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SURGICAL TREATMENT OF ECHINOCOCCOSIS OF II, VII AND VIII SEGMENTS OF LIVER IN CHILDRENS

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The study was undertaken to evaluate of elimination of the residual cavity, depending on the localization of hydrated cyst of the liver (HCL) in the long term. Long term results of surgical treatment of HCL were studied in 97 (63,6 %) of 153 children operated oft in terms of 2 years, were examined in 10 (10,3%),-2,5 years in 21 (21,6%), -5 -10 years in 22 (22,6%), more than 10 years in 44 (45,5%) patients. All the children in order to exclude echinococcosis and characteristics of the state diaphragm domes made radiography of the chest, to detect residual cavity (RC) and relapse HCL performed ultrasound examination of liver, abdominal and retroperitoneal organs. All patients echinococcectomy VII-VIII and II segments of the liver to describe the morphofuctional state and scarring on the spot, remote on the HC readings performed computed tomography of the liver, Doppler, trans aortal (15) and through umbilical (25) angiography of the liver. RC eliminated in the following ways: capitonazh of edges CFC in the form of roll on N.F.Byerozkin (16); omentopection by A.T.Pulatova (18), atypical liver resection (8), by sewing of diaphragm or a diaphragm flap to the bottom of the RC (10), with backing flaps from the CFC on the vascular pedicle for T. A. Abdufatoeva (15). Complications after liver echinococcectomy in the late periods were observed in 12% of patients. Complications after the elimination of the RC by method of capitazha were observed in 30 % of patients. Angiography liver were observed convergence and tortuosity fail Lenlargement of vessels in the projection of the elimination of RC HCL. As a result of circulatory disturbances with the fonnation of foci of infiltration of the liver tissue, which deform the intrahepatic bile ducts in the late period led to the development of chronic hepatitis and cirrhosis of the local. Complications of the field on the Elimination of RC by N.F.Byerozkin observed in 18,6% of patients. At angiography of the liver were observed cut vessels and depletion of blood vessels in the projection of the remote HC wich sclerotic changes of liver tissue as a result of circulatory disturbances wrapped CFC in the form of roll. Complications after the elimination of RC by sewing diaphragm or flap to the bottom of the RC were observed in each second patient with breach involved the diaphragm in breathing. All patients had ventilation respiratory insufficiency. Complications after invaginative method were observed in 3,7%. In these patients at cholecystography observed deformation and chronic inflammatory changes of the gallbladder. After the elimination of RC by T. A. Abdufatoev, scraps of CFC on the vascular pedicle and invaginated ways complications were not observed. After echinococcectomy centrally located small, medium, large and giant HC remains deep RC, the bottom of which is closer to the main vessels of the liver. In such cases, conventional methods of elimination methods of elimination of RC (by method of capitonazha on N.F.

Byerozkin, A.T. Pulatov and by sewing of diaphragm or flap) become ineffective. Thus for small and medium – sized, peripheralrry – located EHC acceptable way to eliminate RC is invagination edges of the CFC to the bottom of the cavity. The elimination of the RC by T.A. Abdufatoev with flaps of CFC on the vascular pedicle was acceptable with medium, large and giant centrally located HCL with sub diaphragmatic localization. Relapsw HCL were observed in 1,5% of patients.

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COMBINATION TREATMENT OF PROXIMAL FORMS HYPOSPADIAS IN CHILDREN

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The purpose was to improve the treatment results of proximal hypospadias in children

Materials and Methods. During the period 1996 to 2011. operated in our clinic 127 boys from the stem (52), scrotal (43) and perineal (32) is a form of hypospadias. At the age of 1 to 3 years have been - 59 children from 4 to 7 years - 32, 8-15 years - 36.U of all children observed curvature of the penis. Due to the curvature of the fibrous strands had 40 children, the other 87 children was mixed curvature (due to lack of skin, fascia and fibrous strand). In 37 out of 127 patients the foreskin was hyperplasiation three children before admission was circumcision. All the patients along with clinical and laboratory investigations (urography, ultrasonography, uroflowmetry) was carried out bacteriological examination of the skin of the penis and urine.

Results and discussion. In 35 out of 127 patients diagnosed cryptorchidism, and bilateral in 15. In a study in 40 out of 127 children were reduced testicular size of the respective age norm of 10 to 20% at 23 and 20% in boys. In 10 children there was micropenis. 15 of 127 patients at first operation was perform ed relegated testis (stages) with simultaneous straightening of the penis by closing the skin defect opposing triangular flaps of A. Limberg, and one course of hormone therapy. Preoperative preparation consisted of the following events: the treatment of chronic inflammatory, antibacterial decontamination 1-1.5 hours before operation, washing the urethra and bladder with a solution of 0.5% and 1% diocsidina protargol solution, and the operative field is processed and bandaged 12% solution detergent before the operation. 20 children was carried out by Duplay urethroplasty. 80 out of 127 children was carried out one-stage urethroplasty through sheets of the foreskin on the vascular pedicle, using precision machinery operating. Urine was assigned by the pass-through uretroepitsistostomy. 40 patients with a decrease in testicular size in the postoperative period prescribed hormonen - gonadotropin and retabolil, vitamin E and potassium orotate.

In the immediate postoperative period in 17 (13.3%) of 127 children had complications

- festering wound with fistula formation (10), the failure of the anastomosis (7). Urethral fistula eliminated after 6 months.

Long-term results of treatment were studied in all children in the period from months to 6 years. In 102 (80.3%) of 127 evaluated the results of good, no complaints, external opening of the urethra is located in a natural place, a good stream of urine. On urethrography, and expressed urofulomater deviations were not. In 4 (9.3%) children revealed a stricture (3) and fistula (1) the urethra. In 7 children had disorders of sexual development.

Thus, as a result of the measures result in lower postoperative complications from 60% to 13.9%, which yielded good results in 91% of children in the long term treatment of proximal hypospadias forms.

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ROLE OF GENETIC FACTORS IN DEVELOPMENT OF PREMENSTRUAL SYNDROME

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A role of genetic factors in development of premenstrual syndrome (PMS) is studied very scarcely. Aims of our studies included a search for significant changes of genotype frequencies for several well-known gene polymorphisms, i.e, those of progesterone receptor genes (PROGINS; PR) and estrogen receptor gene type 1 genes (ER-1), angiotensin-converting enzyme gene (ACE), as well as serotonin transporter (5-HTT) gene variants (5HTTLPR), and dopamine gene polymorphisms (DAT-1). Materials and methods: We observed a cohort of 333 women of 18 to 40 years of age. Of them, 233 patients had PMS symptoms, and 100 women were PMS-free. The persons with pronounced endocrine or other somatic diseases, psychiatric disorders, severe psychoneurological disturbances associated with PMDD, treated with certain medications were excluded from the study. PMS evaluation was performed by means of clinical and psychometric methods. Genotyping of polymorphic deletion/insertion alleles for PROGINS (S/L), ACE (D/I), 5-HTT (S/L), repeat numbers in DAT-1 (9R/10R) and ER-1 (594A/G gene) were performed in leukocyte DNA using PCR methods, followed by visualization of amplicons by electrophoresis. Statistical evaluation was made with SPSS 15 software, significance was approved by $P<0.05$.

Results. Genotype distributions for the gene studied were comparable in PMS and control women. Presence of L allele of PR gene was significant for PMS, probably, due to more intensive synthesis of progesterone receptors, and functional activity of luteal body (estrogen/progesterone ratio, blood progesterone levels in luteal phase), being described as an equation obtained at discriminant analysis: $Y=1,87 +0,58$ PR-L $+0,11E_2/P +0,05P -3,93$

PR-S –0,74 ER1-A (Y – belonging to PMS+ or PMS- group). Carrying the less active S allele of PR gene and A allele of ER-1 was associated with lower risk of PMS, probably, due to decreased reception of sex steroids.

Another association was found between blood renin levels during luteal phase and presence of ACE D allele: Y = –6,097+3,045 ACE-D +0,66 renin (luteal phase). It was found that ACE D/D genotype is more frequent (54.3%) among patients with skin pruritus at premenstrual terms as compared with women free of this symptome (29.4%; p=0.012).

The DAT-1 9R/9R genotype associated with higher dopamine levels in presynaptic space, was more common (16.1%) among patients with expressed premenstrual aggression, as compared with patients lacking this symptome (16.1% vs 6.4%; p=0.01). Higher prevalence of DAT-1 9R allele was noted among women with premenstrual sleep disturbances, than in patients with normal sleep (80.4% vs 54.2%; p=0.001). Frequency of 5-HTT S/S homozygous genotype with presumed dysregulation of serotonin metabolism, was increased among patients with premenstrual headache (32.6% vs 17.8% in comparison group; p=0.004). Similar increase in 5-HTT S/S genotype was detected in women with meteorism and bowel irritation symptomes (31.1% vs 18.5%; p=0.014). Premenstrual skin pruritus was found to be more common in 5-HTT S/S genotype carriers (50.0% vs 19.7%; p=0,001).

Among psycho-emotional disturbances in PMS, we noted hypochondria which was reported more commonly among women with 5-HTT S/S genotype than those with 5-HTT L/L genotype (p=0.035). S allele of the 5-HTT gene was shown to be associated with anxiety features. PMS patients with G/G genotype of ER-1 gene tended to develop affective disturbances and asthenia in the days preceding menses (0.05<p<0.1).

Conclusion: Premenstrual syndrome is a syndrome of heterogenous origin. Both hereditary and endocrine factors, in certain combinations may increase risk of development for certain PMS symptomes. Presence of 5-HTT-S allele, DAT-1 9R, ACE D-allele, ER-1 G/G-genotype are associated with different clinical signs of PMS and its manifestations in psycho-emotional sphere.

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THE PREVALENCE OF PSYCHOSOCIAL RISK FACTORS OF CORONARY ARTERY DISEASE IN SIBERIAN MALE POPULATION AGED 25-64 YEARS

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The aim of the research was to study the prevalence of psychosocial risk (PSR) factors of coronary artery disease in open male population of Tyumen aged 25-64 years.

The study was carried out within the World Health Organization (WHO) MONICA

project. Representative sample was formed by the method of random numbers from the list of male patients of Tyumen urban population. The response to cardiac screening was 85.0% - 850 patients. Test was carried out according to the psychosocial methods: a) trait anxiety (TA) was estimated using Spielberger's self-esteem scale consisted of 20 statements. Degrees of TA were low, moderate, high; b) depression (D), vital exhaustion (VE) and hostility (H) were estimated using MOPSY test consisted of 15, 14 and 20 statements, respectively. Severity of D, VE and H was marked as low, moderate, high. Test coding system was performed by the component indices and score calculation according to the algorithm of MOPSY programme.

The prevalence of PSR factors in male patients aged 25-64 years was (age-adjusted rates): D (high – 4.6%, moderate – 19.0%), VE – 54.5%, high levels of TA – 36.6% and H – 46.4%. High level of TA increased with age and reached its significant maximum in the group of patients aged 55-64 years compared to the young patients in 25-34 age group (28.8% – 50.0%, p <0.001) and 35-44 age group (33.8% – 50.0%, p <0.01). Major depression was maximal in the group of patients aged 55-64 years compared to patients of other age groups and population based index 25-54 years (5.9 – 14.6%, p <0.001). Level of hostility in 25-34 and 55-64 age groups was almost twice above the medium and in 35-44, 45-54 age groups was almost three times higher. High level of vital exhaustion was maximal in the group of patients aged 55-64 years compared to patients of other age groups and population based index 25-54 years (18.1% – 31.3%, p <0.001).

Thus, levels of trait anxiety, depression, hostility and vital exhaustion increased with age and reached its maximum in the group of patients aged 55-64 years.

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TO THE QUESTION OF PERSONNEL PROVISION IN RURAL HEALTH CARE

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An important resource is the provision of health care by medical personnel. In recent years, personnel policy in the health system of the Russian Federation has received considerable attention at all levels of government. Because of this there have been some positive changes: new methods of planning the number of medical personnel, the new system of remuneration, social protection of medical workers. However, there are still many unsolved problems associated with a significant difference in the number of doctors in large cities and rural areas.

In various regions of the Russian Federation, the divergence of these parameters reaches 70%. The project «country doctor» was launched in order to eliminate formed at the federal level imbalance. Its main task is to attract young professionals to the rural health institutions of the country. The main condition for participation in the program is the age of the specialist (no more than 35 years) and the need to work out in the chosen institution

for at least 5 years. Every doctor since the beginning of the work receives an allowance of one million rubles. The project is currently designed for two years for its implementation in the federal budget is reserved eleven billion rubles. The first payments are currently being implemented for young professionals, who began to work in rural health facilities in 2011.

This project is particular importance for the Irkutsk region. Despite the fact that the bulk of the population lives in urban areas (80%), the region has a low population density (3,2 people per 1 km²), which is 2,6 times smaller than average in Russia (8,3 per person1 km²). Nine urban districts, 67 towns and 365 villages are in the region. Provision of the urban areas with physicians is average of 42 to 10 000 people. In most rural institutions, this figure does not exceed 10 to 10 000 people. On the territory of the Irkutsk region are 736 medical stations, 100 of them are not functioning due to lack of health care worker. In the region 24 from 117 outpatient clinics do not have specialists with higher medical education. Another feature of the medical staff in rural facilities is the age of employees: 32% of physicians have retirement age and 46% have pre-retirement age.

At the beginning of the 2012 in the rural area of Irkutsk region shortages of medical staff is 700 people (60%), which is equal to 3,5 annual releases of Medical Faculty of Irkutsk State Medical University. According to a survey of graduates of Irkutsk State Medical University, 20% expressed a desire to participate in the «country doctor». 30 professionals found jobs for the 4 months of the program implementation in rural health care. As predicted this project will reduce the deficit in human resources for 3-5 years. This will greatly increase the availability and quality of medical care for the rural population of the Irkutsk region.

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LASER NANOTECHNOLOGY IN EXPERIMENTAL SURGERY

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One of actual and perspective directions in modern medicine is employment of laser technologies specifically the low-intensive laser radiation (LILR) with use of metals nanoparticles.

Research objective: to study possibilities of laser nanotechnologies employment (LILR) in treatment of the infected burn wounds in the experiment on laboratory animals.

Material and research methods. Experimental researches on studying of laser nanotechnologies possibilities in treatment of the infected burn wounds are carried out on 40 white rats of «Vistar» line male by weight 190 30 grams. Under the combined narcosis the IIIB degree burn of rats was created as a result of laser influence on a skin in the interscapular region, the culture of staphylococcus aureus virulent strain was brought in the wound.

All animals with the experimental purulent burn wound have been distributed on

series: in the first group of animals the treatment was conducted by the solution of copper nanoparticles; in the second group of animals the treatment was conducted by the LILR; the third group of animals received the combined treatment with use of copper nanoparticles and LILR; animals of the fourth group were treated by ointment «Levomicol»; in the fifth (control) group of animals the treatment of wounds was not conducted.

The suspension of nanoparticles was put on the surface of the infected wound of animals of the third group in the rated dose. The laser therapy was conducted by two-channel laser "Matrix" with a laser head of continuous laser radiation (KLO4).

Discussion of results. Results of research showed that in group of animals which receive treatment by suspension of copper nanoparticles the area of wounds was decreased, that is comparable to results of treatment by levomicol. Treatment by the laser was accompanied by the appearance of granulation and marginal epithelization. At local application of copper nanoparticles the bacterial dissemination was disappeared by 7-th days, at laser radiation- by 9th days of treatment whereas in control group it was remained till 14-days of the observaton. At the local use of nanocopper in combination with LILR the bacterial dissemination of purulent wounds disappeared by 7-th days, there were the granulation and marginal epithelization in the wound.

The conclusion. The obtained data of experimental researches with the use of planimetric and microbiological methods of the research indicate at high enough efficiency of the combined use of nanoparticles and laser radiation that surpasses the use of standard methods of treatment on terms and full-bodied epithelization.

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CHRONIC DISEASE OF KIDNEYS AT PATIENTS WITH CORONARY ARTERY DISEASE

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Last years the quantity of patients with chronic disease of kidneys as a result of an arterial hypertensia and a diabetes mellitus has essentially increased. At patients with chronic disease of kidneys faster is noted, than at patients with the kept function of kidneys, development and progressing of vascular pathologies, including coronary artery disease (CAD). As close connection between function of kidneys and risk of cardiovascular diseases is established, actual revealing dysfunction of kidneys at these patients is represented. Risk of chronic disease of kidneys and vascular complications at patients of the senior age groups most often having arterial hypertensia, CAD and diabetes mellitus II types is especially high.

Object: to estimate function of kidneys at patients with a various degree of severity of stenocardia, to define connection microalbuminuria and dislipoproteinemia with a degree of disturbance of function of kidneys at these patients.

Materials and methods: 175 patients CAD in the age from 56 till 72 years with stable stenocardia, from them of 8,6% of patients with 1 functional class, 69,7% and 21,7% -

with 2 and 3 functional class are surveyed. Chronic cardiac decompensation of 2 and 3 functional class accompanied CAD at 53,3% of patients with stenocardia 1 functional class, at 79,5% and 78,9% with stenocardia 2 and 3 functional class accordingly. Renal function estimated on size of speed glomerular filtrations a settlement method under formula Cocroft-Golt, microalbuminuria (MAU) on analyzer Nicocard-Rider a photometric method. The general cholesterol (XC) and triglycerides estimated a method colorimetric hotometry (enzymatic with peroxidase).

Results of research: Mean values of the content creatinine in blood of the surveyed patients with stable stenocardia did not fall outside the limits normative sizes. Thus only at 27 patients (15,4%) speed glomerular filtrations was ≥90 ml/mines, at 90 patients (51,4%) – 90-60 ml/mines at 55 (31,4%) and at 55 (31,4%) and 3 patients (1,7%) – 60-30 and 30-15 ml/mines. At 53,3% patients with stable stenocardia 1 functional class it is noted decrease of speed glomerular filtrations, at the others was moderated (90-60 ml/mines). At 15,6% of patients with stenocardia 2 functional class function of kidneys was kept within the limits of normal amounts, at 68% was moderately lowered (speed glomerular filtrations 90-60 ml/min) and at 16,4% corresponded chronic disease of kidneys 3 stages. At 92,1% of patients with stenocardia 3 functional class it is established chronic disease of kidneys 3 stages and at 7,9 % - 4 stage. MAU is revealed at 5 patients (18,4%) with normal function of kidneys. MAU is certain at 25 (27,7%) patients with chronic disease of kidneys 1 stages, at 17 (31,4 %) – with 3 stages. And size MAY was higher at patients with a greater degree of decrease of speed glomerular filtrations. Thus the degree MAU was authentically above at patients with stenocardia 3 functional class and was greater at patients with chronic cardiac decompensation.

The raised concentration of lipids (above norm on 10%) - the general cholesterol and cholesterol of low-density lipoprotein - are revealed at patients with CAD only at lowered speed glomerular filtrations. And at chronic disease of kidneys 3 stages cholesterol of low-density lipoprotein is more raised (on 30 % above norm). Increases of concentration of triglycerides in whey of blood of patients with CAD at the normal and lowered function of kidneys it is not revealed.

The conclusion: the majority of patients with CAD has a decrease in function of kidneys, and at third decrease of speed glomerular filtrations corresponds chronic disease of kidneys 3 stages. The degree of disorder of renal function in a greater degree is expressed at patients with stenocardia 3 functional class. MAU comes to light almost at half of patients with CAD even at the normal and moderately lowered renal function that allows to diagnose for these patients chronic disease of kidneys of 1 and 2 stages, according to size speed glomerular filtrations. Hyperlipidemia (the level of increase cholesterol of low-density lipoprotein) depends on a degree of infringement of function of kidneys. Thus, patients of the senior age groups have high enough risk of development of chronic disease of kidneys, aggravating metabolic disorders and probability of vascular pathologies. It inevitably worsens quality of a life and increases risk of lethality at this category of patients.

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ELECTROPHORETIC DIVISION RNA BLOOD SERUM OF PATIENTS WITH ISCHEMIC CEREBRAL CIRCULATION DISORDERS

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For the electrophoretic distribution of different polynucleotides using a molecular sieve effect, which are gels. Detailed studies have shown that using electrophoresis gels available data on some characteristics of molecules of nucleic acids. Thus, the method of electrophoresis can determine the molecular weight of a polynucleotides, to determine whether the molecule consists of one or two polinukleotids chains, which form a molecule - linear or circular. Electrophoretic methods are relatively simple and are used in cases when the analysis is only a small amount of crude material.

As a medium for electrophoresis of nucleic acids using polyacrylamide gel. Polyacrylamide gel pore size and, consequently, its properties as a molecular sieve, vibration in a wide range, so in this environment can be divided into nucleic acids of different molecular weight. In gels containing 2-3% T separating ribosomal RNA (mr. mass $0,5x10^6$ - $2x10^6$) in gels of T, which is about 10% - transport RNA (mr. mass $2,5x10^4$) and in more concentrated gels fragments of nucleic acids that are even smaller sizes. Using continuous concentration gradient of degree or gel can be a time to share all types of cellular RNA.

Objective: To improve diagnostic tactics in vascular diseases of the brain ischemic origin by specification of pathogenetic importance ribonucleic acid in various forms of cerebrovascular disease on the basis of electrophoresis of RNA serum.

Research Methodology: Electrophoretic separation of RNA monomers serum and vascular pathology of the brain occurred in 5% polisikrylamid gels.

Material for the study. In conducting electrophoretic separation of RNA serum of healthy men (n = 10) identified 6 RNA monomers. Quantitative RNA monomers in the percentage represented by the following way: 1 monomer - 458-RNA - 40,60 ± 1,68; monomer 2 - 328-RNA - 24,38 ± 1,66; monomer 3 - 288-RNA - 11, 53 ± 0,97; monomer 4 - 188-RNA - 7,53 ± 0,57; monomer 5 - 58-RNA - 7,21 ± 1,23; monomer 6 - 48-RNA - 3,45 ± 0,51 .

Electrophoretic separation of RNA serum of patients initial manifestations of cerebrovascular accident (INCA)(n = 10) showed only 4 monomers of RNA as compared with healthy. Reliably increased the number of two monomers of RNA: 458 and 328-RNA and decreased the number of fourth monomer RNA - 188 - RNA ($p < 0,01$), which corresponds to the analysis forehram iRNA, rRNA and tRNA.

Conducting electrophoretic separation of RNA serum of patients with Dyscirculatory encephalopathy (DE) (n = 10) found monomers RNA 3: 458-RNA, 328 RNA ,288-RNA. This monomer 458-RNA significantly increased, and monomer 288-RNA significantly reduced, increases the level iRNA, decreases level of tRNA, rRNA levels remained within normal limits. In relation to patients with INCA observed significant increase in RNA monomer 1 - 458 – RNA (iRNA) and lower monomer 3 288- RNA (tRNA, $p < 0,001$). The

concentration of monomer 328 - RNA is different from that at INCA.

Separation of molecular forms of RNA serum of patients with transient cerebrovascular accident (TCA) revealed four monomers RNA (appearing on the fourth monomer 188-RNA) and they were a little differently. Significantly increased levels of a monomer 1 458-RNA ($p < 0.001$) and significantly decreased the concentration of monomer 3 (288-RNA) in relation to the level in the serum of healthy people. Monomer 458 RNA dramatically increased in relation to patients INCA ($p < 0,001$), while the monomers 328-RNA and 288-RNA significantly decreased. Monomer 188-RNA, which corresponded to tRNA, was within normal limits. In contrast, patients with DE, in the serum of patients TCA appearing four additional 188-RNA monomer.

In the electrophoretic distribution of serum RNA ischemic stroke patients in acute period observed significant increase in the first four monomers:

458-RNA, 328-RNA, 288RNA, 188-RNA and lower fifth monomer - 58-RNA ($p<0.05$).

Electrophoretic separation of RNA serum of patients with ischemic stroke at 7 days showed six monomers of RNA. In relation to sound significantly increased the concentration of monomers 328-RNA and 188-RNA, while the level of monomers 458 - RNA and 58-RNA was significantly lower than normal ($p < 0,05$). Within the normal range remained monomer 288-RNA.

When comparing the values of blood serum of patients with ischemic stroke rates of patients transient cerebrovascular accident (TCA) seen significant increase monomers 328-RNA, 188-RNA and lowering monomer 458-RNA ($p < 0.001$) of patients with brain infarction in relation to their concentration in the serum of patients TCA.

When comparing the concentration of monomers RNA serum obtained on day 7 observed in comparison with an era of significant reduction of the first monomer 458 - RNA, the second monomer - 328-RNA, the third monomer - 288-RNA (<0.001) and increased levels of the fourth monomer - 188 RNA-and fifth monomer - 58-RNA (<0.05). The content of the sixth monomer in both time ranges within normal limits.

That data electrophoretic distribution correlated with the RNA to total RNA in the serum of patients with ischemic stroke at 1 and 7 days.

Separation of molecular forms of RNA serum of patients with residual signs of a stroke 6 months after the disease gave the following results.

In this group of patients did not differ from normal concentration of the first and second monomer: 458-RNA and 328-RNA increased level remained the third monomer - 288 - RNA and significantly decreased the level of the fourth and fifth monomers: 188-RNA and 58-RNA. In relation to patients with significantly increased INCA remained third monomer - 288-RNA, which is responsible forehram tRNA. In patients with DE compared with patients with residual signs of of ischemic stroke increased and remained the third monomer: 288-RNA ($p < 0.001$), but also significantly reduced was the second monomer RNA - 328-RNA.

Thus, the data distribution of electrophoretic RNA in serum of patients with vascular diseases of the brain correlated with the data obtained in the investigated nuklein (RNA and DNA) in cerebrospinal fluid and blood of patients with chronic and acute disorders of blood flow in a cerebral vessel. Thus, in patients whith INCA increased concentration of monomers 458-RNA and 328-RNA with DE significantly increased the level of only monomer 458-RNA and decreases the concentration of 288-RNA. A similar situation as in DE, observed at TCA, but the serum of patients appearing l-ast monomer 188-RNA. At a fraction of the RNA by electrophoretic separation in the serum of patients with ischemic stroke identified six RNA monomers, but on the first day of stroke monomers 458-RNA and 58-RNA significantly reduced, while the concentration of 328-RNA and 188-RNA - on the contrary, increased. These data are important as the pathogenetic and in diagnostic ways.

Features flow ischemic pathological process in different patients associated with individual characteristics and the presence of distribution of different types of ribonucleic acid, including its monomers.

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HEALTH STATUS OF OF CITY BUS DRIVERS

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The public bus driver's job is one of the most intense and responsible work. It is known that it is connected to enormous nervous and emotional load, demands of constant concentration of attention. The main task of rationing the work of bus drivers is to achieve and maintain high working efficiency throughout all day shift and to preserve their health.

Important condition of trouble-free operation of bus drivers is their good health. Diseases influence on their work capacity and quite often may cause a road accident.

Careful medical control of their health is established not everywhere (as it is done, for example, in aircraft and railway transportation). Operative and basic pre-trip medical control (the general and special) has crucial importance. Unfortunately, special services of the city bus enterprises aren't equipped by necessary modern devices for health diagnostics. Some time bus drivers underestimate consequences of the indisposition or deliberately hide it from medical workers.

It is known that even the most "easy" diseases negatively influence working capacity. During sick period, drivers have sharply decreased attention and impellent reaction speed, coordination of movements, accuracy and speed of the actions connected with driving. Chronic diseases also can raise frequence of accidents. Such illnesses of drivers as

epilepsy, diabetes and cardiovascular diseases raise risk of accidents. The drivers suffering these illnesses get to road accident approximately 2 times more often than healthy. The decrease in working capacity of the driver can come also as a result of reception of many medicines.

Among the causes of temporary disability, respiratory diseases are on the first place, traumas and accidents are on the second, and cardiovascular disease are on the third place. The cardiovascular disease are caused as mentioned above are evoked by high nervous and emotional tension, hypodinamia, hypokinezia in a combination to noise, vibration, infrasound, and toxic substances.

Thus listed all above shows that the problem of occupational hygiene and health of city bus drivers is extremely actual. Especially when domestic and foreign publications open this problem not completely.

Thereupon, it is obviously necessary to study physical, chemical factors of the occupational environment, the basic physiological indicators of an organism and disease of city bus drivers in the conditions of a city with high polluted environment and the transport overload of highways and to develop recommendations for optimizing their working conditions.

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AGE AND SEX STRUCTURE OF WORKERS OF CEMENT PRODUCTION

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Comprehensive study of working conditions of workers on production, the characteristic of medicobiological indicators are necessary not only for identification of epidemiology of diseases, but also for organization of improving, treatment-and-prophylactic actions among working.

The purpose of this study was to assess the age and gender structure of workers of cement production which can reflect influence of industrial hazards on an organism of workers.

The age and sex structure of workers was characterized as follows: 84.8% of workers made men, 15.2% - women. Thus 8.8% of workers were younger 20 years, 29.8% - 20-29 years, 27.9% - 30-39 years, 25.7% - 40-49 years, 5.5% - 50-59 years, and 2.3% - 60 years and older.

Among workers in age group till 20 years women made much higher share (16.2%) than men (7.5%). The similar situation was in age groups of 50-59 years , 60 years and older. In other age groups (20-29 years, 30-39 years, 40-49 years) specific weight of men was higher (26.9% - 30.1%), than women (8.1% - 29.8%). Among employees, 65.3% made men

and 34.7% – women. The main specific weight in this group of workers were people of 20-59 years (men – 85%, women - 88%), whereas specific weight among employees till 20 years and older than 60 years among men made 14.9%, and among women - 12.0%.

The main share of employees was made by men and women of active workable age. The ratio of men and women in technical group was the following: men – 53.8%, women - 47.2%. In this group 20.6% were workers of 20-29 years. As a whole, in technical group men and women of 20-59 years made 79.7%.

In roasting shop, 26.3% of workers are involved, 23.4% - in crushing shop, 16.9% - in packing and transportation shop, 21.8% - in raw materials shop, 11.6% - in dust removal shop. In roasting shop 93.8% of workers made men, 6.2% - women, in crushing shop, respectively, 90.3% and 9.7%. In packing and transportation shop men were 78.2%, and women - 21.8%. In raw materials shop, men made 84.9%, and women - 15.1%. In dust removal shop, respectively, 62.8% and 37.2%.

It should be noted that at some sites of cement production working conditions are considered as very heavy. In roasting shop microclimatic conditions don't correspond to hygienic requirements. In this shop, air temperature reaches +50°C and above in summer, and +42°C in winter. In addition, each hour hot air with energy 1200 cal/cm^3 moves in.

Dust level in air in shop reaches 13.225 mg/m3 that exceeds maximum-permissible level more than in 6.0 times. In working zone of drivers high speed of air movement is noted. It arises when doors are opened for the purpose of air exchange in this shop. The noise proceeding from working devices in shop exceeds the hygienic standard on 3-8 dBA.

The study of duration of work of various categories of workers on this production revealed that in roasting shop the service length of 12.5% of women made 1-5 years, of 50.0% - 6-10 years, of 25.0% - 11-15 years, and of 12.5% - 16-20 years. In crushing shop, specific weight of women with the service length of 1-5 years made 40.9%, 6-10 years - 36.4%, 11-15 years - 13.6%, 16-20 years - 9.1%.

In packing and transportation shop the share of women working for 1-5 years made 30.6%, 6-10 years – 25.0%, 11-15 years – 19.4%, 16-20 years – 13.9%, 21-25 years – 11.1%. In raw materials shop the percentage of women with the service length of 1-5 years made 28.2%, 6-10 years – 25.0%, 11-15 years - 18.7%, 16-20 years – 18.7%, 21-25 years – 9.4%. In dust removal shop the share of women with the service length of 1-5 years was 33.3%, of 6-10 years - 38.2%, 11-15 years - 28,6%, 16-20 years - 19,1%, 21-25 years - 4,8%.

In roasting shop, men with the service length of 1-5 years made 68.1%, 6-10 years – 17.1%, 11-25 years – 4.1%, 26 years and longer – 2.5%. The greatest share of men was noted with the service length of 1-5 years in crushing shop – 44.7%, in raw materials shop - 47.5%, in dust removal shop - 69.1%. The share of men is decreasing with the increase in length of service.

Proceeding from the received data, it is possible to draw a conclusion that the work in heavy working conditions doesn't last for a long time. The greatest share of workers

(85.2%) occupyied in heavy conditions work had the length of service 1-5 years and 6-10 years. It is possible to explain it by the heavy workload in some shops of the cement production.

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THE ROLE OF ETHICAL COMMITTEES IN PRETRIAL CONFLICT RESOLUTIONS BETWEEN PATIENTS AND DOCTORS

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Nowadays doctors in Russia experience great difficulties when facing considerable changes in the system of the medical aid administration, which are caused by a change from the administrative and legal approach to the civil law approach.

The paternalistic relationship pattern, in which a doctor played a leading role and had a full command of a patient's health, which existed earlier, is being replaced by a partner pattern, in which a doctor and a patient agree to act together, uniting their efforts, will and knowledge to fight a disease.

