assessment of the peripheral vascular resistance.

In order to determine standard parameters, we have examined a group of somatically healthy patients, 23 persons in the age of 22.1±3.1. The musculi levator ani are in B-mode with sharp even contours, homogeneous in their echostructure, isoechogenic, Vps, cm/s-12.15±0.67;Ved, cm/s-4.20±0.38; Ri-0.73±0.02; Pi-1.79±0.12.

We have studied 94 patients with a chronic pelvic pain syndrome in the age of 39.1±5.3. The medical and life history were different, but all patients complained of the pain in the lower abdomen, inguinal or perineum regions, often with irradiation in the scrotum.

The patients were examined prior and after the medicamentous treatment, vibro-thermo-magnet influence or laser treatment. During the first examination the values of blood flow

were Vps, cm/s-14.41±1.09; Ved, cm/s-3.84±0.33; Ri-0.71±0.02; Pi-1.92±0.18. After the treatment the corresponding values were Vps, cm/s-12.10±0.78; Ved, cm/s-3.97±0.35; Ri-0.67±0.02; Pi-1.79±0.13. There were no rough muscle changes. The values of blood flow were objectively recorded during the transrectal ultrasound examination of musculi levator ani. A reduction of the peak systolic speed in the case of the chronic pelvic pain syndrome is considered to be of positive dynamics. During the vessel diameter reduction, taking place during a spasm, muscle extension and pelvic stagnation, the blood flow speed, due to the laws of physics, increases directly proportionally.

This way, the advantages of the ultrasound transrectal examination method of musculi levator ani are obvious: painlessness, practical absence of contraindications, immediate proximity towards the anatomic structure, accuracy of dynamic parameters and an uncomplicated execution of the examination by the doctor of any length of service with the help of the ultrasound scanner.

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INTRODUCTION OF MODERN MEDICAL TECHNOLOGIES OF RENAL BIOPSY IN A MONOTOWN

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Renal biopsy is an intravital examination of the kidney tissue by means of percutaneous puncture with the help of ultrasound. Wide application of punch biopsy in the clinical practice is explained by the fact that the majority of modern classifications of kidney diseases, particularly glomerulonephritis, are based on the morphological principle.

Main clinical indicators for biopsy are acute renal failure, nephrotic syndrome, urinary syndrome, kidney lesions during systemic diseases.

Kidney diseases as well as diseases of other inner organs are characterised by a certain pattern, which means that the list of damaging reasons and mechanisms is much wider than the scope of visible outside disease manifestations. Clinical symptoms of various kidney diseases have a nonspecific character and do not let the doctor to precisely determine the etiology and pathogenesis of the disease in each case. Renal biopsy is the only irreplaceable diagnostic method which helps in a situation like this.

Renal punch biopsy is a diagnostic method recognized worldwide. Unfortunately, in Russia renal biopsy works its way with difficulty and is only used in single nephrology centres.

The role of the organiser, who sets a task and creates condition for its solution, is crucial for the development of any direction of the healthcare. The "general designer" of the renal biopsy system in our region is the head physician of the State Budget Institution of Healthcare of the Samara Region "Togliatti City Clinical Hospital No. 1" V.A. Groysmann, who provided for our education in central institutions, helped to

acquire necessary equipment and create conditions in order to perform this diagnostic operation.

In our hospital, renal biopsy is performed by a team of specialists.

The first manipulation was performed in 1999. There have been 1005 renal biopsy cases up to this day.

Modern clinical nephrology is based on three columns: renal biopsy, dialysis and kidney transplantation. Renal biopsy enables precise diagnostics and rational therapy in cases of nephrology patients with complications, thus preventing or postponing a loss of kidney function.

The importance of renal biopsy will only increase, because the data received with its help will not only be studied by means of different types of microscopy but also by means of molecular biology, which will significantly increase the value of this diagnostic intervention.

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PHYSIOLOGICAL REGENERATION OF THE CHOROID

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[Introduction] More than 90% of cases of blindness from AMD is associated with anomalous, abnormal growth of newly formed vessels, which, originating from layer choroidal capillary vessels vascular membrane defects grow through Bruch's membrane beneath the retinal pigment epithelium and / or the neuronal epithelium. Analysis of the available literature on the structure of the vision showed the virtual absence of morphological data on the background of molecular genetic studies eyes. All this determines the seriousness of the executed research.

The aim of our study is to examine patterns of development of human choroid.

Objectives of the study is to establish the algorithm processes of tab, development and functional maturation of choroid human eye, the identification of the mechanisms of its development and monitoring of melanogenesis in structures of choroid.

[Materials and Methods] It was studied 171 eyes of human embryos and fetuses. Used classical histological staining methods with Victoria blue and silver impregnation and immuno histochemical techniques to identify NADFH-diaphorase, CD4, CD8, CD 68, CD163, CD 204, TUNEL-method to identify apoptorising cells, Ki67 to identify

proliferative activity, Iron hematoxilin. Material analysis was performed using a microscope Olympus - Bx51 and CD25 Digital Camera with proprietary software.

[Results] We found that the source of development the choroid eye is not only neuro mesenchyme surrounding the optic cup, but and neuroglia of the inner wall of the optic cup. Angiogenesis in the choroid eye are characterized as other structures such morphological picture of the blood vessels and fit into the framework of the classical concept of the development of the vascular pool.

[Discussion] Participation of progenitor neuro glial cells - migrants from the inner wall of the optic cup in the development of the structures of transparent media of the human eye, has led to a change in the structure of concepts, not only the crystalline lens, vitreous body, cornea, but the concept of the development of Bruch's membrane, which many authors believe that is earlier than choroid, developing structure. In our studies, Bruch's membrane is formed before the other structures of choroid, as an obstacle to the emergence of choroidal vessels in the photoreceptor layer of the retina.

The presence in the growth of capillaries of macrophages phenotyping as CD68, are concluded that the main supplier of vascular endothelial growth factor in the choroid manage from macrophages. It is concluded that the system lesions derived neuroglia for AMD for which neovascularization is secondary and primary to admit defeat of Bruch's membrane, which is normally is a barrier that protects photoreceptor layer of the retina from sprouting capillaries.

Jeannette
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DIE ROLLE DER ERNÄHRUNGSMEDIZIN UND DIÄTTHERAPIE IN DER KLINISCHEN MEDIZIN UND PRAXIS

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In den letzten Jahren und auch aktuell sind Statistiken zur Prävalenz und Inzidenz von sogenannten Volkskrankheiten wie beispielsweise die Adipositas, art. Hypertonie und der Diabetes sowie deren Folgeerkrankungen, aber auch klinisch relevanten Komplikationen wie die Mangelernährung mehr als Besorgnis erregend. Die weltgrößte Gesundheitsstudie „Global Burden of Disease Study" 2010 gibt einen Eindruck über die wachsenden Herausforderungen, denen sich das Gesundheitssystem und die Volkswirtschaft weltweit stellen müssen. Die drei häufigsten Risikofaktoren für die weltweit vorkommenden Krankheitsfälle sind die Hypertonie, Rauchen und chron. Alkoholkonsum. 2010 starben weltweit 9,4 Mio. Menschen an den Folgen von Bluthochdruck, 12,9 Mio. Menschen an den Folgen ischämischer Herzerkrankungen und Schlaganfälle, 6,3 Mio. Menschen an den Folgen der Nicotinsucht, 1,3 Mio. Menschen an den Folgen des Diabetes mellitus und mehr als 3 Mio. Todesfälle waren auf einen zu hohen BMI zurückzuführen. Bis zum Tod gibt es aber Jahre bis Jahrzehnte lange Krankheits- und Behandlungszeiten, Klinikaufenthalte, Kosten und menschliches Leid. Laut Schätzungen der GBDS 2010 werden kurz nach

dem Jahr 2015 mehr über 65- jährige als Kinder unter 5 Jahren auf der Welt leben. Paradox erscheinen dazu die steigende Lebenserwartung im Kontext zur steigenden Erkrankungsrate, längeren Behandlungsdauer und zunehmenden Behandlungsintensität incl. Komplikationszuwachs. Das Krankheits-Eintrittsalter sinkt und die finanziellen Ressourcen sind weitestgehend erschöpft. Allseits steigt das Bemühen, kosteneffizient den zunehmenden medizinischen Herausforderungen zu begegnen. Bisherige Maßnahmen präventiv und therapeutisch scheinen nicht ausreichend und nachhaltig genug, was allein im Bemühen die Adipositas zu stoppen mehrfach belegt werden musste. Zahlen aus Deutschland lassen leider auch keinen Optimismus zu.

6 Mio. der erwachsenen Menschen haben einen bekannten Diabetes mellitus, davon haben 90% einen DT2. Schätzungen nach liegt die Dunkelziffer (unerkannte Diabetes-Fälle) bei 7-8 Mio. Betroffenen. Kosten von 18 Mrd. €uro pro Jahr bzw.2600 €/Person/Jahr belasten das deutsche Gesundheitssystem, somit ist der Diabetes die teuerste chron. Erkrankung. Das Deutsche Diabeteszentrum Düsseldorf prognostiziert bis zum Jahr 2030 einen Diabetes T2 Zuwachs, nur in der Altersgruppe 55-74 Jahre, von 1,5 Mio. Neuerkrankungen. Die Daten der NVS II (Max Rubner Institut 2008) zeigen, dass 58,2 % der Gesamtbevölkerung übergewichtig sind, davon 20,8 % adipös. 2011 starben in Deutschland 40,2 % der Todesfälle an Herz-Kreislauferkrankungen. In Deutschland findet sich die höchste Hypertonie-Prävalenz in Europa und bei der Schlaganfall-Mortalität steht Deutschland mit an Europas Spitze. 2008 verursachte die Behandlung der Hypertonie in Deutschland Kosten von 9 Milliarden Euro (StBa 2010). 43,9 % der Frauen und 51,4 % der Männer haben eine bekannte und behandelte Hypertonie (RKI 2008). Im Gegensatz dazu ist in deutschen Kliniken jeder 4. Patient mangelernährt . Vor diesem Hintergrund muss sich jeder Leistungserbringer auf diesem Sektor fragen, ob dem noch beizukommen ist und wenn ja, wer hat noch Ressourcen, und sind diese bislang ausreichend erkannt und genutzt. Alle aufgeführten Erkrankungen, und die Liste lässt sich deutlich erweitern, sind ernährungsmedizinisch sowohl präventiv vor allem auch diättherapeutisch maßgeblich und positiv zu beeinflussen. Diätassistenten aber auch Oecotophologen und Ernährungswissenschaftler mit anerkannten Weiterbildungen sind prädestinierte, anerkannte und qualifizierte Leistungserbringer. Wer sonst ist in der Lage und hat das nötige Fachwissen, eine komplexe Diättherapie von der Aufnahme bis zu Entlassung eines Patienten durchzuführen? Der Umfang erstreckt sich vom Screening, Ernährungs-Assessment, Ernährungsdiagnose über die Intervention, Evaluation, Überwachung, Codierung, Dokumentation und Beratung. Die Implementierung anerkannter und qualifizierter Leistungserbringer auf diesem Sektor sichert und verbessert nicht nur das Patientenwohl und reduziert das Risikoprofil und Komplikationsraten, sondern erwirtschaftet darüber hinaus Gewinn und Kostenersparnis. Der totale Netto-Nutzen der Diättherapie durch Diätassistenten beläuft sich auf 0,4 – 1,9 Milliarden Euro. Bei rechtzeitiger Intervention krankheitsbedingter Mangelernährung bereits bei Patienten mit hohem Risikoprofil können bis zu 2,5 Krankenhaustage bzw. zwischen

200 – 1500 € pro Patient eingespart werden. Die Leitlinien der American Dietetic Assosiation, noch sehr fragmentarisch in Deutschen Leitlinien, der Algorithmus von Weimann et al. , " Supportiver Einsatz von Trinknahrung von erwachsenen Patienten" sind richtungsweisend, die konsequente Nutzung der Ernährungsmedizin und Diättherapie ist dringend, flächendeckend und nachhaltig notwendig.

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INTERPERSONAL RELATIONS IN THE FAMILY AS A PREDICTOR OF RISK OF FORMATION OF CHILDREN'S DISEASES

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The analysis of practice of family upbringing of children of advanced age shows that the reasons of many failures of parents in upbringing are connected with incorrect definition of the leading direction in a child development, insufficient accounting of his age features. It is known that children most emotionally and directly show their relation to reality in drawings.

Therefore, looking at the person drawn and analyzing a situation in which he or she was drawn, it is possible to analyze the social environment in which the child is developing, experience of his relationship with adults. 70 children at the age of 11 - 17 years studying in grammar school No. 92 of Karaganda and being brought up in incomplete families (among them 36 boys and 34 girls) were surveyed for this purpose. For identification of influences of the interpersonal relations in a family on health of children psychological survey methods were used: unformalized interview with children, parents; scale of attachment to family members; scale of jealousy and envy to the other children in a family; scale of isolation of the child in a family; projective drawing techniques; tests, allowing to define anxiety level of children. Group of comparison consisted of 30 children of similar age being brought up in full families (among them 13 boys and 17 girls).

For all studied children family diagnostics with use of "My Family" tests, kinetic drawing of a family was carried out. Interpretation of the listed drawings was based on such parameters as sequence of performance of a task and arrangement of family members, drawing plot, size of figures of family members, size of space between family members, location of the child in drawing, details of face, other parts of body, clothes, non-compliance of drawn families to the real one, absence of real and introduction of nonexistent family members, animals, color scale.

The obtained data indicate high percent of the conflict family relations in which surveyed children were involved. Most often, according to our data, the conflict relations developed with fathers (51,1%, $p \leq 0,05$) with the increased attachment to mother. In 12,2% there was proneness to conflict towards both parents ($p \leq 0,05$). The analysis of data revealed the violations in relationship between the surveyed child and other children in a

family. In 37,7% of children in the interpersonal relations with younger children jealousy and envy elements ($p \leq 0,05$) were registered. In 8,8% of children, the expressed emotional violations in the form of aggression in the relations with other children ($p \leq 0,05$) were noted. By "forgetting" to draw them the child tries "to win" missing love and attention of parents on a sheet of paper. Aggression is also found in the relations with father (12,2%, $p \leq 0,05$), and less often with mother (6,6%, $p \leq 0,05$). Among the surveyed children the prevalence of the expressed emotional rejection of the father is probably caused by alcohol abuse, passive or excessively active position in upbringing. The higher level of anxiety, inferiority complex in a family situation was noted respectively in 81,2% and 76,6% ($p \leq 0,05$), which indirectly testifies to the unfavorable mental climate in a family. The negative experiences of the child connected with a family, dissatisfaction with family relationship in the form of emotional violations were reflected in the relation to a task. Refusal of drawing of people, postponing of performance of a task in time was recorded in 7,7% ($p \leq 0,05$).

Thus, it should be noted that the pathogenic role of a family in formation of violation of children's state of health is probably caused by the broken interpersonal relations and the wrong type of upbringing. Therefore, the problem of a family remains actual, demanding further study for the purpose of correction and prevention of formation of emotional deviations in the relations between family members.

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NEUE REHATECHNIK

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In der heutigen Zeit eine größere Aktualität gewinnt die Verwendung der Körperübungen die gesteigerte Intensität für die Zunahme die Wirksamkeit den Renovierungsbehandlung. Das ist eingebettetes in den Letzten Jahren in den Schule, den Lyzeen, den Colleges, den Internatsschulen, den Hochschulen, den Krankenhausen, den prophylaktischen Betriebssanatorien der Ukraine (eingebettet in der Jewpatorija vorschulischen Lehranstalt Nr.29 «Cheburaschka», Jewpatorija des kardiologisches Internats und Jewpatorija Institut der Sozialwissenschaften) und die gerichtete für dieses Ziele eine Reihe die Trainingsgeräten und die Methodiken ihrer Anwendungen für das Prophylaxe und die Rehabilitation der Kinder, die Jugendliche, dem Nachwuchs und die Erwachsene. Diese Entwicklungen haben durch Urheberrechte und Patente durch das Zeugnis der UdSSR, Ukraine und Russland geschützt.

Die Steuerbegriffe: die Rudertrainingsgeräten, die heilkräftige Rudern, das Heilschwimmen.

Untersuchungsgang: Auf Grund der Angaben des Ministeriums für Bildung und Wissenschaft der Ukraine, es zeigt sich bei 60% der Schüler und 69% der Studenten in

der Ukraine verschiedene Abweichungen im Gesundheitszustand. Unter ihnen sind die überwiegende Mehrheit oft krank akute Respirationskrankheit (ARI). Wir haben eine Methode zur Rehabilitation auf der Grundlage der zuvor patentierten Innovationen (AC No. 685287) vorgeschlagen (Patent der Russischen Föderation No. 2085225), seine Hauptstoßrichtung ausmachen 3 Rehabilitation mit Bettsruderstrainingsgerät (BRT) und Ruderstrainingsgerät (RT) Akademiemitglied V.G. Pashchenko Patent der Ukraine No. 63845 vom 28.10.2011.

Die Perioden	Die Methodik der Erfüllung
Die Erste	Statt für 11 Tage. Umfasst die Durchführung 2040 KrahlsBewegungen für Gesamtlast 10.200 kgm. Insgesamt benötigte Zeit, 102 Minuten
Die Zweite	Statt für 22 Tage. Umfasst die Durchführung 4180 KrahlsBewegungen Gesamtlast von 25.080 kgf. Insgesamt benötigte Zeit von 204 Minuten.
Die Dritte	Statt für 22 Tage. Umfasst die Durchführung 4180 KrahlsBewegungen. Die Gesamtlast von 33.440 kgf. Insgesamt benötigte Zeit von 204 Minuten.

Ausbildung erfolgt entweder in einem Sauerstoffzelt durchgeführt oder in speziell ausgerüsteten Räumen (NGT), die Büros Rehabilitation (GT) mit einer höheren Konzentration von Sauerstoff in der Luft mit negativen Ionen unter Verwendung Luftionisatoren angereichert. Unter Beobachtung waren 256 Kinder mit häufigen Episoden von akuten respiratorischen Infektionen und mit restlichen bronchopulmonalen Erkrankung. Nach 3-Monats-Betrachtung hat festgestellt, dass die Dosierung Rudern Klassen nicht nur erheblich zur Verbesserung der allgemeinen Situation der Kinder, normalisieren den Schlaf und den Appetit, sondern führen auch zum Verschwinden die trockene Rasselgeräusche in der Lunge, erhöht die körperliche Leistungsfähigkeit von mehr als 35 bis 36,2%, steigern die maximale Lungenventilation, verbessern die bronchiale Durchgängigkeit, reduzieren die Atemfrequenz und erhöhen die Tiefe der Atmung, MN02, geringere die Reaktivität der Atmung und Kreislauf bei Ausübung (Test mit dem dosierungen Rudern), dass zeigt die Ökonomisierung der Atemfunktion und die Durchblutung in der Regel, die Herausbildung von neuen Ebenen der Anpassung durch Bildung sympathoadrenalen Inhibitoreffekt Bewältigungsstrategien.

Schlussfolgerungen:

- die Ergebnisse von Studien zeigen die Wirksamkeit der Verwendung von Trainingsgeräten auf dem Prinzip des Wassersports für die Rehabilitation der Bevölkerung entwickelt
- die Methoden der Rehabilitation von verschiedenen Altersgruppen der Bevölkerung der Ukraine, von einer Gruppe von Autoren auf der Grundlage von den Zeugnisse Victor Gavrilovic Pashchenko verwendet, beweisen die Wichtigkeit ihrer Umsetzung in der physischen Rehabilitation.

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ORGANISATION FEATURES OF THE TOXICOLOGICAL SERVICE IN TOGLIATTI, SAMARA REGION

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The town of Togliatti in the Samara region is one of the most industrially developed towns in Russia. There are more than 9 chemically dangerous industries on its territory with more than 120 thousand tonnes of highly toxic substances like ammonia, chlorine, dichloroethane etc. There is an ammonia line of 280 km on the territory of the region; hundreds of tonnes of toxic substances are transported by the railway, where accidents can happen, especially in classification yards and on spur tracks. All these factors have called for the necessity to organise toxicological aid to the population. In this regard, in 1998 a toxicological centre (with 25 beds) with resuscitation and an intensive therapy room (with 6 beds) was created on the base of the City Clinical Hospital #1 under the direction of head physician V.A. Groysmann. The hospital is fully computerized. A uniform computer system "Kais Vilanta" is widely used in the work of the department, which makes it possible to efficiently solve problems of organisation, treatment and diagnostics origin.

The main tasks of the toxicological service of Togliatti are organisation and execution of preventive measures and treatment of acute poisons of chemical etiology, information and advisory service for the territorial net of medioprophylactic institutions, other interested organisation and population. Furthermore, the centre deals with organisational and methodical administration of medioprophylactic institutions in regard to administration of toxicological aid in cases of acute chemical pathology as well as assessment and quality control of aid administration to patients with acute poisoning.

There are 3 specialised toxicological teams of constant readiness and 20 first-aid team in town. A specialized toxicological team consists of a toxicologist, resuscitation specialist and 3 nurses of the toxicological department. Teams have personal protection equipment and a set of medicine for aid administration for 100 injured.

Toxicological patients are hospitalised 24 hours a day from all districts of the town and the region. Alcohol and spirit poisoning (51-55%) take up the first place in the structure of poisons, followed by psychotropic drug poisoning. The third place is taken by poisoning by liquids such as liquid ammonia, sodium hydroxide etc., the unquestionable leader among them being "Russian poison", acetic acid (8-9%). The mortality in the centre over the last 5 years is lower than that in Russia in general.

The head federal institution in the development of the specialized toxicological aid and organisation and methodological centre is the Russian Federal State Institution "Theoretical and practical centre of the Federal Medicobiological Agency", which renders advisory aid and assists in the training and methodological activity.

In order to improve the quality of the toxicological aid administration in our centre, we implement a programme complex "Computer data-retrieval toxicological system "Poison".

Specialists from our centre take part in working sessions, scientific conferences and toxicology conventions organised at the federal level by Clinical Toxicology Chair of Russian Medical Academy for Postgraduate Education and Research Institute named after Sklifosovski in Moscow and receive advanced training in Toxicology under the direction of the academician of the Russian Medical Academy for Postgraduate Education, head toxicologist of Russia E.A. Luzhnikov.

The main priority of the Togliatti toxicological centre is the improvement of the quality of medical aid administration to population in cases of acute chemical poisoning.

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GIANT PEPTIC ULCER HAEMORRHAGE: EPIDEMIOLOGY, TREATMENT AND OUTCOME IN TARTU UNIVERSITY HOSPITAL, ESTONIA

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Background: It is generally known that patients with giant peptic ulcer haemorrhage (GPUH) are at high risk for poor treatment outcome. The aim of the present study was to analyse epidemiology, treatment and outcome in GPUH during a longer period.

Patients and methods: We analysed the data of 953 patients with 1053 cases (haemorrhage episodes) treated for peptic ulcer haemorrhage during 2003-2012. As a rule, the source and intensity of haemorrhage was assessed endoscopically according to the Forrest scale I – III (high risk stigmata Forrest Ia – IIb). Ulcer haemorrhage was classified as gastric ulcer haemorrhage (GUH) and duodenal ulcer haemorrhage (DUH): prepyloric, pyloric and duodenal bulb ulcers.

Of the 1053 cases 247 (23%) were GPUH (diameter ≥2 cm) group I, and the remaining 806 cases were peptic ulcer haemorrhages with standard size (SPUH) (diameter <2cm) which formed the control group (group II).

To stop the haemorrhage injection methods of endoscopic treatment were commonly used: a combined method of adrenalin with ethanol, adrenalin alone or ethanol alone. Information about the drug use potentially associated with poor outcome of haemorrhage was obtained from medical records.

Results: In group I, GUH cases occurred significantly more frequently compared to group II, 50% (124/247) vs 32% (262/806), respectively, as did high risk stigmata, 78% (193/247) vs 52% (421/806), and the drug use potentially promoting haemorrhage, 65% (161/247) vs 58% (467/806). Endoscopic haemostasis was used significantly more frequently in group I than in group II, 68% vs 51%, as were used repeated haemostasis

procedures, 17% vs 7%, and blood transfusions, 88% vs 75% of the cases.

In group I, 57 (24.6%) of the 232 patients were operated: 14 (12%) of the 115 GUH patients and 43 (36.7%) of the 117 DUH patients, with 1 and 3 death cases, respectively. In group II, 10 patients (1.4%) were operated: 4 (1.7%) of the 238 GUH patients and 6 (1.2%) of the 483 DUH patients. Altogether 14 patients (1.5%) of the 953 died: in group I, 9 (3.9%) of the 232 and in group II, 5 (0.7%) of the 721 patients.

Conclusion: Giant ulcer haemorrhages, compared to standard size ulcer haemorrhages, occur more frequently in the stomach than in the duodenum; the haemorrhage is more intensive and requires more often endoscopic haemostasis, including repeated procedures, as well as blood transfusions and operative treatment. In duodenal giant ulcer haemorrhage operative treatment is required three times as frequently as in gastric giant ulcer haemorrhage. Endoscopic haemostasis and operative treatment allow to reduce lethality from giant ulcer haemorrhages up to 3.9%.

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ERYTHROCYTE MEMBRANE STRUCTURE IN PREMATURE NEWBORNS WITH RESPIRATORY DISTRESS SYNDROME

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Objective. The purpose of the research is to study the morphological structure of red blood cells (with method of atomic force microscopy (AFM)) in premature newborns with respiratory dist-ress syndrome (RDSN).

Materials and methods. The study included 15 premature newborns with gestational age 33,8 ± 1,5 weeks, birth weight 2081,3±302,2 g. 53,3% of newborns needed in artificial lung ventilation (ALV), because of development of RDSN in other children mild disease course was observed.

Comparison group of 14 term newborns with favorable course of pregnancy and normal term childbirth was selected. The mean of gestational age of children was 39,4±0,5 weeks, birth weight - 3131,7±588,8 g, Apgar score in the 1st minute of life - 8 ± 0,4 points.

We investigated the residual umbilical cord blood, central venous in 7 hours after the birth and venous blood of newborns of the 7th day of life. Monolayer of erythrocytes with the use of centrifuge «Diff Spin 2" (USA) was prepared for further processing in the field of AFM. Images of red blood cells were obtained using an atomic force microscope «NTEGRA prima» (Russia) in the semicontact mode. Statistical data analysis was

proceeded using a standard program Origin 6.1. Differences considered significant at a level of statistical significance of p <0,01.

Results and discussion. In the study it was found that, in the smear of residual umbilical cord blood of term newborns there are 85% of planocytes and 15% of transformed erythrocytes: 3% of which are stomatocytes, 3% - echinocytes, and 9% - other abnormal cells.

Discocytes and planocytes constitute 41,5% of the total number of red blood cells in the smear of residual umbilical cord blood of premature newborns. The remaining 58,5% of the red blood cells are abnormal cells that is 5,3 times higher than in term newborns (p <0,01). The following abnormal cells present in the smear of residual umbilical cord blood: echinocytes with deep com-pressed fragment; stomatocytes with two or more cavities, red blood cells which have the form of "shell" and destructed cells. Utero red blood cells of newborns exposed to a number of adver-se factors: gestosis, hemorrhage, and multiple pregnancy, including through in vitro fertilization. With such a pregnancy there are no physiological conditions for antenatal erythropoiesis, the deformation of the membrane and the formation of abnormal red blood cells occur.

In the smear of venous blood, obtained after 7 hours of birth, the morphological picture of ery-throcytes changes: the number of discocytes and planocytes decreased to 29,1%, and the number of stomatocytes and echinocytes increases. 40% of the cells are red blood cells trans-formed with significant damage of membrane, compressed fragments can constitute 50% or more of the total surface area of the erythrocyte membrane. Configuration of compression can have an unusual shape, such as "flowing stream."

At the end of the early neonatal period the number of stomatocytes authentically increases (p <0,01), planocytes do not tend to change, discocytes and echinocytes authentically decreases (p <0,01). In this case echinocytes with deep compressed fragment and stomatocytes with two or more cavities persist. Other damages of erythrocyte membrane appear: its destruction, fragmen-tary or on the perimeter compressions, and elongated red blood cells - "limon forms cells" ari-sing from abnormally low rigidity of the membrane of red blood cells.

Conclusion. Various changes in erythrocyte membrane identify at birth in premature new-borns with RDSN which is associated with adverse pregnancy, preterm childbirth. The disease is characterized by significant changes in erythrocyte membrane, transition from one form to another, the appearance of abnormal red blood cells. There is no stabilization of erythrocyte to the end of the early neonatal period.

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ASSESSMENT OF AN OCCUPATIONAL RISK LEVEL ASSOCIATED WITH INDUSTRIAL AEROSOLS IN THE CONTEXT OF PROFESSIONAL MEDICINE

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A prevalence of a chronic dust disease of the lungs and an increase of its combination with somatical illnesses, including the largest part of the cardiovascular system pathology, the pathology of gastrointestinal tract, and degenerative-dystrophic lesions of the musculoskeletal system. A high level caused by socio-economic damage demands to forecast the development of production-related visceropaty (PRV), and to develop methods for the objective assessment of the level of compensatory reactions to a dust aggression. The dust factor is a "chronic" stressor; in order to be protected from this factor the body mobilizes almost all systems to create adaptation mechanisms._Just recently, the term "genetics" has been mainly connected with congenital malformations and inherited forms of disease. Nowadays, it`s becoming clear a great importance of genetic factors for multifactorial diseases (MFD) and pathological states in which diatheses play a very significant role. In the general aspect of the etiology and pathogenesis of some MFD and of pathological conditions, the effect of one or more genes may dominate. There are tens of thousands of polymorphic genetic systems, of which evolutionary basis is the high adaptive value of certain hereditary factors combinations. But, equally with the well-adaptated individuals must be individuals with an "unfavorable" hereditary factors combination. That are the factors consisting a group of individuals with the highest genetic diathesis to the disease or pathological condition development. All of this corresponds to the subject of our standing research that is a visceropaty pathogenesis associated with production factors. Visceropaties arise when the overall post aggressive reaction of the organism becomes inadequate, when the autoregulation gets broken and the compensation manifestations specificity gets lost. In such a case, the reaction turns from being protective to the body into damaging. The change from an extreme condition, due to an occupational exposure to dust, to a PRV is caused either by an increase of the dust factor intensity and duration or by an individual's sensitivity to occupational dust. The basis of the mechanisms that define an individual sensitivity of the organism under the influence by industrial aerosols are such phenotypic features with a hereditary basis, as the immune status, the reactivity of neutrophils and the state of homeostatic systems responsible for the adaptation. In our opinion, the system of clinical and laboratory assessment of the individual organism stability and of a prediction of the individual sensitivity of the organism under the influence by industrial aerosols, should be based on the identification of a particular genotype type. In fact, such an opportunity has came with the development of molecular biology, with

the improvement of the technical base of medical organizations laboratories that enables to realize, with the methods of laboratory diagnosis, new physical and chemical principles of the finest studies of biological parameters of the human body up to the molecular level. To assess the employee individual diathesis to its development in the best way, a large number of diagnostically important common polymorphisms should be genotyped. However, only one genetic testing to determining of the individual's genetic sensitivity to the disease, as well as an isolated measurement of biochemical parameters taken separately. Whatever the function o system they characterize, these parameters can be neither used for an objective assessment of a health state nor for a prediction of the risk of pathological process development. Thus, the methodological basis for the development of a predictive complex of an occupational risk assessment of employee's health and for the creating an effective individual program to prevent every employee from a dust influence must be only a systematic and integrated approach that let differentiate a biological criteria complex and a compensation reactions or damage level. This particularly orientated research has been focused on the study of the complex of personalized (genetic, immunological, hormonal and metabolic) characteristics and it can be used to predict the risk of the PRV development and to take timely measures to correct them.

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PATOGENETISCHE UNTERSUCHUNG DER ENTWICKLUNG VOM TOURETTE-SYNDROM UND UMSETZUNG DER MULTIFAKTORIELLEN BEHANDLUNGSMETHODEN

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Die Behandlung der obsessiv-phobischen Störungen im Rahmen diverser psychischer Erkrankungen gehört heute zu den kompliziertesten psychiatrischen Problemen. Wir halten die Untersuchung der Entstehungsmechanismen sowie die pathogenetisch begründete Behandlungsmethoden der komplexen psychischen Erkrankungen, die mit motorischen und vokalen obsessiven Störungen verbunden sind – des Tourette-Syndroms – für eine sehr wichtige Entwicklung. Die Pathogenese des Tourette-Syndroms ist nur unzureichend erforscht, deswegen ist eine Klassifikation für die Entwicklung der pathogenetisch begründeten Behandlungsmethoden unabdingbar. In dem psychiatrischen Klinikum der Republik Mordovien wurden in den letzten 7 Jahren 40 Patienten mit Tourette-Syndrom behandelt. Davon waren 33 Männer, 7 Frauen. Bei der Aufnahme war der psychopathologische Befund durch unwillkürliche schnelle einfache und komplizierte motorische und vokale Tics bedingt, dessen Tiefe zwischen 2,5 und 3,0 Punkten nach Avrutski-Skala lag. Je nach pharmakologischen Behandlung teilten wir die Patienten in 2 Gruppen ein: die erste Gruppe bekam die

„traditionelle“ Psychopharmakotherapie mit Haldol und Diazepam, die Patienten der zweiten Gruppe bekamen Mexidol (Emoxypine), Diazepam, Glutamyl-Triptophan und hyperbare Oxigenierung. Unsere multifaktorielle Behandlungsmethode konnte eine qualitative und hoch effektive Behandlung des Tourette-Syndromes ohne Neuroleptika sicherstellen. Diese Behandlungsmethode hat einen Patent nach Recht der Russischen Föderation (Nr. 2313342 vom 27.12.2007).

Die Analyse der immunen und endokrinen Reaktionen ergab, dass die Wirksamkeit der Behandlung mit der Wiederherstellung der neuro-immunologisch-endokrinen Homöostase zusammenhängt. Die Normalisierung der metabolischen Parameter ging mit der Reduktion der leitenden psychischen Symptomatik einher. Pharmakologische Synergie bei der Kombination der traditionellen Psychopharmaka und der metabolisch wirksamen Medikamenten kann sicherlich durch eine komplexe Wirkung auf spezifische Rezeptorsysteme und eine Korrektion der Homöostase der Neurozytenmembran erklärt werden. Dieser Prozess ist adaptiv und besteht aus der „Erneuerung“ der molekularen Komponenten, Optimierung der Lipide-Eiweiß-Zusammensetzung der neuronalen Membranen und der Modifikation der Biomembran. Die primäre neuroadaptive therapeutische Wirkung besteht aus einer Steigerung der neuronalen Aktivität. Der langfristige therapeutische Effekt sowie die spätere Rekonvaleszenz werden durch zweifache Steigerung der Transkriptionsaktivität von Neuronengenen bedingt: zuerst durch die Aktivierung der Akute-Phase-Proteinen, deren Expression steigt; außerdem durch die Redox-empfindliche Transkriptionsfaktoren, zu denen ARE gehört, der normalerweise ein Bestandteil der Zytoplasma und des Zellkerns ist und durch Antioxidanzien aktiviert wird. Die neuronale Aktivierung löst eine Bildung von neuen Proteinen aus, unter anderem hochspezialisierten Proteinen, die die Synthese der Rezeptorproteine und die Dichte der Rezeptoren im Neurozytenmembran steigern und die Entstehung der neuen Rezeptorkomplexen auslösen können.

Außerdem wird eine Steigerung der Neuronenaktivität durch Transkription neuer Ionenkanäle und Enzymen, die die trophische und Stoffwechselfunktion der Zellen verbessern, bedingt, was einen langfristigen therapeutischen Effekt schafft. Somit zeigen unsere Erfahrungen mit komplexen pathogenetischen Behandlungsmethoden einen Ansatz für eine breite Anwendung in den psychiatrischen Kliniken.

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MODERN ASPECTS OF MOTIVATION AND PAYMENT OF MEDICAL STAFF IN A 24-HOUR HOSPITAL

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A reform in the healthcare and obligatory medical insurance system mean introduction

of new progressive forms of payment for medical aid, which do not only make it possible to spend resources with care but also to increase the salary level of medical staff.

An improvement in the quality of medical service is one of the main tasks in reformation of the modern healthcare system. The solution of this problem is directly connected to the problem of motivation of medical staff and payment for their work.

In order for the increase of salary of medical staff not to have a formal character, an "Assessment System of work of medical staff in a 24-hour hospital" was developed and introduced.

In the initial stage, every department received a plan of productive parameters – a number of treated patients – for a calendar year. Productive plan of the department work is drawn on the basis of statistic parameters for departments of the given type as well as volumes stated in the Quota for administration of free medical aid within the frame of the Territorial Programme of State Safeguards established for the hospital in general.

In the beginning there is assessment work in order to determine an actual monthly amount of stimulating payments of the structural department, based on the criteria of efficiency and work quality of the hospital ward.

1. Execution of the monthly plan of aid administration (number of hospitalisations with obligatory medical insurance according to the number of hospitalised patients with payment).
2. Mortality parameter.
3. Presence of legitimate complaints.
4. Discrepancy in diagnosis.
5. (Partial and full) withdrawal of patients from payment according to the results of the quality assessment.
6. Unjustified presence of unidentified people.

The distribution of means for the payment among the staff according to categories in each unit is carried out within the total sum that had been chosen for this staff category. Stimulating payment assets are formed according to the following categories: head of the department, doctors, senior nurse, medium medical staff, matron and junior medical staff.

The payment amount for each category is determined as follows:

$$Dfot = Sfot/\sum OV * Tfakt * Eff + \Delta$$

with

Dfot – additional payment asset for each individual employee;

Sfot – amount of the stimulating payment for the corresponding category according to the protocol of the administrative commission session;

$\sum$OV – number of hours worked in a calendar month by medical staff of the corresponding staff category;

Tfakt – number of hours worked in a calendar month by each individual employee of the corresponding staff category;

Eff. – efficiency factor of each individual employee;

Δ – savings achieved as a result of the implementation of the efficiency factor redistributed among the staff in the corresponding staff category;

$$\Delta = Eff. * \sum\Delta / \sum Eff$$

with

∑Δ – total amount of savings obtained as a result of the implementation of the reducing work efficiency factors staff in the corresponding staff category;

∑Eff – sum of efficiency factors among staff of the corresponding category.

A "reducing coefficient of work payment" can be used in regard to every staff category. This coefficient takes into consideration the assessment criteria of work. In case the reducing coefficient is used, it is necessary to fill out the form "Calculation of the reducing efficiency factor and work quality" for this employee, which has to be signed by the head of the department and senior nurse. The distribution of means among staff is carried out under consideration of the actual working hours.

The implementation of the suggested approach towards the improvement of payment of medical staff of the State Budget Institution of Healthcare "Togliatti City Clinical Hospital No. 1" has shown that the introduction of the new stimulating payment system will make it possible:

- to increase material interest of medical staff in the result of their work;
- to make the formation mechanism of stimulating payment for each individual employee clear and understandable;
- to increase working motivation of staff directly working with patients;
- to improve the level of staffing;
- to increase the level of aid administration.

In the end, the appropriate payment of staff in the healthcare sector has received a connection to the aim of their work – to improve the health status among population.

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CATASTROPHIC ANTIPHOSPHOLIPID SYNDROME: ONSET AND OUTCOME

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Aim: To assess retrospectively the prevalence of catastrophic antiohospholiupid syndrome (CAPS) in patients with APS and to determine the long-term outcome of CAPS patients who survived after CAPS.

Methods: Data of 162 pts. with systemic lupus erythematosus (SLE) and with

antiphospholipid antibodies (aPL) and 94 pts. with primary APS (PAPS) were analyzed. Brain magnetic resonance, Radio isotope venography, lung perfusion scintigraphy, were performed to confirm the presence of thrombosis. IgG/M anticardiolipin antibodies (aCL), lupus anticoagulant were measured in all patients.