There is no doubt that the partner (contractual) pattern is the truest and most productive, however, our research shows that the majority of patients prefer the paternalistic pattern of their relationship with the doctor due to the fact that they do not know their rights and are not ready to fight for them.

The majority of doctors also support the paternalistic pattern because it is easier for them to work with patients who have no knowledge in the area of medical science.

The interference on the side of a patient is regarded as a risk factor and can lead to a negative result.

The arising contradictions inevitably lead to the increase in the number of conflicts between patients and doctors, dissatisfaction with the medical aid on the one hand, and the development of the burnout syndrome and change of the profession on the other hand.

A considerable role in the pretrial conflict resolution is given to ethical committees, which regulate the ethical side of the doctor-patient relation and observe the rights of patients and medical workers.

We have a lot of interesting experience in the area of cooperation between the Ethical Committee of the Ministry of Health and the Department of Public Health of the Medical University regarding the lectures and practical training sessions to develop skills how to work with difficult patients and look for constructive solutions with the help of the complex ethical and legal and socio-psychological analysis of complaints and problem relations between doctors and patients.

The combination of the ethical and legal and socio-psychological aspects in education

makes it possible to expand the range of the legal and psychological literacy and maturity of doctors, to form skills to overcome difficulties of establishing contact with patients and to support and develop ethical norms of the professional activity.

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VITAHERPAVAC, AN INACTIVATED VACCINE AGAINST HERPES SIMPLEX VIRUS TYPES 1 AND 2 AS A MEANS FOR SPECIFIC CONTROL OF RECURRENCES AT CHRONIC HERPETIC INFECTION

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Chronic recurrent herpetic infection (CRHI) caused by herpes simplex virus types 1 and 2 (HSV-1 and -2) is a widely occurring immunodeficient disease when the virus persists in neural ganglia for life. It is characterized by periodical outbreaks with clinical manifestations in loci minoris resistentia, which are specific for each individual (the eyes, skin, genitalia mucosa and others). Over 90% of the global population, according to the WHO, are latently infected with HSV. In Russia, over 2.5 million are hospitalized with HSV yearly. In 30-50% of individuals infected with primary herpes recurrences resulting from provoking factors happen for 2-3 years. Only a combination of anti-herpetic preparations and a vaccine can prevent recurrences of the disease.

Vitaherpavac is a vaccine preparation against both HSV-1 and -2 developed in the D. Ivanovski Institute of Virology and manufactured by the Vitapharma company.

The vaccine is produced in Vero B cell culture, standardized and recommended by the WHO for virus vaccines.

The results of the anti-recurrence therapy of ophtalmoherpes using Vitaherpavac were as follows. In 63% of patients with frequent recurrent forms of infection (ceratitis, iridicyclitis, ceratoiridoceclitis), the disease ceased. In 27%, the frequency of recurrences became reliably lower, and in 10% it did not change. A statistic processing of the results showed a 5 times decrease of recurrences and a 3.2 times shortening of the recurrence period per patient on average. Two courses of vaccination a year with intracutaneous injection of the vaccine during the 'cold' period of the disease, did not substantially affect the levels of IgM and IgG in the blood serum, but raised the level of IgA in the lacrimal fluid. The activity of T-cell response in vaccinated patients rose as was shown by the blastotransformation and delayed lymphocytes migration assays using the HSV antigens as well as a higher activity of natural killer cells. The clinical trials conducted in the Russian Peoples Friendship University showed that there had been no recurrences in 64% of patients with skin herpes and in 37% of patients with genital herpes over the observation period (6 months). Prolongation of remission registered in 61% of patients with skin herpes and in 64% of patients with genital herpes. Intracutaneous vaccination

led to vanishing of viremia in patients with CRHI as was shown by PCR and IF. Etiotropic therapy with Vitaherpavac has a number of advantages compared to use other therapeutic preparations: effect on viremia, no adaptation to the preparation, a decrease of the number of recurrences, prolongation of periods between recurrences, a lower degree of clinical manifestations.

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COMPLICATIONS IN PREGNANCY AND LABOUR AND PERINATAL OUTCOME DEPENDING ON THE TYPE OF ANTIHYPERTENSIVE THERAPY RECEIVED BY PREGNANT WOMEN

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Treatment of pregnant women, in particular that of „foetuses as patients", is a scientific and clinical problem worldwide. The appropriate use of antihypertensive medications is vitally important in regard to pharmacotherapy of the arterial hypertension in the gestation period. The recommended medications must be prescribed strictly according to the indications, used only in rational combinations and dosed effectively. The absence of protective mechanisms in a foetus or an embryo and insufficient knowledge regarding the influence of one or another medication on it requires taking into account not only mother's interests but also those of the foetus.

The objective of the research was to analyse the complications during pregnancy, labour and perinatal outcome depending on the type of the antihypertensive therapy received by pregnant women.

Materials and methods of the research. Using the records of medical documentation, we made a retrospective analysis of complications in pregnancy, labour and perinatal outcomes depending on the type of hypotensive therapy. The first group was made up by 63 pregnant women with arterial hypertension, which had dopegyt monotherapy; the second group consisted of 86 pregnant women, who simultaneously received several medications to reduce the arterial blood pressure.

The results of the research. The complications during pregnancy, labour and the foetus/newborn condition were observed both in the group of patients receiving dopegyt and the group of patients taking several medications for the reduction of the arterial pressure. However, there was a larger number of complications in the case of women taking several medications simultaneously; there were statistically more cases of premature labour (3.6 against 0%, $p=0.0417$). In contrast to the women who took several medications at the same time, women receiving dopegyt often had early and preterm discharge of amniotic fluid (5.4 against 1.1%, $p=0.0271$). It is important to mention that women of the first group mainly had complications during pregnancy and labour, whereas women of the

second group often had adverse perinatal outcomes. Newborns from mothers in the second group often had respiratory dysfunctions and complications regarding the nervous system; however, there were no statistically significant differences between the two groups.

Conclusion: taking several medications simultaneously for the purpose of reduction of the arterial blood pressure during pregnancy is associated with a large number of complications, in particular, more frequent preterm labour, which serves as a basis for adverse perinatal outcomes (prematurity, hypotrophy) and also increases the risk of perinatal losses, complications regarding the nervous and respiratory system of a newborn.

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PATIENTS WITH HELICOBACTER PYLORI POSITIVE AND NEGATIVE DUODENAL ULCERS HAVE DISTINCT CLINICAL CHARACTERISTICS

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Since the first description of Helicobacter pylori (H pylori), infection with this organism has been considered to be the most important cause of ulcer disease. Previous studies have reported that more than 90% and 60% of patients with duodenal ulcer and gastric ulcer, respectively, were infected with H pylori. The use of non-steroidal anti-inflammatory drugs (NSAIDs) was suggested to be the major cause of the remaining H pylori negative ulcer disease. The prevalence of H pylori infection in patients with duodenal ulcer was believed to be so high that confirmatory testing before eradication treatment was considered unnecessary by some centers. It is now apparent that the prevalence of H pylori infection in patients with duodenal ulcer is not as high as what it used to be. It is, therefore, important to study the subset of patients with H pylori negative duodenal ulcer in order to assess any other etiologic factors associated with ulcer development and to establish appropriate management strategies.

Patients with an endoscopic diagnosis of duodenal ulcer were included in the present study. Patients were considered to be negative for H pylori, if both histological examination and rapid urease test of biopsy specimens were negative. A comparison was made between patients with H pylori positive and negative duodenal ulcers.

343 patients satisfied the inclusion criteria for this study. Their mean age was 54,7±0,5 years. Their main presentations included pain (18,5%), bleeding (80,0%), anemia (1,0%), and obstruction (0,4%). 23,4% were smokers, while 4,5% patients were alcoholics. 32,0% - have one or more concomitant medical problems. 4,1% patients gave a past history of pulmonary tuberculosis. 4,8% patients have history of malignancy either currently or in the past, including colorectal cancer, urological cancer, lung cancer, gynecological cancer, cancer of nasopharynx, breast cancer, cancer of larynx, liver cancer, thyroid cancer,

tongue cancer, lymphoma, cancer of maxilla, cancer of hypopharynx, sarcoma, and bone metastasis. 2,9% patients have undergone surgery within 3 mo before presentation. 1,5% patients have underlying sepsis at the time of presentation, which included chest infection, intra-abdominal infection, urinary tract infection, and orthopedic infection. Current medications taken by the patients included NSAIDs, aspirin, corticosteroids, H2 blockers, and proton pump inhibitors.

5,7% patients have multiple ulcers on presentation. 29,6% patients did not have H pylori infection. Although the annual proportion of patients with H pylori negative duodenal ulcers, the increase was due to an ongoing drop in the number of patients with H pylori positive duodenal ulcers; the annual number of patients with H pylori negative duodenal ulcers has remained relatively constant over the study period.

On univariate analysis, patients with H pylori negative duodenal ulcer were significantly more likely females, older, having concomitant medical problem, having pre-existing malignancy, having recent surgery, having underlying sepsis, taking NSAIDs, taking aspirin, or being non-smokers. On multivariate analysis, six factors were found to be independently associated with H pylori negative duodenal ulcer. These factors included older age, concomitant medical problem, pre-existing malignancy, recent surgery, underlying sepsis, and NSAIDs usage. On analyzing the relationship of each concomitant medical problem with the H pylori status, all except asthma were significantly associated with H pylori negative duodenal ulcer. Patients with H pylori negative duodenal ulcer were more likely to present with bleeding, multiple ulcers, and larger ulcers.

The proportion of patients with H pylori negative duodenal ulcers is on the rise because of a continued drop in incidence of H pylori positive duodenal ulcers in recent years. Such patients have distinct clinical characteristics and it is important to ascertain the H pylori status before starting eradication therapy.

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MACRONODULES IN CIRRHOTIC LIVER: MORPHOLOGICAL FINDINGS WITH EMPHASIS IN GROSS FEATURES, PROLIFERATION AND APOPTOSIS

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To study macronodules in explanted cirrhotic livers, performing a detailed description of gross aspects and histological features according to each type. To study proliferation, apoptosis in these nodules.

Sixty one consecutive liver explanted specimens, handled by a single pathologist, following a pre-established protocol, were prospectively inspected for macronodules. From each identified nodule, a digital picture was examined to the following gross characteristics: a) hue; b) color; c) color variability; d) circumscription; e) capsule; and f) extra-capsular

extension. International Working Party (1995) criteria were applied to classify nodules as large regenerative nodule (LRN) low grade dysplastic nodule (LGDN), high grade dysplastic nodule (HGDN), well differentiated hepatocellular carcinoma (WHCC) and moderately differentiated hepatocellular carcinoma (MHCC). Some histological variables not included as diagnostic criteria were also evaluated. All macronodules, 20 normal control livers and one additional section from regular cirrhosis from each liver were immunostained. Hematoxilin-eosin stained slides were used to count apoptosis.

Thirty two cases (52,45%) had 96 macronodules, including 13 (21,31%) with 21 hepatocellular carcinomas (HCC). Nine livers with HCC had other macronodules types, but four did not. Nodule size progressively increase, from LRN to MHCC. The distribution was similar in all kinds of lesions. Nine of 10 green color lesions were HCC or HGDN, whereas 19 of 22 brownish lesions were LRN or LGDN. Most lesions with high color variability were HCC. WHCC was frequently ill circumscribed and had no capsule. All MHCC had well circumscribed borders, and a thin capsule was the rule in LRN, MNR and HGDN. Apparent extracapsular extension was only seen in HCC and HGDN. Major fatty change was associated with HCC, specially WHCC. Clear cells, Mallory bodies, interstitial fibrosis and siderosis resistance were also HCC features. There was a steady increase of proliferation from normal control liver to cancer. Apoptotic rate also roughly increased along the spectrum of macronodules, but with a flattened curve from cirrhosis to LGDN.

The steady increase in size, as well as in proliferation and apoptotic rates from cirrhosis to HCC, suggests a progression from each diagnostic class to the next. Although most HCC develop in macronodules harboring livers, some of them do not, suggesting an alternative pathway for hepatocarcinogenesis. The following gross aspects were found useful in selecting the most suspicious nodules: green color, marked color variation inside the nodule, and extracapsular extension were found as indicators of HCC. Steatosis, clear cells, Mallory bodies and intra - nodular fibrosis could be useful histological criteria to HCC. The deficit of apoptotic rate as compared to proliferation rate from cirrhosis to LGDN could reflect some dysregulation in the cell population control.

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RESEARCH OF POPULATION HEALTH IN ENVIRONMENTALLY UNFRIENDLY REGIONS

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During 2002-2011 multicenter health investigations of various population groups, inhabited the territories with radiation induced and chemical pollution, were conducted within the scientific and technical program on basic researches.

The main goal of our research was the health indicator of population groups resided near the Azgir nuclear test base and genetic diversity of M.tuberculosis strains isolated

from pulmonary tuberculosis patients by using the complex methods of genetic typing of tuberculosis causative agent in the regions with high endemicity among which Atyrau region came to the front.

The research subject were the water of open and underground sources (wells, chinks); soil, flora; medical-demographic health indicators of population living in Azgir nuclear test base region; carrying out complex medical examinations to indicate the level and structure of true and "deplete" population morbidity. The special attention was given to the examination of tuberculosis infection spread among the region inhabitants to develop and implement the modern diagnostic approaches, prophylaxis and therapy of this severe disease.

Especially unsettling factor was a wide spread of Mycobacterium Tuberculosis with multi-drug resistance (MDR) in Atyrau region (42-42,6%) in 2003-2004 that was two times higher than its incidence in the Republic (23,2%). Such strains were isolated almost from a quarter of patients previously had not been treated for tuberculosis. Meanwhile the rate of initial MDR in the region exceeded the republican one (12,5%).

Despite the close attention to the problem of drug-resistant tuberculosis, the structure of mycobacterium tuberculosis populations and genetic mechanisms of their resistance to antituberculous drugs as well as the significance of M.tuberculosis various genotypes on the Kazakhstani territory have been insufficiently studied up to the present.

The data of the present analysis allow concluding that the circulation of M.tuberculosis Beijing genotype in Kazakhstan possibly has an endemic character. One of the causes of drug-resistant tuberculosis high spreading is the circulation of definite M.tuberculosis strains genotypes (Beijing with VNTR-profile 2435) having multiresistance to antituberculous drugs that poses an epidemical hazard having highest priority.

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PATHOMORPHOLOGICAL PICTURE OF TRACHEA OF RATS, EXPOSED TO THE CHRONIC INFLUENCE OF HEXANE WITH NUTRITIONAL CORRECTION

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The search for optimum approaches of nutritional protection from the influence of negative environmental factors, development and implementation of specialized products with directed antioxidant, detoxicating and immune-stimulating properties, which increase abilities of organisms to adapt to negative factors of physical and chemical nature, is one of the topical tendencies of the modern hygiene. Insufficient information about toxic influence of hexane and relatively low efficiency of the existing rehabilitation methods determines the necessity to study the development mechanisms of pathological processes in the trachea of rats in the course of a relatively long period of

time. Based on that, rats were exposed to the chronic influence of hexane in the dose of 300 mg/m^3 (OEL) 4 hours daily, 5 days a week in the course of 16-17 weeks. The exposure took place in standard cells with the volume of 200 litres. The exposed animals were sexually mature white male rats with the weight of 170-210 g. The rats were divided into 3 groups: the 1st group was the control one, the animals of the 2nd and the 3rd group were exposed to the static inhalation influence of hexane. The rats of the 3rd group were receiving a specialized product in addition to the standard feed. After the end of the experiment the animals were killed by immediate decapitation, after which the trachea was taken out in order to determine morphometric parameters.

The histological study of the trachea specimens in the first group of rats, which were not exposed to any additional factors, showed that all layers of the walls of trachea had a typical structure. The trachea specimens of the rats in the 2nd group, which were exposed to the inhalation influence of hexane, showed clear atrophic changes in all layers of the tracheal wall. The integumentary epithelium looked flattened, with a significant decrease in the number of cell rows in comparison to the corresponding parameters of the animals in the 1st group. There were areas with epithelial metaplasia or areas of atrophy, where only the cells of the basal layer remained and were situated in one row in the form of a chain. Fascicles of collagen fibres were also detected. The muscular layer was very thin and sclerosed. The glandular stroma of the mucociliar apparatus was also sclerosed. The remaining glandular structures were covered by the thinned epithelium. So, the specimens of the mucous tracheal wall of the rats in the 2nd group, which were exposed to the inhalation influence of hexane, showed a picture of the chronic atrophic sclerosing type of tracheitis with epithelial metaplasia, atrophy of muscular structure of the tracheal wall, increase in the joining tissue of the wall with a clearly marked lymphohistiocytic infiltration. At the same time, the rats of the 3rd group, which were exposed to the chronic influence of hexane and received the nutritional correction, had moderate catarrhal endotracheitis. There was a small amount of mucus on the epithelial stratum, only focal lymphohistiocytic infiltration and moderate hyperemia of blood vessels. In comparison to the animals in the 2nd group, there were no changes in the muscular layer of the tracheal wall. According to the morphometric analysis of the cellular structure of the integumentary epithelium of the animals in the 3rd group, there was an insignificant decrease in the volume concentration of the ciliated epithelium and goblet cells, and also a tendency of increase in the width of the mucous membrane and smooth muscular layer due to the moderate oedema, in comparison to the animals of the 2nd group, which were exposed to hexane without the nutritional correction.

So, the histological analysis of the specimens of the tracheal wall from the animals in the 3rd group, which were exposed to the hexane intoxication and had the nutritional correction, showed that a specialized product of natural organic origin has an antitoxic action and effectively stops the damaging effect. The appearance of endobronchitis was insignificant and manifested itself in the hyperplasia of glandular structures of the mucociliar apparatus and its hypersecretion as a manifestation of stimulation of the defensive mechanism of upper respiratory tracts.

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METHODOLOGY FOR THE DETERMINATION OF HEXANE IN THE AIR

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Hexane is the most volatile component of gasoline and crude oil, which made it easily comes off and cause poisoning. Hexane has a neurotoxic effect in the organism. It is believed that the neurotoxic effects of hexane has through its transformation in the body in a neurotoxin 2.5-geksandion, that neurotoxicity in 38 times greater than hexane. This fact has led to a decline maximum allowable concentration (MAC) of hexane in the air of the working area in the United States from 1800 mg/m^3 up to 180 mg/m^3. Previously we have presented material evidencing the need to reduce the MAC of hexane with 300 mg/m^3 to 150 mg/m^3 in air of the working area and in the atmosphere up to 30 mg/m^3 in Kazakhstan. This has necessitated the development of a standardized methodology for measuring fume hexane in the air. According specification temperature range was 15 – 500 mg/m^3. Hexane vapor detection technology includes: vapour hexane extraction from air; measuring the temperature and atmospheric pressure; preparation of samples for transport and storage; training sample to analysis; chromatography; a calculation of hexane in the air. In preparation for the measurements carried out the following work: prepare the gas pipettes abstraction air; -preparation of barboter air abstraction.

Fill the gas pipette (500 ml) water in such a way that it does not have air. At both ends of the gas pipettes wear rubber hoses. Gas pipets fix eyedropper in the vertical position and the hose at the bottom end, dressed in a graduated cylinder, which is located below the gas pipettes. This technology ensures the independence of researchers from the sources of electric energy. technology ensures the independence of researchers from the sources of electric energy. In Kazakhstan, the oil is extracted in extreme temperatures (up to 60°C), and useful of batteries is problematic.

Into the syringe gaining 8 ml of dioxane, and fill barboter. Barboter recorded in place of sampling air samples and connects with a rubber hose, departing from the upper end of the gas pipettes. The top of the gas valve opens the eyedropper. Installation is ready to work.

Run the sample starts with opening bottom tap the gas pipettes. The water results in the graduated cylinder, as a result in a negative pressure air hose connected with barboter. It involves injection of air through the sink in barbotere. Be careful not to speed, throughput does not exceed 150 ml/min. Should not be allowed to sink o foam synthesis!

Closing the lower air intakes finishes, which translates the tap water in dimensional cylinder. Closes the upper valve that connects the gas barboterom eyedropper. Measure the amount of water in dimensional cylinder that is absorbed in air. This primitive approach provides sufficiently high accuracy of measurement of selected air to within 2%.

Disconnect an barboter of hose and pour in the penicillium bottle sink . Barboter wash

2 ml sink (dioxane) and add to wash the penicilliun bottle.

Close the bottle tight polyethylene stopper. Tube fix cap aluminium foil, If you need long-term storage.

Sampling must be carried out when the temperature is below 0°C. To a temperature of -4° c gas pipette is filled with 5% solution of NaCl. To a temperature of -15C you can use 50% solution of ethyl alcohol as fluid fills the gas can.

Before chromatography the volume of analyzed liquid passes to 15 ml.

After the procedure chromatography vapour content of sulphur in 1 m^3 of air is calculated by the formula:

$$x = \frac{a \cdot 0{,}15 \cdot 760 \cdot 293 \cdot 1000}{P \cdot T \cdot V}$$

where: x - the content of hexane fumes in 1 m^3, a - hexane content in mg per 1 liter solution, 0,015 - total number of sink that is used for the quantitative chemical analysis, l, 760 - atmospheric pressure above sea level in mm Hg, 293 - absolute temperature, as a 20°C, V - volume absorbed air, l, - number of litres in 1 m^3, P - atmospheric pressure in selecting samples, mm Hg calendar, T - absolute temperature during sampling in degrees Celsius.

Methods of quantitative chemical analysis. Micro syringe with a capacity of 1 μL with an accuracy of at least 0.01 prices tick select 1 μl of sample in the chromatography column with a length of 3 m, internal diameter 2.5 mm, that content silica gel. As media used argon gas. Transmission speed 30 ml/min. Air transmission speed of 300 ml/min. Hydrogen feed rate 30 mL/min. Evaporation temperature is 150°C, temperature detector is 150°C, temperature of column is 50°C.

To calculate the uncertainty in measurement of this method are the following indicators: measurement uncertainty arising from the preparatory proceedings and the chromatography for determination of hexane in the air of the working area and the air; uncertainty of measurement of air flows, volatility in samples for analysis; uncertainty of measurement by precision graduated cylinder; uncertainty of measurement by precision barometric pressure barometer, uncertainty of measurement by precision temperature measurement. The relative error of measurement within is the 15%.

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DISTINCTIONS OF DIGESTIVE DISEASES FORMATION OF THE WORKERS OF MODERN OIL REFINERIES

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The modern oil refinery productions (ORP) in terms of hygiene are major industrial complexes, where the technological process is continuously modernized and automatized,

the equipment capacity is increasing, and the remote process control is widely introduced. Nevertheless, the modern ORP is a significant source of air pollution of the industrial site and of the industrial premises air by a complex of toxic substances.

The complex of professionally production factors has an adverse impact on the health status of workers, characterized by a high level of chronic diseases spreading. One of the leading forms of pathologies of the examined persons were diseases of the digestive system.

The domestic petroleum refining industry is growing at priority rates and occupies one of the leading places in the Republic of Kazakhstan in terms of production. Increased oil products output is due to the introduction of new, most promising and productive technologies, used in industrialized countries of Western Europe.

As a result of carried out comprehensive research of working conditions and health of ORP workers , it was found that the leading detrimental production factor for workers of main specialties is the effect on the digestive organs of petroleum products, which include carbohydrates of saturated, unsaturated and aromatic family. The most constant air contaminants of the production facilities are hydrocarbons. In total, they are found in the 98,7-100% of the samples, however, their concentration does not exceed the MPC (maximum permissible concentration).

Chromatographic separation of the amount of hydrocarbons in the air of working zone showed, that at preparation installations, primary processing and hydroskimming refinery the hydrocarbons are constant, 90% of which are saturated hydrocarbons. Hydrogen sulfide, sulfur dioxide, carbon oxide are also found. In this regard, this group of installations is conditionally combined into group I.

At the installations of secondary processing and gas fractionation the amount of hydrocarbon in 62% consists of unsaturated hydrocarbons. These installations are combined in group II. Apart from these, in the air of the working area low concentrations of hydrogen sulfide, sulfur dioxide and carbon oxide are present.

At the platforming installations the aromatic hydrocarbons are mostly present, proportion of which in the total amount of contaminants in the working areas of production facilities is 91.6%. The specific weight of saturated hydrocarbons was 8.4% and contains carbon oxide in low concentrations (hundreds of percentage %). Therefore, they are united in the III group of installations.

Consequently, at all technological installations of production the combined nature of the impact of factors takes place, the primary and permanent component of which is the amount of hydrocarbons.

The breadth of scale and rates of the oil refining (OR) industry development in Kazakhstan consider the involvement of a large contingent of workers, thus increasing the number of people, exposed to harmful factors of oil refinery production (ORP). This dictates the need for early detection of preclinical functional lapses in workers bodies and the timely organization of preventive and therapeutic measures.

The prophylactic cause of pathogenetic treatment with using the specific treatment and prophylactic food stuffs, enriched with maintenance of a plenty of vitamins (A, E,

C, PP, B_6, beta carotin), antioxidirers (biophlavanoid, phendic connection), macro - and microcells (iron, iodine, zinc, copper selenium) and organic acids (citric, wine, apple, dairy), readily available forms of carbohydrates (fructose, glucose, galactose, saccharose), proteins of a vegetative and animal origin normalizes the functional condition of pancreas, liver and gallbladder and results in the decrease of diseases of digestion organs.

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REDUCTION AORTOPLASTY FOR ASCENDING AORTIC ANEURYSM: A 14–YEAR EXPERIENCE

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Background. According to different authors frequency of occurrence of ascending aortic aneurysms (AAA) ranging from 0.4 – 1.6 % for 100000 population, and ratios of men and women 2 (3):1. Frequency of occurrence of AAA makes 55-72 % of all diagnosed aneurysms of a thoracic aorta. The need for surgical treatment of aneurysms of the ascending aorta, and especially the complicated forms of this pathology is currently not in doubt. We offer our experience in treatment of AAA by two surgical methods: reduction aortoplasty (RA) and prosthesis graft replacement of the AAA from December 1994 to February 2009. For this period 374 patients with AAA diagnosis were operated. 50 (13.4% - study group) patients fulfilled the RA, and 54 (14.4% - control group) prosthesis aortic graft replacement of the AAA. The remaining patients underwent surgery Bentall De Bono or other operations. RA may become the method of choice for a certain contingent of patients with AAA, which may allow patients to operate a more advanced age with severe concomitant diseases, in the absence of severe aortic valve insufficiency, expansion of sine of Valsalva and aortic dissection.

The purpose of the study. Identify the indications and evaluate the results of surgical treatment of aneurysms of the ascending aorta through a reduction aortoplasty.

Methods. In the present study included 104 patients without aortic dissection or aortic root enlargement, for the period from December 1994 to February 2009 operated in the department of surgery of the aorta and its branches. Completed 50 (study group) and 54 (control group) such operations. Age of patients ranged from 13 to 71, 85 (82%) men and 19 (18%) women. All patients had aneurysm of the ascending aorta up to 8 cm without aortic dissection. Out of comorbidity at 35 (33.6%) patients was coronary heart disease, at 82 (78.8%) an arterial hypertension, at 18 (17.3%) were chronic obstructive pulmonary disease, at 14 (13.5%) a peptic ulcer disease, at 9 patients (8.6%) a diabetes mellitus, a chronic renal failure at 16 (15.4%). For establishment of the diagnosis used the following methods of research: spiral computed tomography, transthoracic and transesophageal echocardiography and aortography.

Results. In the study group, all operated patients underwent surgery and were

discharged from hospital, mortality was 0% and the mortality rate in the control group 4 (7.4%). Performed the following operations in the study group: isolated of the RA AAA in 24 patients (48%), concomitant operation in 26 (52%). In the control group: prosthesis aortic graft replacement of the AAA in 19 (35.1%), concomitant operation in 35 (64.9%). During the follow-up period, patients were not observed expansion of the ascending and arch of the aorta, sinus of Valsalva, the progression of aortic insufficiency in both groups, but in the control group 2 patients (5.8%) are taped an aneurysm of the distal anastomosis.

Conclusions. Reduction aortoplasty of the AAA, is the method of choice in the surgical treatment of patients with aneurysms of the ascending aorta. A distinctive feature of this method is speed performance, reliability in terms of hemostatic aortic suture and the stability of long-term results.

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PREDICTIVE VALUES OF PULMONARY FUNCTIONS TEST ABNORMALITIES IN PATIENTS WITH RHEUMATOID ARTHRITIS

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Introduction:

Rheumatoid Arthritis (RA) is a chronic inflammatory disease that leads to chronic pain, high rates of disability and mortality. Respiratory causes, are a significant contributor to excess mortality in patients with RA ranking as the second major cause of death in this patient population, and associated with 10-20% frequency of lethality.

Aim of the study: assessments pulmonary function in patients with RA during 1-year follow-up.

Materials and methods: We investigated 20 patients (pts) with rheumatoid arthritis-related lung disease conforming by multispiral computed tomography (MSCT). Routine clinical examination, bodyplethysmography, spyromethry, diffusing lung capacity (DLC) , MSCT were assessed at inclusion and after 1 year of follow up.

Results: The first evaluation showed the decrease of total lung capacity (TLC) to 63,8 ± 5,9% of normal rate and the decrease of DLC to 65,2 ± 6,5% of normal rate. These findings were associated with prevalence of MSCT changes (interstitial pulmonary fibrosis). Within the follow-up TLC decreased in 25% of patients and DLC – in 35% respectively.

Conclusion. We discovered that significant decrease of DLC may show the progression in lung disease. We suggest that patients with RA need monitoring of pulmonary function during disease course.

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HEALTH OF WORKERS OF ASTRAKHAN GAS PROCESSING FACTORY

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In 1987 a processing of natural gas and a condensate began at the Astrakhan gas processing factory (AGPF).Gas and a condensate were extracted on one of the largest deposits of this raw material in the Bottom Volga region. Distinctive feature of hydrocarbonic raw material of the Astrakhan deposit is the presence a complex of highly aggressive and toxic connections in its structure : hydrogen sulfide-24% of the gas composition, carbon oxysulphide - 1200-2000 mg/m^3, methyl mercaptan, ethyl mercaptan - 700-800 mg/m^3 (basically, methyl mercaptan) - 700-800 mg/m^3, carbon disulfide etc.

The hygienic researches, carried out by us in all basic and auxiliary manufactures of AGPF within last 20 years, since the day of start-up of the enterprise, have confirmed that, despite of unique measures of protection of workers of a factory, it was not possible to prevent influence on them of harmful factors of the industrial environment,completely yet. It has been established, that in working zone of AGPF (premises of pump, compressor, machine halls, and also on the open areas of the factory) a number of adverse hygienic factors takes place, the main factors were pollution of the air environment by a complex of chemical substances (limiting, nonlimiting and aromatic hydrocarbons, hydrogen sulphide, nitrogen, carbon, methyl mercaptan, ethyl mercaptan), intensive industrial noise, high temperature of air (from May till September)

The estimation of a state of health of workers of AGPF borrowed in the basic manufactures, has allowed establishing the following:

- the established adverse production factors cause in workers a change of the immune status which are characterized by leukocytosis, lymphocytosis, change population structure of lymphocytes and subpopulation structure of T-lymfocytes; decrease in the maintenance of antibodies, activity of lysozyme, parameters of phagocytosis;
- the growth of the maintenance of R-protein, antigens of leukocytes, lactoferrin,
- the unidirectional character of reaction to influence of adverse working conditions such as humoral factors of nonspecific resistency on R-protein and lysozyme and in whey of blood, and in a saliva of workers allows to use their definition in a saliva for nonivasive diagnostics;
- the complex of professional industrial harm at AGPF renders the certain influence on a condition of erythrocytes and hemoglobin of workers which is shown by strengthening of polycythemia , decrease in the average maintenance of hemoglobin in erythrocytes , decrease sulf-and methhemoglobin, reduction of factor of anisotropy;
- at workers, with the lowered concentration of sulfhemoglobin, erythrocytes showed the raised acid resistency and in their structure the population of osmotically proof cells has been increased. It testifies about the increase of population “young” erythrocytes in blood of workers of the given group, that specifies irritation of erythron;

• biochemical properties of the microorganisms allocated from the workers of AGPF differ from the bacteria allocated from people of a control group on their adhesive properties and on ability to synthesis of substances similar with neopterine, pancreatic elastase , leptin of a person, soluble receptor to leptin and α1-antitrypsin .

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THE INTEGRAL ESTIMATE OF THREE-DIMENTIONAL MEDICAL IMAGES WITH THE HELP OF HIGH-CAPACITY CALCULATIONS

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The problem of the search automation of the areas of interest on three-dimensional images, which, for example, are reconstructed on the basis of flat sections of computer, MRI or ultrasonic tomography, etc., consists both in the large volume of calculations and the complexity of the recognition algorithms. Together with these purely technical problems, which can be easily overcome by increasing the calculating capacities of computers, there are methodological problems of analysis of the images obtained in vivo. The latter include a small amount of the analyzed reference (model) images which are obtained at the high level of stochastic interference and under the conditions of the broad inner- and interindividual variability of the state indicators of the researched biological objects. At the same time, the reliability of selection of the area of interest on the analyzed image is considerably reduced.