Results: Mean (SD) follow-up was 10.7 (4.6) years and mean age at time of including in the study was 33.0 (11.0) and 35.4 (10.1) years respectively. The development of CAPS was found in 43 pts: 33/160 (23F; 10M) and 10/94 (8F; 2M) respectively. Thirty two (25/33 and 7/10) patients were died. Two of 11 survived CAPS pts. developed thrombosis through 1 year with death event. The analyses of the concomitant factors which may initiate CAPS were assessed. There were SLE flare (n=12), initial menopause (n=2), infections (n=12) including pneumonia (n=7), acute respiratory disease (n=3), food poisoning (n=1), abscess (n=1) as provoking factors in SLE+APS pts. Cancer was revealed in 1 SLE pts and trauma after road accident in 1 SLE pts. Thrombotic microangiopathy as cause of CAPS was found in 3 pts (1 with SLE, 2 with PAPS). Fulminant purpura was at onset of CAPS in all 3 cases. Two of them had recurrent severe skin necrosis with multiple organ failure and died due to severe sepsis thru 1 and 2 years. Triggering factor in PAPS pts. was pneumonia (n=2) and abscess (n=1), in 7 pts these factors were not detected. Treatment comprised high dose steroids, full anticoagulation and immunosuppressant in majority, antibiotics administered when infection were evident. High dose IV gamma globulins were added in two cases and sandostatin was used in 1 pts. due to thrombosis of lien vein and pancreatitis. Conclusion: Triggering factors of CAPS were flare of SLE and infection. Significant failure impairment due to initial CAPS had all survival CAPS pts.

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THE INFLUENCE OF GOLD NANOPARTICLES ON THE CONNECTIVE TISSUE IN THE SKIN

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[Introduction] Despite extensive work on studying the possibility of using gold nanoparticles to develop new antibiotics, their application is not yet possible due to the side

effects and the lack of data on their impact on the organism generalization not only man, but also experimental animals. The limited application of nanoparticles is that gold compounds are toxic, accumulate in the kidneys, liver, spleen and hypothalamus, which may lead to organic diseases and dermatitis, stomatitis and thrombocytopenia. Therefore, a rapidly growing relevance of gold nanoparticles on the basis of toxic kinetic experimental animals for further extrapolation on the human body.

[Methods] As laboratory animals were used 30 male line which divided the FPC, 3 groups: first –control; second-experimental; 3-control too. Experimental group subcutaneously injected gold nanoparticles (NPG) (20 rats). In the control groups in the algorithm the material intake in a day during 5 days of morphological changes of tissues were found. Typical structure of connective tissue, blood vessels, muscle tissue, skin and lymph nodes in the groin area back finiteness rats showed all the days of fence material. Material received on the first day of the experiment, rats receiving subcutaneous injections of gold nanoparticles, yielded a phenomenon marked. [Results] Perivascular infiltration leukocyte around the walls of blood vessels near the contamination of nanoparticles in tissue. On the second, third, and all the next days experiment detected blood vessels of various calibers, which prove the identity of the hypertrophy and death of cells, the destruction of the basement membrane. The cytoplasm of endothelial cells is stands above the surface ground, on the side of the vessel, adjacent to the injection zone of nanoparticles. On day 1, gold nanoparticles are identified in a free State, and then the surrounding was implemented leukocytes begin to phagocytosis them gradually. On 3-and 24 hours are identified as free nanoparticles and was implemented and responding all cytoplasm of leukocytes. The results of investigation about toxic kinetics of the nanoparticles of gold, injected subcutaneously to CBA lined mice were presented in this manuscript. There were studied a migration processes of nanoparticles of gold after subcutaneous injection and the mechanisms of influence on surrounded tissues were also examined.

[Discussion] Founded, that after being injected subcutaneously nanoparticles of gold undergo to phagocytosis by macrophages. Part of those macrophages is migrating in to the lymph nodes and another part is passing in to the blood vessels, where nanoparticles are extracting from macrophages cytoplasm and entering free in to the blood stream. Established, that in consequence of toxic influence of macrophages, laded by nanoparticles of gold, endothelium of blood vessels is damaging. Conclusion is – inhibition of angiogenesis and processes of blood vessels destruction in tissues after nanoparticles injection proceeding by the two ways. First one from not direct inhibition of the vessels endothelium growth factor (VEGF) but from deactivation of macrophages releasing VEGF, which molecules are stimulating endothelial development in the growing blood vessels. Second mechanism is realizing by the immediate loss of endothelium due to migration of macrophages through the blood vessel wall.

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ROLE OF THE HELICOBACTER PYLORY INFECTION IN PROCESSES OF LOCAL IMMUNE HOMEOSTASIS IN CHILD,S GASTROINTESTINAL MUCOSA. STUDY AT THE FAR EAST OF RUSSIA

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[Introduction] Previously, we investigated H. pylori infection of the adult patients with gastrointestinal diseases in Vladivostok, Far Eastern Russia. In this study, we further investigated the role of Helicobacter pylori infection in lactase deficiency pathogenesis in children. In the pediatric fields, secondary and transient lactase deficiency was seen during clinical practice of different gastrointestinal diseases. Many previous studies have shown the mucosal conditions of small intestine and duodenum in secondary lactase deficiency; however, local immune responses in gastrointestinal tract have not been examined. Especially, conditions of gastric mucosa and epithelium in different pathogenetic variants of lactase deficiency in infants and children under 3 years have not been well studied. In this study, we investigated roles of H.pylori infection and immune responses of gastric mucosa and epithelium in, pathogenetic aspects of lactase deficiency in children under 3 years.

[Methods] Sixty-three pediatric patients (age: 5 months to 3 years) with different loss of weight in Regional Clinical Center of Maternity, Vladivostok, Russia, were also included during 2008-2011. All patients were diagnosed as lactase deficiency. Morphological changes of gastrointestinal mucosa were examined by endoscopy and dark field microscopy. H. pylori in biopsy specimens was detected by immunostaining CD4-, CD8-, CD 68-, CD163-, or CD204-positive immune cells in the specimens were detected by immunostaining.

[Results] In our previous study, 89.9% of patients (age, 15 to 80 years) were H. pylori-positive, Regarding the virulence genotype of H.pylori, 79.4% were cagA-positive. As for EPIYA motif of cagA, ABC type was the most prevalent and accounted for 73.2%; ABCC type for 14.6%; AB or ABCCC type for 4.9%, and novel AAABC type for 2.4%. No ABD type was detected.

In this study, 95% of children under 3 years with secondary lactase deficiency were H. pylori-positive. We have established changes of immune cell; numbers and condition in cellular and humoral immunity according to clinical manifestations of this disease. Increase of proliferative activity of immune cells in epithelial layers and the cells without contact to epithelial wall in mucosa were found. Immunostaining showed the increase of immune cells positive for CD4, CDS, CD 68, CD163, and CD204 in gastrointestinal epithelium in H. pylori-positive lactase deficiency patients.

[Discussion] In our previous study, cagA -positive H. pylori mainly belonged to Western type (EPYIA-ABC type) although Vladivostok is geographically located in East Asia.

Present study is the first investigation of lactase deficiency with H. pylori infection in children under 3 years in Vladivostok, Russia. Our data suggest mechanisms of pathogenicity of lactase deficiency under H. pylori infection. Our data are also useful for development of immune response algorithm during medication of those patients and for monitoring of morphological condition of gastrointestinal mucosa in children during various pathologic processes associated with malabsorption and lactase deficiency. Further investigation is required to reveal the exact mechanisms of lactase deficiency under H. pylori infection.

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IMMUNE HOMEOSTASIS OF THE SKIN IN A REPARATIVE REGENERATION AFTER BURNS

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[Introduction] According to the analytical data from WHO, the world each year approximately 50 million people are injured, more than 100 million exposed to surgical procedures. Keloid and hypertrophic scars occur in 1.5-4.5% of the total population (T. Alster, 2003), and according to W. Chernoff (2007) - 10%. Over 4 million people suffer from cicatricial deformities after deep and widespread. Most of these methods of treatment of excessive growth of connective tissue have attitude to patients who have formed a keloid and hypertrophic scars (James W., 2009; Faunce DE, Lianas JN, Patel PJ et al., 2012). Yet until now, there are no treatments that reliably would stop the progression of grows of pathological scar and its recurrent after operative treatment.

The aim of the study was to investigate the role of Langerhans cells in the regeneration processes in the epidermis of the skin after thermal damage.

[Material and Methods] The paper used the material of the skin area of the anterior abdominal wall of men from 18 to 48 years, received the thermal burns III B degree and treated on the basis of Far Eastern district medical center from 2012. Tissue samples were obtained in the dynamics of the healing of burn wounds with the written consent of the patient.

[Results] With immune histochemical analysis in scar tissue revealed cells CD68 (Langerhans cells) and CD163 (effector macrophages) in all phases of healing of burn wound which goes through four specific stages: hemostasis (stopping bleeding), inflammation, proliferation (overgrowth of cells), maturation. Found that at the 1st stage of the wound

and on the border of the wound with intact skin is dominated CD68, which is associated with the need antigen performing of dead cells for phagocytic cells and further attract effector immune cells. On the inflammatory stage is dominated macrophages, which are not only phagocytosis bacteria and damaged tissue, but also secrete cytokines for regenerative processes and migration of immune cells into the zone of inflammation.

[Discussion] The findings suggest that the active involvement of immune phagocytes and antigen presenting cells in the regenerative process, and closing the burn defect, but its functional characteristics depend on their quantitative relationships and quality of interactions. Increasing the number of fibroblasts and macrophages decrease, producing endothelial growth factor, which stimulates the growth of blood vessels in the connective tissue adjacent to the epidermis, the closing burn injury, leads to the formation of coarse keloids. It is known that the development of the deep hypertrophic scar can be observed eating disorders in the center to form a long-term healing ulcers (trophic ulcers). The severity of scarring influence of genetic factors and external action (Kolodchenko E., 2012).

Found that the fibroblasts begin to heal the injured area from the wound edges. During the final stages of maturation (final scarring) collagen begins to recover as soon as the wound is completely overgrown and crust began to flake. The recovery process may last a year or more, during which new collagen is formed to increase the strength and elasticity of the total tissue. The final scar is 70% the same as the normal skin.

Excess of the collagen leads the excess of scar tissue. Hyper regeneration may be due not only to genetic causes, but also a violation of the system antigen presentation - phagocytosis. Then possible to develop keloid red colored scars, above the surface of the skin. Problematic scars usually occur on the hands or other parts of the body flexes, and due to the fact that the scars restrict movement, they can cause loss functionality. Hypertrophic scars formed more new tissue than was destroyed and formed on the surface of the skin bulge, like a scar above the skin. As a rule, it has very significantly darker color.

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T. Yamamoto
G.V. Reva

IMMUNE HOMEOSTASIS MUCOUS MEMBRANE OF THE GASTER-INTESTINAL TRACT AGAINST THE BACKGROUND OF HBP INFECTION, METAPLASIA AND ONCOGENESIS

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[Introduction] According to who, cancer of the stomach in the structure of Oncology is. Stomach cancer each year become ill more than 1 million people. In the Russian Federation for oncological disease stomach cancer 3 takes place after lung cancer and skin disease are diagnosed each year, 32 cases per 100000 population of gastric cancer. The problem is

the world in oncogenesis and studied, and least studied. There is no data on changes in immune homeostasis of gastric mucosa in terms not only of reparative regeneration, but also physiological.

[Methods] Biopsy material obtained from cardiac, gastric antrum and fundal divisions under the Sydney system in accordance with the gold standard of the World Health Organization. Analysis of results carried out in accordance with the criteria of the morphological section the Sydney classification, supplementing the international classification of gastritis and visual-analog scale with semi quantitative evaluation standards of morphological changes of microbial media, as well as the presence of spontaneous recovery of 98% in the case of, for example, the papilloma virus. Biological samples and gastric biopsy material obtained were obtained at the time of the 203 fiber gastro duodenum scope patients ranging in age from 34 to 78 years in the period from 2004 to 2012, on the basis of FESMC (Russia), as with the pathology of the stomach and without moderate clinical manifestations.

[Results] By using immune histo chemistry revealed the different phenotypes of cells monocytes on differons CCM, and connective tissue mast cells in the mucosa's own discs. Immune histo chemical was identify HbP, gene activity Ki67, CD4, CD5, CD8, CD10, CD34, CD68, CD117, CD163, CD204, c-kit –receptor factors stem cells, mine hazard firm DAKO to illustrate and further comparative analysis of the dynamics of disease in different periods. Participation in the immunocytes feature provided mechanisms for restructuring of connective and epithelial structures woven own LPs at physiological and mucosal reparative regeneration of the stomach wall. Identification of immune cells was carried out on the same circuit, despite the different Antigen localization in cellular structures: membranes, Lysosomes, nucleus, Golgi complex. The existence of HbP was determined using microbiological and molecular-genetic studies of selected strains helicobacter pylori with subsequent analysis on pathogenic microorganism genes in the genome. Helicobacter pylori infection received additional confirmation using immune histochemical techniques using antibodies to helicobacter. Additional proof of the blood came from helicobacter using scanning electron microscopy. The results of their observations. Microbiological method research gave culture HbP from 95% (193 from 203) patients who are using the molecular-genetic analysis have been described as Cag A-, Vac A- positive strains with established cag PAI and cag A gene: AAABC Cag A, severe type and truncated (shortened) ABC Cag A, type of unknown function. Just as us growth and rejuvenation of stomach cancer, registered a case of cancer in women 36 years. Like other authors, we have increased the number of infiltrative crayfish. Carcinogenesis is marked with the same frequency in patients without previous gastric ulcers, regardless of which had gastritis: erosion - ulcerative or atrophic.

[Discussion] Dynamics changes of macrophage infiltrate the stomach wall corresponded to increased prliferativnoj activity of epithelial mucous membrane, and was highest when the proliferative activity has dropped due to the depletion of the cambium. Single work focused on phenotypes cell infiltration mucous membrane stomach and tumors.

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THE CONCEPT OF PHAGOCYTOSIS IN THE DEVELOPMENT OF THE STRUCTURES IN THE HUMAN EYE

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Abstract. Disturbance in the development of human eye is an important problem of contemporary ophthalmology. Patient with different eyes dysplasia are significance group in clinical ophthalmology. For the successful study of such pathology the knowledge of general pattern in human visual organ development is necessary. In sources facts about role of immune phagocytes in morphogenesis in the human eyes are absent. We have studied 91 samples of human eyes in prenatal ontogenesis. Role of CD68, CD163. CD204 cells in process of eye development were analyzed. A theory about cornea separation process is designed. It shows that immune cytes takes part in physiological and reparative regeneration of structures in the human eye. We think that it is possible that immunocytes identification in human eyes in embryogenesis is maternal cells, because human embryo does not have blood system creation.

[Introduction] Investigation of morphogenesis, time of separation, growth and differentiation of the eye structure cells is necessary as for understanding of normal eye structures so and for more detailed imagination about histological prerequisites of disturbance in this system, Absence of detailed data about role of the effector cells responsible for the immune phagocytosis during reparation processes and changes of the human eye structures during Glaucoma and other pathological reactions put a solution of this problem on the one of the first place in ophthalmology . Though, most studied the role of immunocytes in pathological processes of eye on the animal model. Role of immunocytes in human eye development shows in a not numerous sources. Existing poor data about the role of immune phagocytosis cells in reparative regeneration of eye structures, become formed our aims and goal of our research.

[Methods] As a material of study we used 91 samples of eyes from embryo, fetal and infants of human, taken on the Pathology Department of Vladivostok State Medical University. Classic morphological stain methods and immunostain protocols for the detection of CD 68, CD163 and CD 204 cells were used and carried out in Niigata University. Visualized data received by the Olympus microscope model BX-51 and analyzed using equipped it original soft.

[Results] Analysis of owned data shows that the process of anterior chamber has opening between the developing cornea and iris is realizing consequently through the destruction of the homogeneous colored plate which is appear a split borderline of choroid and fibrous coat, is undergoing for lysing by cells, in our opinion, macrophages. Our assumption has got

additional confirmation by immunostain on detection of macrophages are CD 68, CD 163 and CD 204. It was established that in the primordial moment they are absent, but comes and quantitatively increase from 4-th until 6,5 mouth of prenatal period, that corresponding for a period of drainage zone structures differentiation. Antigen-presenting cells CD 68 are placed in the fibrous coat mainly in the area of corneal and scleral border. We conceive that antigen-presenting cells are direct and regulate the development of Schwalbe's rings and the drainage zone through the phagocytes induction. Also, we investigate that lens differentiation from the surrounded structures issued because of phagocytosis process than apoptosis, which accepted. Apoptosis is registering only in macrophages lying to the anterior lens capsule and in cells of inner lay of capsular epithelium, generating during imagination of the lens capsule. In vitreous body of the human eye cells we identified cells CD 68, CD 163 and CD 204. Parts of them having the antigen-presenting cells markers are residual, related with collagen-fiber framework of the vitreous.

These can be associate with the eye structures are immune deficient. That's why the residual cells take function of the antigen presenting cells. Consider that avascular structures of human eye are immune deficient there is especially important role of the residual cells, having markers CD 68.

[Discussion] Presence of big amount of immunocytes in the developing eye structures and during pathological processes are testify about perceptiveness and effectiveness of the immune modulating methods of eye treatment development. We think that in earlier stages of development in embryogenesis during the intensive fiber coat differentiation, forming of cornea and sclera, rebuilding of the drainage zone structures and trabecular apparatus, conversion of cellular vitreous in to vascular than to tissue fiber realizing under control of effector high specialized immunocytes of maternal organism, migrating in to the eye structures before placentas and hematic ophthalmic barriers forming. During this period in human embryo only anlage hematopoietic and organs of immune defense has occurring. Forming of anterior eye chamber has completing to beginning of the medullar hemopoesis of fetal organism.

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RETINAL GLIAL CELL IN THE TRASPARENT STRUCTURE OF HUMAN EYE ENVIRONMENTS

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[Introduction] Physically transparence of cornea, lens and vitreous body are not transparence with histophysiology terms and therefore can not freely transmit light to the

retina. In the development of the eye lens is formed of two beginnings: the ectodermal - for capsular epithelium and neuro glial - for stromal of lens. These data suggest that the neuroglia were coming from the inner layer of the optic cup is a source of stromal fibroblasts own substance of the cornea, and is differons fibroblasts into the vitreous of the human eye and the posterior pole of the lens. The common source in the development of the stromal of transparent structures of the eye and explained by the fact that the cornea, lens, vitreous and retina and brain neuroglia contain common to all special proteins - crystalline. Structural relations and the origin of fibroblasts transparent media of the eye are the basis of the same functions of crystalline production, physical and chemical characteristic of that prevent light scattering and its cumulated in one direction. In addition, our data on the origin of stromal neuroglial lens suggest that the lenticular cells can serve as Müller's glia, controlling the flow of transformed energy.

The aim of this study was to analyze the general principles of visual perception operating with our new morphological data on the structure of transparent media of the eye and their interpretation in terms of additions to the modern interpretation of the vision theory, as well as the pathogenesis of visual impairment.

[Methods] In human material used different age groups treated with immune histochemical methods for phenotyping of effector cells transparent structures of the eye.

[Results] It was identified numerous cellular differons in its own substance of the cornea, lens and vitreous body. In vitreous detected CD68, CD163, CD204 cells. All clear eye structures - the lens, cornea own stuff, stromal posterior pole of the lens - was found a protein S100. Found that, along with the cornea and the lens is the vitreous specifically organized staple based structure, which, coupled with the identified cellular differons generates a special kind of connective tissue

[Discussion] Thus, the fibers and cells of the stromal own substance of the cornea, lens, vitreous and retinal glial cells may be as links in a single wire system, which receives light and transforms it into another form of energy, perhaps in electromagnetic waves or a motor impulse and only sends it to photo sensing cells. The result we have a light in one direction due to the cells of the stromal of transparent structures of the eye and the inability of the retina to identify the cells. This gives grounds to conclude that the cells located in front of the retina, are invisible to the photoreceptors, so they spend excitement, not being transparent in the physical sense, but only in saline. We see only what this unique and wiring system allows us.

We found that the cataract lens in glaucoma is characterized by a decrease in its stromal the number of cells are marked as protein S100, as well as increasing the number of apoptosing stromal lens cells. Violation of visual function in glaucoma is a consequence of increased apoptosis in the glial component of the transparent media of the human eye and, therefore, reduce their conductivity, so, even in the end-stage of glaucoma retinal neurons are functional.

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CLINICAL MORPHOLOGY OF VITREOUS BODY HUMAN EYE IN OPHTHALMIC SURGERY

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[Introduction] Any change of the vitreous is a universal damaging factor, both for the induction of pathology of the lens, and retina, so the relevance of the study histophysiology vitreous body is not in doubt.

We are study hyalocytes in the human eye, and are determined species differons in vitreous body in the human eyes. Hyalocytes include differons of fibroblasts, must cells, hystiocytes. Share of cells are concern to local differon. It was given morphology characteristic of hyalocytes.

The aim of the study was to investigate the phenotypes and differons accessories of hyalocytes of vitreous person.

[Methods] We used data obtained during medical abortion, forensic autopsies of people who died from injuries, as well as data obtained during surgery for post-traumatic enucleation of the eye, in the ages from 4 weeks of fetal life to 85 years. Investigations were carried out using the classical hematoxylin and eosin, silver impregnation by Cajal, and the method of immune histo chemistry using SD68 markers, CD163, CD204. For the analysis of the material obtained using Olympus Bx51 microscope with digital camera, CD 25, and proprietary software. Identification of immune cells carried on the same scheme, despite the different localization of the antigen in cell structures: membranes, lysosomes, Golgi complex.

[Results] The complexity of the structural organization of fiber vitreous varies in its various parts. We have found that there are areas that are limited to a membrane having a thickness of 20 microns, optically empty. Also noted that the main larger fibers fibrous skeleton have longitudinal direction. Small fibers 1 mm thick or less may be placed cross-straight, woven into larger ones.

Fibril core and dissolved collagen as a hyaluronic acid to the contribute preservation of gel state and act as mild skeletal vitreum. According to the order of the fibers vitreum can be associated with constricted fibrous connective tissue. We observed that the fibers are woven into a fibrile core of optic nerve sheath in the area of drive that provides high strength of the contact.

In the analysis of age-related changes in the fibrous skeleton of the vitreous was found that the number of fibers gradually decreases, and the dynamics are initially characterized fibers predominantly transverse direction. Loop of network becoming irregular and uneven character, which, in our opinion, may be due to the adaptation of cells to changes in the vitreous body of physiological conditions and increase their synthetic activity. We

found that in the vitreous body, except fibrous skeleton, identified cells. Own analysis of the results showed that the distance between the cells of the vitreous may be different, depending on the topography of them in CT.

[Discussion] In our study, the vitreous body of the eye is formed with a special kind of structured connective tissue, represented by different origin and function of cell differons and intercellular substance, consisting of the main gel-like substance in which the fibrils are shipped properly organized collagen fiber core, which should be considered in vitreous surgery. Hystiocytes possibility of cultivation, in our opinion, opens perspectives for the study of histological and morphogenesis, as well as the use of cultural hystiocytes to treat certain eye diseases, which requires, of course, further research.

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T. Yamamoto

FEATURES OF LOCAL IMMUNE HOMEOSTASIS OF THE MUCOUS MEMBRANE OF THE GASTROINTESTINAL TRACT IN CHILDREN OF PRIMORIES IN THE FAR EASTERN REGION OF RUSSIA

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[Introduction] Previously, we investigated H. pylori infection of the adult patients with gastrointestinal diseases in Vladivostok, Far Eastern Russia. In this study, we further investigated the role of Helicobacter pylori infection in lactase deficiency pathogenesis in children. In the pediatric fields, secondary and transient lactase deficiency was seen during clinical practice of different gastrointestinal diseases. Many previous studies have shown the mucosal conditions of small intestine and duodenum in secondary lactase deficiency; however, local immune responses in gastrointestinal tract have not been examined. Especially, conditions of gastric mucosa and epithelium in different pathogenetic variants of lactase deficiency in infants and children under 3 years have not been well studied. In this study, we investigated roles of H. pylori infection and immune responses of gastric mucosa and epithelium in, pathogenetic aspects of lactase deficiency in children under 3 years.

[Methods] Sixty-three pediatric patients (age: 5 months to 3 years) with different loss of weight in Regional Clinical Center of Maternity, Vladivostok, Russia, were also included during 2008-2011. All patients were diagnosed as lactase deficiency. Morphological changes of gastrointestinal mucosa were examined by endoscopy and dark

field microscopy. H. pylori in biopsy specimens was detected by immunostaining CD4-, CD8-, CD 68-, CD163-, or CD204-positive immune cells in the specimens were detected by immunostaining.

[Results] In our previous study, 89.9% of patients (age, 15 to 80 years) were H. pylori-positive, Regarding the virulence genotype of H. pylori, 79.4% were cagA-positive. As for EPIYA motif of cagA, ABC type was the most prevalent and accounted for 73.2%; ABCC type for 14.6%; AB or ABCCC type for 4.9%, and novel AAABC type for 2.4%. No ABD type was detected.

In this study, 95% of children under 3 years with secondary lactase deficiency were H. pylori-positive. We have established changes of immune cell; numbers and condition in cellular and humoral immunity according to clinical manifestations of this disease. Increase of proliferative activity of immune cells in epithelial layers and the cells without contact to epithelial wall in mucosa were found. Immunostaining showed the increase of immune cells positive for CD4, CDS, CD 68, CD163, and CD204 in gastrointestinal epithelium in H. pylori-positive lactase deficiency patients.

[Discussion] In our previous study, cagA -positive H. pylori mainly belonged to Western type (EPYIA-ABC type) although Vladivostok is geographically located in East Asia.

Present study is the first investigation of lactase deficiency with H. pylori infection in children under 3 years in Vladivostok, Russia. Our data suggest mechanisms of pathogenicity of lactase deficiency under H. pylori infection. Our data are also useful for development of immune response algorithm during medication of those patients and for monitoring of morphological condition of gastrointestinal mucosa in children during various pathologic processes associated with malabsorption and lactase deficiency. Further investigation is required to reveal the exact mechanisms of lactase deficiency under H. pylori infection.

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GUSTATION AND THE NUTRITIVE STATUS IN PATIENTS WITH DYSPEPSIA SYNDROME AND OBESITY

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Global strategy of World Health Organization considers “two major risk factors with regard to noninfectious diseases, namely: diet and physical activity issue”. Eating behavior disorder and malnutrition negatively impact the efficiency of curative and preventative interventions and quality of the patients’ lives, especially with alimentary diseases. Currently, the role of food in etiology and pathogenesis of dispepsia syndrome is still under discussion.

Research objective is to study gustation features, alimentary status, circadian rhythms

of nutrition, psychoemotional status of patients with dispepsia syndrome and obesity.

Materials and methods: there were 120 patients with dyspepsia syndrome under our supervision (66 women and 52 men) aged from 20 till 60 years (average age 47,5±2,1), of them 48 patients with functional dispepsia, 72 – with organic dispepsia. The control (1st) group included 28 almost healthy patients. All patients were divided into randomized groups:– 2nd - with dyspepsia syndrome (DS) – 52 patients, 3nd – dyspepsia syndrome and metabolic syndrome (DS + Ob) – 68 patients. Groups were comparable in terms of sex, age, duration and severity of dyspepsia syndrome. Apart from standard examination required to diagnose dyspepsia syndrome (functional or organic dyspepsia), all patients underwent examination of gustation to the 6 main tastes by a modified technique, testing based on the questionnaire of dietary pattern quality and diurnal food rhythm, psychological questionnaires to identify sleep disturbance and eating behavior disorder, a personal FPI questionnaire, Nutritest-IP1 computer software, bioimpedance metering by Diamond complex, daily monitoring of variability of heart rate, electrocardiogram and blood pressure by Cardio-Tens-01 device (Meditech, Hungary) with further analysis of results by Medibase program. Researches were conducted according to the Good Clinical Practice. Statistic treatment of the data obtained was provided by Microsoft Excel 5.0 and Statistica 6.0 for Windows.

Results and discussion. Functional dyspepsia was diagnosed based on the standard examination conducted and the Roman criteria III (2006). Among patients with functional dyspepsia 18 had a diskinetic variant, 14 – ulcero-like one, mixed variant was revealed in 16 patients. The analysis of the alimentary status assessment by bioimpedance metering showed that patients with dyspepsia syndrome at normal body build index (BBI) had excess accumulation of fat and low percentage of active cellular weight (ACW). Assessment of actual nutrition has shown: significant ($p=0.05$) excess consumption of fats and carbohydrates by the patients of the 2nd group, excess energy value of diet, deficiency of protein, vitamins, micro- and macronutrients in patients from both the 2nd and 3rd groups. As a result of the conducted analysis of assessment of dietary pattern quality disturbances of diurnal food rhythm were revealed in 78% of patients of the 2nd group, 92% of patients of the 3rd group, and only in 50% of control group patients. Upward changes in gustation thresholds (as compared to the control group) to sweet, sour, bitter ($p=0.05$) tastes were observed in 74% of the patient from the 2nd group and 96% of patients from the 3rd group. Considerable prevalence of sympathetic tone and the desynchronosis phenomenon were observed in patients from the 3rd group vs the patients of the 1st and 2nd groups according to the data of both time and spectral analysis of daily heart rate variability monitoring. Thus, in patients from the 2nd group LF/HF amounted to 2.4 ± 0.6, in patients of the 3rd group – 3.9± 0.76 * ($p<0.05$). Reliable ($p<0.05$) direct and inverse correlation relationships were revealed between various indicators of the conducted examination during correlation analysis.

Conclusion. The obtained data suggest that disorders of gustation, dietary pattern quality, and diurnal food rhythm are interrelated with food preferences and actual nutrition

and also with the psychoemotional, vegetative and food status of patients and can play a certain role in the development of dispepsia syndrome and obesity, testify the need for further researches to study the opportunities of carrying out curative and preventative interventions to correct these disorders.

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O.A. Khashina

URGENT TOPICS IN THE EDUCATION OF MEDICAL INSTITUTIONS OFFICIALS UNDER CONDITIONS OF HEALTHCARE MODERNISATION

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Modern socioeconomic condition, further development of market relations and labour-market competition make great demands of preparation of heads of medical institutions. At the modern development stage of the society it means preparation of competitive and professionally mobile medical specialist able to perform complicated administrative functions and operations and organise and plan his/her work and work of the employees in the most efficient way. One of the main conditions of the qualitative postgraduate education is to study modern tendencies and demands arising in the area of healthcare, state and private medical institutions towards executives of medical organisations under conditions of reformation and modernisation. This is connected to:

1) an increase of medical and scientific information; 2) grown and complication of the subject world of medical specialists; 3) a necessity to develop mobility of medical staff; 4) ability to quickly learn new areas of work, introduce new technologies, operatively change or deepen, specify and concretize the activity of organisation.

This all requires from a healthcare specialist a new way of thinking, perception of the world and his/her place in it.

The main task of the Chair of Public Health and Healthcare of the Institute for Postgraduate Education of the Samara State Medical University is to guarantee the quality of postgraduate education in the area of officials of medical institutions according to the requirements of the healthcare sector and priorities of the state policy. Taking into consideration modern tendencies and being oriented to recommendation of our social partners, listeners of series of lectures, special attention is paid to: 1) development and improvement of the programme contents on the basis of the requirements in the new educational standards; 2) improvement of forms and methods of professional education, based on practice-oriented and personality developing directions; 3) development of pedagogical creativity and art.

During the implementation of educational programmes, the staff of the Chair note that pedagogical objective of education is formed as a result of the orientation of the postgraduate medical education towards demands of the specific regional labour market, needs of certain organisations and leading specialists of the trade.

Understanding the whole complexity of the healthcare system modernisation, series of lectures devote a lot of time to the formation of psychologically mature and economically efficient medical staff, staff administration. A lot of attention is also paid to the problems of education, development and motivation of staff, formation of its organisation behaviour, motivation types and profiles of medical employees, stimulating system towards qualitative work.

Qualitative education of medical specialists – health officials with new professional, functional and personal qualities within the system of postgraduate education is highly necessary for modern medical institutions.

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L.A. Balzamova
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EXPERIENCE IN THE FORMATION OF DOCTOR COMPETENCE WHEN WORKING WITH DIFFICULT PATIENTS BY IMPLEMENTING INTERACTIVE FORMS OF EDUCATION

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The main aim of the postgraduate education is the formation of professional, psychological and social maturity.

The dynamism of technologies, increase of the role of personality in the society, humanisation and intellectualisation of work suggest replacing the formula "education for life" by the formula "lifelong education". Nowadays it is possible to claim with certainty that one of the most progressive modern ideas is a statement about lifelong learning, which is implemented with success in the Samara State Medical University, where there is active pre-university training, then a diploma education step followed by postgraduate education and retraining of medical specialists by means of series of general and specialised improvement and primary specialisation in the Institute for Postgraduate Education.

In order to realise the new objective of "lifelong education", the Chair of Public Health and Healthcare of the Institute for Postgraduate Education of the Samara State Medical University constantly introduces innovative education technologies in order to optimize the education process, which is particularly important in regard to the expansion of the adult education.

The issue of adult education within the frame of "lifelong learning" called for realisation, development and introduction of the andragogic (from Greek andros-adult and ago-leading) education technology with improved innovative methodological principles of systemacy, contextuality and consciousness in acquiring professional knowledge among the members of the Chair of Public Health and Healthcare of the Institute for Postgraduate Education.

Within the frame of the realisation of the concept of continuous adult education quality improvement, the Chair of Public Health and Healthcare of the Institute for Postgraduate

Education of the Samara State Medical University actively introduces innovative interactive educational form into the education process, based on the andragogic principles of interaction and activity of students.

Recently the members of the Chair have developed and introduced an innovative education form – a problem-oriented seminar/practical training session "Formation of working skills with difficult patients, search for constructive solutions by means of a complex ethical and legal and socio-psychological analysis of complaints and problem situations", which implements working forms suggested by the author for the first time.

Main questions suggested for discussion in this seminar are legal characteristic of relations occurring during administration of medical aid; characterisation of basic citizen rights in the healthcare sector; legal liability for violation of patient's rights as well as psychological characteristic of the difficult patient personality and forms of work with him/her.

We are convinced that the experience in the implementation of interactive methods of education contributes to the increase of level of legal knowledge and legal activity as well as communicative and emotional competence of doctors, chairmen of ethical commissions and executive workers of medical institutions.

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GENE - GENE INTERACTIONS IN COMMUNITY-ACQUIRED PNEUMONIA INTRAPULMONARY COMPLICATIONS

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This study was conducted to establish the possible contribution of functional gene polymorphisms in detoxification/oxidative stress and vascular remodeling pathways to community-acquired pneumonia (CAP) susceptibility in the retrospective case – control study (350 CAP patients, 432 control subjects) and to predisposition to the development of CAP complications in the prospective study. Pulmonary complications (PC) occurred in 128 patients (36.6% of the whole group of CAP patients) and included pleuritis (81.3%), empyema (12.5%), acute respiratory distress syndrome (ARDS - 12.5%) and other (10.9%). Extra pulmonary complications in 125 CAP subjects were classified as toxic shock syndrome (TSS - 67.2%), myocarditis (44.0%), urinary tract infection (17.6%), multiple organ dysfunction syndrome (MODS) - 4.8%, other (7.2%). Acute respiratory failure (ARF), according the common definition of ARF as an oxygen saturation of less than 90% on room air or a PaO_2 less than 60 mmHg, had 1.2 % of CAP subjects without complications and 29.4% of CAP subjects with complications. All subjects were genotyped for 16 polymorphic variants in the 14 genes of xenobiotics

detoxification CYP1A1 (3 sites), AhR, GSTM1, GSTT1, ABCB1, redox-status SOD2, CAT, GCLC, and vascular homeostasis ACE, AGT, AGTR1, NOS3, MTHFR, VEGF. A comparison of distributions between CAP cases and controls revealed significant effects of SNPs – rs2606345 (CYP1A1), rs1045642 (ABCB1), rs4340 (ACE), and rs1799983 (NOS3). Risk of pulmonary complications (PC) in the single locus analysis was associated with CYP1A1, GCLC and AGTR1 genes. Extra pulmonary complications (toxic shock syndrome and myocarditis) were not associated with these genes.

We further evaluated gene–gene interactions using multi-factor dimensionality reduction, and cumulative gene risk score approaches. The final genetic model which included > 5 risk alleles in the CYP1A1 (rs2606345, rs4646903, rs1048943), GCLC (rs17883901), AGT (rs699), and AGTR1 (rs5186) genes was associated with pleuritis ($P = 2.7 \times 10^{-5}$, OR = 3.00, 95% CI: 1.78-5.07), empyema (P =0.0037, OR = 7.00, 95% CI: 1.63-30.13, ARDS (P =0.031, OR = 4.00, 95% CI: 1.14-13.98), all PC ($P = 3.0 \times 10^{-6}$, OR = 3.21, 95% CI: 1.96-5.26) and ARF (P = 0.0065, OR = 2.49, 95% CI:1.29-4.82).

We considered CYP1A1, GCLC, AGT, AGTR1 gene set using Set Distiller mode implemented in GeneDecks for discovering gene-set relations via the degree of sharing descriptors within a given gene set. N-acetylcysteine and oxygen were defined by Set Distiller as the best descriptors for the gen set associated in the present study with PC and ARF. Results of the study are in line with literature data and suggest that genetically determined oxidative stress exacerbation may contribute to the progression of lung inflammation.

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TRANSESOPHAGEAL ECHOCARDIOGRAPHY AT TIME-URGENT STATES IN CARDIAC SURGERY PATIENTS

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Emergency diagnostic procedures are often required to improve response to treatment of cardiac surgery patients in the intensive care and resuscitation unit. However, the patient's state and medical devices limit the choice of diagnostic studies since transportation of a patient is associated with a high risk for his/her life. In connection herewith, transesophageal echocardiography (TEE) is a method of choice since it has a high quality imaging, as well as in a 3D mode, and the presence of perioperative echocardiographic monitoring makes it possible to obtain a large bulk of data on peculiarities of surgical correction, prosthesis functions and hemodynamics parameters. The main indications for such examination are as follows: acute cardiac valve damage, prosthesis dysfunction (thromboses, paraprosthetic and paraannular fistulas), endocardiac shunts, cardiac tamponade, estimation of ascending and descending aorta and coronary ostia after surgeries have been carried out.

According to our data, transthoracic echocardiography allowed to make a true diagnosis in 48% of cases for patients with signs of acute cardiovascular inefficiency, whereas for TEE the diagnosis was verified in 100% of cases. It should also be mentioned that about 15% of patients underwent an urgent surgery (cardiac valve prosthetics or re-prosthetics, pericardial cavity drainage at cardiac tamponade, thromboses of coronary ostia, acute aortic dissection). TEE has become especially significant in applying methods of artificial circulatory support (extracorporeal membrane oxygenation (ECMO), intra-aortic balloon counterpulsation (IABC). Thus, hemodynamics in patients at artificial circulatory support was estimated by means of TEE because of impossibility to place a Swan-Ganz catheter for a long period of time which is the gold standard in estimation of hemodynamics of systemic circulation and pulmonary circulation.

Thus, TEE for cardiac intensive care unit patients is crucial. This method allows to perform the investigation immediately by the patient's bedside even during resuscitation procedures. Emergency TEE by the patient's bedside gives a physician information that may be immediately used to determine a further treatment approach.

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PROSPECTIVE EPIDEMIOLOGICAL RESEARCH OF PARKINSON`S DISEASE IN THE CLOSED INDEPENDENT TERRITORIAL FORMATION ZHELEZNOGORSK

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Parkinson disease (PD) is the second most common neurodegenerative disorder in the elderly. Clinical manifestation of PD include resting tremor, rigidity, bradykinesia and postural instability. Prevalence (proportion in a population at a given time) of PD is about 0.3% of the whole population in industrialize countries. It increase with age. Epidemiologic studies of prevalence in PD show highly variable results.

Aim: To define epidemiological research of PD in the closed independent territorial formation (CITF) Zheleznogorsk, Krasnoyarsk region, Russian Federation.

Methods: The CITF include Zheleznogorsk city, two settlements and three villages. We used international epidemiological methods including door-to-door servery from September 2009 till August 2012. Patients with PD are more senior 18 years have been included in research. Mean age of all patients with PD was 71.3 ± 7.5 [95 % CI 42-85] ye. o. Cliniko-neurological and epidemiological research was spent in Clinical Hospital No. 51 of Federal medical-biological agency (FMBA) of Russia. The research volume included clinical neurological inspection using Unified Parkinson's Disease Rating Scale. Selection of patients was carried out by a method of stratified randomization with using of

criteria of inclusion and an exception. Statistical processing is made by means of a package of applied programs for processing of biomedical data STATISTICA v.7.0 (StatSoft, USA, 2001).