The algorithms which are oriented to work with large quantities of multidimensional various data with their subsequent representation as an integral image can be effective in the context of estimation of the state of the biological object. The analyzed image is divided into into a set of more three-dimensional areas (voxels). Each voxel is shown as a vector of values, whose coordinates is the brightness of the pixels which form the three-dimensional image. For each voxel there is a calculation of the value of the integral estimate, which determines its proximity to the corresponding voxels of the reference images. The analysis of the statistical distribution of the obtained estimate makes it possible to visualize the area of interest on the image.

If the size of the voxel is 2x2x2 and the size of the three-dimensional image is 256x256x256 pixels, the number of the calculated integral estimates is 2^{21}. This search task needs considerable calculating resources and can be effectively realized with the help of distributed calculations. To solve this task, we have implemented the algorithm of parallel calculations of the integral estimate on the calculating cluster SKIF Cyberia, which is situated in the Tomsk State University.

The initial data for approbation of the methodology of the integral estimate of three-dimensional biomedical images was taken from the internet resource BrainWeb, developed in the McConnell Brain Imaging Centre (Montreal Neurological Institute). This resource

has an interface for the formation of the realistic MRI images of the head in normal and pathological state (multiple sclerosis in three different stages: light, moderate and heavy) according to the specified parameters of the image modelling.

The integral estimate was carried out for two selected fragments of the three-dimensional image. The morphological changes caused by the pathology were absent in the first fragment, and were present in the second one. The multisequencing of the calculations was carried out at the level of the initial data, because the integral estimate on each voxel is an autonomous task that does not need the data exchange between the knots of the calculating cluster. During the calculations we have used 100 calculating knots and one executive knot, from which the initial data was distributed among the working knots and the output data was gathered after the calculations. In this case the number of operations of the interprocess interaction was reduced to the minimum, which guarantees the high self-efficiency of the cluster knots and makes it possible to reach the maximum possible acceleration. The research has shown that this approach to the analysis of three-dimensional medical images makes it possible to effectively select the area of interest.

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OZONE THERAPY AS A COMPONENT OF COMPLEX TREATMENT OF TUBAL PERITONEAL STERILITY

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Objectives - to improve the results of surgical reconstruction of uterine tubes patency in patients with tubal peritoneal infertility.

Materials and methods. There were examined 110 women with tubal peritoneal infertility. All the patients were done laparoscopic reconstruction of uterine tubes patency. 80 patients that made up the first group in addition to conventional preoperative and post-operation care underwent a course of ozonetherapy. The other 30 patients from the second group were on conventional treatment.

The rate of endogenic intoxication was assessed by the content of medium-mass molecules (MMM). The intensity of lipid peroxidation processes (LP) was defined according to the levels of molecular products.

Results. Clinical observations showed the post-operative course in both group to have no complications. However MMM and LP analysis revealed some signs of endogenic intoxication. The elevated MMM, levels of molecular products might have been caused by a surgical stress. Ozone therapy was found to decrease elevated MMM and LP levels. The assessed indices returned to normal one in the second group on the 8^{th}-10^{th} postoperative day.

The results received a year after the operation showed that uterine pregnancy was diagnosed in 37% cases while in the control group it occurred in 20% of cases.

Conclusion. The use of ozone therapy in a complex pre-operative and post-operation management of patients for correction of tubal sterility can improve the immediate and follow up results. The observed effect is evidently due to normalizing ozone influence on the level of endogenic intoxication and lipid peroxidation condition.

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INTEGRATED APPROACH IN DENTAL PATIENTS TREATMENT AND REHABILITATION

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Subspecialty in medical practice has resulted in loss of integrity in patient treatment approach. The major dental patients rehabilitation problem is occlusion recovery with complete or partial edentulism and restoration. Unfortunately dentition and locomotor systems interconnection is not fully taken into account nowadays, though it is a single biomechanical complex.

As of today, the problems caused by TMJ dysfunction are very complicated and lead to a lot of unresolved issues.

The above mentioned abnormality often occurs in dental practice, and according to some sources its frequency amounts to 20-50%, when according to other authors it is as high as 85% and tends to grow

In 1934 Costen was the first to describe entotic sound in patients with complete or partial edentulism, nevertheless even up to nowadays the temporomandibular pain-dysfunction syndrome diagnosis and treatment are not always satisfactory.

The posture and occlusion disharmony interconnections and their corrections were studied by Chechin A.D., 1987, 1989, Persin L.S. 1999, Khoroshilkina F.Y., 2000, Bugrovetskaya O.G., Yurov V.V., 2003, Tsimbalistov and co-autors, 2005.

Currently, there exists no common classification of dentotemporomandibular system (DTMS) abnormality. DTMS dysfunction, this muscle and joint abnormality, combines a number of synonyms within itself that naturally lead to contradictory views about the causes and mechanism of the disease. The researchers' attention is focused on the factors leading to the DTMS muscular system functional state disruption which is connected to the psychogenic and endocrine systems' hypertonia, functional occlusion disturbance etc., neglecting the interconnections of DTMS being part of the locomotor system as a unified complex.

Postural tonic and righting reflexes discovered by R. Magnus in 1962, are the basis of the body equilibrium function. The postural tonic control system, developed in the process of phylogeny, consists of two subsystems – musculoskeletal and neural.

The musculoskeletal system ensures stability and rigidity of the locomotor system on the one hand, and body flexibility and elasticity on the other, thus providing biomechanical interconnections between somato-somatic, somato-visceral and viscero-visceral structures.

In its turn, the neural system – consisting of a central analyzer, the peripheral nervous system and sensory input system, which includes the somato-sensory, vestibular, visual subsystems and dentotemporomandibular joint.

The studies of Fukuda (1961, 1993) Gelb H. (1970), Guillfune P. (1988), Chechin A.D.(1989.), Gagey P.M., Weber B. (1995) have shown that a dysfunction of one of the sensory inputs cause postural tone changes, which leads to functional disturbances in the locomotor system. DTMS is the upper body balance centre, and an abnormality in mandible position leads to changes in position of the head and the whole locomotor system. Presence of additional unfavorable factors, such as stress, bruxism, disturbance of occlusion, swallowing and oculomotor reflexes may lead to DTMS myofascial pathology.

An ability to maintain balance in vertical position is one of the most important conditions in interaction between man and environment. To solve this task, a complex system of fine automatic body position regulation has been developed in the process of phylogeny. Our body obeys the minimal energy absorption law, that is, the skeletal system, while balancing itself, minimizes energy expenditure, which increases its functionality and efficiency.

In vertical position human body normally performs oscillations within 4* in L3 area, being supported only by tonic and tonic-physical muscles.

Human body balance is conditioned by three major force vectors. Litlejohn has shown the connection of mandibular symphysis with pubic articulation through gravity line, and the presence of force triangles in the body which create interconnections between TMJ and other body systems (Litlejohn J M 1956).

Man is influenced by gravity force load. The somatic system (frame system – skeletal, articlular, muscle-fascial, vascular, lymphatic components) directly react to gravity centre displacement. In case of overloading the normal function of any system one gets a vicious circle of dysfunctions.

The function of automatic semicircular inner ear channels balancing, oculomotor and postural complex, occlusion, swallowing reflex, neurological components make up the anatomical and physiological organism functioning concept.

The law of plantar baroreceptors (Burgess P.R., Perl E.R., 1974). Systematization of tonic responses to plantar baroreceptors stimulation in the process of resting upon it: increasing the pressure on the level of one plantar area (owing to the insole with a minimal protuberance in this place) increases the tone of the muscles, the action of which has the tendency to unload this area. Thus, disturbances in plantar bones position and mobility might lead to spinal diseases.

Interaction of occlusion and neuropostural tone is remains currently not completely researched, but it is necessary to remind one known fact (Hartmann L.S., 1837; Claurade M.A., Daraillans B.S., 1989), confirmed by LBonneir (1992), especially important for the study of neuropostural tone laws. Abnormal mandibular information is capable of disrupting the tonic responses. Fortunately, such information appears only when lower and upper teeth are occluded in a position referred to as intercuspation, such condition occurs up to 2000 times per 24 hours while swallowing, an taking into consideration food ingestion, up to

20000 times.

That is why any osteopathic study of the tone shall be performed in mandibular posture position: the mouth is closed, but the teeth are not occluded.

Thus, osteopathic study of the neuropostural system will be the study of neuropostural tone which may be changed by actuation of the system inputs. The tone may be detected either through resistance inverse to passive expansion of the muscle group, or through reciprocal position of skeletal parts, or through motor activity changes. The system of musculotendinous chains makes it possible to correct the interaction of sensory inputs to the neuropostural system and reprogram the latter.

Any patient complaining about pains in standing position or balance instability shall undergo neuropostural balance assessment.

The study objectives are objectification and improvement of the work quality of a stomatologist or osteopath by means of a diagnostic complex, created on basis of a holistic approach to organism.

Treatment of patients with DTMS pathology in our clinics is carried out on basis of the developed diagnostic complex based upon osteopathic, kinesiological, neuropostural testing methods and the generally adopted methods (CT scanning of the mandibulofacial area, electromyography, condylography, podoscopy). After data analysis the patients received treatment by osteopathic and kinesiological methods, with correction of the locomotor system, oculomotor and swallowing reflexes, splint therapy, feet correction using insoles. After treatment a repeated examination was performed, with occlusion restoration procedures after getting positive results.

The holistic approach to treatment of this pathology leads to quality improvement in treatment of this patient group.

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THE USE OF MEDICATIONS REAMBERIN AND REMAXOL TO REDUCE INTOXICATION AND SIDE REACTIONS OF STAGE III-IV OVARIAN CARCINOMA

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Aim. To study effectiveness of Reamberin and Remaxol for reduction of intoxication and by-effects of special therapy for ovarian carcinoma.

Material and methods

We have assessed the degree of intoxication manifestation according to clinical, functional and biochemical parameters in 171 patients prior to a surgery, maintenance chemotherapy (MCT) and 3-4 weeks after MCT in compliance with recommendations of ECOG-WHO regarding toxicity scale.

Effectiveness of implementing Reamberin that directly affects oxidative processes in

Krebs cycle to mitigate intoxication and tissue hypoxia, has been studied in 89 patients with stage III-IV ascitic ovarian carcinoma according to FIGO classification, aged 42 to 79, after a cytoreductive surgery and during MCT (group 1). As a screening group, retrospective patients were taken (82 female patients), relatively similar in age and illness stage, who have been operated in municipal hospitals without taking Reamberin. Remaxol was used in 9 patients with toxic hepatitis for 5 days until indicators had normalized.

Reamberin was injected as 1.5% solution prior a surgery (1-2 days in advance), directly after the surgery daily (intravenously, drop-fed, not more than 90 drops a minute for 5 –10 days), 400 ml a day, and then during each MCT course, three days straight (prior to MCT, on the day of MCT and next day after MCT).

Postoperative MCT in both groups was conducted in the following combinations: Cyclophosphan 750 mg/m^2 + Cisplatin 75 mg/m^2 or Cisplatin mg/m^2 + Cyclophosphan 500 mg/m^2 + Doxorubicin 50 mg/m^2 every three weeks with pre- and post-hydration up to 2-4 liters.

In the screening group, the number of anemia and stage I leucopenia instances until MCT beginning was 12 (14,6±2,1%) and 10 (12,2±0,9%) respectively. In the process of therapy courses, indexes of anemia and leucopenia have increased, including degree 2-3 up to 33 (40,2±3,6%) and 26 (31,7±3,2%) respectively. On the other hand, in group 1 with Reamberin intake prior to treatment, the indexes, were 13 (14,6±2,1%) and 8 (8,9±0,5%) respectively, and in the process of MCT courses, hematological indexes remained practically the same (1-2 degree anemia showed -11,2±1,1% and leucopenia was - 4,4±1,6%). The difference between number of instances and hemoglobin and leucocytes reduction degree in the studied group against the screening group is statistically true ($p< 0,01$).

The 2 and 3 stage cardiac malfunction in group 1 present in 50 patients prior to the treatment (56,1±3,7%), in all instances with Reamberin administration allowed not only to conduct adequate MCT courses, but also to reduce their failure frequency down to 45 (50,56±3,4%).

In the screening group, the number of patients with 2-3 stage cardiac malfunction in the process of chemotherapy has, on the contrary, increased from 52,4±3,4% (43 patients) to 67,1±4,1% (55 patients); corrective therapy, increase of periods between MCT courses or reduction of medication dose. The difference is statistically true ($p< 0,05$) when compared against the screening group.

One of the assessment indexes for urinary system malfunction is the degree of creatinine increase. Prior to the treatment start, 1 degree creatinine increase (table 4) is stated as relatively the same in group 1 (in 12 patients – 13,5%) and group 2 (in 11 patients – 13,4%).

In the group of patients having taken Reamberin as a pre-chemotherapeutic preparation procedure and during MCT, only in 3 surveys (3,37%) the creatinine increase remained, while in the screening group the number of patients with creatinine level (1-3 degrees) has increased in 34 patients (41,4%), having required chemotherapy suspension and corrective therapy conduct in 12 instances (14,6%). The difference between the groups is statistically true ($p< 0,001$).

When other toxicity manifestations were analyzed in patients receiving MCT while taking Reamberin, 1-2 degree nausea and vomiting, mostly delayed, were found in 24 patients (26,9±2,2%), and in the screening group 2 and 3 degree of the same were found in 45 patients (59,2±3,4%), 28 out of them suffered acute nausea and vomiting (within 24 hours after starting chemotherapy), despite the fact that 30 minutes prior to the chemotherapy all patients received anti-mimetics (Ondasetron 8 mg or Granisetron 1 mg) intravenously.

Dynamics of post-operational levels of serous CA-125 (high-molecular glycoprotein whose does not normally exceed 35 units/ml) prior to MCT were studied and in its process which, according to the opinion of N.S.Sergeeva in joint authorship (2002) is an objective factor of ovarian carcinoma treatment efficiency. According to most authors, the level of the latter depends more of engagement of peritoneum mesothelium into the process, than of the tumor mass volume.

Summary

1. Implementation of Reamberin medication prior to a cytoreductive surgery and during one-day (severe) courses of poly-chemotherapy creates conditions for tumor intoxication and anemia reduction.

2. Reamberin and Remaxol are toxicity protectors with MCT which do not weaken the anti-tumor effect. Reduction of the tumor marker CA-125 is registered within shorter period than in the screening group. Effects of Ca-125 decrease differences Ca –125 after course 2, 4 and 6, are significant on the level $p<0,05$.

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PROCESSES OF PREMATURE AGEING AND APOPTOSIS WITHIN THE METABOLIC SYNDROME

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Topicality. Ageing is premature if the biological age precedes the calendar age. One of the symptoms of the premature ageing is a failure in the regulation of apoptosis. Apoptosis can be described as a programmed cellular death. Protein p53 is a factor that triggers the apoptosis. Among various conditions of the human body the metabolic syndrome (MS) attracts a lot of attention. It combines many preconditions for the acceleration of the apoptosis. That is why the study of the apoptosis and processes of premature ageing in patients with the metabolic syndrome is a topical issue.

The objective of the research was to study the processes of the apoptosis and premature ageing in patients with the MS.

Materials and methods of the research. We have studied 270 patients with the MS, aged 30 to 60 years - 48,0 (42,0; 53,0) years, 162 men and 108 women. Criteria of the MS: the main symptom being waist circumference more than 80 cm in women and 94 cm in men, with additional symptoms of blood pressure ≥ 130/85 torr, triglyceride level ≥ 1,7 mmol/

l. The control group was composed of 70 healthy people of the similar age 47,0 (40,0; 52,0) and sex (40 men and 30 women) without the MS. The conducted study included the measurement of the concentration of the protein p53 (U/ml), serum insulin level (mcU/ml); waist circumference (cm), body mass index = weight/height². The biological age and the ageing rate coefficient were calculated according to the formulas of A.G. Gorelkin und B.B.Pinhasov. The acceleration of ageing took place if the ageing rate coefficient was more than 1,05.

Obtained results. The serum insulin level of patients with the MS was 35,93 (29,40; 51,81) mcU/ml, in the control group 12,43 (10,49; 15,29), p<0,05. The body mass index of patients with the MS was 33,91 (31,82; 40,38), in the control group - 24,52 (21,34; 24,75), p<0,05. The waist circumference was 120,5 (111,0; 133,0) cm and 88,0 (76,0; 92,0) cm, correspondingly, p<0,05. The level of the protein p53 in patients with the MS was 1,59 (1,36 1,91) U/ml, in the control group - 0,96 (0,91; 0,99) U/ml, p<0,05. The correlation analysis in the group of patients with the MS showed a strong correlation connection between the concentration of the protein p53 and the waist circumference (r+0,64, p< 0,05), the amount of the protein p53 and body mass index (r+0,85, p< 0,05). The ageing rate coefficient in patients with the MS equals 1,32 (1,16; 1,49), in the control group it is 0,9 (0,87; 0,99), p<0,05. The accelerating ageing rate, diagnosed on the basis of the ageing rate coefficient in patients with the MS, led to the increase in the biological age. The biological age of patients with the MS was 54,34 (48,91; 59,46), in the control group - 46,35 (39,55; 51,81) year, p<0,05. The calendar age was 48,0 (42,0; 53,0) and 47,0 (40,0; 52,0) correspondingly, p<0,05.

Conclusions. Patients with the metabolic syndrome have an increased concentration of the protein p53 (inductor of the apoptosis), the biological age increases by 7 years, the ageing rate coefficient is 1,32.

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HYGIENIC EVALUATION OF FOOD'S QUALITY AND SAFETY BASED ON INFORMATION OF ENVIRONMENT AND HEALTH MONITORING.

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In the multi-compartment and the multivariate effects of habitat's impact the task of quantitative assessment of the integrated risk to human health is very important. The solution of this problem allows us to identify the priority areas of risk and contingent, to predict changes of the citizens' health due to the influence of the facts of the environment in the dynamics, to take the address management solutions to minimize the risk to public

health.

Analysis of risk to human health from contamination of food chemicals acquires a special significance in connection with the entry of the Russian Federation to the WTO and the implementation of the Customs Union Agreement on Sanitary Measures.

In some regions considerable experience in assessing and managing risk has been gained.

In the Voronezh region the estimate of risk to public health from the contamination of food raw materials and food chemical contaminants has been done.

Research methods. Calculations of dose risks were carried out on the basis of risk indicators and socio-hygienic monitoring. As exposed groups the following ones were selected: young children "from 0 to 6 years"; the children "from 6 to 18 years"; "18 year-old adults and older" (male and female). In calculating of the potential dose of xenobiotics' supply concentrations of chemicals in foods made with 50% condom percentile.

Calculations of average daily doses of chemicals (ADD, mg / kg-day), coming from the i-th product by the oral route were done. Exposure factors by age groups were taken with account of standard body's weight and duration of exposure. Characteristics of non-carcinogenic effects of risk provided the ratio of actual exposure levels and safe levels of exposure (RfD, mg / kg-day). For substances with a one-way (additive) effect on the system (target organs) the value of the total risk index (HI) was determined. Calculations of individual cancer risk (ICR) of chemicals were made using data about the magnitude of exposure and factors' values of carcinogenic potential (SF). For substances belonging to one group of carcinogens in their combined (additive) effects of the total carcinogenic risk was calculated.

To assess the exposure, the recommended annual minimum sets of food for the main socio-demographic groups of population in the Voronezh region were used.

Results and discussion. Arsenic, mercury, cadmium, nitrates were identified as the priority contaminants of food, having non-carcinogenic effect; nitrosamines (NDMA and NDEA amount) were identified as the priority contaminants of food, having carcinogenic effect and lead, arsenic and polychlorinated biphenyls (PHB) were identified as the priority contaminants of food, having total effect (carcinogenic and non-carcinogenic).

These results show the probability of development's risk of non-carcinogenic effects (hazard ratio HQ> 1) if a person will eat food which is contaminated with arsenic and nitrates. The consumption of recommended amount of milk and dairy products, vegetables and melons, fish makes the largest contribution to the total amount of risk on the arsenic and the consumption of recommended amount of vegetables, melons and potatoes makes the largest contribution to the total amount of risk on the nitrates. Young children «from 0 to 6 years» are at risk.

In the analysis of total non-carcinogenic hazard index of effects it is revealed that among the systems and organs that are affected by the combined effects of chemical contaminants cardiovascular system (arsenic, nitrates), central nervous system (mercury, lead, arsenic, cadmium), the nervous system (lead, arsenic) and blood (lead, nitrates) have

the greatest influence (in descending order of risk). The probability of harmful effects on the cardiovascular system, central nervous system, nervous system and blood is in 2.5 times higher for children aged 0 to 6 years in comparison with other age groups. In addition, for this age group the risk of exposure of chemical pollutants on the immune system (mercury, PCBs), kidneys (cadmium, mercury) and reproduction (mercury, PCBs) was noted.

Individual carcinogenic risk for all age groups while consuming the recommended set of food is happened because of the presence of arsenic. Milk, vegetables and fish are belonged to food that makes the largest contribution to the carcinogenic risk.

Conclusion.

1. Arsenic and nitrates are the priority contaminants of food that make the largest contribution to the risk to public health in compliance with the recommended diet.

2. The most «dangerous» product groups for the population of the Voronezh region are the following groups: for arsenic – milk and dairy products, vegetables and melons, fish; for nitrates – vegetables and melons, potatoes.

3. Young children «from 0 to 6 years» are the risk group in the evaluation of carcinogenic and non-carcinogenic effects which happen because of the chemical contamination of food products.

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SELECTION OF METHOD FOR RECONSTRUCTION OF THE ABDOMINAL WALL IN THE LARGE AND GIANT POSTOPERATIVE HERNIAS

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Objective: To develop objective criteria for selecting of method for the reconstruction of the anterior abdominal wall for large and giant postoperative hernias.

Material and methods: We analyzed our experience in surgical treatment of large and giant postoperative hernias in 38 patients with the use of: a) tension-free herniorrhaphy with synthetic grafts without the restoration of the white line of the abdominal wall (20 patients), b) components separation - the reconstruction of the anterior abdominal wall (AAW), consisting in the application of relaxing incisions in the aponeurosis AAW (18 patients). The negative side of the operations of the second type is the need for extensive mobilization of skin and fat layer from the middle to the posterior axillary line. In order to avoid this fact, we have developed a subcutaneous technique of reconstruction AAW. In the anatomical study we found that the usage of the subcutaneous method of reconstruction allows us to achieve stretching of AAW by 6-10 cm from each side. The anatomical study was the basis for the application of this technique in 18 patients. The control for selecting of method for the reconstruction of the anterior abdominal wall was the figures of intra-abdominal pressure: at the end of operation intra-abdominal pressure should not exceed the

pre-operative one by more than 5 cm of water column.

Results: The level of intra-abdominal pressure in the early postoperative period ranged from 11 to 22 cm of water column. When intra-abdominal pressure increased by more than 18 cm (4 patients) we used a set of conservative measures and intra-abdominal hypertension was eliminated from all of these patients. Intra- and postoperative control of intra-abdominal pressure allowed to avoid the development of abdominal compartment syndrome. During the early postoperative period 2 (11%) patients of the first group had seromas and 1 (7.9%) patient of the second group had - hematoma. Complications were treated with aspiration and drainage under ultrasound guidance. 24 patients followed-up in the in the late postoperative period – there were not recurrences of hernias.

Conclusion: Thus, the control of intra-abdominal pressure when choosing a method of reconstruction of the abdominal wall for the large and giant postoperative hernias is safe and effective method of preventing of early postoperative complications and recurrence of hernias in the late period.

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BEHANDLUNG VON PATIENTEN MIT DER ARTERIELLEN HYPERTONIE UND DER ISCHÄMISCHEN HERZKRANKHEIT, DIE FÜR DIE KORREKTUR DER UROLOGISCHEN PATHOLOGIE VERWIESEN WURDEN

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Jegliche chirurgischen Eingriffe sind mit einem anhaltenden hämodynamishen und psychologischen Stress für den menschlichen Körper verbunden. Dieser Stress kann eine große Rolle in der Entwicklung von Herz- und Gefäßkomplikationen in der postoperativen Periode spielen. Wir haben 883 Patienten aus der Hauptgruppe ausgewählt. Alle waren männlich, im Alter von 40 bis 80 (Durchschnittsalter 59±8 Jahre). In die Gruppe der laporaskopischen Nephrektomie (LN) wurden 53 Patienten mit der arteriellen Hypertonie (AH) im Alter von 37 bis 65 aufgenommen (Durchschnittsalter 49±7 Jahre). In der Hauptgruppe hatten 409 Patienten (46,3%) eine gutartige Hyperplasie der Prostata, 63 Patienten (7,1%) hatten Prostatakrebs. 290 Patienten (32,8%) litten vom Urolithiasis, 121 Patienten (13,8%) hatten eine Nierengeschwulst. 198 (22,4%) Patienten der Hauptgruppe hatten die ischämische Herzkrankheit (IHK): Belastungsstenokardie mit der WHO-Funktionsklasse (FK) I (101 Patienten) und II (97 Patienten) ohne AH. 174 Patienten (19,7%) hatten AH Grad I (42 Patienten), II (109 Patienten) und III (23 Patienten) ohne IHK. 511 Patienten (57,9%) wurden mit einer Kombination von IHK mit der Belastungsstenokardie (WHO-FK I – 218

Patienten, FK II – 293 Patienten) und der AH (Grad I bei 102 Patienten, Grad II bei 233 Patienten, Grad III bei 176 Patienten) diagnostiziert. Die Dauer der AH bei den Patienten mit der LN betrug 6,5±3,2 Jahre. 37 Patienten aus der LN-Gruppe (69,8%) hatten IHK, von denen 20 (54,1%) Patienten die Belastungsstenokardie der FK I, 17 (45,9%) die Belastungsstenokardie der FK II hatten. Alle Patienten vor und nach dem operativen Eingriff hatten die Langzeit-Blutdruckmessung und das Langzeit-EKG nach Holter. In Abhängigkeit von den Ergebnissen der Langzeit-Blutdruckmessung wurde gegebenfalls eine antihypertone Therapie eingesetzt oder korrigiert. Wir empfehlen bei allen Patienten, die für eine chirurgusche Behandlung der Nierengeschwulst, Urolithiasis oder Prostatakrankheiten in die Klinik verwiesen werden, die Langzeit-Blutdruckmessung durchzuführen, um den Grad der Blutdruckerhöhung zu bestimmen und eine gezielte Korrektur der antihypertonen Therapie durchzuführen. Falls die präoperative Langzeit-Blutdruckmessung erhöhte Blutdruckwerte zeigt, empfehlen wir eine Therapiekorrektur mit der Anwendung von Calciumantagonisten (Nifecard retard) und ACE-Hemmer Fosinopril. Nach der Verordnung oder Korrektur der Therapie soll der Patient einige Tage lang beobachtet werden. In dieser Zeit ist es empfehlenswert, den Blutdruck 2-3-mal täglich zu messen. Falls der Blutdruck erhöht ist, muss die Operation verschoben werden, und der Patient muss in die therapeutische Abteilung für die Bestimmung einer passenden Hypertoniebehandlung verwiesen werden. Für die Patienten, deren Blutdruckwerte nach der Langzeit-Blutdruckmessung im Normalbereich liegen, und alle Patienten mit der IHK ohne AH mit Prostatakrankheiten, wird eine chirurgische Korrektur der urologischen Pathologie empfohlen. In der präoperativen Periode wird den Patienten mit einer gutartigen Hyperplasie der Prostata und einer akuten Harnverhaltung das Langzeit-EKG nach Holter für die Bewertung des Herzrhythmuses und für die Auswahl der Patienten mir hoher Wahrscheinlichkeit, eine atriale Fibrillation (AF) in der frühen postoperativen Periode zu entwickeln, empfohlen. Patienten (n=466) mit der Anzahl von ventrikulären Extrasystolen über 1 000 pro Tag gehören zu der Risikogruppe, in der die AF entwickelt werden kann. Diesen Patienten empfehlen wir eine Verordnung von einem Betablocker, z.B. Metoprolol 50-100 mg/Tag, da die Paroxysmen der AF bei 36 Patienten am zweiten Tag nach der Operation entdeckt wurden. In der Kontrollgruppe (n=100) wurde kein Metoprolol verordnet, und die AF wurde am zweiten und zehnten Tag nach der Operation gefunden (n=36, n=6 entsprechend). Der chirurgische Eingriff darf nicht früher als 3 Tage nach der Metoprolol-Verordnung durchgeführt werden. Postoperativ müssen bei den Patienten mit Prostatakrankheiten der Blutdruck, Puls und EKG kontrolliert werden. Eine besondere Aufmerksamkeit soll den Patienten im Alter von über 60 Jahren nach der Nephrektomie gewidmet werden. In dieser Gruppe von Patienten ist eine Senkung des Blutdruckes in der frühen postoperativen Periode möglich, die eine Dosierungsverringerung der Antihypertensiva erfordern.

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PREDICTORS OF ARRHYTHMIC COMPLICATIONS IN PATIENTS WITH THE SYNDROME OF OBSTRUCTIVE SLEEP APNEA

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Objective. To study predictors of arrhythmic complications in patients with the syndrome of obstructive sleep apnea (SOSA).

Materials and methods. 112 patients with the syndrome of obstructive sleep apnea were examined initially and prospectively. During the observation paroxysms of atrial fibrillation and ventricular tachyarrhythmias were registered with 56 patients out of 112 (50,0%) (1st group: average age 56,4 ± 5,3), 56 patients (50,0%) had no rhythm disturbance (2nd group: average age 54,7 ± 7,2). We used standard ECG with calculation of maximum (max), minimum (min), dispersive (dis), corrected (corr.) P wave values, PQ(R) and QT intervals, Holter ECG monitoring, rates of timing and spectral analysis of daily variability of heart rate, night pulse oximetry. Analysis was conducted with the help of statistic programs package «Statistica 6,1», we applied Mann-Whitney U-test, Wilcoxon signed-rank paired difference test, calculation of sensitivity (Se), specificity (Sp), positive and negative prognostic values (PPV and NPV), chances ratios (CHR).

Results. Pdis values with patients in 1st group were higher by 83,9% and 55,1% than in 2nd one (both $p < 0,01$). Besides QTdis with women in 1st group was higher than in 2nd one by 56,1% ($p < 0,05$). Decrease of arterial blood saturation with oxygen during the sleep was associated with increase of Pdis values with men and PQ(R) with women. The most predictive value for appearance of rhythm disturbance with patients with SOSA were demonstrated by Pdis rates (Se – 66,7%, Sp – 57,9%, PPV – 50,0%, NPV – 26,7%, CHR – 2,7 standard units), PQ(R)dis (Se – 44,4%, Sp – 68,2%, PPV – 60,5%, NPV – 46,9%, CHR – 1,7 standard units), QTmin (Se – 71,4%, Sp – 50,0%, PPV – 50,0%, NPV – 28,6%, CHR – 1,5 standard units) и QTcorr. (Se – 54,5%, Sp – 57,1%, PPV – 66,7%, NPV – 55,6%, CHR – 1,6 standard units). With patients of 1st group PNN50 and SDANN values exceeded analogous values of 2nd group by 67,3% and 50,9% respectively, and SDNN was increasing with women with arrhythmia by 32,1% (all $p < 0,05$). In 1st group in comparison with 2nd one we noted decrease of total spectrum intensity by 21,4% and LF/HF index by 30,6% (both $p < 0,05$).

Conclusions. So, during the night sleep, patients with SOSA predictors of paroxysm atrial fibrillation may have the increase of Pdis and PQ(R)dis values and ventricular arrhythmias – QTdis and QTcorr. In such a case, rhythm disturbances appeared more often against the background of cranial division activity dominance.

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CLINICAL EXPERIENCE OF OBSERVING OF THE PREGNANT WOMEN WITH BODY WEIGHT DEFICIT

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Nowadays there is unfavourable demographic situation in Russia. Birth of a healthy child becomes quite problematic due to low index of women health of mothers-to-be.

Hormonal dysfunctions affect decidual reaction in endometrium and proliferative activity of trophoblast in early pregnancy, at the stage of placenta development.

The women with body weight deficit are in the group of high perinatal risk and reproductive loss.

The main task of the research is development of new approaches to preconception period preparation f the women with body weight deficit and prenatal care of them.

Materials and methods. We have studied anamnesis, somatic and reproductive health of 198 women with body weight deficit at the age of 19-29 years, applied to the family planning office. 198 women were divided into 2 groups: the basic contains 100 women who passed preconception course and comparative group of 98 women who failed to take such a course. In the basic group the pregnant women received preventive treatment developed by our colleagues, the second group did not receive it.

The criteria of inclusion into research were the primiparas with index body weight less than 20 kg/m^2.

Research's results: prevention and treatment of early insufficiency of placental bed and placenta suggests the beginning of prevention and treatment in pre-embryonic period and early pregnancy. It was detected that menarche started at the age of 13 years and 6 months in 53 % of cases, at the age of 14 years in 36 % of cases, at the age of 14 years and 6 months in 11 % of cases. It took 2,5-3,5 years to form regular menstrual cycle in 129 (65%) cases, 53 (26,8%) women still do not have regular menstrual cycle. According to our methodology of preconception preparation of the women body weight deficit it was recommended good nutrition including .diet food rich in protein micronutrients, multivitamins, control of gastrointestinal tract activity, essential polyunsaturated fatty acids omega3, hormonal support during the first phase since 9 till 14 day of the cycle by minor doses of estrogens and during luteal phase by the medicines of progesterone line since 16 till 25 days of the cycle, low molecular weight heparin in combination with dipiridamol 50 mg 3 times a day since 5 till 26 days of the cycle to improve haemodynamics.

If the pregnancy has not occurred within 3 months, then additionally to hormonal support stimulation of ovulation is started by clomid 100 mg since 5 till 9 day of the cycle under US control on endometrium follicles' growth and also ovulatory dose of

human chorionic gonadotropin if follicle's diameter is 18-20 mm and progesterone since 16 till 25 days of the cycle.

The basic group consists of 100 patients who had passed preconception preparation according to the developed methodology. Comparative group consists of 98 pregnant with body weight deficit who had not passed preconception preparation and prenatal care was performed according to the existing standards.

In accordance to our methodology on the first examination of the women with BWD it was prescribed to continue hormonal replacement therapy in early pregnancy: in case of decreased estrogens' rate to take in minor doses of estrogens in 5-7 weeks gradually stop taking it in, in case of low basal rate to use chorionic gonadotropin up to 12weeks, to support yellow body's function to use progestagens up to 18 weeks. Natural progesterone micronized 200mg intravaginally 2 times a day up to 18 weeks.

It was stipulated to recommend the women with BWD from the basic group metabolic correction of adaptive-homeostatic responses of fetus-placental system at 6-8 weeks,12-14 weeks, 20-22 weeks and 30-32 weeks of gestation in out-patients' department 10 days: essential polyunsaturated fatty acids omega3 2 capsules a day; dextrose 5% - 400,0 + deproteinized gemoderivat made of calf blood with low molecular weight peptides, nucleic acids derivatives 5,0 i.v.

During the second half of the pregnancy in a day dextrose 5% + metabolic medicine, containing succinic acid 100mg, nicotinamide 10 mg, 20 mg of inosine, riboflavin mononucleotide 2 mg., magnesium sulfate 25% -10 ml intravenous drip-feed in case of threatened miscarriage; nadroparin calcium 0.3 s/c for better microcirculation (after hemostasiogramm results); combined multivitamins with micro- and macronutrients, which efficiency is based on its components; It was recommended levocarnitine 8 drops 3 times a day to improve protein and fat metabolism.

During the pregnancy of the women with BWD from the basic group who have passed the preconception preparation and followed the suggested methodology of antenatal prevention

It was detected FGR by US at the term of 32-34 weeks 3,9 times less than in women with BWD who were treated according to the existed standards (coefficient of contingency $r=+0,79$; $p<0,001$); cases of gestosis were 2,5 times less(coefficient of contingency $r=+0,82$; $p<0,001$); threatened miscarriage2,3 times less(coefficient of contingency $r=+0,78$; $p<0,001$).

Therapeutic measurements in the prenatal period applied to the pregnant women with BWD afford to decrease the perinatal complications rate, improve the outcome of fetus and newborn, reduce the frequency severe central nervous system affliction and critical state of the newborn and the children of early age.

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SEROMAS AFTER THE SURGERY OF POSTOPERATIVE VENTRAL HERNIAS WITH THE USE OF MESH ENDOPROSTHESES

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The objective of the research is to study the occurrence of seroma formations depending on the method of the surgery of the anterior abdominal wall with the help of a mesh endoprosthesis in case of postoperative ventral hernias.

Materials and methods.

The retrospective research was based on the method of the paired analysis of the surgery of the postoperative ventral hernias in „Dr. Paramonov's Clinic". During the analysis of 460 cases we chose 58 women at the age of 40 to 60 years. The first group (n=24) was composed by patients who had an „on lay" operation, 2 (n=24) had an „in lay" surgery. Polypropylene endoprostheses were used in all cases.

Criteria of inclusion: a planned surgical procedure; the size of the hernia from 100 to 200 cm^2; tension hernia repair.

Criteria of exclusion: infectious complications in the postoperative period; duration of the surgery more than 120 minutes due to the apparent adhesive process and the necessity of reconstructive invasions in the intestine.

The performance of the „in lay" surgery is possible if the preperitoneal cell is sufficiently apparent, if the peritoneum has cicatrical changes and apparent fusing, „on lay" surgery is carried out. The duration of the operation in the second group was longer by 16+11 minutes.

The frequency of drainage in the area where the mesh is situated was 100% in the first group and 16.6% (4 cases) in the second. Subcutaneous cellular tissue was drained in 100% of observation cases in the second group.

The duration of the drainage before implanting the endoprosthesis was 3 days in all the cases. The amount of the drainage was reduced from 86+42 ml to 30+12 ml in the first group and to 24+10 ml in the second. The duration of the drainage of the subcutaneous cellular tissue in the second group was 2 days.

The occurrence of seromas in the first group was 6 (25%). It required some additional evacuation of fluid along the drain channel, cutaneous sutures or by puncture, 4 to 12 times. The evacuation was performed once a day in the course of one week, and later according to indications.

There were three cases of seromas of the subcutaneous cellular tissue in the second group, which required evacuation from 2 to 4 times via the drain channel or cutaneous sutures. The area of placement of the endoprosthesis in the second group was monitored with the help of the ultrasound. The formation of seromas was registered in 3 (12.5%)

cases. The preperitoneal cellular tissue was not drained in these observations. A puncture was performed in two cases when the estimated indicators of the cavity space showed more than 100 cm³. 60 and 80 cm³ of the serous fluid were obtained during the puncture; further punctures were not needed.

The research shows that the „in lay" surgery is more rarely accompanied by the formation of seromas. Most probably, the drainage of the fluid into the abdominal cavity takes place between the sutures of the peritoneum. Furthermore, we think that due to this type of surgery there is a closer contact of all layers of the prosthetic peritoneum, which is caused by the intraperitoneal pressure.

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VALUATION OF MICROBIAL COLONIZATION OF FOUNDRY ALLOY, USING IN REHABILITATION OF SICK PERSONS WITH INFLAMMATORY PATHOLOGY PARODONT

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Cavity of mouth is the unique ecological system for microorganisms, forming constant microflora. Wealth of food resources, constant humidity, optimal significances pH and temperature create favourable conditions for adhesion and colonization of bacteriums. When there is adequate mechanism of resistance quantity of bacteriums in mouth's cavity is controlled, creating balance between pathogenic, condition-pathogenic and useful microorganisms.

Factor, increasing colonization is an ability of bacterium's and fungus to stick to surface of teeth, mucous membrane and prosthetics, it is microbial adhesion. Constructional material, using for making dental prosthetics part, may be show unfavourable acting for the state of moths cavity, connecting with forming of bio pellicle on elements of prosthetic.

It is proved, that while inflammatory pathology of parodont reduction of forming bio pellicle provides increasing of macroorganism and parodont, educes probability infectious of lympha blood system, makes difficult adhesion and impedes persistence of parodont-pathogenic bacterium's, reduces risk of progress inflammatory process in tissue parodontotical complex.

The aim of research: Increasing of efficiency of methods rehabilitation sick persons with inflammatory pathology parodont in a way of clinic microbiological substantion of choice foundry alloy for dental prosthetics and immobilizing apparatuses.

In investigation 30 sick persons with defect of dental ranges on upper and lower jaw was appreciated state of microflora mucous membrane of mouth's cavity (15 women and 15 men) at the age of 45 to 65 years with parodontim of light degree of difficulty: PMA [Parma, 1960] – less 30%; PI [Russel A., 1956] – 0,5-1,9; OHI-S [Green J.C.,

Vermillion J.K., 1964] – 0,7-1,2; SBI [H.P. Muhlemann, S. Son, 1971] – 1,3-1,4. It was made 10 (ten) byugle prosthetics from gold contained alloy «Super LB», cobalt-chrome-molybdenum alloy «Byugodent CCS VAC» and alloy of titan «VT6L» with the next valuation of microbe colonization. Common quantity of made prosthetics is thirty (30). Bacterium investigation during valuation adhesive to foundry alloy they were doing two groups of microorganisms of mouth's cavity: resident's group which plays the stable role in micro biotzenoz of mouth's cavity (micro airfoil streptococci Streptococcus sanguis, Streptococcus salivarius, Peptostreptococcus anaerobius, Enterococcus faecalis end bactheroid Prevotella oralis) end parodont-pathogenic group, possessing with factors of virulence and supporting development of pus-inflammatory process in mouth's cavity (Actinomyces naeslundii, A. israeli, bactheroid Prevotella melaninogenica, Porphyromonas gingivalis, Fusobacterium spp). Presence of stamms fundus Candida albicans are the most important disbactherious of mouth's cavity during reduction mechanisms of especial resistance of organism. Obtaining of material for microbiological investigation they fulfill after putting by scraping from the inner surface of prosthetic on upper jaw – in the field incisor nipple, on lower jaw – in the field of alveolar bone. Obtaining of material were doing net 24 hours in the seventh 24 hours and in a month using of prosthetic with the aim of investigation of prosthetic bio pellicle.

Visional studying microflora of mouth's cavity were doing using technology aerobically cultivation about 37°C. After secretion isolate colonies they get pure cultures on cordial-brain agar or half liquid environment AC and were doing identification using complex of morphological, cultural and biochemical sign with using «key» for identification microorganisms of mouth's cavity. Quantitative studying of microflora, growing in the original (initial) sowing were defined by contents of each king of bacterium's from the advantage 1cm^2 adhesives pellicle for taking material (CFU/cm^2). Further they were doing quantitative sectorial sowing bacterium solvent from the transport environment. Kind of breeding ground and time of incubation period was defined by the problem of qualitative investigation microflora.

Colonization of the stable microflora alloy «Super LB». S. sanguis and E. faecalis: the 1st twenty four hours – 101 CFU/cm^2; the 7th twenty four hours – 104 CFU/cm^2, the 30th twenty four hours – 106 CFU/cm ^{2}. P. anaerobius: the 1st twenty four hours – 101 CFU/cm^2; the 7th twenty four hours – 102 CFU/cm^2, the 30th twenty four hours – 105 CFU/cm^2. S. salivarius and Prevotella oralis: the 1st twenty four hours – 101 CFU/cm^2; the 7th twenty four hours – 102 CFU/cm^2, the 30th twenty four hours – 104 CFU/cm^2.

Colonization of the stable microflora alloy «Byugodent CCS VAC». S. sanguis and E. faecalis: the 1st twenty four hours – 105 CFU/cm^2; the 7th twenty four hours – 106 CFU/cm^2, the 30th twenty four hours – 108 CFU/cm^2. P. anaerobius: the 1st twenty four hours – 102 CFU/cm^2; the 7th twenty four hours – 105 CFU/cm^2, the 30th twenty four hours – 108 CFU/cm^2. S. salivarius and Prevotella oralis: the 1st twenty four hours – 102 CFU/cm^2; the 7th twenty four hours – 103 CFU/cm^2, the 30th twenty four hours

– 105 CFU/cm^2.

Colonization of the stable microflora alloy «VT6L». S. sanguis and E. faecalis: the 1st twenty four hours – 102 CFU/cm^2; the 7th twenty four hours – 105 CFU/cm^2, the 30th twenty four hours – 107 CFU/cm^2. P. anaerobius: the 1st twenty four hours – 102 CFU/cm^2; the 7th twenty four hours – 103 CFU/cm^2, the 30th twenty four hours – 106 CFU/cm^2. S. salivarius and Prevotella oralis: the 1st twenty four hours – 101 CFU/cm^2; the 7th twenty four hours – 102 CFU/cm^2, the 30th twenty four hours – 105 CFU/cm^2.

Colonization of residential microflora alloy «Super LB». A. naeslundii: the 30th twenty four hours – 102 CFU/cm^2. Prevotella melaninogenica: the 7th twenty four hours – 101 CFU/cm^2, the 30th twenty four hours – 102 CFU/cm^2. Porphyromonas gingivalis: the 7th twenty four hours – 102 CFU/cm^2, the 30th twenty four hours – 103 CFU/cm^2. Candida albicans: the 30th twenty four hours – 101 CFU/cm^2. A. israeli and Fusobacterium spp. – was not sowed.

Colonization of residential microflora alloy «Byugodent CCS VAC». A. naeslundii: the 7th twenty four hours – 101 CFU/cm^2, the 30th twenty four hours – 103 CFU/cm^2. Prevotella melaninogenica: the 7th twenty four hours – 101 CFU/cm^2, the 30th twenty four hours – 103 CFU/cm^2. Porphyromonas gingivalis: the 7th twenty four hours – 102 CFU/cm^2, the 30th twenty four hours – 104 CFU/cm^2. Candida albicans: the 30th twenty four hours – 102 CFU/cm^2. A. israeli and Fusobacterium spp.: the 30th twenty four hours – 102 CFU/cm^2.

Colonization of residential microflora alloy «VT6L». A. naeslundii: the 30th twenty four hours – 102 CFU/cm^2. Prevotella melaninogenica: the 7th twenty four hours – 101 CFU/cm^2, the 30th twenty four hours – 103 CFU/cm^2. Porphyromonas gingivalis: the 7th twenty four hours – 102 CFU/cm^2, the 30th twenty four hours – 104 CFU/cm^2. Candida albicans: 30-twenty for hours – 101 CFU/ms2. A. israeli and Fusobacterium spp. – was not sowed.

Conclusion: The important stable kinds of microbe flora of mouth's cavity possess by the ability to colonization dental prosthetics from gold contained alloy «Super LB», cobalt-chrome-molybdenum alloy «Byugodent CCS VAC» and alloy of titan «VT6L», moreover qualitative parameters of colonization stabilized flora substantially exceed as such for virulent kinds of bacterium's and fungus of type Candida. An absence of expressed negative action on structure micro biotzenoz of prosthetic bio pellicle promotes support of adequate mechanisms of resistance, reduces progress inflammatory process from sides of tissue prosthetic part, it leads to health farm of common sanitary situation providing support microecological status of patient.

Obtained information's permit to recommend using of bugle prosthetics and immobilizing apparatuses from alloy «Super LB», «Byugodent CCS VAC» and «VT6L» with the aim of treatment of complication and increasing of effectiveness of orthopaedic methods treatment in complex rehabilitation of sick persons with inflammatory sickness of parodont.

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HYDROLYTIC RESISTANCE FOUNDRY ALLOYS USED IN COMPLEX REHABILITATION OF PATIENTS WITH INFLAMMATORY PARODONTAL DISEASE

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The major factor of the successful rehabilitation of patients with inflammatory parodontal pathology in modern dentistry is a reasonable choice of construction material used for producing dental prostheses and splinting devices in all the phases of orthopedic treatment.

Clinical observations and research results show that the effect of dental materials in the tissue of a living organism and the microflora of the oral cavity is determined by the structure and physico-chemical properties of the restorative material. The presence of pores, cavities, micro-defects in the design of therapeutic and prophylactic device significantly increases the adhesive properties of microbial flora of oral cavity. The increasing of structural homogeneity with improving surface properties of cast alloys will help to remain stable microbiological parameters, to increase the effectiveness of rehabilitation mechanisms, to increase the resistance of prosthetic bed tissues, to provide the successful prediction of long-term clinical results, creating, thus, the optimal conditions for the maintenance of oral cavity homeostasis.

The aim of research: The efficiency increasing of rehabilitation methods of patients with inflammatory parodontal pathology by using scientifically-based appliance of dental casting alloys according the results hydrolytic resistance studies.

The materials of research are a solution of artificial saliva (T. Fusayama, 1975) and the corresponding international standard ISO 6871-87 dental casting alloys using for making frames of high-rate clasp dentures and splinting devices: gold-alloy “Super LB”, cobalt-chromium-molybdenum alloy “Byugodent CCS VAC», titanium alloy, “VT6L”. In the studding of hydrolytic resistance method of determining the contact angle between the solution of artificial saliva and foundry alloys was used, as well as the method of determining the surface energy of the cast alloys. These methods allow to compare the parameters of the hydrolytic resistance of cast alloys, as well as to predict the stability of the adhesive treatment and prevention apparatus of the base alloys to precipitation of microbial agents from the oral fluid.

The determination of the contact angle of cast alloys for a solution of artificial saliva was carried out by the traditional method with using a projector and paper screens. Wetting angle was calculated according for each parameter of the drop (height, shape of the spherical surface, the radius of the perimeter of the contact, the magnitude of a tangential relation to the solid phase). The indicators of the cast alloys surface energy were calculated on angle values by using the Dupre - Young equation and (Zisman) plotting, establishing a linear relationship according cosine contact angle ($\cos \Theta$) with the surface

tension of the artificial saliva (reference data).

The value of contact angle (Θ), formed by liquid and solid phase lets to determine much a form of liquid droplets on solid surfaces is close to spherical (Θ = 45°-55°) under conditions of dynamic equilibrium. Casting alloys, the contact angle of which is consistent with the parameters of the wetting of a spherical shape, have a minimum surface area with minimum surface energy for given volume. It helps us to minimize the total energy of the fluid, reducing the wettability of the cast alloy. The value of contact angle has been set: an alloy of the "Super LB" – 44° ± 1,76°, alloy "Byugodent CCS VAC» – 39° ± 1,57°, titanium alloy, "VT6L" – 46° ± 1,85°.

Casting alloys hazing high rates of surface energy, with interaction of saliva with low surface tension (reference data) have inter penetration. The phenomenon of permeability is connecter with the existence of stable intermolecular gratuity in the restricted area when a dynamically stable equilibrium state. It prevents the spread of the liquid phase on the surface of the alloy with a high surface energy, providing reductions in wettability. The values of surface energy: has been calculated the fusion of the "Super LB" – 386 ± 15,3 (′10-3 Dzh/m2), the alloy "Byugodent CCS VAC» – 345 ± 13,6 (′10^{-3} Dzh/m^2), the alloy "VT6L" – 392 ± 15,6 (′10^{-3} Dzh/m^2).

The alloys "Super LB" and "VT6L" have optimal values of wettability, with the parameters of a spherical shape with the most distinct indicators of the surface energy. Promote the provides structural homogeneity, high purity of the surface, the absence of inclusions, micro defects, significant the porosity with significant numbers of surface energy and wettability optimal. The formation of single-phase multi-structured alloy of gold and platinum "Super LB". The conduction of the mechanism of hardening, unlimited solubility of alloying elements with a significant number of clusters, the formation of substitution solid solution, and the interpenetration of the atoms without deformation of the crystal lattice. The reduction of adhesion performance of the liquid phase reduces the probability of formation of complex compounds with the saliva and the deposition of bacterial agents, providing distinct hydrolytic resistance to "Super LB" fusion.

The formation of hexagonal close-packed structure of the alloy "VT6L" promotes the introduction of alloying elements that have agreed indicators: point melting and solidification, point solubility in the melt, the surface tension and viscosity. The minimum number of alloying elements, acting as alpha-and beta-stabilizers, creates multiple centers of crystallization of fine-grained and microgranular structure with a minimum range of their distribution. It provides structural homogeneity, high purity of the surface, the absence of inclusions, micro defects, with significant rates of porosity of the surface energy and wettability of the best. Adhesion performance reduction of the liquid phase reduces the probability of formation of complex compounds with the saliva and the deposition of microbial agents, providing stable hydrolytic resistance to a fusion of "VT6L".

Conclusion: The gold-alloy "Super LB" and titanium alloy "VT6L" have a distinct hydrolytic resistance due to strong intermolecular attraction at the interface between solid and liquid phases, the optimum wettability and surface energy of the alloy significantly.

The reduction of the adhesion mechanisms of the liquid phase reduces the probability of formation of complex compounds with saliva, providing the stability of the alloys in the precipitation of the microbial flora from the oral fluid. The reducing of bacterial contamination in the area of prosthetic bed tissues increases the adequacy of resistance mechanisms, providing means of preserving maintenance of physiological homeostasis in the recovery microecological status. It increases the effectiveness of orthopedic treatment in the complex rehabilitation of patients with inflammatory parodontal diseases.

D.A. Domenyuk

RESEARCH OF MORPHOLOGY OF FOUNDRY ALLOY, USING IN ORTHOPAEDIC TREATMENT OF SICK PERSONS WITH INFLAMMATORY PATHOLOGY OF PARODONT

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Foundry alloys are the most important constructive materials for making of dental prosthetics, splinting, apparatuses and implants in clinic of orthopaedic stomatology. Contemporary scientific researches convince that alloys of precious and unprecious metals using for orthopaedic treatment of sick persons with inflammatory pathology of parodont must possess with minimum adhesion to microbial flora, significant mechanical durability, anticorrosive durability, chemical stability, biological indifference, low heat-conducting.

Discovery of foundry alloy with the high purity of surface permits significantly to reduce microbial colonization of dental prosthetics. This increases efficiency of orthopaedic treatment in order to preserve adequate mechanisms of resistance, reduction of progress inflammatory process from side of tissues prosthetic part lengthening of phase durable remission on support of microecological status.

The aim of research: Study of morphology of foundry alloy using for orthopaedic treatment of sick persons with inflammatory pathology with method of scanning electronic microscopy and 3D of laser profilometry.

For research of materials are chosen foundry alloy which according to demands of international standard ISO 6871-87 and using during making of shell solid foundry byugle prosthetics and splinting apparatuses: alloy which contains gold «Super LB», cobalt-chrome-molybdenum alloy «Byugodent CCS VAC» and alloy of titan «VT6L». Alloy «Super LB» chemical composition – 75,0%Au; 8,0%Cu; 8,0%Ag; 9,0%Pt; physical-mechanical property – durability 225,5MPa (ISO-220MPa); limit of fluidity 537,0MPa (ISO-450MPa); relative lengthening 14,3% (ISO-2%); density 15,3g/cm^3. Alloy «Byugodent CCS VAC» chemical composition – 63,0%Co; 27,0%Cr; 5,0%Mo; C,Mn,Si>5%; physical-mechanical property – durability 360 HV; modulus of elasticity 222 kN/mm^2; limit of plasticity 0,65 kN/mm2; relative lengthening 9,0%; density 8,4g/cm^3. Alloy «VT6L» chemical composition – 90%Ti; 6,0%Al; 4,0%V; physical-mechanical

property – durability 250MPa; limit of fluidity 92000PSI; modulus of elasticity 16000PSI; relative lengthening 12%; density 4,51g/cm^3.

As a method of research is used scanning electronic microscopy by the system «EVO-40» («Karl Zeiss») with the appliance for microanalysis «INCA» («Oxford») and 3D laser profilometry by the apparatus «SIS-1200 PLUS». Preparation of examples was doing krioultramicrotom by «LKB-PRODUKTER AB». Examples of foundry alloy were studied of divisibility of increase from ´35 till ´50 000. The more objective and reliable mark of foundry alloy which permits to appreciate all morphological peculiarities was reached during enlarging ´5000. In the whole were got and analyzed 600 electronogramm and 600 profilegramm of surface of investigated examples.

In results of scanning electronic microscopy and 3D of laser profilometry were substantiated criterions of mark morphology of foundry alloy: richness of granular structures (centers of crystallization); proportional distribution of granular structures; characteristic of granular structures; a form of limits, forming between granular structures; size of abnormality borders of granulars are even without pointed edger of profile surface. Morphology of alloy «Super LB» is represented the majority of granular structures about equal stability. Centers of crystallization are defined as small and microgranular structures. Forms of limits of granules are even, without pointed cants. Abnormality of profile surface – 0,02mkm. Microstructure of alloy «Byugodent CCS VAC» is represented by the significant quantity granular structures when they are distributed in proportion. Centres of crystallization have small and middle granular structure with minimum diapason of distribution. Limits of granules are even without edges. Abnormality of profile surface – 0,02mkm. Morphology of alloy «VT6L» is represented by the majority of granular structures when they are distributed equally. Centres of crystallization of the same sizes, right form, having small and microgranular structure when diapason of distribution is extremely small. Limits of granules of even form without pointed cants. Abnormality of profile surface – 0,03mkm.

The least expressed phase of the same type when the small porousity and moderate purity of surface is characterized for alloy «Bugodent CCS VAC». Introduction of the large number of alloy elements forms small and middle granular centers of crystallization. Spheres and parts of dendrites are less rich with alloy elements, than centres of crystals thanking different size transformation and it is linked with the electoral ousting of elements from the centre to provinces. Distinctive for each alloy elements different importance's of points of smelting and durability, solubility in smelting, tightness and viscous and also the electoral solubility of oxygen and hydrogen is the reason of saturation of melting with gas from surrounding atmosphere (opened and closed porousity).

The best demonstrations of structural similarity on high clear nests of surface and absence of opened porousity possess alloy «Super LB» and «VT6L». Leggier elements of alloy «VT6L» (aluminum, vanadium) are demonstrated as alpha and beta-stabilization, combining hexagonal dense packed structure alpha-phase with cube structure beta-phase. The minimum quantity of alloy elements forms plural centres crystallization of small and

micro granular structures with minimum diapason of distribution.

The same size of affin's transformation promotes to the proportional distribution and richness with alloys elements of centres of crystal and interdendrical spheres. Agreement of demonstrations of alloys elements and also high solubility of oxygen in hexagonal hard packed structure is the reason of minimum of saturation of melting with gas from surrounding atmosphere (the only porousity). Thin granular structure of alloy «Super LB» forms thanking exchanging solubility of components without deformation of crystal grate and plural number of clusters, rising density and providing homogeneity of material during casting. Formation of one phase multi structural solid solution of substitution with the unlimited solubility promotes the same demonstrations of valence, as a crystal grate and size of atoms melting metals. Introduction of alloys elements with high temperature melting and also using mechanisms of homogenization tempering and ordered durability does minimum within crystal liquid.

Conclusion: Using alloy which contains gold «Super LB» and alloy titan «VT6L» possessing expressed morphology thanking phase's similarity, high cleanness of material when porousity is absent forecasts reduction bacteriological adhesion on the surface dental prosthetic and splinting apparatus. This reduces activity of aggressive factors of rick, intensifies the role of immune biological barrier of cavity's mouth and parodont, improves compensatory possibilities of ecological systems of organism, increasing effectiveness orthopaedic treatment complex rehabilitation of sick persons with inflammatory pathology of parodont.

E.V. Donchenko

THE ROLE OF HUMAN ECOLOGICAL MEDICINE IN THE IMPROVEMENT OF ADAPTIVE CAPABILITIES OF A HUMAN BODY

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Human ecological medicine is a new approach in the naturotherapy. The core principles of Human ecological medicine are the following:

- A human body is a integral, multifunctional system. All processes, proceeding in the human body, are the results of changes of balance of adaptive systems.
- A disease is the adaptive reaction of the human body, whether it is successful or not.

Treatment methods are focused not on depression of pathogen (adaptive) reactions of the body, but on creation of favorable conditions for their actualization. A program of endoecological rehabilitation is used for these purposes.

The program is based on hyperthermic intestinal dialysis, visceral massage, phytotherapy.

In the course of the treatment there occurs the compensation for the deficiency state. This provides the possibility for fusion of different biochemical complexes, necessary for restoration of imbalance in the human body.

In the course of the treatment we have taken into consideration the influence of attitude of patients towards the possibility of disease progress.

These techniques are used during the last 18 years, and they have shown their high efficiency, which in some cases has made 80% – 90%. The number of patients that was treated with the help of techniques mentioned above has made more than 15 000 people.

The list of the diseases treated:

- chronic herd infections
- diseases:

1) cardiovascular system diseases;
2) diffuse diseases of connective tissues;
3) all gastrointestinal diseases;
4) chronic and acute diseases of respiratory system;
5) diseases of endocrine system;
6) diseases of female and male genito-urinary systems;
7) central nervous system diseases
8) arthropathy;
9) chronic pathologies of gastro-intestinal tract, respiratory and endocrine systems in pediatry;
10) dermopathies: neurodermatitis, psoriasis, diathesis, eczema;
11) allergic state;
12) female and male sterility;
13) mental disorders;
14) oncological diseases.

In order to assess the efficiency of treatment we have used all the clinical laboratory and instrumental methods of examination, as well as “Dynamics” software program that allows to assess the functional status, adaptive resources and health level of the patients.

We have observed positive dynamics, improvement of spare capacity and health level in all cases in the course of treatment. The level of improvement depends on the duration of treatment. The patients, who received treatment more than a month, had shown less evident positive dynamics (5-10%). Optimal level was reached by those patients, who had received the treatment during 3-4 months (50-70%).

Thus, improvement of adaptive resources, spare capacity, health level in all cases prove high efficiency of human ecological medicine and reflect the capabilities of the human body to restore imbalance and health in some specific condition.

Sergej Dorochov

REGENERATIVE KRYOTHERAPIE NACH DOROCHOV® IN ONCOLOGIE

KryoPraxis Dorochov, Viersen (Düsseldorf), Germany;
http://www.kryopraxis.de

Klassifizierung: Eine Klassifizierung der Kryotherapie lässt sich auf der Grundlage des klinischen Effektes vornehmen, abhängig von den Temperaturparametern, die bei der Einwirkung des Kältefaktors auf das Gewebe zum Tragen kommen.

REGENERATIVE KRYOTHERAPIE nach Dorochov® ist die kurzzeitige, dosierte Kältebehandlung von Geweben und Organen mit nahe an der Kälteresistenzschwelle des Gewebes liegenden Temperaturparametern, die darauf ausgerichtet ist, an der behandelten Stelle eine Regenerierung sowie eine Funktionsreaktivierung zu bewirken.

Bei der regenerativen Kryotherapie erfolgt eine Reaktion des Organismus, die mit einer lokalen Reizung des Gewebes in Verbindung steht und sich so äußert, daß die pathogene Ursache beseitigt, das Gewebe regeneriert und die Funktionsfähigkeit wiederhergestellt wird.

Bei der Behandlung durch regenerative Kryotherapie kommt es in den Geweben des Organismus zu den gleichen pathophysiologischen Veränderungen, wie sie bei I.V. Davydovskij (1969) als Entzündungsprozesse beschrieben wurden: Die REGENERATIVE KRYOTHERAPIE nach Dorochov® st eine effektive Behandlungsmethode, mit der eine stabile therapeutische Wirkung erzielt werden kann.

Auf dem Wege der regenerativen Kryotherapie

- können Schnarchen und Apnoe-Syndrom beseitigt werden;
- kann die Nasenatmung wiederhergestellt werden;
- kann die Schutzfunktion des lymphoiden Gewebes in den Gaumenmandeln und den lymphoiden Rachenfollikeln normalisiert werden;
- können Immunvorgänge stimuliert werden;
- können chronische Infektionsherde in den Gaumenmandeln, im Rachen und in der Nase behoben und deren Komplikationen (Folgekrankheiten) beseitigt werden, als da sind: Systemerkrankungen, rheumatoide Erkrankungen des Herzens (Endo-, Myo-, Perikarditis), der Blutgefäße (Vaskulitis), der Gelenke (Polyarthritis), der Nieren (Glomerulonephritis), der inneren und der Geschlechtsorgane (Potenzstörungen), des Nervensystems (Chorea), der Haut (Sklerodermie, Psoriasis, Pustulose, Lupus erythematodes); infektallergische Erkrankungen (Bronchialasthma, atopische, allergische Dermatitis etc.); immundefizitäre Zustände.

Wenn jeder (und dies gilt insbesondere für Kinder) sich zu Prophylaxezwecken einer Kältebehandlung des lymphoiden Gewebes der Gaumenmandeln, der Rachenfollikel und der Nasenschleimhaut mittels regenerativer Kryotherapie unterzieht, so wird man, besonders bei Kindern, eine Verbesserung der Schutzfunktionen des Organismus und eine Immunitätsstimulierung feststellen können, und man kann davon ausgehen, daß danach

das Risiko von Systemkrankheiten, rheumatoide, infektallergische und onkologische Erkrankungen, immundefizitäre Zustände sowie Schnarchen und Apnoe-Syndrom deutlich herabgesetzt wird.

Ein wesentlicher Punkt bei der regenerativen Kryotherapie ist die Überwachung der Abkühlungsparameter an den Geweben, da hiervon der therapeutische Effekt unmittelbar abhängt. Ich habe die Methode der regenerativen Kryotherapie an einem mobilen medizinischen Kryogerät spezieller Bauweise entwickelt, welches ich in Deutschland habe patentieren lassen (Deutsches Patent; München, 1993). Mit Hilfe eben dieses Kryogerätes ist es möglich, die Gewebekühlung gut unter Kontrolle zu halten. Dies gilt besonders für den HNO-Bereich.