Results: We observed 135 patients with PD, including the urban population - 131/135 (97%) persons and rural - 4/135 (2.9%) persons. Thus, city dwellers prevailed (97% vs 2.9%, $p \leq 0.05$). Women were 89/135 (65.9%), including city dwellers - 88/89 (98.8%) persons, countrywomen - 1/89 (1.1%) persons. Mean age of women was 72 ± 10.7 [95% CI: 42-82] ye. o. Men were 46/135 (34%), including city dwellers - 43/46 (93.4%) persons, countrymen - 3/46 (6.5%) persons. Mean age of men – 67.3 ± 7.0 [95% CI: 49-85] ye. o. Thus, women prevailed ($p \leq 0.05$). Mean age of women was above, than at men (72 ± 10.7 vs 67.3 ± 7.0, $p \leq 0.05$). It reflects a demographic situation in Krasnoyarsk region and in the Russian Federation, as a whole. The highest age-specific prevalence rate was recorded among women 70-75 ye. o., among men 65-70 ye. o. (0.36 per 1000 vs 0.17 per 1000 general population, $p \leq 0.01$). Mean age of debut PD was 65.4 ± 9.54 [95% CI: 18-80] ye. o., including women – 65.7 ± 12.2 [95% CI: 18-80] ye. o., men – 65.0 ± 7.8 [95% CI: 45-76] ye. o. Patients had hypokinetic rigid syndrome and tremor (mixed form of PD) in 119/135 (88.1%) cases. Hypokinetic rigid syndrome without tremor (hypokinetic rigid form of PD) was in 12/135 (8.8%) cases and prevail among men ($p<0.01$). Patients had only tremor (early stage of PD) in 5/135 (3.7%) cases. It was transformed to the mixed form of PD in 4/5 (80%) cases. Disability group was in 82/135 (60.7%) persons. PD was the cause of disability in 15/82 (18.2%) cases. Accompanying somatic pathology - 67/82 (81.7%) cases. Patients had the first disability group in 18/82 (21.9%) cases, the second – 56/82 (68.2%) cases, the third –8/82 (9.7%) cases. Thus, the second disability group as a result accompanying somatic pathology prevailed ($p<0.01$).

Conclusion: Prevalence of PD in CITF Zheleznogorsk varied from 0.92 per 1000 population in 2009 till 1.25 per 1000 population in 2012. The overall prevalence of PD in CITF Zheleznogorsk was 1.16 per 1000 general population, 2.87 per 1000 population over the age of 40.

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O.G. Gradil

ASSESSMENT OF AGE-DEPENDENT CHANGES IN OVARIAN RESERVE IN WOMEN WITH INFERTILITY

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Female infertility is an urgent problem of modern medicine and preserving fertility is main task at present. Despite rapid development of assisted reproductive technology (ART), there is a need to improve the procedures which have been used today. In addition, it is also necessary to consider age-related fertility physiological functions decline which required an accurate evaluation of reproductive potential for the purpose

to determine the tactics and predicting of success by infertility treatment.

Materials and methods. We present the data of 98 women of reproductive age who were divided into two categories. The study group included 68 women aged 24 - 45 with a long infertility (over 5 years), mainly of tubal-peritoneal origin. The control group consisted of 30 healthy women. The functional state of the hypothalamic-pituitary-ovarian system was evaluated by the level of the pituitary hormones (luteinizing hormone - LH, follicle stimulating hormone - FSH, prolactin - PRL) and sex steroid hormones (estradiol, testosterone) in serum. Ovulation was confirmed by ultrasound. Medical diagnostic laparoscopy was done in 45 patients of study (main) group (due to salpingoovariolizis, resection of ovaries). In 30 cases biopsies of ovarian tissue were obtained for pathologic study. From 1 to 4 sections of ovarian tissue were taken from each patient. All biopsy samples were processed using 5% formalin fixation, paraffin embed, staining according Romanovsky-Giemsa and studied by a pathomorphologist. Assessment of ovarian reserve was done for all patients on day 2-4 of spontaneous or induced menstruation by combined oral contraceptive. Menstrual - like reaction, were evaluated by transvaginal ultrasound. Using Pie Medical Equipment BV “Picus” and 6,5 MHz in a transvaginal transducer in the scan mode. All measurements were made in the first half of the day (12.00). For each ovary the following parameters were determined: ovarian volume, the average diameter of the largest follicle. Ultrasound scan at baseline was carried out in the early follicular phase of the cycle and during the follow-up - if indicated.

Results. The findings allowed to identify the characteristics of normal, reduced and very low ovarian reserve and to study the correlation between ovarian reserve and insufficient ovarian response (IOR). Ovarian reserve was identified as an important component of the reproductive capacity of women, characterized by the functional state of the reproductive system and was evaluated using biochemical and ultrasound parameters. According to our data the normal ovarian reserve recorded in the patients by presence of the following parameters: regular menstrual cycle of 28-31 days, FSH levels less than 9 U / L, ovarian volume not less than 5 cm, the number of antral follicles at least 5 in each ovary. Reduced ovarian reserve was characterized by shortening of the menstrual cycle for 2-3 days, the episodes of increase of FSH> 15 IU / L, ovarian volume of 3 to 5 cm, the number of antral follicles less than 3 in each ovary. Extremely low ovarian reserve: was characterized by persistent menstrual irregularities, persistent elevation of FSH> 15 IU / L, ovarian volume <3 cm, the number of antral follicles is not more 2 in each ovary. On the basis of the pathological studies of the patients with infertility, we studied pathomorphogenesis of ovarian dysfunction, in which dystrophic-atrophic alteration of follicular apparatus associated with the development of organ fibrosis, direct by correlating with the age of the patients plays a key role. In women over 35 reduction of follicular unit to decrease in the number and size of primordial and mature follicles, fibrosis of the cortex associated with fibrosis of vessel walls, cystic

atresia mature forms. We perform biopsy of histological samples of the ovary only in cases when the patients are indicated therapeutic-diagnostic laparoscopy as a part of the complex therapeutic measures.

Conclusions. It was estimated that the status of ovarian reserve correlated with the age of patients. In women under 34 normal ovarian reserve was present in 76%, between the ages from 34 to 38 years, only 30% of cases, and in all patients over 38 reduced or very low ovarian reserve was found. At very low ovarian reserve which is characterized by persistent menstrual irregularities, persistent elevation of FSH more than 15 IU / L and less 3 cm^3 ovarian volume, and number of antral follicles not more 2, getting oocyte impossible, and the patient should be oriented to the use oocyte donors. We consider that pathological assessment of ovarian reserve is the most accurate predictor of IOR; its implementation is appropriate for women over 35 with prolonged infertility, as a complex of medical and diagnostic procedures measures.

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DEMENZ

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Weltweit nimmt die Anzahl von Demenzerkrankungen zu. Dabei beträgt der Anteil der degenerativen Formen (Morbus Alzheimer) bis zu 60 %. Gegenwärtig nimmt man an, dass in Deutschland 1,3 Millionen an Demenz erkrankt sind. Viel versprechende Untersuchungen über die Entstehung von neurodegenerativen Veränderungen haben noch nicht den therapeutischen Durchbruch ergeben. Während moderne bildgebende Verfahren eine Früherkennung zulassen (PET, MRT), sind Forschungen nach speziellen Indikatorproteinen, d.h. Biomarker, noch im vollen Gange.

Gegenwärtig werden in der klinischen Praxis die nichtmedikamentösen und medikamentösen Verfahren angewandt, wobei für die Behandlung der Alzheimer-Demenz zwei Medikamentengruppen zur Verfügung stehen. Das sind Memantine und Acetylcholinesterasehemmer. Die klinischen Studien zeigten auch Verbesserungstendenzen in der kognitiven Leistungsfähigkeit. Für die vaskuläre Demenz gibt es gegenwärtig kein zugelassenes Medikament.

Möglicherweise kann ein Krebsmittel – Bexaroten- typische Alzheimersymptome rückgängig machen. Diese Aussage kommt von US – Forschern, die im Tierversuch ein Rückgang der charakteristischen Eiweißablagerungen im Gehirn feststellen konnten. Inwieweit eine hoffnungsvolle Behandlung bei Menschen möglich ist, bleibt jedoch abzuwarten.

M.T. Seidumanov

ORGANISATION AND ADMINISTRATION OF QUALITATIVE AND ACCESSIBLE MEDICAL AID

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"City Emergency Hospital" of Almaty was founded in February of 2011. Today it is a multisectoral medioprophylactic institution within the healthcare system of Republic of Kazakhstan in regard to the administration of highly specialized emergency medical aid. The capacity of medical and diagnostic hospital departments make it possible to take in up to 50 patients, with medical aid appealability up to 200 a day.

At the moment there are 320 twenty-four-hour beds in the hospital. There are 8 clinical departments in the hospital: Neurosurgery, Traumatology, Orthopaedics, Urology, General Surgery, Gynaecology, Neurology, General Therapy and Endoscopy as well as Anaesthesiology and Resuscitation Science. There is an operational unit with emergency and planned surgeries, resuscitation unit of the reception diagnostic department, chemist's and nutrition unit.

Due to the high-technology equipment and staff of the hospital, it was possible to open a Neurovascular centre.

Specialists of the Traumatology Department of the hospital have mastered complex methods of total endoprosthesis replacement of hip and knee joints as well as neck of the femur osteosynthesis. They perform osteoplastic surgeries in autotransplantation of large limb segments and tissue complexes.

Endoscopy and Functional Diagnostics Department have a wide range of functional and ultrasound testing methods. The hospital staff offers seminars on endoscopic examinations of republican and international importance.

Complicated surgeries and high-precision visualisation in the Radiodiagnostics Department made it possible for the hospital to receive a license to administer high-technology medical aid in the area of gynaecology, general surgery, traumatology, orthopaedics, urology and radiology.

The following main medical and economic parameters have been achieved:

Parameter	Budget departments	
	2011	2012
Number of beds	300	320
Use of beds	304	352
Average duration of stay	7.2	6.4
Bed turnover	42.2	54.8
Inactivity time of the bed	0.2	-0,7

Thus, during a short time of the hospital's existence, we have chosen the right market direction based on the hospital model practiced in the West. However, it is necessary to

achieve even more. In the first place, it is necessary to implement medical information system in order to reduce the expenditure of time for specialists, to simplify circulation of documents, to further optimise the clinic's resources and to pass accreditation according to the requirements to the specifications of quality as soon as possible.

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DISORDERS OF INTESTINAL MICROBIOCOENOSIS IN PATIENTS WITH CHRONIC LIVER DISEASES

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Disorders of qualitative and quantitative microflora content of the human intestine occupy a considerable place in the structure of gastroenterological pathology. In 2003, the Ministry of Healthcare of the Russian Federation approved of the branch standard "Protocol of patients' treatment. Intestinal dysbacteriosis" (Branch Standard 91500.11.0004-2003), according to which changed of the qualitative or/and quantitative microflora content of the intestine are called dysbacteriosis. Dysbacteriosis, a clinical and laboratory syndrome, occurring during many diseases of the digestive system organs, including chronic liver diseases, is characterised by a transition of various species into unusual state for them and by their excessive growth, metabolic and immunological disorders as well as clinical symptoms of intestinal lesions in some patients.

Chronic liver diseases are widely spread and have a large social importance. According to various estimations, these diseases are detected in more than 5% of adult population in European countries, and their share is very significant in the structure of the digestive system organs.

Up to this day, the questions regarding the frequency monitoring and degree of microflora disorders in the intestine in patients with chronic liver diseases have not been sufficiently studied. Ethiopathogenetic influence mechanisms of intestinal dysbacteriosis on the course of the main disease (process) and medical correction during their combination remain unknown.

The arsenal of modern pharmacological means for recovery of normal intestinal microflora includes various groups of drugs such as prebiotics, probiotics, symbiotics, symbiotics, bacteriophages and others. Nevertheless, the drugs mentioned above are not always able to guarantee the recovery and support of the optimal state of the intestinal microflora because they only affect separate microbiocoenosis chains. In spite of the accumulated experience of various drug application for normalisation of qualitative and quantitative microflora content of the intestine, the influence of hepaprotectors, prebiotics and probiotics both in the monotherapy and combination therapy on the intestinal microbiocoenosis and clinical course of chronic liver diseases of various etiology remains insufficiently known.

Taking into consideration the above, the clinical course of chronic liver diseases with intestinal dysbacteriosis and evaluation of the efficiency of prebiotics and probiotics therapy, separately and in combination, as well as their influence on manifestations of the main disease are very important.

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SUBPOPULATION COMPOSITION FEATURES OF LYMPHOCYTIC INFILTRATE AND EXPRESSION TO THE SOME HORMONES IN CASE OF MENINGOTELIAL BRAIN TUMORS DEPENDING ON THE DEGREE OF CELL MALIGNANCY

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Meningioma is the most common kind of tumor of the brain and spinal cord and compriseup to 30% of all intracranial tumors (Matsko D.E., 1998; Cordera S. et all., 2002; Claus E.B. et all., 2005). According to the dataof literature review and the results of individual research (Kuznetsova A.B. et all., 2012), enzyme systems involved in the steroid hormones metabolism are known to be present in the brain tumor cells. It has been suggested that either the appearance of cell atypia induces some changes in the response mechanisms of tumor cells to hormonal impact, or the very appearance of cellular atypia is the result of changes in hormone balance and endocrine system disturbances. The full extent of the phenomenon has not been studied.

The aim of the investigation is to study the distribution patterns of the hormone receptors expression and to evaluate the features of the tumor cells microenvironment in meningotelial brain tumors with various grades of cellular anaplasia.

Materials and methods.Twenty-five patients (10 males and 15 females) treated in neurosurgical departments of Chelyabinsk region clinical hospital No. 1 and Chelyabinsk region clinical hospital _3 (age ranges from 24 to 69 y.o.) with histologically verified brain meningotelialtumor of Grade I cellular anaplasia(18 cases of meningotelial meningiomas) and Grade II cellular anaplasia (7 cases of atypical meningiomas) were examined.

The studyof pathohistological micropreparationsof tumortissues stained with hematoxylin and eosin, as well as immunohistochemicalone using mono-and polyclonal antibodies to the androgen receptor (AR, polyclonal), gonadotropic releasing factor (GnRHR, clone A9E4), human chorionic gonadotropin (hCG, polyclonal), thyroid hormones (THR, polyclonal), parathyroid hormone (PHR1, polyclonal)were performed.

Monoclonal antibodies CD4 (clone 4B12), CD8 (clone S8/144B), CD31 (clone JC70A), CD56 (clone 123S3) wereused to identify the microenvironment of tumor cells and tumor vascularization level.Monoclonal antibodies Ki-67 (MIB-1 clone) were used to assess the proliferative activity of the tumor.

Polymorphic cellular infiltrate of histiocytes, plasma cells and lymphoid cells was defined in the studied tumors around the vessels and diffusely. In meningotelial meningiomas lymphoid CD8 + cells were predominant and CD4 + cells were not detectedin the infiltrate. The amount of CD8 + cells in the infiltrate was 2-3 times morein patients with atypical meningiomas than in those withmeningotelialmeningiomas, and there was a small amount of CD4 + lymphocytes.

Proliferation activity of tumor cells and the vascularization degree of the tumor was found to intensifydue to the increasing degree of cellular anaplasia. Simultaneously, endothelial cells were exposed to the transformation in the form of intracellular edema as a result of an increase in vascular density in atypical meningiomas.

All tumors, regardless of the malignancy grade, were characterized by a high level of membrane and cytoplasmic expression of receptors to androgens. The study of thyroid hormone receptors revealed a moderate level of expression in the tumor cells nuclei.The diffuse staining of the nucleus was observed in the meningotelial meningiomas, whereas in atypical meningiomas the staining was detected mainly incaryolemmas. Receptors toGnRHR, hCG and PHR1 in tumor cells were not detected.

Thus, meningiomas of the gradeI and II cellular anaplasia have no significant differences in the expression of receptors to hormones, but differ in composition of lymphocytic infiltrationcells as well as degree of vascularizationqualitatively and quantitatively.

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EFFECT OF ESOMEPRAZOL (NEXIUM) ON INTRAGASTRIC ACIDITY IN PATIENTS WITH PEPTIC DUODENAL ULCER

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Objective: To study the effect of proton pump inhibitor - esomeprazol – on the level of intragastric acidity in patients with PUD.

Materials and methods: 92 patients aged 19 to 60 years, of which - 68 men and 24 women, were examined. The patients were divided into 3 groups. The first group (38 patients) received 300 mg of ranitidine, the second group (36 patients) received omeprazole, 20 mg, the 3rd group (18 patients) received esomeprazol - 20mg at 8 p.m. Acid-forming function of the stomach was studied by means of long continuous pH monitoring - "Gastraskan-24" (Russia). Antisecretory effect of drugs was assessed by changes in daily average pH in the body, antrum of the stomach and esophagus.

Results: Study of the effect of drugs on the indices of daily average pH in the body,

antrum, esophagus before and after the administration indicates that omeprazole (20 mg / day) and esomeprazol (20 mg / d) suppress acid-forming function in the body and antrum of the stomach significantly stronger than ranitidine 300 mg / day. In the esophagus after the use of omeprazole and esomeprazol daily pH is higher (pH 6, 4 and 6.5) than after the use of ranitidine (pH 6,2). In the study of antisecretory action of esomeprazol 20 mg we have established that when using it at the time of gastroesophageal refluxes (GER), the last completely disappear in about 30-50 minutes. Suppression (GER) occurs much earlier than the antisecretory effect of the drug occurs, and continues for 9-10 hours. Twenty-four-hour hourly pH-gram of patient F., aged 30, suffering from DU for 5 years, after taking esomeprazol 20 mg. at 7:14 p.m.., showed that the latent period of the drug was 1 hour 54 min., and duration of the effect was 10 hours 07 min., at the same time in 45 minutes after taking the drug GER disappeared in the esophagus and were absent during 13 hours. Conclusion: The received data enable us to say that esomeprazol apart from antisecretory action has a prokinetic effect.

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INTERACTIVE COMPUTER-ASSISTED PROGRAMS FOR CLINICAL CYTOLOGY IN POSTGRADUATE MEDICAL EDUCATION AND PRACTICE

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Objectives. Clinical cytology plays an important role for obtaining the accurate morphological diagnosis. The main problem in diagnostic cytopathology is the probability of human error in interpretation of cell pathology. The objective of the study was to analyze some results of computer application in cytological practice. Images from cytological smears were acquired using video and digital cameras fitted to the microscope. The results of collaborative work of cytopathologists, pathologists and programmers during more than 15 year will be presented.

Materials and Methods. 5457 cytological images from 645 patients have been used to create a database for the interactive computer-assisted programme (ICP). Images have been taken from cytological slides made by the conventional and LBC technique in different nonneoplastic, precancerous and neoplastic lung, breast, thyroid, stomach and cervical lesions.

Results: The ICP has been created in order to assist cytopathologists in learning and interpretation of the cytological slides. Glossaries of morphological features and nosological forms have been developed. The glossary consists of cytological criteria characterizing

normal cells, reactive changes, various cellular and structure abnormalities: size and shape of cells and nuclei, size of cytoplasm, chromatin details, structures, presence or absence of nuclear atypia, background of the smear, presence or absence of various bacterial agents et cetera. The nosological forms glossary was designed according to the ICD (O), WHO classification and the Bethesda System. All images in the ICP were described according to the available cytological features and classified by the nosological forms. Red arrows help to find the definite cytological sign in the images. The ICP allows to view all the images from the database, to search the images classified by morphological features and nosological forms and to browse the results. There is a possibility to edit the images from the database and to add new ones. The ICP can give the percentage ratio of morphological features for each available nosological form and the percentage ratio of nosological forms for each available morphological feature. The ICP was tested on archival cytological slides by 103 cytologists and cytotechnologists who have different practice in clinical cytology.

Conclusion: The main result of this work is the optimization of clinical cytology by information technologies. The results of testing showed that the ICP provides a lot of data that can be helpful in teaching, training and self-training in clinical cytology as well as in routine practice and thus can be used for improving the health care.