Es sollte uns ein Anliegen sein, die Kryotherapie bekannter zu machen und sie in der täglichen Praxis anzuwenden, denn sie bietet für den Patienten eine Alternative zu radiakalen operativen Eingriffen und zu der damit verbundenen Entfernung von Geweben und Organen.

INDIKATIONEN für die regenerative Kryotherapie nach Dorochov®:

Tonsillitis (Mandelentzündung), Pharyngitis (Rachenentzündung), Rhinitis (Schnupfen); Schnarchprobleme;

Rheumatismus: Herzerkrankungen (Endo-, Myo-, Perikarditis), Nierenerkrankungen (Glomerulonephritis), Gelenkerkrankungen (Arthritis), Blutgefäßerkrankungen (Vaskulitis), Hauterkrankungen (Sklerodermie, Pustulose, Psoriasis, Lupus Erythematodes), Nervensystemerkrankungen (Chorea); allergische Erkrankungen (Bronchialasthma, atopische, allergische Dermatitis etc.); onkologische Erkrankungen, immundefizitäre Zustände; Erkrankungen der inneren und der Geschlechtsorgane; zu Prophylaxezwecken gegen onkologische, rheumatoide, innere und allergische Erkrankungen, Systemkrankheiten, immundefizitären Zuständen sowie Schnarchen und Apnoe-Syndrom.

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DETERMINATION OF CENTRAL BLOOD PRESSURE OF PREGNANT WOMEN

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Over the last few years studies have demonstrated the importance of the central arterial blood pressure (ABP) parameter over the generally accepted parameter of arterial pressure in the brachial artery. The cuff pressure in the brachial artery does not always correspond to the pressure in the descending aorta. Due to the fact that it is the value of the systolic arterial pressure (SAP) in the aorta that determines the afterload and the left ventricular myocardial mass, the correlation between the SAP level and the mortality rate has a more indirect character in comparison to the SAP in the aorta.

The objective of the research was to reveal possibilities and clinical importance of the determination of central blood pressure of pregnant women according to the results of 24

hour monitoring of arterial pressure.

Materials and methods of the research. We observed 233 women aged between 17 and 45, 4-41 weeks pregnant. Criteria of inclusion: chronic arterial hypertension (AH) (essential hypertension, renal forms of arterial hypertension) - 88 women, gestational hypertension - 83 women, pregnant women with a normal level of ABP - 62 patients. Pregnant women with other symptomatic forms of AH – obesity of the 3-4 degree, proteinuria, heart diseases, endocrine diseases, frequent premature ventricular contractions – were excluded from the research.

We use a 24 hour arterial blood pressure and pulse rate monitor MnSDP-2 BPLab (LLC „Petr Telegin", Nizhny Novgorod), certified in accordance to the International Protocol ESH 2001 and recommended for the use for pregnant women. In order to analyse oscillograms, we used software Vasotens (LLC „Petr Telegin", Nizhny Novgorod), which is based on the oscillometric method of estimation of central and peripheral hemodynamics. We used a common cuff as a sensitive sensor. Using this equipment, it is possible to monitor patients 24 hours.

Results. When we compared the values of the central and peripheral systolic ABP in pregnant women, depending on the pregnancy period we found out that the peripheral and central SAP values increase from the first to the third trimester in the case of pregnant women with both normal ABP and AH ($p<0.01$). There was a significant difference between the central and peripheral SAP in both groups of more than 10 mmHg. The correlation between the SAP in the aorta with the weight and height of a newborn ($rs = - 0.52$) is stronger than that of the SAP measured in the brachial artery ($rs = - 0.41$). We also detected the connection between the SAP in the aorta and labour complications related to the AH, in accordance to the point system developed by us ($rs = 0.40$; $p <0 .05$). The obtained data confirms the opinion of other authors that the SAP in the aorta is the most sensitive indicator; it provides the most precise reflection of changes in the vascular wall and also allows evaluating a probable risk of development of cardiovascular complications. In doing so, it is orientated to peripheral ABP parameters.

Conclusions. It is possible to have a 24 hour central ABP monitoring with the help of the equipment MnCDP-2 BPLab with the software Vasotens (LLC „Petr Telegin", Nizhny Novgorod). Clinical and prognostic value of this method for pregnant women requires further research.

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THE ANALYSIS OF THE LEVEL OF CYTOKINES IN BLOOD AND THE ROLE OF OZONE-THERAPY IN THE COMPLEX TREAT-MENT IN PATIENTS WITH POLYTRAUMA

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Our aim was to analyse our experience of the complex treatment in patients with polytrauma with using ozon-therapy, the analysis of the level of cytokines in blood.

Patients and methods: our experience of using of ozone-therapy in complex treatment in patients with polytrauma with wounds, who were treated at Municipal Clinical Hospital 14 named after V.G. Korolenko, Moscow, which is clinical base of medicine of catastrophes department of Moscow State University of Medicine and Dentistry (MSUMD), after different mechanism of trauma is presented. There were 110 men (55,8 %) and 87 women (44,2 %). It is interesting to stress, that the mean age of the patients was 41 years (18 to 89). All patients were admitted to the hospital as an emergency. All patients were carefully examined, different laboratory and instrumental investigations (routine laboratory studies, urinanalysis, serum, biochemical, bacteriologic tests, X-ray studies, laparoscopic investigations, etc.) were administered. We have used early diagnosis, intervention and modern surgery methods (reposition of bone fragments, traction, extension, pulling pluster, bandage immobilization, different methods of osteosynthesis with new models of constructions). In some cases different methods of treatment were used (for example, plaster cast to immobilization wrist fracture and closed osteosynthesis of femur fracture). We have never used adhesive, board or underwater tractions. In all cases of any, including postoperative, wounds we used ozone-therapy. We have apparatus for external and internal ozone-therapy ORION – OPM-1 with different complectation elements (cameras for leg-foot, arm-wrist localization). We have used the method of early rehabilitation using therapeutic gymnastics, massage programme to train the extremities and joints. Prognosis and severity of general state was obtained with using Revised Trauma Score – classification, Injure Severity Score, Apache II and with data of the level of proinflammatory cytokines (TNF, IL-1beta, IL-6, IL-10) in blood. Our findings of the level of proinflammatory cytokines in blood and the stages of traumatic disease in patients have shown that there were marked characteristic changes of the level of proinflammatory cytokines in it. Those were depended on the general state of the patient. In the first stage (primary effect) usually the increase of the level of cytokines of this group was not significant or it was normal. Then in conformity of progress of traumatic shock it was change for the worse of the general state of the patient and increase of the level of cytokines in blood. In the hypercatabolism phase we have revealed prolongation of the increase of the level of cytokines (change for the worse) or the level was still high, but had not been enlarged (change for the better). In the phase of resorbtion the level of proinflammatory cytokines was increased again or was high (the negative tendency). If the level had been decreased, it was the evidence of the positive effect of the treatment. In case of polyorganic disorders we have noted the constant increase of the level of cytokines (the negative tendency). In this situation either there were mortal changes and death, or it was septic condition. If the level of cytokines had been decreased, it was the evidence of positive tendency. Results and discussion: we have no complications after using ozone-therapy. We have obtained very good results of using ozone-therapy in complex treatment of our patients, only 31 with severe polytrauma have died, the others have favourable short- and long-term results. In conclusion we'd like to say, that complex treatment with using modern methods, such as ozone-therapy, early surgical procedures and rehabilitation can play a valuable role in maintaining patient's overall health and quality of life. Our findings and results have shown,

that the analysis of the level of cytokines in blood is the possible way to prognosis and to change the treatment of traumatic shock in time in patients with polytrauma.

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GENERALIZED CLASSIFICATION OF LARYNGEAL STENOSIS IN CHILDREN

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Treatment of laryngeal stenosis in children remains a large problem in resuscitation science, otorhinolaryngology, surgery of children and paediatrics. There are various reasons leading to stenosis.

The objective of the research was, on the basis of all the previously known classifications and our own observations of 25 years, to work out a generalized classification of the main reasons for laryngeal stenosis in children.

Generalized classification of laryngeal stenosis in children

I. Aetiological factor	1. Congenital (laryngomalacia, tracheomalacia, laryngeal atresia, sublaryngeal hemangioma, congenital laryngeal stenosis, vascular compression and others) 2. Acquired: A) Infectious: 1. Viral infections 2. Bacterial infections B) Mechanical: 1. Laryngeal obstruction by a foreign body, tumour 2. Traumatic injury of larynx C) Chemical D) Thermal E) Allergic F) Neurologic (idiopathic vocal cord paralysis, pathology of CNS) G) Somatic (laryngeal oedema related to heart diseases, liver cirrhosis, kidney cirrhosis, cachexia and others).

II. Degree of laryngeal stenosis	1. Compensated 2. Subcompensated 3. Decompensated 4. Asphyxia
III. Duration of the process	1. Fulminant 2. Acute 3. Subacute 4. Chronic with acute conditions
IV.Clinical morphological forms	1. Oedematous 2. Obstructional 3. Cicatricial 4. Spasmodic 5. Ulcerous-necrotic
V. Complications	1. Pulmonary 2. Non-pulmonary

N Note:

Fulminant stenoses develop within minutes in case of spasms of fissure of glottis of different aetiology or if a foreign body gets into the larynx or trachea. Acute stenoses (normally up to 2 weeks) occur in cases of diphtheria, stenosing laryngothracheitis; subacute (2 weeks – 1 month) and chronic (more than 1 month) during prolonged intubations in cases of craniocerebral injuries, stenosing laryngothracheitis etc. with formations of granulomas and cicatrices; in cases of laryngeal cancer; congenital pathology; during development of perichondritis of traumatic or other aetiology (syphilis, typhus).

In the beginning of the diagnosis it is necessary to indicate the character of stenosis, whether it is congenital or acquired, the duration of process, degree of stenosis, then the aetiological factor, clinical and morphological form and complications.

Examples of a diagnosis: (the word „acquired“ can be omitted in some cases, e.g. with acute respiratory virus infection)

1. Congenital chronic laryngeal stenosis with tracheomalacia subcompensated of the 2nd degree, extratracheal form, complications: bronchitis.

2. Acquired acute laryngeal stenosis, subcompensated, of the 2nd degree, with acute respiratory virus infection, oedematous, complications: two-sided bronchopneumonia.

Conclusions:

The new classification of the laryngeal stenosis in children takes into account those rare reasons leading to its development, which can help a doctor to diagnose a patient and choose the correct treatment method.

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SELECTION OF THE SEDATIVE DOSE OF SODIUM OXYBATE BY MEASURING THE BIS INDEX DURING EXTUBATION OF PATIENTS WITH ACUTE STENOSING LARYNGOTRACHEITIS

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Modern methods of treatment of patients with acute stenosing laryngothracheitis (first of all, inhalation therapy with adrenomimetics and hormones) do not always give the desired result. Moreover, laryngeal stenosis remains, causing an emergency intubation in order to stop the acute hypoxemia.

We have noticed a close relation between the inflammation in the subglottic area, frequent allergic reactions and stress (caused by different laryngeal manipulations) among patients with acute stenosing laryngothracheitis. Therefore, to break the vicious circle "inflammation-allergy-stress", it is necessary to prepare patients for the extubation (sodium oxybate, prednisolone, diphenhydramine hydrochloride and lasix).

The objective of the research is to select the optimal dose of sodium oxybate for sedation of patients with acute stenosing laryngothracheitis by determining the level of consciousness with the help of the BIS index and suggest an extubation method with the lowest rate of repeated intubations.

Materials and methods. We have observed 30 patients with intubation tubes having the following diagnoses: acute respiratory virus infection, acute stenosing laryngothracheitis and a second and third degree stenosis. The average age was nine months, 11 boys (73%) and 4 girls (27%). The medical history of 18 patients (60%) contained various allergic reactions (diathesis, uticaria, giant uticaria, dermatitis). Moreover, these children often suffered from acute respiratory virus infections and paratrophy.

The patients were randomly divided into three groups of 10 patients each.

For sedation, the first group received a 50 mg/kg dose of 20% sodium oxybate 15 minutes before extubation.

The second group received a 50 mg/kg dose of 20% sodium oxybate, 1 mg/kg of prednisolone (no more than 15 mg), 0,3 mg/kg of 1% diphenhydramine hydrochloride (no more than 5 mg) and 0,5 mg/kg of 1% lasix (no more than 10 mg). This extubation method was formalized as an innovation proposal Nr. 4205, issued by Irkutsk State Medical University on 3 March 2002.

The third group was given a 100 mg/kg dose of 20% sodium oxybate 15 minutes before extubation. Monitoring of haemodynamics was carried out using the equipment by Nihon

Kohden, the level of consciousness was assessed according to the BIS index from 0 to 100 on the Cerebral State Monitor 2.

Results and discussion. When using a 50 mg/kg dose of sodium oxybate (first group), the level of consciousness is gradually reduced to 80-83% on the 15th minute after the drug is introduced, which makes it possible to extubate patients with acute stenosing laryngothracheitis without any apparent negative reaction to the manipulation (low probability of recollection). The stage of conscious sedation (82 – 85) usually lasts up to 30 minutes, then the level of consciousness gradually increases and is fully restored by the 60th minute.

The complex preparation of patients (a 50 mg/kg dose of sodium oxybate, 1 mg/kg of prednisolone, 0,3 mg/kg of 1% diphenhydramine hydrochloride and 0,5 mg/kg of 1% lasix) for extubation in the second group hasn't shown any substantial difference in the level of consciousness compared to those in the first group. The introduction of a 0,3 mg/kg dose of diphenhydramine hydrochloride (and other components of premedication) do not have any important effect on the sedation of patients.

When introducing a 100 mg/kg dose of 20% sodium oxybate, the BIS index is gradually reduced to 70 – 75 on the fifth minute, the stage of deep sedation (38 - 44) lasts 40-50 minutes, and the consciousness is fully recovered after 120-180 minutes. The highest rate of repeated intubations was registered in the third group - 7 patients (70%). 15 minutes after being introduced, the 100 mg/kg dose of sodium oxybate puts patients with acute stenosing laryngothracheitis into a state of deep sedation with suppression of cough reflexes. Activation of stress-limiting systems (GABAergic system) by sodium oxybutyrate smoothes over the negative reaction to extubation. On the other hand, the suppression of cough reflexes leads to the accumulation of phlegm in the tracheobronchial tree, causing repeated intubations.

5 patients (50%) in the first group had to be intubated for the second time. It is explained by the fact that only one component, namely, the extubation stress, is eliminated by introducing a 50 mg/kg dose of sodium oxybate. Both the allergic component (susceptibility to immediate reactions in form of hyperaemia and edema in the medical history of 60% of patients) and inflammation in the area of larynx are, however, not affected by this premedication. The insufficient attention to these components of the acute stenosing laryngothracheitis leads to repeated intubations among 5 patients (50 %).

The lowest rate of repeated intubation was registered in the second group - 20% (2 patients). It is explained by the fact that the drugs (sodium oxybate, prednisolone, diphenhydramine hydrochloride and lasix) as a part of the pre-extubation preparation influence the inflammation (edema) in the subglottic area, the allergic component present among the majority of patients and the stress reaction to extubation.

Conclusion.

1. For sedation of patients with acute stenosing laryngothracheitis before extubation, it is possible to choose the optimal dose of sodium oxybate by controlling the level of consciousness according to the BIS index.

2. The usage of the following drugs - sodium oxybate, prednisolone, diphenhydramine hydrochloride and lasix – in the pre-extubation preparation lowers the risk of unsuccessful extubations due to the influence on the main pathophysiological processes in the acute stenosing laryngothracheitis, namely allergy, inflammation and stress.

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POSSIBILITIES FOR CLINICAL USE OF A 1 PERCENT ALUNITE SOLUTION WHEN TREATING RESUSCITATION PATIENTS WITH POLYRESISTENT BACTERIAL FLORA

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Today the polyresistant flora creates a huge problem in resuscitation departments. In spite of the rapid development of the modern pharmaceutical industry there is still no universal bactericidal and virucidal drug. We have pointed out bactericidal properties of the mineral alunite, which is harmless for humans, and has a broad application in cosmetology and folk medicine.

The objective of the research is to evaluate the bactericidal properties of the mineral alunite in the complex treatment of hospital infection in resuscitation patients with suppurative-septic complications.

Materials and methods. The research was carried out in 2 stages and took 2 years. The first stage included the research of different concentrations of the alunite solution in the colony of various pathogenic bacteria taken from biological environments of resuscitation patients. At the second stage a 3 percent alunite solution was applied externally to the resuscitation patients of the city hospital no. 1 in Bratsk. The patients signed a legal agreement allowing the use of the alunite solution in the complex treatment.

The alunite solution was prepared in sterile conditions, by putting a chrystal of alunite (Bekra Mineral) into a 0,9 % solution of NaCl. It was empirically established that in order to prepare 3 litres of a 3 % alunite solution, it is necessary to expose 100 g of chrystal in a sterile 0,9% solution of NaCl at room temperature for 19 hours.

The examination of the bactericidal activity of different concentrations of the alunite solution was carried out on the base of the licensed microbiological laboratory of the city hospital no. 5 in Bratsk.

Stage I (in vitro). According to the research, the following bacteria are sensitive to a 3 % alunite solution:

Staphylococcus aureus (MRSA), only sensitive to vancomycin; Pseudomonas putida (polyresistant); Pseudomonas aeruginosa (sensitive to ciprofloxacin, imipinem, moderately

sensitive to ceftazidime); Acinetobacter baumanii; Klebsiella pneumonia (ESBL), sensitive only to carbapenems; E. coli (ESBL), only sensitive to carbapenems.

We have discovered that 3-5 % alunite solutions stored with a tightly closed cap at + 4º C in a dark place have a 100% bactericidal activity up to one year, and there is no „reverse" crystallisation of the solution. The bactericidal activity of the solution (2%, 1,5 %, 0,5% and 0,1%) is reduced with the decrease in its concentration.

Stage II (in vivo) consists in the clinical use of the 3 % alunite solution (locally on wounds and for lavage of abdominal cavity) in the case of 4 resuscitation patients.

Nosology	Number of patients	Place of bacterial sampling	Separated pathogenic flora	Treatment with antibiotics	Treatment with the 3 % alunite solution
Thermal burn with more than 40% of body-surface area	3	Wound drainage	Pseudomonas aeruginosa	ceftazidime	alunite – 4 – 6 days
Acute destructive pancreatitis, pancreatonecrosis, sepsis, double-sided pneumonia	1	Wound drainage	Pseudomonas putida, E. coli (ESBL), Klebsiella pneumonia (ESBL)	doriprex, ceftriaxone, metrogyl, sulperazone, vancomycin, tienam, amicacin, tavanic, gentamicin	alunite – 9 days

Results and discussion. The study has shown that the 3 % alunite solution has very high bactericidal activity both in vitro and in vivo when applied to the most common bacteria strains in resuscitation departments.

Three patients (age 26, 39 and 48) with thermal body or extremity burns, mainly with more than 40% of body-surface area, had Pseudomonas aeruginosa on the wound surface after spending 3-4 days in the city hospital No.1 in Bratsk. All the patients received standard treatment (infusion therapy, antibiotics, anaesthetization, heparin therapy, symptomatic treatment). The additional local application of the 3 % alunite solution in the course of 4 to 6 days on the wound surface helped to successfully remove Pseudomonas aeruginosa. Control bacteriological inoculations showed negative results. All these patients were sent to the corresponding departments after 8-9 days and, later on, after the healing was completed, home.

The city hospital No. 1 in Bratsk had a patient V., 38 years old, with the acute destructive pancreatitis and pancreatonecrosis, with complications in the form of sepsis, double-sided nosocomial pneumonia, chronic cholecystitis, pyelonephritis, acute insufficiency of cerebral blood flow of ischemic type, apparent tetraparesis and toxic encephalopathy. He state was very severe from the first day in the hospital. He was receiving infusion therapy and

parenteral nutrition (p-p glucoses, gelofusine, aminosol, sterofundin, lipofundin, leukocyte and platelet depleted packed red blood cells No. 8, QFFP – No. 6, hemofiltration – No. 8; pentoglobin No. 8; antibiotics: ceftriaxone, doriprex, sulperazone, metrogyl, tavanic, tienam, vancomycin, amicacin, fluconazole; intravenously: cytoflavin, quamatel, heparin, fraxiparine, gordox, anaesthetization; per os: iron, omez, nystatin, gentamicin. Enteral nutrition with „Nutrizone". In spite of the treatment the patient's state remained critical. He received ALV for 84 days, bronchoscopy and fibrogastroscopy and tracheostome. On the 27th day there was drainage of the pancreatic cyst, sanitization and drainage of the abdominal cavity. The abdominal cavity had a purulent wound exudate, which had to be sanitized against Klebsiella pneumonia (ESBL), E. coli (ESBL) – sensitive to imipinems and alunite, Pseudomonas putida (polyresistant) – sensitive only to alunite. Taking into account the bacteriological results, on day 91 the patient received lavage of the abdominal cavity with alunite. The treatment was carried out 9 days. The amount of the wound exudate gradually decreased, the patient's appetite improved and soon he was able to perform spontaneous breathing. Control bacteriological analysis showed no growth of the bacteria. On day 103 the patient had positive dynamics, and he was sent to the surgical department with tracheostome. On the 112th day the tracheostome was removed and he was released from hospital on the 114th day.

Summary

Under the development conditions of the polyresistant micro flora, when treating resuscitation patients, there is a good possibility in future to locally apply the 3 % alunite solution, which suppresses the most common pathogenic strains of bacteria in 100 % of cases, thus drastically increasing the chances of patients' survival rate.

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CONTROLLABLE RISK FACTORS: SUPERFLUOUS BODY MASS AND SMOKING. FEATURES AS VARIANCE CHARACTERISTICS OF ECG

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Research objective: To estimate by means of ECG dispersion mapping (an ECG recreation center) the general activity of regulatory mechanisms, a neurohumoral regulation of heart, and also early changes of a myocardium of metabolic character in people with increased body mass and smoking, as controllable risk factors (FR) of development of cardiovascular disease.

Materials and methods: Change of dispersion characteristics of an ECG, not in all cases testifies to illness, but under certain conditions (external influence or FR interaction), can be realized in various pathological conditions. Such persons make certain groups of risk and demand dynamic observation, and as a result - active reasoned

influence on FR of the patient.

The group of people is surveyed: 212 people of 112 men and 100 women. 1 group of men – 20-35 years (28 people - 26 %), the 2nd group of men of 35-50 years (42 people - 31 %), the 3rd group of the man of 50 years also is more senior (42 people - 31 %), the 4th group – women of 20-35 years (30 people – 30 %), the 5th group of the woman of-35-50 years (35 people - 35 %), the 6th group of the woman of 50 years and older (35 people - 35 %). Influence of controllable risk factors (the raised delivery, excess weight, obesity, and smoking) for work of a cardiac muscle with an assessment of a recreation center of an ECG was estimated. Inspection was carried out by means of the Kardiovizor-06C Device, the device for cardio screening, allowing tapping the precursory hidden symptoms of SVDs.

At the surveyed group change of dispersion characteristics of an ECG by means of indicators (a myocardium index, a rhythm index, variability of a cardiac rhythm, a specification code), and also - dependence of these results on indicators of body mass index (BMI), a smoking index were estimated.

Results: In the first group normal indicators are found in 86 % the respondents, in the 2nd group - in 54 %, in the 3rd group - 26 %, in the 4th group - 86 %, in the 5th group - 60 %, in the 6th group - 28 %. 67 people with an increased body mass, with excess weight, with obesity and an index of smoking were revealed. Strongly manifested pathology was observed in 52 of them.

Change of variance characteristics by means of myocardial performance index in a range of 15 % to 19 % - in 20 people, from 19 % to 26 % - at 16, more than 26 % - at 17 people. Persons with FR had a lowered variability of a cardiac rhythm in 80 % of cases. Without a smoking factor (only an increased body mass) deviation were observed in 22 people – 43 %, FR (excess weight, smoking) deviations on myocardial performance index are registered in 30 patients – 57 %.

The correlation analysis showed high interrelation between an index of a myocardium and the increased, superfluous body mass, and also obesity. Smoking persons had more expressed changes of a recreation center of an ECG with an experience more than 5 years, than non-smoking.

Conclusions: treatment of the group with the increased risk of diseases of SVDs aged 45 and older, among which persons with excess weight, obesity and smoking, with smoking over 5 to 15 years prevailed.

In women of younger age at which excess weight was observed, it is the period from 35 years and older, larger fastness to such risk factor, as smoking also is observed.

Thus, the brave age range for women on such risk factor as excess weight, makes 35 years and older, in men – 45 years and older.

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COMPARATIVE ANALYSIS OF PARENCHYMA AND STROMA IN DIFFERENT MEDULLARY BREAST CANCER VARIANTS

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The problems of morphologic diagnosis of medullary breast cancer variants (typical, atypical and infiltrating ductal carcinoma with medullary features – R.L. Ridolfi et al., 1977) are not solved up to the present time. Clear-cut edge of the tumor, syncytial growth of poorly differentiated cancer cells with high mitotic activity and the presence of lymphoid infiltration of the stroma characterize these neoplasms. We have studied 20 cases of typical medullary cancer, 26 - atypical medullary cancer, and 54 - infiltrating ductal carcinoma with medullary features by means of usual, special painting, histochemical, immunohistochemical reactions and morphometric techniques as well. The cancer cells of typical medullary cancer at full length had syncytial growth, were characterized by pronounced (expressed) nuclear and cellular atypia with a high level of proliferation (73±10% Ki67-positive cancer cells, the mitotic index is 32±8,38), the absence of mucin, widespread necrosis (85% cases had an area of necrosis of cancer cells more than 25%), negative reaction to estrogen and progesterone receptors, to protein HER2/neo and positive reaction to epithelial membrane antigen. Cancer cells turned out to be positive to cytokeratins of both simple (7, 8, 18) and squamous epitheliums (a mixture of cytokeratins 1, 5, 10, 14), had a high level of expression of vimentin (90%) and protein p53 (50%). The typical medullary cancer stroma was poorly developed (relative share is 22,8±6,93%), was notable for a low degree of microvasculars development (relative fraction is 6,66±3,06%), lymphoid infiltration of the stroma in 90% of cases was moderate or pronounced (expressed), was represented mainly by T-lymphocytes. The morphological similarity between typical and atypical variants of medullary cancer is caused by the fact that atypical medullary cancer more than 90% is represented by the typical medullary carcinoma structures, and we have not identified any significant immunohistochemical feature, which allows to differentiate between them these variants of medullary cancer. Only the discovery of a pool of cancer cells with morphologically distinguishable glandular differentiation, which in some cases may have histochemical characteristics (features) of mucin formation, allows us to diagnose an atypical variant of medullary cancer. The pronouncement (expression) lymphoid infiltration of atypical medullary cancer stroma was diminishing (only in 65% of cases it has been rated as moderate or pronounced), the collagen fibers content (relative share is 34,2±9,66%) and microvasculars (relative fraction is 7,85±2,94) was increasing, thereby the necrosis areas (61,5% of the cases had the areas of more than 25% necrosis) and the cancer cells mitotic potential (66,3±29,56% Ki67-positive tumor cells, mitotic index is 26±20,41) were also decreasing.

The infiltrating ductal carcinoma with medullary features, along with the typical medullary carcinoma structures, their proportion was prevailed in most cases, contained

a clearly visible focis of tumor cells with glandular differentiation, having the structure features of invasive ductal cancer, these cancer cells expressed only cytokeratins of simple epithelium (7, 8, 18). In 20% cases of this group some of the tumor cells expressed estrogen and/or progesterone receptors, and in 25% cases the overexpression of the protein HER2/neo was revealed. Changes in the stroma were characterized by a significant increase in the number of collagen fibers (39,5±9,9%), microvasculars (8,94±2,15%) under even more than in atypical medullary cancer, reducing the degree of stroma lymphoid infiltration (55,5%), tumor tissue necrosis focuses (11,1%).

Judging by the all characteristics (features) investigated the atypical medullary carcinoma has the intermediate position between typical medullary carcinoma and infiltrative ductal carcinoma with medullary features. We assume that the growth of the differences expression degree under the simultaneous diminishing of syncytial component content and the enlarging of glandular growth parts from typical medullary cancer to the atypical variant and infiltrating ductal carcinoma with medullary features reflects the tumor progression of medullary cancer, the progression being demonstrated by the growing of the degree of malignancy in the form of increased invasive and metastatic potential of cancer cells.

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HOW TECHNOLOGIES "ROFES" AND "COLOURPSYCHOSOMATIC-ROFES" WERE APPLIED WITHIN THE LIMITS OF PREPARING YOUNG HIGHLY QUALIFIED SPORTSMEN FOR TRAMPOLINE TUMBLING COMPETITIONS

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In this research work experimental materials are presented regarding use of hardware-software systems such as "ROFES" (functional and emotional state assessment detector) and "Colourpsychosomatics" (CPS) which provide information about a sportsman's emotional state at the moment of testing and about a number of peculiarities of the current state.

Objective of the research: to determine functional state of the female sportsman who is specialized in two kinds of multiathlon: trampoline and double mini trampoline; to find out initial symptoms of mental disadaptation at different stages of training practice before competitions.

Tasks:

1. To elaborate corrective techniques on the basis of the sportsman's personal peculiarities and psychofunctional state.
2. To elaborate guidelines for corrective sessions and rehabilitation measures.

Research methods and arrangement. Research and corrective sessions were conducted in a laboratory within the limits of sports activity (since the year 2009 till present). The object of the research was a young promising female sportsman who within one year cycle participated in 16 and more important competitions.

According to the coach's decision within the limits of some of the competitions the sportsman did competition program in two specializations – trampoline and mini trampoline.

For diagnosis we used the following checkup methods: observation, structured interview, diagnosis with ROFES technique and Colourpsychosomatic-technique. Besides that, stable, professionally important qualities of the sportsman were determined such as motives of behaviour, style of attitude to the environment, spheres of interest and mindset. Two-stage method for personal traits investigation consists of the stage one within which norm-characteristic traits are determined and the stage two within which patho-characteristic traits are determined.

Diagnosis includes several stages:

The first stage – functional state of organs and organ systems was registered with ROFES to get evidences of clinical diagnoses; along with the somatic data we also got psycho-emotional portrait of personality and psychological characteristics such as: tonus of the vegetative nervous system and emotional tonus; adaptative potential; functional state; psycho-emotional status.

The second stage – on the basis of the obtained data and "Correction module" we made up an individual program of colourcorrection.

The third stage – taking an individual colourcorrection course on the basis of "Colourcorrection module".

The fourth stage – state of the surveyed sportsman was analyzed with ROFES technique before and after competitions, also it was analyzed how efficient the individual course of compensation by method of colourcorrection is and pathological frequencies were recorded on magnetic carrier. Colourcorrection sessions were prescribed upon agreement with the coach, mostly within precompetition period, and were conducted 2 times a week in the presence of the coach and psychotherapist, the rest of the days on sportsman's own.

Precompetition training was based on six-day microcycles. Training sessions included performing competition compositions 7-10 times, practicing elements and links for voluntary combinations. After practice on trampoline or mini trampoline, body conditioning and breathing exercises are obligatory. Two weeks before the competition started, "obligatory" and voluntary programs were performed in "competition" mode 7-10 times, body conditioning – in moderate load mode. After the competitions a lot of training time was dedicated to body conditioning and practicing elements of voluntary final program. At this period psychocorrective sessions and sessions of body functional state correction were conducted upon agreement with the sportsman and the coach.

Research results and their discussion.

Basing on the obtained data it can be noted that dynamic of such indicators as functional

state (FS) and adaptative capacity state (AP) is strongly interrelated with psychoemotional status and state of body compensatory mechanisms.

Coach taking into account functional state and adaptative potential indicators can insert corrections into schedule of training sessions.

The analysis of the results of the sportsman's participation in the competitions and of the dynamic of adaptative potential, functional state and psychoemotional status (tables 1-3) shows that when the sportsman had low adaptative potential (from 15 to 31%), she was not a leader in the competitions and was in stressed conditions like "emotional exhaustion" and low level pre-start readiness. Total adaptative potential registered with ROFES reached the average of 75% by the end of the cycle and exceeded the normal level of a healthy human being (50-60%).

It also should be noted that tonus of the vegetative nervous system and psychoemotional status are interrelated. When their levels are below norm the sportsman feels "strong emotional tension close to exhaustion phase and distress".

Besides, no interconnection was detected between adaptative potential and psychoemotional status, while when tonus of the vegetative nervous system was below norm, adaptative potential, on the contrary, was quite high (58%, 63%, 74%).

Conclusions.

1. Within the limits of the research it was found out that precise planning of training load on the basis of adaptative potential values and psychoemotional status values registered with ROFES gains more importance during preparation for the All-Russian championship and European championship.

2. Within the limits of training for high sports achievements, structuring training sessions, combined with Colourpsychosomatic sessions, becomes more important than volume of physical load during the sessions.

3. Colourpsychosomatic method and ROFES diagnostics method allow to assess degree of adaptative processes tension and functional and emotional states dynamic quickly and fully, as well as to determine the sportsman's physical load tolerance and level of readiness for competitions. These methods also allow to prescribe individual corrective programs of psychofunctional intervention.

Wolfgang Fischer

STATIONÄRE NEUROLOGISCHE REHABILITATIONSMEDIZIN IN DEUTSCHLAND - FALLBEISPIEL EINER FODROYANT VERLAUFENDEN MULTIPLEN SKLEROSE (MARBURGER VARIANTE)

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Zusammenfassung:

Je nach Schweregrad der Erkrankung und des funktionellen Defizites werden die

Patienten in definierten Phasen (A – F) in der neurologischen Rehabilitation behandelt

Entscheidend für die Zuordnung ist der Schweregrad der Grunderkrankung und das Ausmaß des funktionellen Defizites. Es muss in jedem Fall ein Rehabilitationspotential erkennbar und definierbar sein; der allgemein-körperliche Zustand des Patienten muss Rehabilitationsfähigkeit zulassen.

Folgende Einteilung wird in sämtlichen neurologischen Rehabilitationskliniken Deutschlands angewandt.

Phase A: Akutbehandlungsphase (Behandlungsphase im Akutkrankenhaus)

Phase B: Phase, in der intensivmedizinische Behandlungsmöglichkeiten vorgehalten werden müssen. Diese Phase ist eine Krankenhausbehandlung und erfolgt im Fachkrankenhaus für Frührehabilitation.

Phase C: Phase, in der Patienten aktiv in der Therapie mitarbeiten können, aber noch kurativ-medizinisch und mit hohem pflegerischem Aufwand betreut werden müssen.

Phase D: Phase nach Abschluss der Frühmobilisation (Mobilität mit oder ohne Hilfsmittel, kein wesentlicher pflegerischer Betreuungsaufwand).

Phase E: Phase nach Abschluss einer intensiven medizinischen Rehabilitation - im Sinne einer nachgehenden Rehabilitationsleistung - und berufliche Rehabilitation.

Phase F: Phase, in der dauerhaft betreuende und/oder zustandserhaltende Leistungen erforderlich sind.

Teamarbeit der Neurologischen Rehabilitation

Ärztlich angeordnete notwendige medizinische Diagnostik (z.B. EKG, Notfall-Labor, Röntgen, Computertomogramm, EEG und Broncho- sowie Gastroskopie) kann in den neurologischen Kliniken Beelitz – Heilstätten, auch in Verbindung mit Konsiliaren, jederzeit bei akuten Fragestellungen durchgeführt werden.

Mit speziellen diagnostischen Verfahren lassen sich weitere therapeutische Maßnahmen in ihrer Effektivität erfassen und kontrollieren. So dienen beispielsweise neurophysiologische Untersuchungen der diagnostischen Einordnung bestehender Schädigungen des Gehirns, Rückenmarks und der Nerven und ermöglichen Rückschlüsse über Funktionsverbesserungen.

Die Krankengymnastik ist ein wesentlicher Teil stationären Rehabilitations-

Behandlung. Sie hilft einerseits die Rückbildung von Ausfällen zu beschleunigen, andererseits können verbliebene Störungen durch Training der Willkürfunktion oder von ausgleichenden Mechanismen verbessert werden. Dadurch kann es auch bei schwerwiegenden Funktionsstörungen noch zu erstaunlichen Besserungen kommen.

Unter Ergotherapie versteht man eine besondere Form der Aktivierungs- und Beschäftigungstherapie, bei der unter Anleitung eines Ergotherapeuten Tätigkeiten des täglichen Lebens praktisch geübt und (wieder) erlernt werden.

Ergotherapie ist darauf ausgerichtet, neben der Bewegungsfähigkeit, Körperwahrnehmung und Sensibilität auch Körperfunktionen wie Gedächtnis und Konzentrationsvermögen oder Leistungsfähigkeit und Ausdauer zu trainieren und zu

fördern.

Die Logopädie diagnostiziert und behandelt Sprach- und Sprechstörungen, Störungen des Schluckaktes und des Schluckvorganges, bietet zielgerichtet Atemtherapie sowie Atemtraining an, erarbeitet kompensatorische und Triggermechanismen, um eine orale Ernährung wieder zu erreichen – häufig in Verbindung mit einem gezielten Facialistrainig. An Testverfahren werden neben den Aphasietests auch bildgebende Verfahren der Schluckdiagnostik angewendet (fieberendoskopische Schluckdiagnostik).

Im Rahmen der Psychologie/ Neuropsychologie werden eine Reihe von möglichen Beeinträchtigungen der geistigen (kognitiven) Leistungen diagnostiziert und behandelt. Diese Leistungseinschränkungen können nur vorübergehend oder auch länger bestehen. Am häufigsten sind Beeinträchtigungen der Aufmerksamkeit, der Gedächtnisleistung, des Planens und Handelns und visuell-räumlichen Leistungen.

Auf der Basis diese komplexen rehabilitationsmedizinischen Ansatzes wird das Beispiel einer 23- jährigen Patientin aus Rostov/Don diskutiert, die an einer rasch progredient verlaufenden MS (Marburger Variante) erkrankte, im Verlauf 2 x reanimationspflichtig wurde und in Russland keine vergleichbaren rehabilitationsmedizinischen Strukturen nutzen konnte. Im Rahmen eines zweimaligen Rehabilitationsaufenthaltes in einer neurologischen Spezialklinik in Deutschland konnten sowohl die Krankheitsakuität als auch die medikamentöse Therapie nachevaluiert und durch gezielte Rehabilitationsmed izinische Prozeduren die soziale Kompetenz und Teilhabe gestärkt und das psychosoziale Defizit abgebaut werden. EDSS zur Aufnahme 9,5; EDSS zur Entlassung 7,0.

Fazit

• Auch bei schwersten Verläufen partizipiert der Betroffene von der Rehabehandlung.

• Medikamentöse Behandlungsstrategien können optimiert und dem jeweiligen Erkrankungsstadium unter Nutzen- / Risikoabwägung angepasst werden.

• Funktionelle Defizite können teilweise durch neuronale Plastizität und neuronale Netzwerkaktivität teilkompensiert werden.

• Hilfsmittelversorgung erweitert den individuellen Aktionsradius)

• Die Teilhabe am täglichen Leben und die Partizipations- sowie Antezeptionsmechanismen im individuellen sozialen Netzwerk können optimiert , die psychosoziale Behinderung gemindert und die soziale Kompetenz gestärkt werden.

• Zum Erhalt der wiedergewonnen Fähigkeiten und Funktionen ist auch unter ambulanten Bedingungen die konsequente und kontinuierliche Fortführung krankengymnastischer, ergotherapeutischer und logopädischer Behandlung zwingend notwendig genauso wie die fachärztliche Überwachung der Krankheitsprogression.

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STUDY OF STRESS-PROTECTIVE PROPERTIES OF PICAMILON IN THE EXPERIMENT

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It is well known that stress plays an important role in the dysfunction of all bodily parts and systems, and an excessive stress reaction is always accompanied by the development of dysregulatory pathology, thus creating a serious medical and social problem (E.S. Akarachkova, 2006; M.A. Kozyrev, 2007; S. Amnon, 2007). A perspective and effective way to prevent stress-induced pathology is the use of medicine with properties similar to the natural stress-limiting bodily systems (G.V. Gvak et.al. 2004). In doing so, it is advisable to direct the antistress protection not to the complete liquidation of stress but to the elimination of hyperergic reactions and their pathological effects (I.P. Nazarov, 2003). The optimum way to prevent the negative effects caused by stress is to influence the central stress-limiting systems, namely, the GABAergic, opioidergic and peripheral antioxidant systems (A.V. Kaluev, D.J. Natt, 2004). Therefore, picamilon as a derivative of GABA is one of the perspective drugs to solve this problem (R.S. Mirzoyan, 2003).

The objective of the research was to study the stress-protective activity of picamilon on the basis of behavioural reaction of animals and on the example of its influence on the phagocytal activity of neutrophils oppressed by the influence of stress.

Materials and methods of the research. The research was conducted on 265 sexually mature white mice of both sexes with the weight of 20 – 26 g. Picamilon was introduced in the dose of 0.50 mg/kg. To compare the effects, we have used diazepam in the dose of 0.02 mg/kg. The control group of mice received an injection of 0.02 ml – 0.9% sodium chloride solution. The stress was modeled by placing the mice into narrow pencil cases: 1) 10 hours a day in the course of 5 days to study the behavioural reactions (I.A. Kolomeytseva, 1988) in the test „open field" (A.V. Kaluev, 1998); 2) 5 hours a day in the course of 5 days to study the influence on the phagocytosis of neutrophils (I.A. Kolomeytseva, 1988). Experiments causing pain to animals were conducted under inhalation ether narcosis.

Results. The research showed that since the start of the experiment under the influence of stress the horizontal activity decreased by a factor of 4.4, the vertical one by a factor of 15 and the exploratory activity by a factor of 3.7. The corresponding parameters in the group of mice that received diazepam decreased only by 58.5%, 45.7% and 44.7% in comparison to the initial parameters. The parameter for the duration of grooming in the group receiving picamilon showed positive dynamics in comparison to the animals in the group of stress control.

Stress was also accompanied by a decrease in the phagocytal activity of neutrophils by a factor of 2, the phagocytal activity of neutrophils in the NBT test by 39.43%, and a decrease in the index of neutrophils activation by a factor of 2 in comparison to the initial parameters. The mice receiving diazepam showed no significant changes in the activity of

neutrophils in the NBT test or the index of neutrophils activation; the phagocytal activity of neutrophils decreased by only 29.6% in comparison to the initial one. Picamilon increased the phagocytal activity, damaged by stress, by 11%, the activity of neutrophils in the NBT test by a factor of 2.2 and the index of neutrophils activation by a factor of 2.

Conclusions: 1. Picamilon as a potential stimulator of the GABAergic system corrected the stress-induced depression of the motor and exploratory activity of mice and showed anxiolytic properties. 2. Picamilon facilitated the normalisation of the phagocytal activity of neutrophils, which was oppressed by the influence of stress. 3. Taking into consideration the mentioned properties of the drug, it is possible to assume that picamilon has stress-protective properties.

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MICROBIOLOGICAL CRITERIA FOR IDENTIFYING PERSONS WITH DYSFUNCTIONAL DISORDERS OF THE BILIARY SYSTEM

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The actual task of the modern health care is to identify deviations in the health status of people at the stage preceding the development of the diseases with the help of non-invasive methods of diagnostics using bioavailable material for investigation.

It is known that the changes in the qualitative and quantitative composition of microbiocenoses of a human body, communicating with the external environment, occur long before the appearance of the expressed pathological processes and often have peculiarities specific to certain types of pathology.

Taking into account that the dysfunctional disorders of the biliary tract play a significant role in the development of the digestive system diseases (gastritis, gastroduodenitis, duodenal ulcer etc.), we studied the peculiarities of the composition of microbiocenoses of the large intestines in people with the disorders of this type.

The quantitative and qualitative composition of the large intestines microbiocenoses was investigated in 491 persons aged from 18 to 72 years. Among the persons investigated, the dysfunctional disorders of the biliary tract (DDBT) were established in 395 people after the carried out ultrasound examination of the gallbladder with the use of a test breakfast. In 96 cases, there were not detected disorders of the functional state of the gallbladder (control group).

The conducted bacteriological examination of the large intestines microbiocenoses composition in people both with the presence of DDBT and with its absence showed that the main feature of the large intestines microbiocenosis composition in the presence of DDBT is the finding of hemolytic Escherichia coli in the microflora composition. Hemolytic

Escherichia coli in persons with DDBT were detected in 346 patients (87.6 + 1.9 %), in 49 people (12.4 + 1.8 %) hemolytic Escherichia coli were not detected. However, the dynamic monitoring of the large intestines microbiocenosis composition of these people during 3 months with an interval of 20 days allowed to detect hemolytic Escherichia coli, which indicated to the frequency of their presence in the intestine microbiocenosis composition . In the group of people with the lack of DDBT, hemolytic Escherichia coli were detected in 6 persons (6.2 + 2.4 %). There were also revealed differences in the number of hemolytic Escherichia coli in the large intestines microbiocenoses of people with DDBT and without it, and their share in the total population of Escherichia coli. If in people with DDBT, the number of hemolytic Escherichia coli made on the average lg 4.3 + 0.2 in the microbiocenosis composition, and the share of population of all Escherichia coli made on the average 43.6 %, reaching in some cases 100 %, in people without DDBT the average number of hemolytic Escherichia coli made lg 0.3 + 0.03 in the microbiocenosis composition, and the share in the population of Escherichia coli reached on the average 12.3 + 2.6 % with the variations from 1 to 25 %. To identify the position of hemolytic Escherichia coli in the large intestines microbiocenosis structure, there was determined a coefficient of constancy (C), which was equal to 52.8 + 4.3 % by DDBT, that confirms the ratio of hemolytic Escherichia coli to the constant types in large intestines microbiocenoses in people with DDBT.

Thus, the total set of the results obtained allows to regard the presence of hemolytic Escherichia coli in the large intestines microbiocenosis composition as microbiological criteria of the dysfunctional disorders of the biliary system.

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CONTEMPORARY SCREENING OF CHRONIC ATROPHIC GASTRITIS AMONG WORKING POPULATION OF A MEGAPOLIS

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Background. Chronic atrophic gastritis, caused by Helicobacter pylori (H. pylori) as well as caused by other reason, is universally recognized as stomach precancerous condition. Gastric cancer is one of the most common oncologic diseases and one of the most frequent mortality causes. It is often diagnosed late and has a poor prognosis.

The purpose of research - early diagnosis (before appearance of first symptoms) of chronic atrophic gastritis, considered as preneoplastic status, during mass medical examinations of megapolis working population.

Research material and methods. For periodic medical investigation working people of Moscow were screened for gastroduodenal pathology in addition to traditional clinical-

laboratory and instrumental examinations. 1076 people were included in the study, 684 men and 392 women aged from 16 to 76 years. We applied a modern non-invasive serological study using a comprehensive diagnostic test "GastroPanel" (Biochit, Finland). Blood serum was analyzed to determination content of pepsinogen 1, basal gastrin 17 and presence of specific anti-Helicobacter pylori antibodies of class G by way of enzyme-linked immunosorbent assay (ELISA). In the second stage of research blood serum of 617 infected with H.pylori people was examined by ELISA in order to detect the cytotoxin-gene associated protein A (CagA), that is one of the bacteria pathogenicity factors. We used a set of reagents HelikoBest-antibodies ("Vector-Best", Novosibirsk).

Results. A marker of body stomach mucosal atrophy - the reduced level serum pepsinogen 1 - was found in 107 people (9.9%), with similar frequency in men and women. It was detected most often in both sexes over the age of 50 years. Among people with a discovered suspicion of chronic atrophic gastritis, increased concentration of gastrin 17 was noticed in 62 cases, confirming the gastric body mucosal atrophy. Increased level of gastrin17 in blood serum was observed very often in individuals with a significant decrease of pepsinogen 1 level that indicates the development of severe atrophy. H. pylori infection was diagnosed in 943 surveyed (87.6%) people, and in patients with laboratory indications of chronic atrophic gastritis - in 98 cases (91.6%). The total amount of IgM, IgA and IgG antibodies to H. pylori Cag A antigen was detected in 439 people with H. pylori infection (71%), and in 79% of patients with suspected development of gastric mucosal atrophy. In majority of patients with suspicion for chronic atrophic gastritis (77%), there were neither gastrointestinal complaints nor medical history.

Conclusion. We confirmed previously found extremely high prevalence of H. pylori infection, the most frequent reason of chronic atrophic gastritis, among the working citizens of Moscow. At present blood examination using test complex (without endoscopy) allows to identify individuals with suspicion for chronic atrophic gastritis associated and non-associated with H. pylori infection. That is especially important for mass medical examinations of the population. Laboratory signs of atrophic gastritis were found by us rather frequently - in 9.9% of researched individuals - working people in Moscow. Pepsinogen 1 low level – marker of gastric mucosal atrophy - is an indication for endoscopical diagnostics of stomach disease. Preclinical diagnosis will improve the detection of atrophic gastritis, early gastric cancer and its prognosis.

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ENDOSCOPIC OPERATIONS DURING TREATMENT OF TUBO-PERITONEAL INFERTILITY

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Tubo-peritoneal infertility is a large problem in the modern gynecology. The main reasons for the formation of the peritoneal process in the organs of generation are

inflammatory diseases of fallopian tubes, operations on the uterus and uterine appendages as well as the external genital endometriosis.

The objective of the research is to assess treatment of gynecological patients with the tubo-peritoneal infertility factor at the stages of fertility recovery.

Materials and methods of the research: the observation group was composed of 350(100%) women referred for the endoscopic operative treatment. 216(61.8%) patients had primary infertility, 134(38.2%) had secondary infertility. The age of the observed women was 22-38. The endoscopic laparoscopy was carried out typically: coagulation of foci of endometriosis, separation of adhesions, sonographic hydrotubation with dye test of fallopian tubes, hysteroscopy. Surgical procedures were performed using the Karl Storz equipment.

The results of the research: it was diagnostically confirmed that only 210(60%) (1 group) operated women had adhesive processes in the small pelvis as a result of a recurring inflammation of the fallopian tubes and ovaries; 140(40%) operated women were diagnosed with the external genital endometriosis.

According to the results of endoscopic operations the patients of the first group were divided according to the endoscopic classification by V.Hulk: 25 women (11.9%) had the first stage of the adhesive process, 70 patients (33.4%) had the second stage, 69 women (32.8%) had the third and 46 patients (21.9%) had the fourth stage. The surgical procedure for the first stage of the adhesive process was salpingo-ovariolysis, stage 2 and 3 – salpingo-ovariolysis and salpingostomy, 2 patients had salpingectomy. The patients with stage 4 had salpingo-ovariolysis and salpingostomy, and it was impossible to perform salpingostomy with 6% of women. The fertility recovery with adhesiolysis was 35% in patients with the light form and 19% with the medium and heavy stage of the adhesive process in the small pelvis.

During endoscopy 140 (40%) women (second group) were diagnosed with the external genital endometriosis of different stages of endometrial injury. This group of patients had salpingo-ovariolysis, metrolysis, coagulation of foci of endometriosis, 9% had a fallopian tube removed.

After the operation women of the first group had therapy preventing a recurring formation of adhesions: physiotherapeutic measures, immunomodulation, system enzymatic therapy, correction of hormonal disorders. The second group received a gonadotropin-releasing hormone agonist therapy in the course of 3-6 months. The reproductive function was recovered in 17.8%.

Conclusions: During the treatment of a chronic inflammatory process it is necessary to take into account that in 40% of cases the infertility is connected to the external genital endometriosis and requires a pathogenetic treatment. This way, this research made it possible to confirm the high diagnostic and therapeutic value of endoscopic operations.

E.A. Glikman

ACUPUNCTURE DIAGNOSTICS AND TREATMENT OF INTERNAL ORGANS DISEASES BASED ON VISCERAL MANUAL THERAPY METHODS

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Abdomen diagnostics is an important part of oriental diagnostics. Ancient Chinese tractate describes diagnosing internal organs diseases by the abdomen state. This technique has been perfected. Let me present the results.

Let's take a look at the diagnostic areas of the abdomen.

Fields and organ lumps

Ancient Chinese tractate refers to indurations and lumps that emerge along with internal organs diseases. These lumps emerge on the frontal abdominal wall. They hurt when being palpated.

These lumps correspond to five pyroelements: Earth (center), Fire (top), Water (bottom), Metal (left) and Wood (right).

Heart lump. A hard elbow-like bulging situated in epigastric angle.

Liver lump. A lump the size and shape of an upside-down glass situated in the left epigastric area.

Spleen and pancreatic lump. A lump the size and shape of an upside-down glass situated in the middle epigastric area.

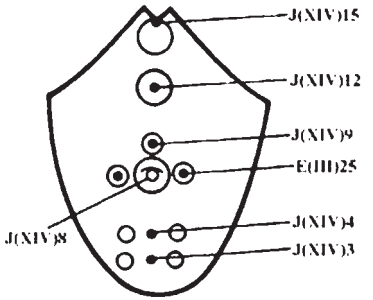
Lung lump. A lump in the shape of an upside-down glass situated in the right hypochondrium.

Kidney lump. Doesn't necessarily have a precise location, usually situated on the left abdominal wall.

Basic diagnostic abdomen points

There is a traditional Chinese Mo examination which examines pulsation in certain points.

Most of these points are situated in dermatomes which have a general segmentary innervation to corresponding organs.



Aorta pulsation pocket on the front abdominal wall

Normally aorta pulsation is not transmitted to the front abdominal wall. When transmitted, it is a sign of insufficiency which is accompanied by weakness and irritation. The closer to the surface the pulsation is, the more the irritation grows.

Energy connections between internal organs

According to the theory of five primary elements "", internal organs influence each other. It occurs in:

Activations (strengthening one organ by means of another one)

Inhibition (one organ holds back or controls another one)

Anti-inhibition (activating the inhibited organ by the inhibitor)

Abnormal inhibition (organ that must have strengthened another one, inhibits it).

U-sin theory has been explained in many books on acupuncture. Therefore we will look only at several conclusions which relate to the subject discussed.

1. Activation

Liver ⇨ Heart ⇨ Spleen and pancreas ⇨ Lungs ⇨ Kidneys ⇨ Liver

2. Controlling inhibition

Liver ⇨ Spleen and Pancreas ⇨ Kidneys ⇨ Heart ⇨ Lungs ⇨ Liver.

3. Anti-inhibition

Liver ⇨ Lungs ⇨ Heart ⇨ Kidneys ⇨ Spleen and pancreas ⇨ Liver.

4. Abnormal inhibition

Liver ⇨ Kidneys ⇨ Lungs ⇨ Spleen - Pancreas ⇨ Heart ⇨ Liver.

Besides inner organs can interact based on the principle of belonging to the same element. For instance, gall bladder (Yang) and liver (Yin) belong to Tree element, small intestine (Yang) and heart (Yin) belong to Fire element, stomach (Yang) and spleen and pancreas (Yin) belong to Earth element, large intestine (Yang) and lungs (Yin) belong to Metal element, and bladder (Yang) and kidneys (Ying) belong to Water element.

Normally they should counter-balance each other. If Yang organs dominate within one element, it leads to lowering the functions of Yin organs, and vice versa.

Let's give an example of a patient with stomach aches with clear syndrome of redundancy (Yang syndrome). The following can be done:

1. Strengthen the functions of spleen and pancreas
2. Slow the function of small intestine
3. Strengthen the function of gall bladder

Since pathology of one organ is always connected with other organs' pathologies, it is necessary to monitor the state of almost internal organs. It can be done by abdominal wall palpation (it allows to discover epigastric and hypogastric redundancy or insufficiency), by position of organ's lumps and areas and by diagnostic points. Clinical signs of internal organs and canal pathologies can also be used.

Treatment principles according to oriental medicine and visceral manual therapy

The main objectives are:

• Liquidation of pathobiomechanical and reflex changes in visceral tissues and lingamental apparatus; liquidation of biomechanical organ extrusion.

• Liquidation of pathological determinative systems of spine and brain which support the course of disease.

• Normalization of pain and propriocentive sensitivity of organs.

• Regeneration of visceral rhythm.

It is known that all internal organs are connected by means of lingamental apparatus and are attached to the spine. Besides, cerebrospinal nerves which are responsible for internal organs innervation exit through the spine. That's why the treatment should start along with regeneration of impaired spine and pelvis functions and acupuncture.

The described approach is important for treating patients with internal organs pathologies and helps to conduct any disease treatment from the position of the wholesome organism.

D.V. Golikova

NEW APPROACHES TO THE ORGANISATION OF PREVENTIVE MEDICINE

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Health occupies a special place in the system of human values. Lately great attention has been paid to the analysis of factors which contribute to the development of diseases and influence the level of health. The question of clinical examination of healthy population is being raised more and more often, which means that diseases can often be prevented by increasing the nonspecific tolerance of organism towards the influence of negative factors of the environment.

The objective of our research is to scientifically justify the improvement of the preventive activity of a departmental polyclinic (on the example of the Federal State Budget Institution „Polyclinic of Ministry of Agriculture of the Russian Federation").

The results of the conducted study on the basis of the analysis of the sickness rate and the prevalence of hazards of occurrence of socially important diseases made it possible to determine the main directions of improving the disease-preventive service to the population bound to the corresponding departmental polyclinic, and form a complex of health-improving preventive measures.

The analysis of the diagnosability provision of the departmental polyclinic showed a good accessibility of patients to a comprehensive examination, which is very important for the disease prevention, detection and timely initiation of treatment of detected diseases, as well as treatment of patients who have been under the dispensary observation for several years.

The conducted sociological research showed that the overwhelming majority of people think that it is necessary to be clinically examined for the detection of predisposition to certain illnesses.

The conducted complex analysis of the preventive measures in the departmental polyclinic made it possible to develop and implement methodical recommendations with the use of new organisational approaches in order to carry out preventive medical

examinations with a subsequent dynamic observation of healthy people from risk groups and sick patients, which increased the effectiveness of preventive and health-improving measures.

Due to the use of the developed methodology the health parameters in each age group have improved within the course of the observation. There has been an increase in the number of patients under the dispensary observation from 39.3% in 2005 to 77% in 2009; the coverage of patients under the dispensary observation, whose disease has only recently been detected, made up 47.8% in 2009 in comparison to 2.8% in 2005.

The completeness of medical and health-improving measures in 2009 (89.3) increased in comparison to 2005 (44,7) by a factor of 2. The share of patients under the dispensary observation without temporary disability has grown as well. There has also been a tendency of a decrease in the average duration of a disease with temporary disability.

Thus, the conducted complex analysis of the health parameters of the population and their comparison to the volume and the results of medical and preventive examinations, formation of contingent under dispensary observation, ranking according to the nosology, subsequent monitoring of doctors of corresponding specialties, the use of the recommendations in the form of the „Programme of the methodology of active preventive and health-improving intervention", evaluation of the results of the dynamic observation of patients with individual non-infectious diseases and the introduction of the „Subsystem of dispensary observation in the medical information system" make it possible to control the change in the level of health, dynamically observe and actively influence the effectiveness of the health-improving measures, and let directors of medical institutions improve the quality and increase the efficiency of the preventive medicine.

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GENE-GENE INTERACTIONS: TREATMENT POSSIBILITIES FOR ARTERIAL HYPERTENSION PATIENTS

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In spite of the modern developed treatment algorithms the selection of antihypertensive therapy is a problem that requires a more differentiated approach to prevention of fatal and nonfatal complications. Therefore, the search for new markers that would predict the course and nature of complications in patients with arterial hypertension (AH) has been extremely important so far.

The aim of this work is to study gene-for-gene interactions of candidate genes of hypertension: a gene of angiotensin-converting enzyme, angiotensin 2 receptor type 1, beta 2-adrenergic receptors and their association with the basic hemodynamic parameters in patients with arterial hypertension in the Republic of Mordovia. We examined 456 people,

among them 339 patients with primary arterial hypertension of 1-3 degree, 1-2 stage based on the SCRF classification (2011), followed by the separation into groups according to the nationality and belonging to the ethnic group of patients living in the territory of the Republic of Mordovia (Erzya n = 110,Moksha n = 99, Russian n = 130). The control group included 117 volunteers with normal blood pressure and having no first-line relatives with the cardiovascular diseases, divided according to ethnicity (by 39 people) as well. All groups were comparable in terms of basic characteristics.

The study of I/D polymorphism of the angiotensin-converting enzyme (ACE) in hypertensive patients and healthy individuals revealed the predominance ofintermediate genotype of ACE gene. But the study of polymorphism based on national origin and gender revealed that Mordovian-Moksha male patients are more likely to have the carriage of unfavorable DD genotype of ACE gene. Genotype of the gene of angiotensin II receptor type I (ATIIRI) revealed a significant prevalence ofhomozygous AA genotype regardless of the level of blood pressure, ethnicity and gender of patients. The study of polymorphism of beta 2-adrenergic receptors was carried out in the position of Arg16Gly and Gln27Glu. Also, in the study of carrier genotypes of this gene ethnic and gender specificity found the following: there is a significantlymore common GG genotype of the gene of beta 2-adrenergic receptors in the position of Arg16Gly for Mordovian-Moksha men and women and Mordovian-Erzya men, and an unfavorable genotype is significantly more common in Mordovian-Erzya men and women in the position Gln27Glu.

The analyzed identified associations of unfavorable genotypes carrier with major hemodyna- mic parameters in most cases did not provide credible evidence in theanalysis of correlations and the calculation of odds ratios. Therefore, a more valuable measure is the assessment of hemodynamic parameters in the analysis of combinations of unfavorable genotypes of the major candidate genes of hypertension, particularly studied in this paper. In the combination of DD genotype of ACE gene and the CC gene AT2R1 there were identified the reliable values of the higher values of ESS, EDD, and LVMM as well as significantly reduced ejection fration significant for hyperten-sive patients of Mordovian ethnicity. The combination of an unfavorable DD genotype of ACE gene and genotype GG gene beta 2-adrenergic receptors in the position Gln27Glu revealed that hypertensive patients of Mordovian ethnicity have the highest indexes of both systolic and diastolic blood pressure.

Therefore, there was found ethnic and gender specificity of the DD genotype carrier of ACE gene in hypertensive patients of Mordovian-Moksha males and GG genotypes of the gene of beta 2 - adrenoceptor in the position Arg16Gly of Moksha men and women and Erzya men, and in the position Gln27Glu of Erzya men and women. The presence of "unfavorable" combinations of DD genotype of ACE gene, CC of AT2R1 gene in hypertensive patients is characterized by more evident changes in hemodynamic and echocardiographic parameters reflecting LVH and symptoms of heart failure. This knowledge will offer a specific group of patients with antihypertensive drugs of organo-specific properties in the early stages of the disease.

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PHYTO - AND OZONETHERAPY OF DYSFUNCTION LYMPHOID AND LYMPHATIC SYSTEMS IN THE ANTIAGEING PROGRAM

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The problem of improvement of life quality and achievement of long life by the persons of old age is actual problem in medical rehabilitation. Destructive sclerotic processes take place in all organs, state of endoecological medium of organism depending on state of drainage and detoxication function of lymphatic system and, particularly, lymphatic nodes become worse with aging. These facts clearly define the role of lymphoid and lymphatic systems and the necessity to search correction means for persons of old age. Phyto- and ozonetherapy are experimentally proved as methods of optimization of functions of lymphatic system of persons of old age.

We used original herbal collection including leaves and root of Bergenia crassifolia, Rhodiola rosea, Hedysarum, Vaccinium myrtillus, Vaccinium vitis-idaea, Currant, Rose, Thyme, dietary fibers. Ozonapplication was carried out by the ozonized olive oil on area of lymphocollection of inguinal lymph nodes.

The intake of phytocomposion and ozone application doesn't change the topography of lymphatic nodes of inguinal region but has influence on the speed of lymphokinesis increasing the percentage of animals (rats) with rapid passage of lymph.

Phyto- and ozonecorrection causes the different in intensity structural responses of lymphatic node in young and old animals. Structural functional zones of lymphatic node are changed their area more in old animals than in young animals. It is supposed the modulating effect of phyto- and ozonecorrection. The structure of inguinal lymphatic nodes particularly connective tissue component in old animals shows the same morphologic signs reflecting the aging. Peculiarity consists in heterogeneity of the lymphatic node structure depending on localization of sclerosis against background decreased lymphopoiesis (excess of middle lymphocytes and delay of differentiation of lymphoblasts). Phyto- and ozonecorrection enforces immunogenesis in lymphoid node causing plasmatary reaction namely the increase of lymphocytes in paracortex and medullar cords against background decreased density cells of lymphocyte series in paracortex. Function of lymphatic node maintains and shows the compensation state in old animals during the course of phyto- and ozonetherapy. Judging by changes of lymphatic node the immune potential and drainage function are forced as a result of phyto- and ozonecorrection in old animals. Phyto- and ozonetherapy helps to achieve lymphostimulation effect which has preventive character.

Thus, phyto- and ozonetherapy are recommended for the program of antiageing to decrease of involution and pathological processes in lymphoid and lymphatic systems.

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M.A. Popova

MORPHOFUNCTIONAL STATE OF LITTORAL CELLS OF THE LYMPH NODE IN THE CONDITIONS OF NICKEL TITANIUM IMPLANTATION

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The aim is to study ultrastructural equivalents of a functional state of littoral cells of subcapsular sinus of the lymph node. The lymph node is regional implantation area. It is known that regional lymph nodes drain a well-defined region. In relation to region lymph nodes are indicators of the internal environment of an organism. At dentition pathologies we can expect the grand changes in littoral cells which are boundary structures in a lymph node.