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FEATURES OF CHANGES THE STRUCTURE OF THE THYROID GLAND IN EUTHYROID GOITER

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The purpose of scientific work is associated with investigation of the changes in parenchime and stroma of the thyroid gland in euthyroid goiter. 60 cases of euthyroid nodular goiter were investigated. Control - 20 cases of cadaver material. The disease is mainly pronounced in women 30 to 60 year old; duration of disease, from a few months to 20 years. The material was stained with hematoxylin-eosin and picrofuxin by van-Gieson method. In euthyroid goiter follicles forms are generally circular or oval, they are medium or large size. The lumen of the follicle is filled with colloid observed in some central vacuolization. Structure and tinctorialic properties of colloids in different cases are different.

There are desquamation, degeneration and apoptosis of thyroid cells pronounced in euthyroid goiter. As a result of proliferation, B-cell creates accumulation of microfollicles that are devoided colloid. The population of cells characterized with polymorphism.

There were identified three groups of colloid goiter. In 60 cases, 30% was observed colloid nodules without proliferation of follicular epithelium with a thick colloid from the thyroid cells both flat and cubic forms. In 45% of cases there was a colloid goiter

with marked epithelial component and a partial follicular cell proliferation. In 25% proliferating colloid nodules were observed.

In nodular euthyroid goiter has a pronounced heterogeneous structure. Proliferative activity has a weak and moderate. However, in some cases, there are areas with highly follicular cells. In some cases, these cells creates microfollicular structures directed to the lumen of the follicles. In case of euthyroid nodular goiter lymphoid infiltration is focal.

In nodular euthyroid goitre there are absorved degenerative and dystrophic processes in the connective tissue. Large foci sclerosis, occasionally with calcinosis and bone formations was revealed. There is accumulation of extracellular siderofagi and hemosiderin. Regressive changes causes cystic nodes degeneration. There are changes in the necrosis and fibrosis form. In the stroma and the follicles are found hemorrhages, eritrostaz, erythro- and leykodiapedezis.

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SOME DATA ON STRUCTURAL CHANGE OF PHARYNGEAL GLANDS OF RATS AFTER A COURSE OF DIFFERENT BALNEOLOGICAL PROCEDURES

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For the purpose of investigation of structural characteristics of pharyngeal glands after course influence of various balneological procedures the experiment on 90 sexually mature 3-month old male rats (weight of 180-200 gram) has been made. Three series of rats were studied in experiment, for each series there was a control. Histological sections of the posterior wall from the upper, middle and lower thirds of the pharynx were studied. The received micropreparations were colored with H&E, Van Gienson's picrofuchsin.

Results of our researches have shown that the glands of pharyngeal wall of rats changed after course of the iodobromic, bituminous and strong sulfide influences. Under influences of the iodobromic and bituminous course of balneological procedures the sizes of glands increased. Results of the received data show that the thickness of initial part of pharyngeal glands was 1.3-1.4 times more than control indexes ($p < 0.05$), the area of initial part – 1.5-1.8 times ($p < 0.05$), the area of excretory duct – 1.7-2.9 times, also the parenchyma of initial part of gland 1.1 times ($p < 0.05$) were more than control. After influences of strong sulfide baths the «morphological regression» of glandular apparatus of pharynx of rats was defined. The thickness and area of initial part, quantity of secretory parts of glands and also the quantity of parenchyma of gland decreased relatively to control, respectively: 1.2-2.2 times ($p < 0.05$), 1.4-1.8 times ($p < 0.05$), 1.2-1.8 times ($p < 0.05$), 1.2 times ($p < 0.05$).

According to this data we conclude that the using of strong sulfide baths in resort practice has a potential danger, however the iodobromic and butiminous influences are effective and safe.

I.V. Shadrina
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ABOUT TRANSFORMATION OF "THE COMBATANT PERSONALITY" TO "THE ORGANIC COMBATANT PERSONALITY"

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The problem of personal changes of prenozologic level (within accentuation), that arising at participants of modern wars, is fixedly studied by psychiatrists. On the basis of A.E.Lichko's (1983) and E.G. Eydemiller's (1994) works theoretical preconditions to development of the concept of "The Combatant Personality" (Lytkin V. M., 2002) were made. This problem is offered to be solved by taking into account a number of factors: social and psychological features of the present stage of development of the Russian society, dynamics of personal changes, basic traits of character, "points of the weakest resistance", interactions of the acquired and premorbid personality features. Total influence of these factors causes formation of "A combatant accentuation". Researches showed that when mental disorders are forming at combatants it is also necessary to consider "causality" and "predisposition" (Litvintsev S. V., 1994; Snedkov E.V., 1997; Kotov S. A. 2010). Our researches added this concept with the idea, that within "predisposition" the factor of residual and organic cerebral insufficiency (Kovalev V. V., 1978) is significant. To the end of the puberty age (16 years) residual and organic manifestations can be compensated therefore a conscription to the army is quite reasonable. However the impact of adverse factors to the "combatant personality" can decompensate residual and organic cerebral insufficiency. Thus the war mental trauma leads to bigger "loosening" of residual and organic "soil", causing the development of sharp PTSD. At the condition of influence of additional adverse factors of a war situation, especially brain traumas and contusions (uncured or insufficiently treated), the organic disorders which symptomatology is still latent start being formed. The forming organic disorders fixes PTSD symptomatology, causing transition it to the chronic current. Chronic PTSD in the subsequent, after demobilization, in turn, promotes social maladaptation of combatants. On this background a new negative factors that impact central nervous system (abuse drugs, brain traumas – usually somatogeniyas and psychogeniuses) are appered. Organic problems, on the basis of PTSD are increasing; the latent symptomatology becomes obvious. Various organic disorders of the period of the remote consequences of a war mental trauma are formed (organic – disturbing, asthenic, affective, depressive is more often, dissocial; organic psychosyndrome). Thus, "the combatant personality" is transformed to the "organic combatant personality" with a wide range of the emotional and personal problems causing it social and psychological decompensation in a peace time. Adequate and timely psychologo-psychiatric mesuares in the sharp period of a war mental trauma, and in the period of its remote consequences, can prevent the transformation of the "combatant personality" to "the organic combatant personality".

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TO THE QUESTION ABOUT THE USE OF ENDOPROTHESIS WITH IMPLANTS IN OPERATIVE TREATMENT OF JUGORBITAL SYSTEM

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The problem of restoration of the jugorbital complex in short supply of soft tissues including skin tissues has been representing the confusing task in surgery.

Nowadays the biological materials as auto- and allogenic transplants can be used in clinical practice for this purpose.

Along with this the implant constructions such as titanium, zircon endoprothesis and the constructions made of carbon alloy and synthetic polymer are widely introduced in last couple of years.

The advantage of synthetic polymers to biological materials is on their stereo lithographic technology of production in laboratory conditions and on the lack of necessary to correct them during the surgical manipulation.

The benefits of biological materials are on their features such as the lack of antigenic and toxic properties, the probability of their resorbing and elimination.

Today the restorative operative treatment of jugorbital system including the treatment of other supporting structures of facial skeleton in applying the endoprothesis are perfectly improved and generally they let to achieve the main goals.

But in order to cover the endoprothesis in the lack or shortage of soft tissues of the specified areas usually can be used the complex of soft tissues taken from the areas bordering with defect including the vascular pedicle. Unfortunately, this manipulation cannot be used in operative treatment of patients who have had extensive or mechanical injuries of facial and head zones with large destructive lesion of skin and soft tissues.

In these situations the use of round stalk in order to eliminate the previously said defects of listed areas must be the proper procedure.

N.A. Shcherbina
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I.N.Shcherbina

THE HLA-TYPING ROLE IN PROGNOSING THE METABOLIC SYNDROME IN PERIMENOPAUSAL PERIOD

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At present the frequency of the metabolic syndrome in women of different age has been increased. It is dealt with worsening the ecological situation and as a result of it the worsening of character and quality of food. In connection with this the prognosis of women's metabolic syndrome development is an actual problem of modern gynecology. To solve this problem we have investigated 210 women in perimenopausal period, 106

(50.5 %) of which had metabolic syndrome and 104 (49.5 %) without it.

The HLA-typing has been defined for all the patients using the complementdependent cytotoxic reaction according to U.M. Zaretsky (1983). The serum series of Hematology and Transfusiology have been used for typing. As a result of the investigation carried out it was shown that the patients with the metabolic syndrome in sublocus A more often had the following alleles: A1 (in 56% cases) and A-3 (in 31% cases);in sublocus B, B7 (in 18% cases) and B27 (in 41% cases);in sublocus C, C5 (in 11% cases) and C-8 (in 21% cases); in sublocus DR, DR2 (in 32% cases) and DR5 (in 29% cases). Women without metabolic syndrome in sublocus A more often had the following alleles: A1 (in8% cases) and A-3 (in 7% cases); in sublocus B - B7 (in 6% cases) and B27 (in 4% cases); in sublocus C – C5 (in 6% cases)and C8 (in 22% cases); in sublocus DR – DR2 (in 11% cases) and DR5 (in 7% cases).

The data obtained show that the patients with metabolic syndrome are more often the carriers of haplotypes A1B27C5DR5 (11%), A3B7C8DR2 (10%), A3B1C8DR5 (7%).

The risk of developing metabolic syndrome with women in perimenopause period has been calculated according to the formula X=hp (1-hc)/hc (1-hp), where hp is the patients sign frequency; hc is the sign frequency that is typical of the patients under control; for allele A1 is 10,3; A3 is 5,2; B7 is 3,4; B27 is 16,6; C5 is 1,9; C8 is 0,9; DR2 is 3,8; DR5 is 5,4.

The research carried out testifies to the fact that the patients who are the carriers of alleles B27 and DR5 are in the zone of the greatest diathesis as to the development of metabolic syndrome in the perimenopausal period.

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POSSIBLE MARKERS FOR OOCYTE QUALITY UPON IMMUNE OVARIAN FAILURE

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Immune diseases of the female reproductive system, especially the ovaries, are widespread and have adverse effect on fertility. So it is important to find new approaches to create a more adequate therapeutic strategy for the prevention and treatment of reproductive disorders.

Oocyte quality is a key limiting factor in female fertility. Traditional methods for the evaluation of oocyte quality are based on morphological classification of the follicle, cumulus-oocyte complex, polar body and/or meiotic spindle. The use of the grading system can provide valuable information for the preselection of oocytes with higher developmental competence, but such assessment of oocyte quality is a somewhat subjective. It is important to detect the biochemical markers for embryo development, which would

increase the chances of a successful pregnancy with IVF by optimizing oocyte and embryo selection, and allow fewer embryos to be transferred. It is known that the oocytes are closely associated with cumulus cells, and oocyte-cumulus cell communication is vital to oocyte development. So gene expression analysis of cumulus granulosa cells is a promising non-invasive technique for determining embryo quality.

The aim of this study was to determine in the experimental model of immune ovarian failure in mice whether transcript levels in cumulus cells can provide a useful marker of oocyte developmental competence.

The CBA mice were immunized five times with the ovarian extracts from BALB/c mice. The first immunization (0.1 mg of protein per g of body weight) was made subcutaneously in complete Freund's adjuvant. A week later, intravenous immunizations were started. Mice were injected four times within two weeks with 0.025, 0.0375, 0.05 and 0.07 mg of protein per g of body weight, respectively, without an adjuvant. Six days after the last injection, the mice were killed with an overdose of nembutal, and their ovaries were sampled. The control mice received equivalent volumes of normal saline and were treated similarly to those of experimental groups.

We have shown that the treatment reduced the amount of oocytes in ovary, impaired the oocyte meiotic maturation as well as reduced the number of viable follicular cells and increased the number of cells with morphological signs of apoptosis and necrosis. It were assessed the gene expression of hyaluronic acid synthase 2 (HAS2), gremlin1 (GREM1), and cyclooxygenase-2 (COX-2), which are important regulators of reproductive events, such as oocyte maturation, ovulation, fertilization. Semi-quantitative reverse-transcriptase polymerase chain reaction measurement of HAS2, GREM1, and COX-2 mRNAs was performed and data for all genes were obtained from all the control samples.

HAS2 transcript levels in cumulus cells isolated from oocytes of immunized mice were 1.9 times lower than those detected in cells from control mice; while expression of GREM1 and COX-2 mRNAs was undetectable in immunized mice. Therefore our studies of cumulus cell gene expression indicated that HAS2, GREM1, and COX-2 are possible markers for oocyte quality in mice with immune ovarian failure. Such results add further evidence to the literature data supporting the concept that cumulus cells are a promising source of reliable markers for predicting oocyte quality, and they would provide useful information that adds to the morphological selection in women with different reproductive disorders.

The results indicate that the measurement of HAS2, GREM1 and COX-2 mRNA levels in cumulus cells would reliably complement the morphological evaluation providing a useful tool for selecting oocytes with greater chances to be fertilized and develop in vitro.

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COMPLEX THERAPY OF NON-PSYCHOTIC DEPRESSION IN SCHOOLCHILDREN AND STUDENTS

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In the XXI century proved that depression - is a global medical and psycho-pedagogical, not just psychiatric problem. It is a standard psychiatric nonpsychotic depressive disorders network level have the most negative impact on the psychosomatic state of children, adolescents and adults, their emotional status, academic performance, efficiency, commitment to effective treatment and a healthy lifestyle.

The aim of the work was the study of the effectiveness of non-drug treatment of depressive disorders, non-psychotic level as monotherapy and as an integrated treatment of patients with childhood and adolescence.

The study involved outpatients with clinical and psychopathological, psychometric, questionnaire, clinical-dynamic and statistical methods 258 patients.

The diagnoses according to ICD-10 were - a reaction to severe stress and adjustment disorders, depressive reaction with mixed anxiety and depressed mood, F43.22; mild depressive episode with somatic symptoms, F32.01. Graded scale Hamilton Depression Rating - from 8 to 16.

All study patients ranged in age from 7 to 18 years, mean age - 10, 8±2,5 years, from them were females - 96 (37.2%), men - 162 (62.8%). They were divided into three groups and control groups.

The first group was treated with a combination of psychotherapy and physical therapy (exercises), the second group - to apply a combination of psychotherapy and reflexotherapy (acupressure), the third group - the use of acupressure and physical therapy exercises. Finally, the control group was used only short-term integrative psychotherapy.

In the first group of 66 patients had 32 children 7-12 years old and 34 adolescent aged 13-18. In the second group, which used the methods of psychotherapy and reflexotherapy, there were 64 people, including 32 patients 7-12 years old and 32 adolescent aged 13-18. In the third group (acupressure and psychotherapy) of the patients were 63, including 32 children 7-12 years old and 31 adolescent 13-18 years.

A clinical examination with assessment of mental status at the time of the initial inspection and the dynamics of using standardized psychometric assessment scales: the Clinical Global Impression scale (CGI), the Hamilton Depression Rating Scale (Hamilton Rating Scale for Depression (HRSD or HDRS-17) and used a questionnaire Zung and Children's depression inventory (CDI).

All materials are open stratified comparative study were subjected to statistical analysis using the methods of parametric statistics (by Student t-test) with the help of

computer programs, Microsoft Office Excel 2007-2012 and statistical package BioStat 2009 Professional.

In this case, the use of therapeutic exercises in combination with short-term integrative psychotherapy in group 1 compared with the other groups already on day 14 of treatment was more effective, but the difference was not significant ($p>0,05$).

On day 28 showed a significant benefit of using psychotherapy and exercise therapy is relative, as the control group and the group, which was used psychotherapy and reflexotherapy ($p<0.05$).

In all groups except the control group, there was a decrease below the level of clinical depression, but in the third group it was significant enough to confirm the effectiveness of the combination of physiotherapy and acupressure for the treatment of this disease ($p<0,05$).

Combination of methods exercise therapy with reflexotherapy and psychotherapy can improve the effect of treatment of non-psychotic depression in children and adolescents 7-18 years old compared with the use of only one of psychotherapy techniques that monotherapy is not effective for the treatment of affective disorders border ($p<0,05$). In this case, a more efficient set of exercise therapy and psychotherapy with children 7-12 years and adolescents 13-18 years - a combination of reflexotherapy and psychotherapy ($p<0,05$), and the simultaneous use of exercise therapy and reflexotherapy in this condition was similar in both age groups ($p>0,05$).

Siegfried Schink

AKUTNACHSORGE UND REHABILITATION BEI ARTERIEN- UND VENENKRANKHEITEN

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Patienten mit arterieller Verschlusskrankheit (pAVK) haben eine deutlich verkürzte Lebenserwartung. 2011 wurden in Deutschland 200.000 arterielle Interventionen und 30.000 arterielle Operationen vorgenommen. Durch die Akutnachsorge (Wundversorgung, Mobilisierung, Schmerztherapie, Infektionsbehandlung, Hyperperfusionsödem) und die anschliessende Rehabilitation (aktives Trai-ning, balneophysikalische Anwendungen, Vacumed, Schulungen, Hilfsmittel, Schuhversorgung) werden diese Patienten schnell und schmerzarm mobilisiert. Ihre Gesamtprognose wird verbessert.

Patienten mit schwerer venöser Insuffizienz (CVI) haben eine deutlich eingeschränkte Lebensqualität. Die Vermeidung der CVI durch optimale Varizenchirurgie und richtige Thrombosebehandlung steht an 1.Stelle; die Nachsorge und Rehabilitation wird dominiert durch adäquate Kompression und angepassten Lebensstil.

Elena A Shishkina

ÖKOLOGISCHE GESUNDHEIT ALS EIN MEDIZINISCH-SOZIALESPROBLEM

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Die Menschheit als Teil des natürlichen Raumes agiert nicht nur als Quelle seiner Degradation, sondern auch als Opfer eigener sozialer Tätigkeiten, wovon die Qualität der physischen und sozialen Gesundheit der Menschen sprechen. „Heutzutage gibt es keine Gründe, das Vorhandensein von ökologisch bedingten Krankheiten zu bestreiten. Es ist eher notwendig, sie in dem Gesamtstrom von pathologischen Entwicklungen, die durch exogene chemische, physische und andere Faktoren des menschlichen Daseins verursacht sind, zu suchen". [Ökologisch bedingte Krankheiten. Epidemiologie von ökologisch bedingten Krankheiten. / - Online-Ressource. http://medicalplanet.su/512.html - Zugriff: 08.03.13].

Die bezeichnete Situation ist offensichtlich, daher ist es wichtig, die Erforschung der ökologischen Gesundheit als komplexes medizinisch-soziales Problem, dass dem Entstehen von ökologischen Gesundungsprogrammen und deren Einführung in das praktische Gesundheitswesen entgegenwirkt, zu betrachten. Die Gründe, die die klinische Untersuchungen von ökologisch bedingten Krankheiten erschweren, sind das symptomatische Polymorphismus und ein häufiger Mangel des spezifischen Bildes, wodurch ein oder anderer Symptomenkomplex zu einer Gruppe von bereits bekannten Krankheiten gezählt wird, die jedoch die ökologische Genesis nicht berücksichtigen. Die Mehrheit von klinischen Untersuchungen bietet sehr isolierte Ergebnisse, die mit den Daten des Umweltmonitorings und sozialen Lebensbedingungen nicht verbunden sind. Gleichzeitig werden „die Gesundheit und Krankheit in der medizinischen Soziologie in einem breiteren Kontext als der menschliche Überlebenskampf und die Anpassung an Lebensbedingungen betrachtet. Die Anpassung des Gesundheitswesens soll in breiteren politischen und sozialen Aspekten betrachtet werden". [. V. Reshetnikov. Soziologische Betrachtung der Medizin. //Medizinsoziologie, 2003, No. 1, S.5]. Der Hauptteil der klinischen und statistischen Parameter ist unvollständig und weltweit nicht klassifiziert; er gibt keinen klaren Vorstellungen über die ätiopathogenetischen Mechanismen der ökologisch bedingten Krankheiten und der Dynamik ihrer Entwicklung.

Die moderne Wissenschaft ist durch eine Reihe von Ansätzen ergänzt, die die Verwandlung der menschlichen Gesundheit unter dem Einfluss des ungesunden Lebensraumes untersuchen. Diese sind Umweltmedizin, Umweltepidemiologie, Umwelthygiene, Umweltpsychiatrie, Ökologische Medizingeographie, Umwelttoxikologie sowie andere interdisziplinare Wissenschaften. Gleichzeitig sind sie lediglich eine theoretische Ökologisierung des Konzeptes und vom praktischen Gesundheitswesen weit entfernt.

Die Analyseschwierigkeiten der ökologischen Gesundheit sind ebenso durch die Unzugänglichkeit zu zuverlässigen Informationen über die Erkrankungshäufigkeit der Bevölkerung, die in der Nähe von umweltschädlichen Objekten lebt und arbeitet, bedingt.

Ein Interessenmangel der Behörden an die informative Klarheit führt dazu, dass die Mehrheit von medizinischen Institutionen über diese Information gar nicht verfügt. „Der trendige Terminus „Klarheit" bezüglich der Behörden agiert als Model von unendlichen PR-Technologien und -Spielen, die Politiker und Bürger miteinander spielen, wobei die Letzten in der Wirklichkeit schutzlos werden". [E.A. Shishkina. Staat und Informationstechnologien in der konfliktologischen Dimension./ Rolle der Konfliktologie in der Sicherstellung der Zusammenarbeit zwischen dem Staat, Business und der Zivilgesellschaft. – Materialen des III Internationalen Kongresses der Konfliktologen. / Kazan: Kazan Staatliche Technische Universität, 2010, Band 2, A. 140].

Der Hindernis-Komplex für die Ökologisierung des Gesundheitswesens ist nicht nur die hier erwähnten Parameter begrenzt. Er umfasst einen breiten Spektrum von methodologischen, wirtschaftspolitischen und sozial-moralischen Problem, die eine systematische Betrachtung auf unterschiedlichen Wissensstufen erfordern.

S.V. Sivakon
A.S. Sivakon

RESULTS OF THE SURGICAL TREATMENT OF DUPUYTREN'S CONTRACTURE

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Topicality: In spite of the ongoing research work, both the etiology and pathogenesis of Dupuytren's contracture remain unknown, that is why there are no pathogenetically justified methods of conservative treatment. According to the opinion of the majority of authors, at the moment there is no alternative for the surgical treatment for the disease. However, the results of the surgical treatment remain very modest, which is explained by a high level of complications, relapses and unsatisfactory late results.

The objective was to compare the traditional Dupuytren's contracture surgical treatment "open palm technique" with our method of plastic removal of cutaneous covering defects.

Materials and methods: The results of the surgical treatment of 250 patients with Dupuytren's contracture were observed in the course from 1 to 14 years. The patients were divided into 2 groups. The first group included 195 patients who had a subtotal aponeurotomy with the subsequent "open palm technique" according to McCash. The second group consisted of 55 patients, who had a partial distal aponeurotomy with the subsequent removal of skin defects according to the original Z plastic surgery developed by us or island vascularized skin grafts.

Evaluation indicators were duration of treatment, level of complications and relapses and the restoration level of the hand after surgery in the long-term period.

Results: The average treatment duration depended on the degree of manifestation of the contracture of fingers and was 67 days in case of stage II contracture (flexion up to 45°), 75 days in case of stage III (flexion from 45° to 90°) and 80 days in case of stage IV (flexion more than 90°) in the first group. In the second group, the duration of treatment was 1.5

shorter, in case of stage II – 28 days, in case of stage III – 45 days and 46.5 days in case of stage IV.

The complications were divided into 3 groups: intrasurgical complications, which occurred during the surgery (anatomical structure injuries); complications of the early postsurgical period, which occurred during the period of wound healing (the first 3 weeks of the postsurgical period, e.g. ischemic necrosis of the island graft, hematomas, marginal skin necrosis, suppuration, finger nerve neuritis, slow wound healing, neurodystrophic palm syndrome); and late complications, which occurred during rehabilitation (e.g. stiffness of fingers).

The intrasurgical complications occurred in 4.0% in group I and in 1.8% in group II. Early complications took place in case of 27.0% of patients of group I and 13.7% of patients of group II. Late complications occurred in 24.4% in group I and in 14.5% in group II. On average, the level of complications was approximately 2 times higher in group I, which, in our opinion, was connected to the peculiarities of the secondary wound healing while using the "open palm technique".

While studying the quality of the long-term treatment results we used an evaluation system which takes into consideration the initial contraction of fingers in relation to the restoration of the movement volume: full range of movement – "good"; contracture up to 25% from the initial one – "satisfactory", and disease relapse – "unsatisfactory".

In group I good long-term results were obtained in 59.6%, satisfactory results in 7.8% and unsatisfactory results in 32.6%. In group II: good in 79%, satisfactory in 18.3% and unsatisfactory in 2.7% of cases.

Conclusions: A partial distal aponeurotomy with the subsequent plastic surgery of skin defects enables a reduction in the treatment duration in 1.5 times, the number of complications in 2 times, an increase in the number of good long-term results and a decrease in the number of unsatisfactory results in comparison with a subtotal aponeurotomy with the subsequent wound treatment with the "open palm technique".

S.V. Sivakon
S.V. Bichinov

A NEW METHOD OF PLASTIC SURGERY OF SUBCUTANEOUS DEGENERATIVE RUPTURES OF HAND EXTENSORS

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Topicality: A significant part in the number of injuries in the finger extension area is played by injuries in the region of the distal interphalangeal joint. Closed subcutaneous tendon ruptures take place in 74% of cases. In 80% of cases the reason for the subcutaneous rupture is caused by its degenerative and dystrophic change. Conservative treatment of degenerative ruptures is ineffective and a surgical restoration by means of sewing the ends together is impossible. The existing methods of plastic replacement of the tendon of the distal hand extensor have a wide range of disadvantages and, therefore, complications.

The objective of the study was to develop a new rational method of plastic surgery of degenerative subcutaneous ruptures of tendons of hand extensors.

Materials and methods: We have developed a new method of plastic surgery of the distal hand extensor, the principle of which is presented further. First, there is a Z-shaped cut above the distal interphalangeal joint. The place of the tendon rupture is now open and its proximal end is singled out. At the base of the nail bone, closer to its back surface, we form a transverse canal with a diameter of 3 mm. The canal receives an autograft from the tendon of the long palmar muscle. The ends of the autograft cross above the distal interphalangeal joint and the crossing zone is sewn to its capsule. Then the ends of the autograft are sewn to the lateral cords of the proximal end of the distal extensor. At the final stage of the operation, the distal interphalangeal joint is fixed in the extended position with the help of two spokes places paraxial along the lateral finger surfaces. In the postsurgical period, there is an additional external immobilization up to three weeks.

The interbone execution of the autograft enables its secure fixation to the nail bone. The cross anchoring of the ends of the autograft to the lateral cords of the proximal end of the distal extensor prevent their shift towards the lateral finger surfaces when bending the distal interphalangeal joint.

Results: 32 patients with subcutaneous ruptures of the distal extensor had surgery according to the method presented above. There were 2 cases with complications. In the first case, a break of the back cortical plate of the nail bone when forming the canal, which required an additional fixation of the autograft. The second complication was an inconsistent suture between the autograft and the proximal tendon end, which led to the gradual hammer-shaped finger deformation. Good functional results were received in 31 cases.

Conclusions: Thus, the suggested method is technically simple and yet effective enough and can be recommended to the wide use in practice.

T.V. Smelaya
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A.M. Golubev
L.E. Salnikova

ROLE OF THE FUNCTIONAL POLYMORPHISMS IN THE CYP1A1, ACE AND IL-6 GENES CONTRIBUTE TO SUSCEPTIBILITY TO COMMUNITY ACQUIRED AND NOSOCOMIAL PNEUMONIA.

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Community-acquired and nosocomial pneumonia are frequent infectious problems that have no tendency to significant reduction. Objectives: To establish the contribution of genetic host factors to the risk of community acquired pneumonia (CAP) and nosocomial

pneumonia (NP) in the population of Russian Federation.

Methods. From January 2008 to October 2011 a total of 334 patients (307 males and 27 females; age range 18-55 years, mean age 27 years) from Russian Federation with CAP, hospitalized at the clinical bases of V. A. Negovsky Research Institute of General Reanimatology, Moscow, Russia were included in the study. The diagnosis of CAP was based on the presence of acute symptoms resulted from lower respiratory tract infection, confirmed by clinical, radiological and laboratory data. Hospitalization was ascertained based on participantself-report and active surveillance by medical personnel. The control group consisted of 134 unrelated healthy volunteers without a previous history of pneumonia (130 males and 11 females; age range 18-52 years, mean age 29.1 years).

Design. We analyzed 13 polymorphisms in 11 genes (IL-6, TNF-a, MBL2, CCR5, NOS3, CYP1A1 (3 sites), GSTM1, GSTT1, ABCB1, ACE and MTHFR) in patients with CAP and NP. A total of 796 patients and controls were included in two case-control studies. The genotyping was performed using tetra-primer allele-specific PCR-method.

Results. Individual SNP analysis has revealed the strong association between the CYP1A1 rs2606345 and CAP (P = 3.9 x 10-5, OR = 0.42, 95% CI 0.27-0.63). Three genes (CYP1A1, ACE, IL-6) have been identified that account for part of the increase in vulnerability to both diseases CAP and NP. The carriage of three predisposing genotypes versus protective genotypes increased CAP risk (P = 0.001, OR = 7.01, 95% CI 1.99-24.70) and NP risk (P = 0.028, OR = 4.34, 95% CI 1.15-16.45).

Conclusion. Genetic predisposition to CAP and NP is attributed to cumulative contribution of

polymorphisms at CYP1A1, IL-6 and ACE genes independently of age, gender, type of causative pathogen and use of mechanical ventilation in patients from Russian Federation.

Keywords. Community-acquired pneumonia, nosocomial pneumonia, gene polymorphism, CYP1A1, ACE, IL-6.

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EXPERIENCE OF APPLICATION MCKT IN REVEALING OF PATHOLOGY OF VESSELS

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Introduction. In the given report results of inspection of patients with a various pathology of vessels, including a pathology of vessels of a brain, lungs, a mediastinum, the upper and lower extremities, vessels of an abdominal cavity and a small basin are resulted. Stenosis and occlusions, arteritis and thrombosis, coartation of aorta, revealing of stenosis and occlusions after transplantations, preoperative specification of anatomy of vessels, an establishment of thromboembolisms of pulmonary vessels and an other pathology.

Improvement of visualization of the received data with application of special algorithms

of reconstruction of images was the purpose of our research of revealing of advantages _T -angiography over an arteriography.

Materials and methods. Researches were spent on computer tomograph Asteion Super 4 (Toshiba) in a spiral regimen,CT-64 sleis with thickness of a section from 0.5 mm and more. Automatic start from bolus SURE START was used. Processing of the received data was carried out by means of workstation VITREA 2 (Vital Images Inc)and VITREA 3. To patients 100-150 ml of not ionic contrast agent (350.0 – 370.0 mg of iodine/ml) with bolus rate of 3.0-3.5-4.0 ml/seconds were entered.

Results: From 335 observed at 81 has been taped arterial an aneurysm (36 – the ACA/ ACA, 19 – MCA, 14 – ICA, 12 – the basic artery); at 25 patients it is taped arteriovenous malformation (AVM); at 13 – KKA an anastomosis; at 15 – a venous angioma; at 16 – a tortuosity and deformationof ACA, at 1 – the aberration of the right subclavial artery; at 12 – an aorta coarctation; at 18 – an aortic aneurysm, at 8 – TELA; at 14 – an atherosclerosis of vessels of the lower extremities, 2 vessels of the upper extremities, stratifying an aneurysm of thoracical department of an aorta it was observed by us at 6 patients, abdominal department of an aorta at 8.

Conclusions: CT- angiography allows to visualize simultaneously walls and a lumen of vessels under any angles at unique data gathering, to receive images in the projections inaccessible at a usual angiography (for example, cranio-caudal); to reduce a radial load on the patient; an exception of risk of occurrence of complications from the surgical manipulations necessary at a usual angiography.

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SOCIAL, ENVIRONMENTAL AND INDIVIDUAL FACTORS IN THE DEVELOPMENT OF DISEASES OF MAMMARY GLANDS IN WOMEN

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Introduction. Characteristic of the polyetiologal of non cancer diseases of mammary glands causes the study of the influence on the development of the disease pathology of the reproductive system, extragenital diseases, the mental state of women and environmental factors.

Aim of the study: to assess the psychosocial and somatic risk factors promoting the development of diseases of mammary glands of the women of the city

Patients and methods. A questionnaire survey was conducted by the method of questioning of 171 women with non cancer diseases of mammary glands at the age from 17 to 67 years. The genital and extra-genital pathology was analyzed. The social factors of strong (excess) motivation were investigated on the methods of L.N.Sidorenko, 1998.

The results of the study. The women in the group of our respondents of our city were

married 75%. Dissatisfaction with the family experience felt 47% of them. The presence of domestic conflicts had 80% of the women, conflicts at work - 65.5% and mental stress felt 87.7%, sexual factors had 58% of the women It is necessary to note that the presence of all the five factors indicated 28.7% of the women, the four factors of the mentioned above - 13,5% , three of them - 31%, two - 22,2%, one factor had 4.1%. Only one of the women does not have any negative social factors (0,5%).

25,6% of the women suffered from accompanying diseases were such as gynecological - 25,6%, diseases of the liver - 19%, cardiovascular - 15%, thyroid - 12%, other diseases - 14,5%. Accompanied diseases were not revealed at 13.9% of the patients. Overweight and obesity had the young women in 17-26 years in 8.7% of the cases, t he 27-36 year-old women - 14%, 37-46 year-old - 46%, 47-56 year-old - 73,6%, 57 - 67 year-old - 77%.

Thus, we can give the following psychosomatic characteristic of the patients with non cancer diseases of mammary glands. They are the women of reproductive age (62%), married (75%), but with dissatisfaction of marital status (47%). Their work and family life is in frequent conflict with others (65,5 per-80%). These women are inclined to corpulence and ¼ of them suffer from gynecological diseases.

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PREVENTION METHODS FOR THE INFLUENCE OF THE FUEL-AND-POWER SECTOR EMISSIONS ON THE ENVIRONMENT AND POPULATION HEALTH ON THE BAIKAL NATURAL TERITTORY

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The fuel-and-power sector is one of the main emission sources of pollutants in the air.

Coal is the absolute dominant in the energy balance of the Baikal Natural Territory (BNT). Its share in the total primary fuel and energy resources is approx. 95%.

The influence of the atmospheric air pollution on the mortality rate was assessed in Ulan-Ude, where the emissions from the Thermal Power Station 1, working on coal, led to the formation of a high level of air pollution by suspended particles. On the basis of the risk assessment methodology it was determined that the share of additional mortality caused by the influence of these particles made up 17%, with the average in the country being 3%.

According to our calculations, besides the harmful emissions, 3800 t of oxygen are used by Thermal Power Station 1 and 2 and industrial and municipal boiler houses in Ulan-Ude. In order to compensate for it, it is necessary to have an area of afforestation of 78.6 thousand ha. The city now has only 790 ha.

One of the primary tasks of the power engineering in the BNT is a steady energy supply to residential houses, health resorts and agricultural sector with consideration for high environmental requirements for the fuel-and-power sector under conditions of a special economic management in the Baikal basin. Environmentally safe technologies based on renewable sources of energy fit these requirements.

During the development of the Russia's Renewable Energy Programme within the frame of the Global Energy Foundation, the authors have developed 14 projects on the basis of renewable sources of energy in order to build objects in the BNT. During their implementation the power will comprise 6474.45 kW, thus saving 1762.7 t of coal equivalent per year, which will prevent emissions of 4865 t/year of CO2 and using 9.6million t/year of oxygen.

These numbers clearly speak about an urgent necessity to replace boiler houses working on organic fuel by environmentally safe energy-efficient technologies based on renewable energy resources in order to improve population health and preserve the environment in the Baikal region.

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CHARACTERISTICS OF THE IMMUNE HOMEOSTASIS OF HUMAN ORAL MUCOSA IN THE AGE ASPECT

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[Introduction] The mucous membrane is implemented Border immune defense, so the study of cell-cell contacts of immune competent cells, especially local immunity associated with the mucous membranes directly into the mucous membranes, as well as their influence on the proliferation and apoptosis of epithelial cells is particularly relevant.

The aim of our research is to improve the quality and effectiveness of orthopedic dental treatment by taking into consideration local immune homeostasis of the oral mucosa in contact with various designs of dentures.

1. To develop modern methods of assessment of local immune homeostasis of the oral mucosa and to study its condition in orthopedic dental patients before treatment.
2. To study the local immune homeostasis of the mucous membranes, interacts with materials and structures of fixed prostheses, including dentures on implants.
3. To characterize of the immune homeostasis of the mucous membranes, interacts with the materials and structures of partial dentures.
4. To investigate the immune homeostasis of the mucous membranes, interacts with the materials and structures of complete dentures.

5. Develop algorithms for the selection and design of dental prostheses with the homeostasis of the mucous membranes, interacts with the materials and structures of dentures.

[Methods] Immune histochemical method with immune phenotyping markers SD68 (dendritic cells, Langerhans cells), SD163 (interstitial macrophages), SD204 (mast cells), CD4, CD8. Immune phenotyping was performed in the laboratory of the University of pathomorphology in Niigata city (Japan), markers specific for these cell types.

[Results] A morphological study RBCU biopsies taken from patients prior to dental prosthetics and in different types of occlusal rehabilitation prosthetic. We examined 97 patients aged 20 to 85 years who were in the control and experimental groups with associated pathology of dentition (focal and generalized catarrhal gingivitis to moderate). These patients were planned a prosthetic rehabilitation. Analysis of these and literature data on the peculiarities of local mucosal immunity gum area prosthetic bed in response to different methods of prosthesis showed that acute local inflammation occurred redistribution of immunocytes, their recruitment from the bloodstream in the inflammation and changes in the activity of proliferative processes in cells of the epithelium and lamina propria of the mucosa.

[Discussion] In the mucous membrane was recorded significant decrease in the level of cells of number of populations and subpopulations of keratinocytes in all age groups studied. These data give an idea of the leading of the pathogenesis of inflammatory changes in the gums, and identify ways of preventing the removal of the risk factors.

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ARRHYTHMOLOGY PROVISION TO PATIENTS WITH METABOLIC SYNDROME

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The aim of the study was to evaluate provision of arrhythmological services to patients with metabolic syndrome.

In Khanty-Mansiysk Autonomous Okrug-Ugra a three-stage system of providing assistance arrhythmology was established: I stage - polyclinic reception cardiologists and hospital care; II stage - a specialized high-tech medical care (consultative-diagnostic care in clinics, specialized inpatient cardio); III stage - clinical examination of patients in the developed algorithms, medical and social assessment of the effectiveness of treatments, the work of curators.

In Territorial Cardiology Clinic (II stage) dispensary registration of arrhythmology patients was divided into three areas: clinical examination by community cardiologists trained in the management of patients, survey arrhythmology at the Cardiology Clinic

and the issue of surgical treatment, postoperative outpatient arrhythmology Cardiology Clinic 2 once a year.

For the year 2012 5308 people were consulted. 2574 patients (48.5%) needed specialized assistance and further arrhythmology conservative therapy, of them 341 (13.2%) were with the metabolic syndrome.

We studied patients with the metabolic syndrome. There have been identified following cardiac arrhythmias: atrial fibrillation (103 patients – 30.2%), WPW syndrome - 33 (9.7%), supraventricular tachycardia - 71 patients (20.8%), antrioventrikular blockade - 46 people (13.5%), ventricular arrhythmias (41 people - 12.0%), weakness sinus (47 - 13.8%). During the year, the following types of aid arrhythmology were performed: radiofrequency ablation was performed in 172 patients (6.7%). The pacemaker was installed in 200 people (7.8%), programming the pacemaker was performed in 2050 patients (79.6%). 152 patients (5.9%) with cardiac arrhythmias underwent transesophageal electrophysiological study.

Thus, a three-stage system allows to monitor the effectiveness of treatment of arrhythmology patients with cardiovascular disease, the necessity of planning a heart surgery, to improve the availability and quality of specialized care.