In experiment at 60 white rats of Wistar carried out implantation of samples the nickel titanium in processus alveolaris of the lower jaw in molar tooth area. Nickel titanium, also known as nitinol, is a metal alloy of nickel and titanium. The intact animals group was control. For 7, 14, 30, 60 and 120 days after implantation make an elektronmicroscopic and morphometric research of littoral cells of a subcapsularis sinus of superficial cervical lymph node.

In the conditions of implantation the nickel titanium cell lining of lymph node sinus is exposed to essential structurally and functional changes. The weight cellular organelles (granular endoplasmic reticulum, ribosomes, mitochondrions) decreases. For 7 days the numerical density of total ribosomes has decreased for 23,2% mainly at the expense of the attached ribosomes owing to what the volume density of granular endoplasmic reticulum has decreased for 48,3%. The volume density of mitochondrions has increased by 58,5%, and their numerical density and superficial density of an internal membrane mitochondrions has decreased for 27,6% and 20,1% accordingly. Noted facts testify to infringements plastic, secretory and synthetic functions of these cells (Borodin J.I., 1992; Schoetle G.J., 1980). Essential pauperization of littoral cells by power resources takes place (Avtsyn A.P. et al., 1979, 1986; Frej-Vissling A, 1976).

In the subsequent terms of research the tendency to restoration of littoral cells ultrastructure is observed. There is increase numerical density of mitochondrions and superficial density of mitochondrions internal membrane. It testifies to increase of power potentialities of cells and to activation of lipid peroxidation (Allson J.R., Jammer J.J., 1987; Harris P.T., 1987). Thus the volume density of mitochondrions decreased that, apparently, creates the best conditions for exchange processes in comparison with large mitochondrions (Shkurupy V. A, 1981; Peters-Golden M., Thebert P., 1987).

However, for 30 days such parameters of the ultrastructural organization of littoral cells as numerical density mitichondrions, superficial density of mitochondrions internal

membrane, volume density basal pinocytotic vacuoles and the numerical density of summary ribosomes remained authentically below corresponding values of intact animals group. Only for 60 and 120 days of research of value of the majority of parameters of the ultrastructural organization of littoral cells of an internal wall of a subcapsular sinus has no statistically significant differences from group of intact animals.

The conclusion. In the conditions of implantation the nickel titanium take place to be long change of the ultrastructural organization of littoral cells of lymph node sinus. Decrease of numerical parameters of cellular organelles testifies to functional effort and deterioration plastic and an energy potential of littoral cells in support of histolymphatic relationship.

I.V. Groshev

DIFFERENCES IN SICKNESS RATE AMONG MEN AND WOMEN

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The attempt to systematize some research results, authentic and literature data on studying sickness rate of various diseases suffered by men and women is undertaken. This issue is a pressing complex problem of the human study both in theoretical and practical aspects.

Sex ratio of sick people suffering from some diseases varies significantly from proportion 1:1. In some cases these differences can be stipulated by specificity of reproductive function, in other cases – by social factors (living conditions, work, taking alcohol, smoking and etc.), thirdly – by biological features of men and women. At the same sickness rate of men and women the sex of sick people has an influence on the frequency of detection of some diseases in the process of periodic health examination. Tumors (mainly benign) are diagnosed three times oftener among women, but gastric ulcer – three times more frequently among men ($p<0,001$). Apart from gastric ulcer men are diagnosed with chronic bronchitis ($p<0,05$) 1,2 times more frequently, ischemic heart disease ($p<0,001$), cerebral atherosclerosis ($p<0,05$) and urino-genital organ diseases ($p<0,01$). At a regular medical check-up women have disorder of the nervous system 1,2 times more frequently mainly because of neurocirculatory dystonia ($p<0,01$), rheumatic diseases and rheumatoid arthritis, chronic cholecystitis ($p<0,001$), vertebrae osteochondrosis ($p<0,05$). Sex differences are detected mainly among patients suffering from peptic ulcer, among whom there are twice more men at the age under 30, and patients suffering from chronic enterocolitis, among whom women prevail at the age under 35 ($p<0,01$). These differences smooth over while aging. The influence of sex on age structure of patients with endocrinologic dysfunction and functional disorders hasn't been revealed. From that it may be concluded that sex, not having significant influence on detectability of diseases, defines types, character of diseases and age peculiarities of their

initial revealing in the process of periodic health examination.

Thereby, sex differences are a dynamic social and psychological determinant deeply and widely influencing health. It may be noted that at large men have a weaker resistibility to diseases; they endure all diseases worse than women, as the latter have a twofold defence due to two X chromosomes. Besides, the level of mental health among men is lower than among women.

V.A. Groysman
A.L.Razlivinskikh

QUALITY IMPROVEMENT OF MEDICAL CARE ADMINISTRATION ON THE BASIS OF THE DEVELOPMENT OF HEALTH CARE INFORMATISATION

Municipal budget health care institution „City Clinical Hospital Nr.1", Togliatti, Russia

Problems of the quality improvement in the medical care provided by medioprophylactic institutions are put into the centre of attention of medical workers of all levels and specialties. One of the effective directions in improvement of the efficiency of expertise, control and administration of the quality of medical aid is the development of informatisation in the health care. A complex automatic information system "Vilanta" was created, implemented and patented in the City Clinical Hospital №1 in Togliatti, which has 655 beds. This system is the first to solve problems of twenty-four-hour hospital administration: information is entered into the system once and is available for the medical and management staff. The data input is carried out on 275 places by the medical staff (703 users) when the medical card of the hospital patient is processed. As a result of the application of the complex automated information system "Vilanta" in the administration of the hospital medical care the staff and administration of the hospital have a series of considerable advantages at work, namely:

1. The time needed to receive information about the results of a patient's examination is considerably reduced. There are no more paper referrals for examinations. Patients go to the attending physician in real time; several specialists can work with the patient history at the same time, which is particularly important in surgical departments, where the time factor plays a crucial role and influences the end result of the treatment.

2. A doctor receives invaluable assistance in case of a recurrent admission of a patient into the hospital. He gets comprehensive information, including all previous hospitalizations and visits to the hospital's reception to get medical aid, already at the reception.

3. The use of the computer data base made it possible for the doctors, heads of departments and hospital administration to reduce the time needed to create various kinds of reports by eighty per cent. The reports are created automatically within several seconds.

4. It is a lot easier to search for information that is needed for different organisations (e.g., bodies of immediate investigation, courts, insurance companies, health care department etc.).

5. The identification control of the obligatory medical insurance policy of a patient in the reception makes it possible to detect discrepancies in time and determine the payer for the provided medical service.

And this is not the complete list of the advantages of the hospital administration system. The availability of the information system in the hospital made it possible for us to receive a patient's file in the electronic form and have a real picture about direct expenses needed for the medical aid administration in the hospital. FOR THE FIRST TIME the financial items of revenue and expense of medical care are attached to the patient.

The presence of the information system in the hospital made it possible for us to develop criteria, assess the intensity and rate of performance of the medical hospital staff and carry out a policy of effective material stimulation of workers, correspondingly. One more element of the evaluation of the health care administered by the medical staff in the hospital was the technology of the automated expertise of medical aid quality, applied in practice, which satisfied both the producers and consumers of health services. The information received during the expertise of medical aid quality made it possible to reduce:

- the number of unjustified expensive examinations;
- the number of cases of inaccurate prescriptions of medicine due to the strict quantitative record and analysis of the sources, from which the medicine arrived;
- the number of mistakes during filling in documents was reduced to zero;
- the number of cases of inaccurate prescriptions of medicine (or no prescriptions at all) due to the strict subject-quantitative and cost records;
- the number of mistakes in documentation was reduced to zero due to the automated patient's history led by the attending physicians of the hospital.

In the conclusion we would like to mention that within 10 years of operation of the information system the number of conflict situations between medical workers, patients and their relatives has considerably decreased. Serious complaints of the hospital administration to the hospital workers were nearly reduced to zero. The doctors take a more active part in weekly conferences in the hospital, carry out research work. Patients' records clearly show the increased satisfaction with the medical aid quality.

V.A. Groysman
A.L. Razlivinskih

THE CONCEPT OF MARKETING IMPROVEMENT OF MEDICAL CARE

Municipal Budget Health Care Institution „City Clinical Hospital Nr.1", Togliatti, Russia

It is well known that the human need for medical care radically differs from other kinds of needs, that is why health services are seen as a very specific product. If the majority of goods, activities and services are acquired by people with pleasure, medical care is in most cases a product that a human being is forced to obtain due to a disease. Under competitive

conditions, health care institutions are interested in acquiring additional patients. Health care institutions have two objectives: to build a reputation of an effective (in regard to the treatment) institution and to create an image of a reliable business partner. These two tasks cannot be solved by only using medical knowledge. Thus, the transition of funding to private investors and limited volumes of state funding caused an introduction to the health care management system of some marketing principles for the purpose of attracting both additional consumers of services and investors.

The thing is that the active promotion of the already implemented services, without taking into consideration the actual need for them or modern medical technology, often turns into imposing them onto patients with only one thing in mind: to earn profit. That is why it doesn't play any part in the improvement of the health state of patients, and in some cases, where the applied methodology has a wide spectrum of contraindications, even worsens it. Exactly for this reason true and effective marketing activity is primarily based on a thorough study of human needs in different health services, i.e., on the identification of their potential consumers. In turn, the study of the market of health services is based on the analysis of age, sex and social structure of the population, and the prognosis of the change in the number and structure of the population due to the change in the birth and death rates, migration etc. That means that the study of the market of health services and needs for one or another type of medical care is impossible without a deep research of the demographic situation and its tendencies.

The foundation for building and accepting the concept of a medical organization must not be the objective of „EARNING PROFIT" but the task of „SATISFYING THE NEED of a client (buyer, patient)", and all the economic-organizing measures should be oriented towards the creation of conditions facilitating the fulfilling of this task.

In order to formulate the development plan correctly, we need to answer the question „What is important for the consumer (patient)?". According to the results of our research,

it is important for the consumer:

- to know about his health state;
- to receive attentive and respectful attitude;
- to obtain clear and comprehensible recommendations regarding the following treatment;
- to spend minimum time on clinical examination and feel comfortable during it;
- to receive service in a convenient time (after work, on the weekend);
- to expect a discount on a subsequent visit.

The essence of marketing relations is not administering medical aid as such but satisfying target needs of everyone.

The market orientation of a medical institution towards a Consumer/Patient comes down to the organization of all its units and services on the basis of qualitative and quantitative characteristics of the current and future consumer demand in such a way that the needed health service is delivered in the needed quantity and quality in the right place

and for the corresponding price. The orientation towards satisfying the need should be the main thought when shaping the marketing strategy of a medical institution.

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EMERGENCY CARE FOR PREGNANT WOMEN WITH UROLOGICAL DISEASES

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The present work contains the analysis data of the work of the emergency care department in regard to pregnant women with urological diseases. We have analysed annual reports and case histories from 2003 to 2011. Indications for emergency hospitalisation: 1. Renal colic; 2. Acute pyelonephritis; 3. Hematuria; 4. Anuria, acute retention of urine; 5. Acute renal failure; 6. Traumas of urinary organs.

Acute pyelonephritis and pregnancy. In most cases acute pyelonephritis develops in the second half of the pregnancy: in the fourth or fifth month of the first pregnancy, in the sixth or the seventh month in the subsequent pregnancy. 423 patients with acute serous pyelonephritis and 11 patients with acute purulent pyelonephritis were treated during the analysed period. There were 98 cases of ureteral catheterization, 77 cases of ureteral stenting, 3 nephrectomies and 8 nephrostomies. There were 2 cases of spontaneous stent expulsion.

Clinical indications of the hematuria syndrome correspond to the diseases which it accompanies. During examinations in regard to hematuria we have detected the following: 115 patients had nephroliths, there was one case of malignant neoplasm in the bladder and one case of malignant neoplasm in the kidney. Transurethral bladder resection and nephrectomy were performed, correspondingly. Two patients received conservative treatment in regard to kidney contusions.

Pregnancy is not a risk factor for urolithiasis; the number of urolithiasis cases does not grow with an increase in the number of pregnancies.

The conservative treatment of urolithiasis is preferred during pregnancy. Remote lithotripsy is counter-indicative; some cases, however, cannot go without an operation. Indications for surgical therapy: anuria, caused by the ureteral obturation by a stone, acute purulent pyelonephritis, frequent attacks of renal colic without the tendency to the spontaneous stone expulsion.

The conservative stone expulsion treatment led to the spontaneous stone expulsion in the case of 98 patients. 37 patients had urolithiasis complicated by the obstructive pyelonephritis. Ureteral catheterization in combination with treatment of the worst syndromes was performed on the 5-7 day in cases of the acute serous secondary pyelonephritis. An indication for endoscopic operations was the absence of the expected effect from the stone expulsion therapy in the course of 5-7 days without signs of acute pyelonephritis. 42 contact lithotripsies were performed on pregnant women with ureteral

stones. During contact lithotripsies, the complete stone destruction was achieved in 36 cases, in the case of 6 patients stones migrated into the cavitary system of the kidney and the patients had ureteral stenting. There was one case of the acute serous pyelonephritis, which was stopped by the conservative treatment. One patient, who refused to have an endoscopic invasion, had preterm labour in the 34th week.

Anuria. Pregnant women with excretory anuria and reflex anuria with renal colic are referred to the urological department. In our department we have treated 17 patients with reflex anuria and 1 patient with excretory anuria. All cases of reflex anuria were stopped by the conservative treatment. The patient with excretory anuria had a percutaneous puncture nephrostomy and contact ureteral lithotripsy after the childbirth. The hospitalization of pregnant women with urological pathologies in one specialised department of a multisectoral hospital, which has modern equipment and a highly-qualified staff, made it possible to minimise the number of complications and avoid lethality.

Lutz Harms

MODERNE THERAPIEOPTIONEN BEI MS (SCHUB-, BASIS- UND ESKALATIONSTHERAPIE) UND WAS IST IN ENTWICKLUNG?

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Die multiple Sklerose ist eine häufige neurologische Erkrankung, die vor allem jüngere Menschen betrifft. Die komplexe Pathophysiologie und Ätiologie ist trotz enormer Fortschritte in den letzten Jahrzehnten nicht geklärt. Initial stehen inflammatorische Prozesse im Vordergrund. Gleichzeitig laufen aber degenerative axonale Vorgänge ab, die in späteren Stadien die Oberhand gewinnen.

Die Diagnose richtet sich nach den 2010 revidierten McDonals-Kriterien.

Seit der Einführung immunmodulatorischer Basistherapien konnte die Schubfrequenz deutlich gesenkt, der Krankheitsverlauf verlangsamt werden.

Leitlinien der DGN bzw. DMSG unterscheiden Basis-von Eskalationstherapien. Die Basistherapeutika Betaferon, Avonex , Rebif und Copaxone werden in Ihrer Wirksamkeit als etwa gleichwertig angesehen und erreichen eine Schubratenreduktion um etwa ein Drittel. Applikationsart und -frequenz und Nebenwirkungsprofil unterscheiden sich. Von Therapieversagern spricht man beim Auftreten von 2 Schüben pro Jahr unter der Therapie. Die Kernspintomographie spielt heute die Hauptrolle in der Diagnostik und Verlaufskontrolle.

Für die Eskalationstherpie stehen verschiedene Medikamente zur Verfügung, bislang vor allem das an Bedeutung verlierende Mitoxantron (2002 in Deutschland zugelassen) und der monoklonale Antikörper Natalizumab. 2011 wurde das oral zu verabreichende

Fingolimod (Gilenya) in Deutschland für die second line Therapie zugelassen.

Die deutlich wiksameren Medikamente der Eskalationstherapien haben eine sehr unterschiedliche Wirkungsweise und können ernste Nebenwirkungen hervorrufen. Daher ist eine Eskalation genau abzuwägen und an genau definierte Indikationskriterien gebunden. Ein entsprechendes striktes Sicherheitsmanagement ist erforderlich, auf das genauer eingegangen werden soll.

Für heftige Diskussion in Fachkreisen und Betroffenengruppen haben vom italienischen Gefäßchirurgen Zamboni 2009 veröffentlichten Daten zu Veränderungen des venösen Abflusses aus dem Gehirn gesorgt. Seine Theorie der „chronischen cerebrospinalen venösen Insuffizienz“ (CCVSI) hat einige Zentren zu Erweiterungsinterventione n an den Venen veranlaßt. Die Datenlage ist ausgesprochen kontrovers. Noch liegt keine modernen Kriterien standhaltende Studie hierzu vor.

Neben der an der Immunpathogenese orientierten, eher kausalen Therapie, spielt aber auch die symptomatische Behandlung der vielfältigen Beschwerden der MS-Patienten eine für die Lebensqualität ganz wesentliche Rolle. Gerade in diesem Bereich sind etliche Bedüfnisse der Patienten längst nicht erfüllt. Häufig werden die Möglichkeiten nicht ausgeschöpft. Allerdings fehlt oft auch die Evidenz bzw. die Zulassung wirksamer Medikamente. Eine große Hilfe bei der hyperaktiven Blase wird die nun zugelassene Behandlung mit Botulinumtoxin sein. 2011 wurden zudem das Fampridin (Fampyra) zur Verbesserung von Gangstörungen und das Sativex als Add-on-Medikament gegen Spastik zugelassen.

In den kommenden Jahren wird das Feld der Möglichkeiten durch weitere neue Substanzen erweitert werden und damit noch komplexer. Andererseits wird die individuellere Therapie, angepaßt an das jeweilige Stadium der Erkrankung bzw. den Verlaufstyp, immer besser realisierbar sein.

Was ist in nächster Zeit zu erwarten?

Zu folgenden im kommenden oder übernächsten Jahr zu erwartenden Medikamenten wird berichtet:

BG12
Teriflunamid
Alemtuzumab
Daclizumab
Laquinimod

Desweiteren befinden sich einige viel versprechende Substanzen oder Verfahren in frühen Studienphasen. Zunehmend wird versucht werden, die Remyelinisierung zu fördern. Mechanismen und Chancen werden erörtert:

Anti-Lingo-1
Autologe Stammzelltransplantation - Wurmeier

Erkenntnisse zur Pathogenese oder zur Genetik werden in der Zukunft die therapeutischen Abläufe beeinflussen und uns ggf. einer individualisierten Therapie, einer Restitution oder gar Heilung näherbringen.

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TREATMENT OF EPISPADIAS IN CHILDREN

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Among the malformations of the urinary tract in children epispadias is a severe anomaly requiring surgical correction. The success of surgery depends on the form, the child's age, size of the penis and the type of Reconstructive - plastic surgery. As is well known for epispadias postoperative complications observed from 20 to 60 %.

The purpose of the work . Improve the results of surgical treatment of epispadias in children.

Material and methods . In the clinic of pediatric surgery, anesthesiology and resuscitation of the Tajik Institute of Postgraduate medical training based on the child's Clinical Surgical Hospital in 1996 - 2011 years of treatment were 22 male children with epispadias.

At the age of 1 year to 3 years, 14, 4 - 8 years 3, 9 - 12 years 2 13-15 years 3. The form of epispadias were: capitate 1, stem 2, 14 subtotal, total 5. I -----% were observed concom itant pathology inguinal cryptorchidism - 2, 2 serotal inguinal hernia, anal atresia 1, pyelonephritis - 2.

Results. Patients with epispadias capitate form of corrective surgery is not performed, as in a functional relationship and the change was not cosmetic.

When we applied epispadias surgery Ransey in 8 children, and the operation Ransey in the modification of the children of 14 patients

Operation Ransey in the modification consists in the formation of the urethra from the urethral area, the selection of the corpora cavernous, dissection of adhesions and straightening of the penis, the selection of the skin on the ventral surface of the defect and closure of the dorsal surface of the penis by two opposing skin flaps. The formation of the urethral catheter Folleya performed using microsurgical techniques (increased 4-fold) with the imposition of nodal joints polyglastin 6/0. The second series of reinforcing seams. Then the seams were superimposed on the tunica albuginea of the corpora cavernous. In this regard, the urethra is formed by mixed up on the ventral surface of the penis

Studied the long-term results of treatment in 22 patients during the period from 5 to 10 years. A complication in the postoperative period after surgery Ransey were 6 patients: incontinence - 2, urethral fistula - 3, and the children who underwent surgery in Ransey modifications have revealed a complication in the form of urinary incontinence and urethral fistula 1.

Thus, the plastic urethra using microsurgical technique and modified method Ransey, as well as in the postoperative period quantum therapy and intravenous drip application of medical ozone gives good results.

I.A. Ignatova
V.V. Fefelova
S.V. Smirnov

ETHNIC PECULIARITIES OF THE PATHOLOGY OF EAR AND NOSE AMONG NATIVE AND IMMIGRANT RESIDENTS OF EASTERN SIBERIA

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The relevance of the subject is due to the high prevalence otorhinolaryngologic and allergic pathologies. This issue is extremely important for the people of Siberia and the Far North, particularly for the indigenous population, which is represented by the various Mongoloid populations. Some types of ear pathologies among Mongoloids of Siberia are more common than among Caucasoids. The same patterns were observed in the population of the northern regions of Canada, Alaska, Greenland.

The population of the northern territories of Russia belongs to different ethnic groups. The distribution of HLA system genes in Mongoloids of Siberia confirms some general patterns which are characteristic to the genetic structure of Mongoloid ethnic groups of the world: high frequency of genes HLA-A9, B15, B40 and the absence or extremely low frequency of genes B8, B14, B18, and B21.

The aim of this work was to study the ethnic characteristics of otorhinolaryngologic pathology for people of East Siberia.

Objectives:

1. To carry out a comparative analysis of the othopathology structure in Caucasoids and two Mongoloid populations (Evenks and Yakuts) living in extreme Arctic conditions and to explore their ethnic features.

2. To determine the structure, the prevalence of nose diseases and identify their ethnic characteristics of the indigenous and migrant populations in Eastern Siberia.

Materials and Methods: The study was carried out by organized complex medical examinations. All patients underwent otorhinolaryngologic, as well as allergy testing. Multifactorial program module "Allergic rhinosinusopathy" was designed and the method of correlation adARtometry was ARplied.

A total of three ethnic groups were examined, living in the same extreme environmental conditions of Eastern Siberia: in Caucasoid migrant population, and two Mongoloid populations - Evenks and Yakuts.

The survey was conducted in the towns of Tura, Nidym, Yessey. There were examined 561 people with otopathology, and 5075 patients with allergic rhinosinusopathy.

The first focus of our work was to study ethnic diseases peculiarities of the ear diseases.

A comparative study of the otopathology structure in three different ethnic groups found that the structure of the auditory organ pathology in these populations is different.

In the Evenk population chronic suppurative otitis media (64.06% of the total ear pathology) is prevalent, while in Caucasian and Yakut population this disease is several

times less frequent (14.5% and 9.89% respectively). The bulk of otopathology in the Yakuts and Caucasoids is presented by sensorineural deafness (76.10% and 59.9% respectively), whereas the Evenks have this form of nosology in only 12.10%.

We believe that similar patterns of otopathology structure in the Yakuts and Caucasoids is due to the fact that the Yakuts, according to the genetic marker HLA system a strong admixture of Europoid, marked by the gene HLA-AI (phenotypic frequency - 28.8%) is revealed. (Fefelova V.V. 1987, Fefelova V.V., 1990). This

Europoid admixture seems to have been introduced into Yakut population by ancient Caucasoids.

Thus, we believe that the similarity of the otopathology structures in the Yakuts and Caucasoids is due to the fact that continuing to this day among the Yakut, "Caucasoid" gene pool affects the structure of the pathology of the ear and makes it closer to Caucasoids.

The second focus of our work was to study the peculiarities of ethnic nose diseases: an allergic rhinosinusopathy.

Allergic rhinosinusopathy (AR) is one of the problems of modern medicine, and is not only due to the rapid growth, but due to worsening, as well as modification of its clinical course.

According to studies by several authors, the proportion of AR in the structure of allergic diseases is 60-70%. Epidemiological studies conducted in different countries confirm the progressive rise in the morbidity and high levels of the prevalence of AR.

The prevalence of AR among Caucasoids and Mongoloids of Evenkia was investigated. It is noteworthy that the AR is detected among the newcomers (Caucasoids) 2.2 times more likely than among native (Mongoloid) (newly arrived people - 26.9 per 1,000, and the indigenous population - 12.0 per 1,000).

Indicators of the structure of AR among residents of Evenkia depending upon their periods of residence in the North also have their differences; among indigenous population with AR 70% is the group living in the North "from birth", whereas in the alien population AR is more common (39.9 %) in people living in the North "from 11 to 20 years."

In the study of the prevalence of AR in the Evenk population depending on the etiological factor it is determined that the most frequent reason for the occurrence of AR are dietary factors, and the alien population in Evenkia suffers from food origin twice as frequent as indigenous population (76, 0 versus 33.3 per 1,000 people.). P <0,05.

Nonrandomness of the data is confirmed by the fact that functional features of other physiological systems, as well as the prevalence of pathology of the visual analyzer, biliary system, gastro - intestinal tract of the Yakuts have patterns similar to the Caucasoids and different from other Mongoloids.

Our studies show that ethnic features have a significant impact on the structure of otorhinolaryngologic pathology, as well as the surveyed populations genetic structure, established by analyzing the distribution of HLA system genetic markers.

Identified ethnic characteristics of the hearing organ disease and allergic rhinosinusopathy in the Evenk population are of great importance not only to identify the causes of researched

disease, but also to clarify its pathogenetic mechanisms. This, in turn, helps to determine the reasonable way of their therapeutic correction and prevention arrangements, thereby improving the otorhinolaryngologic and allergology services.

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EFFECTS OF LOW TEMPERATURES IN POLIPOUS ETHMOIDITIS

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The use of low-temperature effects in medicine has been known since ancient times, but modern cryotechnologies appeared only recently. The role of the mucous membrane in otorhinolaryngology as the basic physiological and immunological filter, impervious to disease-causing agents, has been studied by Bykova V.P., 1983 Preobrazhensky B.S., et al., 1969; Pluzhnikov M.S. and Lavrenova G.V., 2007, etc.).

There are many different schools involved in the study of the cold effects on the disease processes in the body, in particular, the International Institute of Cryomedicine, where they use regenerative cryotherapy in otorhinolaryngology to improve the process of mucous membrane regeneration, removal of pathogenic causes and restoration of its original function. As a result of cryotherapy on polypus tissue, nasal mucosa, lymphoid tissue of the tonsils and pharynx the immunity is increased and the risk of systemic, infectious and allergic diseases is reduced.

Objective: To study the dynamics of the concentration of IL-6 and IFN-γ in nasal swabs of patients with PE before and after polypus fabric cryotherapy and mucosa of the lower turbinates cryotherapy.

Material and methods: 75 patients with allergic rhinosinusopathy - AR, (including polypous etmoiditis - PE (n = 50) were examined and treated by cryotherapy. First control group (n = 25) included individuals with no exacerbation of AR for the last 3 years, the second group of patients included individuals with PE before cryotherapy (n = 50) and the third group of patients included individuals with PE after cryotherapy (n = 45).

For nasal swabs we used a modified method of "nasopharyngeal swabs", recommended by the Russian Health Ministry order (Nr. 117 of March 21, 2003): the contents of the upper middle nasal passage was sampled with a sterile probe and the resulting material was washed into a test tube with sterile saline with volume of 0,5 ml.

For cryotherapy we used a set of inspection otorhinolaryngologic tools (Mozhaisky MIZ, Nr. 86/386-156) and cryosurgical unit "CAG-01" with a dose capillary flow of cooling agent (liquid nitrogen) and a set of applicators. The technique of cryotherapy: under

local anesthesia and nasal mucosa anaemization withSol. Dicaini 2% et Sol, Adrenalini hydrochloridi 1% the cryotherapy was performed on the tissue of nasal polypus and the area of the lower nasal turbinate for 1 to 2 minutes.

Results: the study of the local immune response on indicators of the concentration (pg / ml) cytokines IL-6 and IFN-γ in nasal secretions of the control group, patients with PE before cryotherapy and patients with PE after cryotherapy, the following data were collected.

In the nasal secretions of the control group the concentration of IL-6 was amounted to 10,6 ± 5,32 (P1, 2 <0,01 P1, 3 <0.05) in patients with PE before cryotherapy it was amounted respectively 69,6 ± 21,3 , P2, 1 <0.01, and in patients with PE after cryotherapy it was amounted 19,5 ± 5,8.

The concentration of IFN-γ in nasal secretions of control group patients was 61.9, in patients with PE before cryotherapy group it was amounted respectively 121.2 and in patients with PE after cryotherapy group it was amounted 282.4. The differences are reliable.

There was shown a significant increase in levels of IL-6 and IFN-γ in nasal swab during the acute clinical evidences of PE before cryotherapy compared with the control group. The revealed changes give evidence of the immune response stress.

While studying the dynamics of cytokines in nasal secretions in patients with PE before and after cryotherapy the following data were collected. So, after cryotherapy there was the significant decrease in IL-6 and increase in IFN-γ in comparison with the initial concentration of these cytokines in patients with polypous etmoiditis before cryotherapy. So it is clear that patients with polypous etmoiditis should get treatment with cold (cryotherapy).

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MODERATELY HYPERVOLEMIC HEMODILUTION DURING SURGICAL INTERVENTIONS ON THE KIDNEY IN CHILDREN

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The purpose of the work. The study of the effectiveness of MHH pediatric urology.

Materials and Methods. The study were 42 children with unilateral single (23) and multiple (5) and bilateral (7), kidney stones, congenital unilateral (4) and two-way (3), hydronephrosis.

The children were aged under 1 year of -3 from 1 to 3 years-9 from 3 to 7 years, 8-14 years-13-17. All of the patients had chronic pyelonephritis. 42 patients with 52 produce operations: pelviolithotomy with nephrostomy-15 nephrolithotomy nephrostomy to -25, neopielouretroanastomoz-10nephrectomy 2. Patients depending on the composition hemodilution conducted MHH were divided into 2 groups. One group consisted of 23 patients who underwent MHH reopoliglyukina solution, 10% glucose and 10 ml gelatin per

1 kg of the child. In 40 -50 minutes before the start of the operation under the premedication (droperidol, or natrii oksibutiratis, atropine and diphenhydramine in the age-dose), MHH performed by intravenous bolus hemodilutant. MHH was made at 15 - 20 ml per 1 kg body weight. hemodilutant filled in the missing parts with 10% glucose solution or Ringer's solution. MHH is achieved with a decrease in hemoglobin concentration of 15% and hematocrit 1.5 ±20 2.0% from baselineEfficacy of the MHH was carried out by studying central hemodynamics, tetrapolar rheography, blood gases - oximetry, pulmonary shunt - oxygen method, renal blood flow - a sample Reberga - Tareeva, minute diuresis, coagulation - a unified program, the toxicity of blood - paramecia test.

Results. In a group of patients after the MHH decrease of peripheral vascular resistance by 11± 1.6%, blood viscosity 7.5 ±1.2%, fibrinogen by 12.6 ±2.1% for clotting Lee - White 20 ±2 5%. Showed an increase in stroke (15.3 ±2.7%) and minute (3.5 ± 12%), cardiac output, renal blood flow (1.5±8.5%) and minute diuresis (15 ±2 2%). PO_2 was 88± 3.2 mmHg, PCO_2-34,6 ±2.1 mm. Hg. c.., Sat.O_2 - 97.5 ±1.2% and -pulmonary shunt 1.6± 0.3%. The average volume of bleeding was intro operative 16±1.3 ml per 1 kg body weight. In 9 (39.1%) patients with hemoglobin and hematocrit were reduced more than 30%.

The survival of paramecia (SP) was 29±2.5 min. These patients required surgery after transfusion of packed red blood cells. In group II patients peripheral reduced vascular resistance, blood viscosity, fibrinogen, blood clotting kidneys were the same as a group of patients.

Noted an increase in stroke (12.2 ±1.8%), minute (10±1.2 %), cardiac output, renal blood flow (by 10.2 ±0.9%), minute diuresis (17± 1.3 %) compared with a group of patients was statistically significant (P <0.05). PO_2 was 92±2.0 - mm Hg.c. Of Art., PCO_2-29 ±1.6 mm m.c.and Sat. O_2-98,3±0.6% pulmonary shunt -1.0±0.5%. SP 32±2.1 - min. The average volume of surgical bleeding has been intro 8 ±0.8 ml per 1 kg of the child.

It should be noted that only 4 (21%) of 19 patients at the end of the operation were the indications for transfusion of packed red blood cells.

Thus, two groups of patients performed MHH polyhydric alcohol solutions and plasma, compared with 1 group were significantly effective. In these patients achieved an increase in solubility and transport of oxygen into the plasma, reducing the toxicity of the blood and maintaining the balance of coagulation and anti-coagulation systems.

Saltanat Isabekova
Mira Iskakova

MULTILEVEL MECHANISMS OF MEMORY FUNCTIONING

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The main principles of the formation of associations between objects are: the coincidence of their effects in space and time, similarity, contrast, and their repetition by the subject.

The law is formulated on the basis of forgetting experiments tripiternyh memorizing nonsense syllables. According to this law after the first error-free repetition of a series of such

compounds is quite quickly forgetting.