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SURGICAL APPROACH IN PATIENTS WITH HIATAL HERNIAS

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Hiatal hernia (HH) is the most common cause of gastroesophageal reflux disease (GERD). In this condition reflux results from the alteration of anatomico-physiological components of sphincter apparatus of esophagogastric junction. The immediate cause of reflux esophagitis (RE) is a long-term contact of gastric and duodenal content with esophageal mucosa that frequently results in such complications as peptic ulcer, hemorrhage, stenosis, Barrett's esophagus.

In the division of children gastroenterological surgery we operated on 57 children for HH. The patients aged from 11 months to 17 years, among them there were 32 boys and 25 girls. For diagnostic purposes we used radiological, endoscopic examination with esophageal mucosa biopsy, pH-metry, which enabled to reveal hiatal hernia, reflux-esophagitis of various intensity, and in 12 patients – esophageal peptic stenosis. The stenosis was located in the lower third of the esophagus, the diameter of its lumen being 0.4-0.9 cm, the length – 1.5-2.5 cm. Before the operation all patients had frequently been provided conservative therapy.

Nissen fundoplication was the main surgical treatment technique and performed in 54

patients. Isakov-Kanshin modified operation was performed in 3 patients. After the surgery 4 patients had the recurrent disease. To exclude the recurrence, Nissen operation was complemented by cruroraphy (24), and esophagofundoraphy according to Chernousov (6 patients).

12 patients with esophageal peptic stenosis had combined therapy: in addition to the operative and conservative treatment, they underwent intraoperative balloon dilatation of the esophagus. 6 patients had a single dilatation procedure. 3 children underwent the dilatation twice, and 3 patients had three dilatation procedures. All patients had a follow up endoscopy 10-14 days after the operation. Esophageal patency in this group of patients was recovered.

Thus, operative treatment of HH should be complex and include conservative and surgical management: esophagofundoplication, cruroraphy and esophagofundoraphy, while peptic esophageal stenoses require balloon dilatation.

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ACTIVITY STATUS AND QUALITY OF LIFE OF PATIENTS OF PENSIONABLE AGE AS OBJECT OF SOCIOLOGICAL RESEARCH

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The health of the population of Russia is one of the foreground conditions of economic power of the state.

Recently, certain progress in protection of health of citizens of pensionable age was achieved. It was made not only by development of diagnostics and treatment, but also through separation of geriatrics as independent field of medical knowledge.

In the present study a short form of the questionnaire "Medical Outcomes Study Short Form (SF-36)" was used for evaluation of quality of life of patients of pensionable age. All questions of questionnaire are grouped in eight scales: physical functioning, role activity, bodily pain, general health, viability, social functioning, emotional and mental health. Data of each scale varies from 0 to 100 points, where 100 points means full health.

As a result of treatment the physical functioning index increased by 1.6 - from 29.3 to 46.9 points for men and by 1.5 - from 30.1 to 45.2 points for women.

During the treatment at the hospital level of role activity increased from 6.9 to 13.3 points for men and from 5.3 to 13.7 points for women, which means an increase of opportunities in their daily activities by improving the physical condition.

The indicator of pain increased from 46.3 to 56.5 points for men and from 44.1 to 58.7 points for women, which characterizes a reduction in pain intensity. Overall assessment of the health of the patients at the time of discharge increased in 1.37 times for men - from

34.2 to 47.0 points and in 1.3 times for women: from 32.7 to 42.5 points.

Treatment at the hospital has improved all indicators of psychological component of health. Life activity increased in patients (both in men and women), a certain sense of increased power and energy was noted. The indicator of viability in men increased from 32.9 to 43.1 points and from 33.3 to 44.1 points in women.

At the same time, the level of social functioning increased slightly - from 51.2 to 56.1 points in men and from 55.2 to 57.1 points in women. This is connected with the fact that patients have a rather low level of social contacts due to the age of patients and with poor physical and emotional conditions (but in a lesser degree).

After the treatment the level of role functioning caused by emotional state increased from 13.7 to 28.3 points in men and from 15.3 to 34.4 points in women. The positive dynamics of the indicator points to the fact that as a result of treatment the ability and the willingness to perform the necessary daily activities increased in patients.

Indicator of mental health increased slightly - from 55.3 to 57.1 points in men and from 53.4 to 56.5 points in women, but even this modest increase allows them to reach the level of healthy people.

The treatment has improved all parameters that characterize both physical and psychological components of the quality of life of patients of pensionable age. As a result of treatment physical and social activity, emotional status, subjective evaluation of emotional state, mood, and, in general, overall state of health were increased. However, the achieved levels of most parameters (except mental health indicators) were still lower than these ones in healthy people, mostly because of patients' age, which does not allow them to achieve optimal quality of life, even after the treatment.

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THE USE OF AUTOMATED SYSTEM CHOICE FOR TREATMENT OF PATIENTS WITH LYMPHATIC EDEMA OF THE EXTREMITIES

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The clinic hospital surgery examined 107 patients with varying degrees of lymphedema of the extremities. All our patients were divided into 2 groups with respect to the pathological process. The first group included 42 patients with grade 1-2 lymphedema, the second - 65 patients with grade 3-4 lymphedema.

We performed Spearman rank correlation analysis of the examined groups of patients to determine the relationship between various parameters: serum cytokines (TNF, IL-1, IL-6 and IL-10), the data of ultrasound linear size of lymph nodes (length and width) and indicators electromyographic (AMR, TL, ASR and SPE). It was found that the severity of clinical signs of lymphedema is directly related to the degree of changes in the parameters of the lymph nodes, serum cytokine and data electromyographic study. Based on this,

we have developed an automated system choice of treatment depending on the above parameters.

In the course of follow-up of patients with secondary lymphedema of the extremities and monitoring changes in the linear sizes of the lymph nodes, it was noted that their persistent increase (length, width) of more than 12,94 ÷ 18,51 mm and 5,98 ÷ 9,96 mm (from baseline values or norms in healthy individuals) lead to morphofunctional reorganization of lymph node. It is therefore necessary to carry out surgical correction of secondary lymphedema to increase the linear sizes of the lymph nodes, focusing on the upper bound of the presented ranges.

While receiving TNF index within the range 2,05 ÷ 4,38 pg / ml adequately to use surgery (overlay lymphoadeno or lymphoangiovenos anastomosis), if the above TNF - conservative. For IL-1, IL-6 and IL-10, the following ranges of values of cytokines, indicating the stability of the functional status of the patient 1,96 ÷ 4,44 pg / ml, 4,2 ÷ 7,58 pg / ml and 6,86 ÷ 10.92 pg / ml, respectively. The received data indicate that the level of cytokines in the serum of the specified range and lower for patients with secondary lymphedema of the extremities shows surgery. Conservative treatment should be provided in the cases, when cytokines is above established ranges.

When analyzing the data electromyography both groups of patients, and examined by 4 parameters for m. gastrocnemius and m. vastus medialis, we found that the range of values corresponding to the amplitude of the motor response (AMR), the terminal latency (TL), the amplitude of the sensory response (ASR) and the speed of propagation of excitation (SPE) in the first case was in the range 4,11 ÷ 7,51 mV , 3,63 ÷ 6,85 ms, 9,08 ÷ 13,86 mV and 17,22 ÷ 23,6 m/s. For m. vastus medialis above listed figures correspond 1,41 ÷ 3,65 mV, 4,69 ÷ 8,29 ms, 1,7 ÷ 4,1 mV and 29,8 ÷ 38,12 m/s.

Based on the data we have developed and patented an automated system choice of treatment in which you enter all of the above parameters, and determines the type of treatment for each patient individually. Surgical treatment is possible with linear size of lymph nodes: length 12,94 ÷ 18,51 mm and a width of 5,98 ÷ 9,96 mm (maximum). Parameters cytokines TNF 2,05 ÷ 4,38 pg / ml IL-1 1,96 ÷ 4,44 pg / ml IL-6, 4,2 ÷ 7,58 pg / ml IL-10 6,86 ÷ 10.92 pg / ml (not more). Electromyography data for m. gastrocnemius and m. vastus medialis: AMR 4,11 ÷ 7,51 mV 1,41 ÷ 3,65 mV TL 3,63 ÷ 6,85 ms and 4,69 ÷ 8,29 ms ASR 9,08 ÷ 13,86 mV and 1,7 ÷ 4,1 mV (max.), SPE 17,22 ÷ 23,6 m / s and 29,8 ÷ 38,12 m / s (at least), respectively.

If the obtained results of the linear sizes of lymph nodes and cytokine levels are higher than the specified range of values, and the data presented below electromyography parameters, you need a conservative treatment. When it is ineffective surgery is not advisable.

R. Yuy Tsun-Shu

CYTOGRAM PECULIARITIES OF ORAL CAVITY MUCOSA DIFFERENT AREAS AT ELDERLY AGE

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Introduction and objectives. Demographic situation in Kazakhstan, as well as in many other countries in America, Europe and Asia is characterized by the elderly and old people's percentage increases during the late decades. Specifics of aging process in Kazakhstan are that age difference of men's and women's lifespan is dramatic. In 1999 it was 10,3 years. According to the latest data this index has increased to 11,9 years. As Kazakhstan is joining the category of countries where elderly population is prevailing, it imposes serious requirements to medical problems and needs to reconsider the existing treatments, demanding to work out a universal scientific concept of aging processes origin. The aim of the research was to study the epithelium cytogram indexes of oral cavity mucosa age norm showing evidence of the peculiarities of its proliferation and differentiation in the organism's aging process.

Materials and methods of research.The material for the research was lip, cheek, free part of gum, tongue and hard palate mucosa swabs of 142 respondents aged 45 – 85 years. Prepared swabs were dried, fixed in spirit-acetone (1:1) during 5 minutes and May-Grunvald and Romanovsky-Himsa stained. Epithelial cells with various stages of differentiation and dystrophic cells among them, with neutrophils invasion and microorganisms contaminated were determined in swabs per 1000 cells. Besides, mononuclears, segmentonuclear neutrophils and lymphocytes were revealed. Having counted cytograms on oral cavity mucosa swabs we calculated differentiation (ID) and keratinization (IK) indexes. The obtained data analysis and evaluation of credibility of differentiating averages were done using Student's test and program package Stat Soft "Statistica-6". Index changes were considered to be credible for $P<0,05$.

Results and conclusion. Having studied cytograms of different types of oral cavity mucosa – lining (lip, cheek), specialty (tongue) and chewing (gingiva, hard palate) it was found out that ID and IK of lip and cheek epithelial cells and in less degree tongue are the most informative oral cavity mucosa indicators. Gingiva and hard palate ID and IK are not informative as they are covered with multilayered flat keratinizing epithelium which hinders taking the material and cytogram calculation.

As our research has revealed epithelial cells' ID and IK averages gradually increase during the whole period of experiment in people aged 45 – 85 years. But essential ID and IK increase was seen only from the age of 65 ($P< 0,05$). However, at the same time in comparison with the young people we could see essential individual variability of cytograms of lining type oral cavity mucosa in elderly respondents. It shows more apparent fluctuations of biological age in elderly people. The ID and IK levels increase in lining type of oral cavity mucosa epithelial cells indicates changes in regulatory mechanisms of their proliferation and differentiation. The differentiation process of oral cavity mucosa

epithelial cells enhances in elderly people, which leads to epithelial cells of 5th and 6th stages of differentiation increase and decreases the quantity of cells of 4th and 3d stages of differentiation in cytogram.

However, as our research reveals the ID and IK averages of lining type of oral cavity mucosa epithelial cells can essentially change in patients with the oral cavity diseases (chronic generalized parodontitis, stomatitis, lichen ruber planus), chronic reflux esophagitis, gastritis, gastric ulcer and duodenal ulcer and also endocrine disorders (type 2 diabetes mellitus, hypothyroidism). Types 3, 4 and 5 epithelial cells increase with neutrophil infiltration can be observed in some elderly patients. Epithelial cells in dystrophic state were also revealed (hydropic degeneration). In some patients under study dramatic increase of the number of epithelial cells pathologic mitosis (nuclear division without cytotomia) were revealed. In this way, the obtained ID and IK averages of lining type of oral cavity mucosa can be considered as real biological age indicators.

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THE RESEARCH OF THE GLUTATHIONE SYSTEM FUNCTIONING PECULIAR PROPERTIES IN THE PATHOGENESIS OF NONALCOHOLIC FATTY LIVER DISEASE

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Relevance. Nonalcoholic fatty liver disease is one of the first among other diseases in the modern gastroenterology. The serious consequences and complication of ones, including nonalcoholic steatohepatitis can cause a life's deterioration, disablement and death. Nonalcoholic steatohepatitis is liver lesion with the presence of inflammation and the development of fatty dystrophy. The clinical picture is similar to alcoholic steatohepatitis, but the aetiology is different. The relatively benign course NAFLD is called steatosis. The illness proceeds with hepatomegaly due to increased adipose tissue, often without symptoms.

The purpose of the study. Investigation of the glutathione system activity changes and processes of lipid peroxidation in patients with NAFLD in different clinical conditions.

Materials and methods. The work was carried out on the basis of faculty clinics IGMU. The test material was a plasma and packed red blood cells. The blood sampling was taken from three groups of people: 1) with non-alcoholic steatohepatitis, and 2) with fatty steatosis, and 3) control group. The glutathione system changing was evaluated with the eight indicators. 1) the content of GR in red blood cells, and 2) the content of GR in blood plasma, and 3) the content of GT in red blood cells, and 4) the content of GT in blood plasma, and 5) the content of GPO in red blood cells, and 6) the content of GPO in blood plasma 7) the content of GSH in red blood cells, 8) the content of GSH in blood plasma. The malondialdehyde (MDA) test was used as an evaluation indicator of redox

processes as an end product of lipid peroxidation. To determine the content of enzymes and MDA used photometric methods: 1) GR in B. Mannervik et al; 2) GPO in L. Flohe et al; 3) by MDA in J. Stocks mod. by Volchegorsky. 4) GT in W.H.Habig et al; 5) GSH in Andersen et al. One processed the statistical data manipulation with the Student's t test for nonuniform samples.

The experimental results demonstrate the lipid peroxidation activation in the blood plasma of patient with a nonalcoholic steatohepatitis (MDA increase of 35,5%). The system of glutathione changing data was observed decreased activity of the enzyme GR (31,4%) in blood plasma, needed to restore the disulfide bond of oxidized glutathione, and enzyme GT (23,1%) catalyzed the reaction of glutathione with electrophiles. It has also been found an increase enzyme GR (26.8%) and enzyme GPO (28%) in erythrocyte. The study of the blood plasma of patients with a hepatic steatosis showed ones a decrease activity of the enzyme GR (20,8%). The one was observed decreased activity of the enzyme GPO (43.8%), whose main function is to protect the body from oxidative damage. In the erythrocytes of these patients was observed an increase of the enzyme GR (35.2%) and an increase of the enzyme GPO (19,7%).

Conclusion: The result of the experiment established significant differences of the organism functional state of the people with these diseases (steatosis and nonalcoholic steatohepatitis). The results can be used to study the regulation of glutathione system enzyme activity in patient's blood and find a new treating approaches of nonalcoholic fatty liver disease.

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STAGE APPROACH TOWARDS DIAGNOSIS AND PROGNOSTICATION OF ENDOTOXICOSIS AND SIRS IN PERITONITIS PATIENTS

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We have carried out a clinical study of 142 patients with a widespread form of appendicular peritonitis. The average duration of the disease before being hospitalised was 2.5±0.3 days ($P<0.05$).

Patients with the widespread form of appendicular peritonitis in the preoperative period clearly show endogenous intoxication syndrome in combination with organ-systemic insufficiency (enteral, hepatonephric, coagulating), which serve as an evidence of a severe abdominal sepsis development.

1-2 days after surgery, in spite of a certain positive dynamics of endogenous intoxication (subcompensation stage), there was an increase of liver and kidney disorders, activation of fibrinolysis and growth of cytokine parameters, which confirms a development of a generalized inflammatory process up to the occurrence of a toxic septic shock. It was caused by a high level of endotoxemia in the preoperative period and an excessive number of toxic

substances coming from the abdominal cavity into the general blood flow.

On day 3-4 of the postoperative period there was a climax of polyorganic insufficiency accompanied by a development of the decompensation stage.

The condition of patients improved on day 5-6 after surgery. According to the SAPS score, it corresponded to the medium severity level.

On day 8-10 of the postoperative period the condition of most patients measured according to the SAPS score, was relatively satisfactory.

The analysis of clinical and laboratory data of patients with the widespread appendicular peritonitis showed a leading role of endogenous intoxication against the background of the secondary acute enteral insufficiency in the development stage with the presence of a primary inflammatory affect and a bacterial translocation with a subsequent generalisation of the process leading to the development of a severe abdominal sepsis.

The score severity classification system and endogenous intoxication system with the use of SAPS and total intoxication index made it possible to predict homeostatic and functional disorders in the postoperative period (a high score indicates severity of the pathological process and a high risk of the treatment with complications).

As a result of the tests it was determined that days 1-2 and 3-4 of the postoperative period correspond to the compensation and decompensation endotoxicosis and polyorganic insufficiency stages. The systemic and stage approach towards the examination of laboratory markers showed that the most significant in relation to diagnosis and prognosis are leukocyte index of intoxication, medium molecular weight oligopeptides (MCM), lipid peroxides (conjugated dienes, lipid hydroperoxide, malondialdehyde), total indexes of liver and kidney functions, urokinase, fibrinogen, fibrinolytic blood activity, antithrombin-III and cytokine profile. High values of these parameters in the postoperative period on day 1-2, 3-4 after surgery confirm a severe level of intoxication, development of polyorganic insufficiency, depth of the systemic inflammation and progression of the septic process. The high concentration maintenance of MCM, lipid peroxides and cytokines (TNH-α, IL-1β, IL-10) on day 5-6 and 8-10 in the postoperative period show the remaining systemic inflammatory reaction (SIRS). Low IFN-γ values on all stages of the postoperative period, especially on day 5-6 and 8-10 characterise a stressed immune state – immunodeficiency as well as a high risk of the development of suppurative-septic complications or a slow-moving inflammation.

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SCHOOL HEALTH TECHNOLOGIES AT LABOUR LESSONS OF PRIMARY CLASSES

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Labor lessons in the primary classes are a versatile educational tool which can balance

the monotonous training activities of the growing person by promoting the comprehensive development of hormones. The scientists established that a child's fingers are organically connected with cerebral center and internal organs. Therefore, training of hands in the classroom work increases the functional activity of the brain and other organs stimulate language development.

On the labour lessons junior students acquire basic competencies, i.e. they use the acquired knowledge on practical activity in everyday life for: domestic work (self-service, repair of clothes, household items, etc.); observing personal hygiene and safe methods of working with materials, tools, appliances; creating various products from available materials on his own idea, realizing the collaborating in the process of joint work.

During all of labour duties it is necessary to take all measures to ensure the safety and hygiene of students. It is important for all lessons regularly remind children about healthy living and the rational organization of the workplace, their influence on the performance, cost of training time and quality of work.

A survey of primary school teachers showed that many of the causes of ill health of children associated with non-compliance with the rules of sanitation, hygiene and safety (Low light class; stuffy school rooms, failure mode of the day, handling training sessions, incorrect use of work tools and devices) and a violation of ergonomic requirements (disparity in shape and size of school desks to age peculiarities of children). Therefore, health-technology in primary schools should be part of the educational process, and by part of the training process. It would be wrong to think that outdoor games at recess and physical education are sufficient for full physical and mental development of growing bodies.

We believe: School health-technology in primary school can improve the motivation for learning activities to prevent fatigue and tiredness. School health lessons on labor include:

- warm-up and coordination exercise (bodily and muscular and visual). Result: the alternation of rest and load different muscle groups, rest from daily routine and maintain body tone;
- training on attention and reaction time (using a variety of vivid visual aids, graphics, entertaining schemes, not only by their contemplation of children, but also an active search, comprehension and analysis. It is important to pay attention to the movement of the eye pupils, head, body, change the seat position to standing, which requires the use of visual aids to accommodate not only the space at the board, but the ceiling, the space for parties, etc.). The result of such training is to develop eye coordination, visual-motor response speed of orientation in space;
- training on development of the sketch product, execution drawings and drawings of parts assembly. The result: the development of artistic taste, psychomotor system;
- assembling models of parts of the designer. Result: memory training, design thinking.

The introduction of health-technology leads to reducing disease, fatigue, better health, improving mood of students.