If people offer a series of tasks, and some time to interrupt their execution, it turns out later that the study participants almost twice as likely to remember unfinished tasks than completed.

Emphasizes the role of exercise needed to consolidate the material. The relationship between the action and its result is stored the better, more fun is the result.

The basis of memory is the plasticity of the cerebral cortex of the brain, its ability to form conditioned reflexes.

Passage through the excitation of a specific group of cells (neurons) leaves a physical trace, which determines the mechanical and electronic changes at the junction of nerve cells (synapses).

Under the influence of biocurrents changes occur in the synapses (nerve cells of the joints), which facilitates the subsequent passage of biocurrents on these routes. The different nature of neuronal circuits, and corresponds to a fixed information.

Under the influence of biopotentials in the cytoplasm of neurons form specific protein molecules that are "written" information reaching the brain.

With the passage of a pulse through a specific group of neurons having persistent changes in synaptic conductance within a specific neuronal ensemble.

Human memory functions as a psychological, physiological, and molecular and chemical levels.

The memory is implemented by an individual multi-level mechanisms - psychological, physiological, and chemical. For the normal functioning of human memory requires all three levels.A person can understand and manage only the highest psychological level, which is the determining relatively low. Only at this level, the memory becomes a process mediated mnemic action component of cognitive activity.

Mira Iskakova

SOURCES OF ELECTROMAGNETIC FIELDS IN AN ORGANISM

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Heart — the strongest source of electric and magnetic fields in an organism.

By means of skvid-magnetometers it was possible to allocate a magnetic signal from the microparticles of iron which has got to a stomach together with meal, and it gives the chance to define, for example, what were products - fresh or preserved. Besides, measurement of distribution of magnetic fields round a torso of the person after inhalation of a magnetite harmless to an organism allows observing places of primary sedimentation of a dust in lungs and speed of its natural deducing (it is revealed, in particular, that at smoking a dust is deduced more slowly, than at non-smoking). In such a way it is possible

to reveal the centers stagnation, and by results of physical influence on particles dust (ultrasound, microwave heating or a variable magnetic fields) to receive the information on character of cytologic changes in the center.

It is known that an eye — a source of enough strong electric field as retina work is accompanied by occurrence of potential to 0,01. In between forward and back its surfaces. It causes an electric current which magnetic field can be registered in a kind magneticokulogramme in surrounding fabrics at movement of eyes and in a kind magenticzetinogramme at change of light exposure of a retina. Supervision and studying of the magnetic it is full of an eye represent an interesting independent problem. At the same time it has appeared that an induction of a magnetic field of eyes essentially above, than a brain magnetic field.

At work of the brain, which basis for the present are in many respects mysterious, arise both electric and magnetic fields.

For an organism as a whole magnetic properties of blood and elements making it have special value. One of the first A.L.Chizhevsky opened radially-ring structures in moving blood and theoretically investigating magnetic interaction rotating erythrocyte has paid attention to it. In particular, assumptions have been come out that erythrocytes in blood at patients with heart-vascularing system diseases have abnormal magnetic properties so their ability to "be magnetized" leads to change of viscosity of blood, structures of a blood-groove and to haemodynamics infringement.

As a result magneticbiology researches own magnetic field of live organisms, however was revealed and the electric phenomena closely connected with biomagnetic activity, also were for a long time a subject of attentive and all-round studying. The scientific literature on this question is huge, and consequently here these researches will be mentioned only in that degree in what they concern biomagnetic fields.

Adjustment for reception of the information from the general biomagnetic field is carried out by the full or partial clearing disciplining process of thinking and directing it in a certain channel, to in advance planned purpose. Emotional coloring of thinking helps adjustment process, forcing to take part in it all nerve ganglions and wave guides of Kenrak and resulting an organism in a condition uniform harmonious whole (emotional coloring — a consequence of ambitious dream, hope of compensation).

Leo Kacugin

SEMICARBAZIDE-CADMIUM THERAPY AS A PALLIATIVE TREATMENT OF CANCER PATIENTS

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Since 2002 we participate in clinical trials involving use of SemiCarbazide-Cadmium Therapy as a palliative treatment of cancer patients. This therapy - is a multi-component

treatment system that includes metal-containing drugs on basis of cadmium and gadolinium, semicarbazide, bacterial agents, immune modulators on basis of thymic hormones, biologically active substances similar to those naturally produced in the body and a special diet. Years of experience with this therapy both our own and of other doctors showed that this system of treatment is well tolerated and highly effective. When properly used, and with compliance with the know-how, the therapy does not cause serious side effects. It is often more effective than treatment with standard metal-containing drugs of platinum group. Our experience with this therapy reveals the following. During the treatment, patients develop some common scenarios. The majority, in a few days after beginning the treatment, shows improved well-being. Patients become more active. Perhaps this is due to action of semicarbazide on activity of SSAO and GABA systems. Then analgesic effects occur followed by reduced need for analgesics. Perhaps action of cadmium is also a part of such effect. In its biological effects there are still more questions than answers. After several months of using the therapy with SKT several scenarios develop. In some patients the size of tumors begins to decrease. These patients continue treatment and in some cases are cured. In the remaining patients feeling better does not lead to cessation of tumor growth. They drop out of treatment, or continue it as a palliative treatment because their well-being remains. We found an unusual pattern, which is apparent in many patients who received Semivarbazide-Cadmium Therapy and responded well to treatment. Patients whose tumors began to decrease, shortly after undergoing a viral infection often lose sensitivity to these drugs. A month and a half after suffering a mild flu or a viral infection, during a routine inspection it was detected that tumor stopped to decrease in size. Soon after this, it resumed its growth. Patients who avoided the viral infection remained highly sensitive to this therapy, and often were cured. In our opinion, the danger of viruses is underestimated. It is known that many types of viruses increase the risk of cancer. However, viruses can act not only on healthy cells, but also on the tumor. They can change them and cause emergence of new types of cells that are resistant to therapy. In oncology there are still no definite answers on reasons for reducing sensitivity of cancer cells to chemotherapy. Perhaps the answer can be found if we will examine role of viruses in the way tumor responds to medication.

O.V. Kalmin
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A.V. Nikolsky

MORPHOLOGICAL CHANGES OF BOVINE PERECARDIUM DURING THE COURSE OF PYOINFLAMMATORY PROCESS

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One of the most difficult surgery questions is that connected with the treatment of pyoinflammatory diseases of abdominal cavity organs and their complications. This fact induces surgeons to seek new and more effective methods of peritonitis diagnostics

and treatment, sometimes to revive well-known methods nowadays based on modern knowledge and equipment. Open treatment modes with the use of absorbent nets, plastic bags, vacuum dressings, and xeno-substance became widely used in widespread peritonitis surgery last years. In this regard the aim of our study is the research of morphological changes of the bovine pericardium plate during the course of purulent process.

The source of research was an observance of 9 patients with an acute surgical pathology of abdominal cavity organs. These patients were treated with bovine pericardium in the process of laparotomy formation. The perforations 0.5 cm in diameter were made on the plate atop. Then the plate was arrange in such a way that its smooth side came in contact with internals. The plate edges were fixed to aponeurosis with the interrupted sutures. Levomekol dressing was put atop. In postoperative period, if relaparotomy was necessary, the interrupted sutures of one of the plate edges were put off, and after the operation they were made again. Bovine pericardium was left after the relief of peritonitis and normalization of abdominal pressure in order to prevent hernial disease. The secondary-delayed sutures were put on the wound which was Roden drained. During dressings and remedial relaparotomy on the 1st, 3rd, 7th, 14th and 21st days the bovine pericardium pieces with dimensions of 5×5 mm were cut off and put into a solution of neutral formalin. After fixation paraffin blocks were made. Sections of 10 micron in thickness were colored with hematoxylin and eosin.

Undertaken microscopic research showed that neutrophilic leucocytes began to accumulate in small numbers (about 100-150 cells in visual field) on the surface of bovine pericardium on the 1st day after the operation. On the 3rd day after the operation the quantity of neutrophils on the surface of bovine pericardium increased up to 300-500 cells in visual field. Purulent effluent partly got into its thickness. Formation of blood capillaries was not found during this period. On the 7th day after the operation the quantity of neutrophilic leucocytes decreased on the surface of bovine pericardium (less than 100 cells in visual field) in case of favorable course of the process. They totally disappeared in its thickness. Lymphocytes, cells of fibroplastic layer and gigantic multinucleated cells emerged. The development of granulation tissue (the sign of recovery) began. The total area of formed vessels was 1576.26±3.21 μm^2/mm^2. On the 21st day after the operation (in case of the relief of peritonitis) neutrophilic leucocytes were not found in the laparotomy area. The total area of newly formed vessels increased in 6.3% (1758.36±4/84 μm^2/mm^2). In one out of 9 cases purulent process did not stop and necrosis of tissue began to develop on the 7th day. On the 14th day purulent effluent got into bovine pericardium deeply and led to the separation of fibers and its destruction. Those changes brought about the necessity of bovine pericardium plate replacement. In a week after the replacement the following was seen on the specimens: gradual neutrophilic infiltration at the joint of proper tissues and bovine pericardium. The infiltrate of tissues, surrounding bovine pericardium, consisted of lymphocytes, macrophages, and fibroblasts with a small addition of neutrophils. Gradual resorption of purulent effluent took place on the line between bovine pericardium and proper tissues of an organism. Gigantic multinucleated cells emerged. The area of blood

vessels increased, i.e. there was a development of granulation tissue, which is the sign of mature connective tissue.

Thus, the applying of bovine pericardium for the purpose of laparotomy formation leads to positive results at the relief of inflammation in abdominal cavity. At the same time there is a possibility of necrosis of a pericardial plate and its replacement during the course of continued peritonitis.

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D.V. Nikishin

OSTEOANAGENESIS FEATURES UNDER THE APPLICATION OF «CARDIOPLANT» MEMBRANE

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It is still an urgent question to find materials, which help to provide optimal conditions for bone tissue formation after operations. Osteoplastic materials of different origin (allogenic, xenogenic, and synthetical analogues of mineral and organic components of a bone) are widely used today. At the same time it is usually impossible to fix osteoplastic materials to bone cavity properly. Sometimes it leads to the infection of a bone wound and results in the emerging of a soft-tissue reclaim. That is why the problem of resorbing membrane application is still urgent. In this regard, the most interesting material for us is «Cardioplant», which functions as a resorbing membrane. According to our considerations, a bioactive material «Collapan-L», which includes hydroxyapatite, collagen, and antibiotics, has optimal osteoplastic properties on conditions that it is applied with «Cardioplant» membrane in common. The aim of our work is to study the efficacy of «Cardioplant» as a resorbing membrane.

The experiment was carried out on 12 Chinchilla-rabbits of 1.5-2 kilos in weight. Under general anesthesia 4 holes of 1.5 cm apart were done with the cutter of 1.4 mm in diameter in the lower third part of thigh diaphysis. The second and the fourth holes were filled with osteoplastic material «Collapan-L». A special barrier membrane «Cardioplant» was placed on first two defects (one of which was filled with «Collapan-L»). The rabbits were brought out of the experiment in 1, 2, and 3 months. The fragments of thighs were fixed in neutral 10% formalin with the following demineralization. Paraffin histologic sections were colored with hematoxylin and eosin. Microphotography of ×200 and ×400 zoom was taken in order to analyze morphological changes.

Analyzing the histologic specimens of the first group animals (in a month after the operation) it was found that rough fibrous osseous tissue developed in the holes, left unfiled, but bone defect was totally uncovered. Proper bone tissue formed in the holes, filled with «Collapan-L», but bone defect remained uncovered. However, the defect was less in size as against the previous pattern. Unfilled bone defect, covered with «Cardioplant» plate, was characterized with the development of rough fibrous osseous tissue, which partly covered the defect. In a pattern where «Collapan-L» and «Cardioplant» were used simultaneously,

the result was the best: the bone defect was almost completely covered with rough fibrous osseous tissue.

In 2 months after the experiment it was found that unfilled hole was covered with completely formed bone tissue outside. Inside the defect was partly covered and filled with rough fibrous osseous tissue. In a pattern, where only «Collapan-L» was used, it was found the total defect covering and the formation of bone tissue islets in the thickness of osteoplastic material. Analyzing unfilled hole, covered with «Cardioplant», it was found that the defect was completely covered with rough fibrous osseous tissue. The combination of osteoplastic material «Collapan-L» and «Cardioplant» helped to cover the defect. In the thickness of «Collapan-L» a multitude of bone tissue islets were found and the formation of additional bone plate began on the surface of «Cardioplant», which was atop.

In 3 months after the experiment began, proper bone tissue with the islets of rough fibrous osseous tissue developed in a hole, left unfilled; the bone defect was completely covered, but bone tissue thinning around the defect centre can be observed. In a hole, filled with «Collapan-L», proper bone tissue formed, bone defect covered, but the forming of callus was noticed, thickness of which was somewhere 2 times bigger than that one of an intact bone. In a hole, covered with «Cardioplant», bone tissue replaced the membrane. Under the mutual application of osteoplastic material «Collapan-L» and «Cardioplant» bone tissue completely covered the defect and was similar to intact tissue by the 3rd month.

The results of our experiment proved the application efficacy of «Cardioplant» as a barrier resorbing membrane in using the method of directional regeneration of bone tissue. The forming and development of bone tissue under «Cardioplant» need less time; the origin bone thickness restores more quickly. Data resulting from the study persuade us of practicability of «Cardioplant» application and of further elaboration of this material as a resorbing membrane in clinical practice, including its combination with osteoplastic materials.

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MORPHOLOGICAL EVALUATION OF SCREW OSSEOINTEGRATION OF TITANIUM IMPLANTS TREATED BY MICROARC OXIDATION

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Despite scientific advances in dentistry, traumatology and orthopedics the restoration of bone tissue in pathology is rather actual now days. The action of used stuff of osseointegration, repairing, and in life process itself is largely connected with improving and reliability of intraosseous part of the implantant. It's determined by processes occurring in boundary between living tissue and metal.

The aim of the study was to investigate the degree of osseointegration and bone regeneration in application of various types of titanium implants subjected to treatment by microarc oxidation.

An experimental study was conducted on 30 pigs of Large White Duroc breed X age of 45 days and live weight of 14±0.5 kg. Animals were divided into 5 groups of 6 animals each. The study was carried out in accordance to Helsinki Declaration of the World Medical Association, 2000 and the instruction of the European Community. Before starting the experiment within 15 days the animals had quarantine period. Then, the animal implantation was performed in the femur at a right angle with the line of implantable designs and tapered helical surface. Was evaluated general condition of animals during the postoperative clinical observations: their mobility, appetite, presence of strain in the area of intervention, pain in palpation, edema and hyperemia of the soft tissues. Blood tests were performed. On the 14th, 30th, 60th, 180th, 360th day after the operation, animals were slaughtered. Thin sections were histologically studied. It was «implant – bone» of the proximal and distal parts of the epiphysis of the femur. Histological study evaluated the quantitative and qualitative composition of the cellular elements and histological manifestations of reparative processes in the implant. It was a reaction to the implant, the severity of the inflammatory reaction to foreign material, the predominant type of tissue in the area of the implant. The obtained data was processed by standard variational-statistical methods.

The observations have shown that swelling in the postoperative suture in all animal groups was making less in 3-4th day after surgery. The wound was healed by primary. Sutures were removed in 7 days. High mineralized bone matrix was forming on the boundary surface during the 1-2 weeks after introducing implant. In the absence of functional load during the first 90-180 days after bone formation de novo earlier restructuring could be seen in the area of necrosis. Pats with dead osteocytes were resorpted. In same time these parts were replaced by fibrous bone tissue. Any structural changes in bone tissue in the border area did not occur. Microscopic examination of Implantation in all stages of observation determined mature compact bone tissue with no signs of degenerative and destructive changes and inflammation. In some parts the formation of fibrous connective tissue was observed.

This study has proved that coating obtained by microarc oxidation is a stable ceramic compound. Bone mineralized matrix can deposited on this one. Osteointegrated implant contact with tissues is the result of ongoing process of bone formation and reconstruction if resorption is absent. The period of reducing can be short due to the increase formation of osseous structures and the extending contact area of implant with bone tissue. The titanium construction does not cause pathological changes in the surrounding tissues during their recovery, does not disturb the homeostasis of the vital activity of organs and tissues. There is no toxic, cancer and allergic effects on tissues and body.

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ASSESSMENT OF LOAD AND INTENSITY OF WORK OF PUBLIC BUS DRIVERS

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The work of bus drivers is characterized by influence of a complex of adverse factors, such as nervous and emotional pressure (urgent decision-making, the analysis of the situation on roads and forecasting in shortage of time, responsibility for safety of passengers, etc.), physical pressure, of some physical factors (noise, an infrasound, general and local vibration, temperature), etc. Thus disregard of hygienic standards on workplaces of drivers remains stably high and makes under separate factors from 56,0 % to 82,3 % and more. Adverse working conditions are risk factors for health of workers, promote general and professional pathology among them.

The workload and working conditions of Almaty city bus drivers had been studied. following parameters have been estimated:

Most of drivers have a two-shift operating mode which is characterized by the early beginning of work in 1st change and its late termination in 2nd change. From the physiological point of view, the early beginning and later the termination of changes breaks biorhythms of the person and demands from an organism of reorganization of a daily stereotype.

According to chronometrical monitoring, time for the basic work of city bus drivers makes 80.0-85.0 % depending on intensity of a transport stream, road conditions, weather conditions and other factors. Time for breaks during the spring-and-summer period of year is more (to 10.0 %) than in fall-and-winter (to 5.0 %) due to increase in time of the basic work and repair at lines during the winter period.

Throughout all their work, bus drivers are focused over objects of the information both out of a cabin, and in bus salon, therefore «duration of the focused attention» makes also 80.0 – 85.0 %. So the work of city bus drivers is characterized by high degree nervous-emotional pressure and can be classified as “harmful”, i.e. 3 class, 2nd hazard degree.

In their work of the driver of the city bus level of its emotional intensity is influenced by mutual relations with passengers: reception of payment for journey, occurrence of various conflict situations. Along with it transportation of a large quantity of people in difficult city conditions brings considerable degree of risk in character of work of the driver and assigns to it the big responsibility for safety of passengers and safety of the car.

Besides, intensity of work of drivers of city buses is caused by a stream of the information arriving from the environment of movement, from the car and passengers. The size of this pressure is connected with quantity and character of the arriving information through visual (system of means of display of the information), acoustical (sound signals, noise),

tactile, olfactory and other analyzers (smells, vibration etc.).

Specially developed questionnaire had been spent poll of drivers by us. According to this poll it is established that the majority of drivers (93.0 %) mark occurrence during change more than 8 conflict situations which are caused or their professional work which is connected with other participants of movement (actions of pedestrians, drivers of other vehicles), or passengers in bus salon.

The work load of city bus drivers is assessed as "harmful" (3 class – 3rd degree).

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HYGIENIC ASSESSMENT OF MICROCLIMATE IN PRIVATE HEALTH CARE CENTERS

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In recent years, equipment of health care establishments by x-ray, radiological, electronic, electromedical and laser equipment, ultrasonic and superfrequency installations, medical barochamber is considerably increased.

Reanimation and intensive therapy, radioactive substances, highly effective antibiotics, cortikosteroids and other drugs are implemented into medical practice widely. On the one hand, it promotes increase of level of functioning of health care establishments and quality of medical care. On other side, it puts health care workers in new, not enough or not studied working conditions. Thus the optimum microclimate of working spaces should provide normal level of heat exchange of working bodies with environment, comfortable heat feelings, and increase thermal stability of an organism.

The purpose of the study is to assess physical parameters (temperature, humidity and speed of air movement) of a private medical center in Almaty.

Methods. Measurement of physical parameters was carried out with use of the standard techniques by device TKA-PKM-60in the warm period of year, in the afternoon. 80 medical workers work in the area of 420 sq.m, 32 sq.m and 18 sq.m.

During the warm period at work places of workers with 2A category of workload fluctuation of air temperature made from 22 °C to 24 °C; relative humidity – from 42 % to 48 %; speed of air velocity – from 0,01 m/s to 0,18 m/s.

In general, physical parameters of air in checked medical center were in line with the standards presented in sanitary-and-epidemiologic requirements. The exception was air velocity which was in most cases less than recommended 6-30 times.

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REDUZIERUNG DER GEBÄRMUTTERDURCHBLUTUNG WÄHREND DER MYOMEKTOMIE BEI SCHWANGEREN

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Die konservative Myomektomie bei Schwangeren ist einer der schwierigsten organerhaltenden chirurgischen Eingriffe. Das hohe Risiko des massiven Blutverlustes, der eine Reihe der chirurgischen Probleme verursacht, stellt häufig die eigentliche Möglichkeit der Operationsdurchführung unter Zweifel. Oft werden Ärzte gezwunden, radikale Entscheidungen zu treffen. Am dramatischsten sind solche Ereignisse im Fall von Frauen in der ersten Schwangerschaft, die ein Gebärmuttermyom haben. Solche Fälle kommen häufiger vor, unter anderem, in unserer Region. In den letzten 10 Jahren haben wie 96 Frauen mit dem komplizierten Schwangerschaftsverlauf infolge vom Gebärmuttermyom beobachtet. Dabei wurden alle diese Frauen mit dem Verdacht auf eine akute Ischämie der Myome mit der Gefahr des Schwangerschaftsabbruches in unsere Einrichtung verwiesen. Sowohl durch klinische Untersuchungen als auch die Ultraschallergebnisse und Laboruntersuchungen wurde diese Diagnose bei 78 (81,3%) aus 96 Frauen bestätigt, dabei wurde die beständige (inkurable) Gefahr des Schwanger schaftsabbruches bei allen 78 Frauen festgestellt. Die große Abmessungen des Myoms (mehr als 6 cm im Durchmesser) mit dem Wachstumstendenz bei der bestehenden Schwangerschaft wurden bei 56 (58,3%) Frauen aus 96 registriert. 5 Frauen (5,2%) aus 96 waren im ersten Schwangerschaftstrimester, 75 Frauen (78,1%) in der 13.-28. SW, 16 Frauen in der 29.-35. SW; es gab keine Frauen, die weiter als in der 35. SW waren. Nach der durchgeführten konservativen Behandlung konnten die Ischemiemerkmale bei 27 (34,6%) Frauen aus 78 mit Versorgungsstörungen des Myoms nicht beseitigt werden. Bei 21 (77,8%) Frauen aus 27 war das Myom groß, mit der Wachstumstendenz. Die charakteristische Besonderheit bei Frauen mit der inkurablen Ischämie des Myoms bestand darin, dass es um solitäre Myome ging. Außerdem konnte die Gefahr des S chwangerschaftsabbruches bei 14 (25,0%) Frauen aus 56 mit großen Myomen nicht eliminiert werden, und die Perspektive der bestehenden Schwangerschaft war sehr zweifelhaft. So bekamen 41 Frauen - 27 mit der inkurablen Ischämie der Myome und 14 mit der nicht korregierbaren Gefahr des Schwangerschaftsabbruches infolge von großen Myomen - Anzeigen für die Durchführung der konservativen Myomektomie mit dem Ziel, die Schwangerschaft zu erhalten. Dabei hatten 31 (75,6%) Frauen aus 41 die erste Schwangerschaft, und 10 (24,4%) eine weitere Schwangerschaft. Bei allen 41 Frauen war die Schwangerschaft erwünscht und verlief mit interorganischen Myomen: intramural-subserös bei 14 (34,1%) Frauen, intramural – bei 24 (58,5%) Frauen, intramural-submukös – bei 3 (7,3%) Frauen.

Die geplante Myomektomie wurde bei allen 41 Frauen durchgeführt. Es gab keine Fälle des notgedrungenen intraoperativen Schwangerschaftsabbruches und keine Episoden der notgedrungenen Hysterektomie. Die Abmessungen der entfernten Knoten (im Falle von mehrknotigen Myomen wurden alle Knoten ohne Ausnahmen entfernt) schwankten von 4,0 bis 22,0 cm. im Durchmesser, und ihre Anzahl schwankte von 1 bis 5. Die Versorgungsuntersuchungen der Uterusmyomen wurden bei allen 27 Schwangeren durch histologische Untersuchungen bestätigt. Bei 3 Frauen aus 41 kam es zu einem spontanen Schwangerschaftsabbruch nach 14-38 Tagen nach der Operation in der 9., 11. und 26. SW. Alle drei Fälle wurden in unserer Abteilung beobachtet und hatten keine ernsten Komplikationen. Bei den restlichen 38 Frauen: 1 hatte eine spontane Frühgeburt in der 34. SW, 31 Frauen – die geplante abdominale natürliche Geburt in der 37.-40. SW. Es gab keine perinatale Verluste. 4 Frauen schieden aus der Beobachtung aus, 2 befinden sich in der Gestationsphase.

Das schwierigste Kontingent (chirurgisch betrachtet) stellten 4 Frauen mit besonders großen interorganischen Myomen, mit den Abmessumgen von 9,0 bis 22,0 cm. im Durchmesser. Abgesehen von der Größe des Tumors war das Risiko des massiven Blutverlustes mit der Lokalisierung der Knoten (auf der Uteruskante durch die Nähe zur großen Blutgefäßen und zur Uterushöhle bedingt) und der Varikose des utero-ovariellen Kollektors und allgemeinen Änderungen des graviden Myometriums verbunden. Das hohe Risiko des massiven Blutverlustes ist in solchen Fällen nicht nur mit der Verlustgefahr der gewünschten Schwangerschaft, sondern vielmehr mit dem Verlust des Fruchtbarkeitsorganes verbunden. Aus diesem Grund wurde bei diesen 4 Frauen die homolaterale Unterbindung im Bereich der aufsteigenden Gebärmuttergefäße und gleichzeitig der Verschluss der Eierstockarterie im Bereich der Eierstockeigenband (auf der gleichen Seite) durchgeführt. Die Redzierung der Durchblutung wurde auf der betroffenen Seite (Lokalisierung des dominierenden Knoten) realisiert. Die Durchblutung der Eierstockgefäße wurde unmittelbar nach der Widerherstellung der Gebärmutterwand wieder eingesetzt. Die Schwangerschaftsperiode, in der diese Methode der Bluterhaltung eingesetzt wurde, war nicht mehr als 21 Wochen. Alle 4 Operationen waren erfolgreich. Das intraoperatives Monitoring vom intrauterinen Kind fand nicht statt, die postoperative dynamische Ultraschalluntersuchung zeigte keine Auffälligkeiten in der Herztätigkeit des Kindes. Das Volumen des totalen Blutverlustes unter diesen 4 Patientinnen schwankte von 200,0 bis 700,0 ml (im Durchschnitt 330,0±120,0 ml), und in der gesamten Gruppe – von 150,0 bis 700,0 ml (im Durchschnitt 280,0 ±80,0 ml.). Von diesen 4 Schwangeren hatten 3 Frauen eine abdominale Geburt in der 38.-39. Woche und 1 in der Gestationsphase. So wird dank der homolateralen Reduzierung der Gebärmutterdurchblutung bei Schwangeren mit hohem Risiko des massiven Blutverlustes und Verlustes des Fruchtbarkeitsorganes während der Myomektomie die Operation im geplanten Umfang durchgeführt und die Schwangerschaft erhalten.

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SCHWERE GEBÄRMUTTERVERLETZUNG BEI SCHWANGEREN

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Schwere mechanische Verletzungen bei Schwangeren gehören zu einigen der am wenigsten untersuchten Aspekten der Geburtsheilkunde. Dies wird durch die Isoliertheit der Ärzte für Gynäkologie und Geburtsheilkunde von der Systemanalyse der schweren Verletzungen bei Schwangeren sowie den sporadischen Charakter solcher Beobachtungen erklärt. Wegen dieser Faktoren war bis jetzt keine geburtshilfliche Beschreibung des klinischen Bildes der mechanischen Gebärmutterverletzungen bei Schwangeren im realen Zusammenhang mit den sich entwickelnden Varianten der Pathologie möglich. Begreiflicherweise wird die Aktualität dieses Problems nicht nach der Häufigkeit der Vorkommnisse bewertet, da diese in der Friedenszeit niedrig ist. Bemerkenswert sind die hohen Raten der mütterlichen und perinatalen Letalität, die bei dem Polytrauma der Schwangeren beobachtet werden. Der große Bereich der schweren Versetzungen des fetal-plazentaren Komplexes sowie die schweren Verletzungen am Skelett und extragenitalen inneren Organen sind die offensichtlichen Gründe dafür.

Als Ergebnis der Gründung des medizinischen Nothilfedienstes in der Republik Usbekistan wurde diese Kategorie der Patientinennen hauptsächlich im Hauptzentrum und seinen regionalen Filialen behandelt. Während der Arbeit des Nothilfedienstes (seit 2000) wurden 158 Frauen behandelt: 66 (41,8%) nach Verkehrsunfällen, 51 (32,3%) nach Alltagsverletzungen, 20 (12,7%) nach Sturzverletzungen und 21 (13,3%) nach Hitzeverbrennungen. Die Polytrauma wurde bei 18 (11,4%) Schwangeren nach den Verkehrsunfällen und Sturzverletzungen beobachtet, und die Letalität betrug 55,6% (10 Frauen aus 18 starben). Die über 10 jahren gesammelte Erfahrung ermöglichte uns, einige Grundlagen über das Syndrom der schweren Verletzung der Gebärmutter in der Schwangerschaft zu formulieren: 1. Es entsteht durch den direkten Schlag in den Bereich der Gebärmutter in der Zeit, wenn diese außerhalb des Knochengerüstes des Beckenbodens heraustritt; 2. Die schwersten Konsequenzen unmittelbar nach der Verletzung entwickeln sich in der fortgeschrittenen Schwangerschaft (über 20 Wochen). 3. Charakteristisch ist der komplette Verlust des Myometrium-Tonus (noch bevor das Kind herausgenommen wird) der Gebärmutter mit der Entwicklung der inkurablen Areflexie. 4. Schock-Gebärmutter, inkurable Atonie und Areflexie entwickeln sich unabhängig von der Entstehung und Grade der Plazentalösung. Der hochenergetische direkte Schlag in den Bereich der schwangeren Gebärmutter ist der offensichtliche Grund für die Entstehung der Atonie. 5. Eine großflächige vorzeitige Plazentalösung kommt in 100% der Fälle vor, wenn sie auf der vorderen Gebärmutterwand liegt. Die Häufigkeit (10,0%) und Grad der Plazentalösung gehen drastisch zurück, wenn die

Plazenta dorsal lokalisiert wird. 6. Der gesamte Blutverlust (inklusive der extragenitalen Verluste) erreicht eine kritische Zahl (über 3000,0 ml), wenn die Plazentalösung vorzeitig statt findet. 7. Das Syndrom der schweren Gebärmutterverletzung wird in der Regel vom antenatalen Tod des Kindes begleitet. 8. Eine traumatische Gebärmutterzerreißung sowie die Verletzungen beim intrauterinen Kind, die zusammen mit der Polytrauma vorkommen, entstehen selten. 9. Uncharakteristisch bei der Polytrauma bei Schwangeren ist die Häufigkeit der frühzeitigen Fruchtwasserabganges und die äußeren blutigen Ausscheidungen aus Genitalien, sogar beim schweren Verlauf der Plazentalösung. Diese klinische Alogik erklärt, warum die letzten zwei Faktoren zu den charakteristischen Merkmalen des Syndroms gezählt wurden.

Der wahrscheinlichste Grund für das Fehlen der äußeren blutigen Ausscheidungen bei der vorzeitigen traumatischen Plazentalösung ist, unserer Meinung nach, die beobachtete Atonie des Myometriums, die sich durch den schweren direkten Schlag in den Bereich der Gebärmutter entwickelt. Dies bedingt eine rasante Verringerung des intrauterinen Druckes direkt nach der Verletzung, was während des Bauchschnittes beobachtet wird. Vermutlich aus diesem Grund ist es leicht für das stetig wachsende retroplazentares Hämatom den immer größer werdenden Platz infolge von der nahezu ungehinderten Dilatation des Myometriums und Verdringung der Plazenta in Richtung des Hydramniones anzunehmen. Deswegen löst das heraustretende Blut die Amnionhüllen nach der Plazentalösung nicht, und läuft nicht durch den Zervixkanal nach draußend, sondern sammelt sich im großen retroplazentaren Hämatom. Ein weiterer Grund kann der häufig beobachtete hohe traumatische Blasensprung mit dem Durchbruch des retroplazentaren Hämatoms in die Höhle des Hydramniones sein. Unter Bedingungnen der rasanten Verringerung des intrauterinen Druckes geht fast das ganze Blut des retroplazentaren Hämatoms den Weg des geringsten Widerstandes in die Höhle des Hydramiones. Als Resultat tritt kein Blut heraus. Der Grund für das Fehlen des erwarteten vorzeitigen Abganges von Fruchtwasser liegt, unserer Meinung nach, in der schnellen Reduzierung des intrauterinen Druckes unmittelbar nach der Verletzung, und die Tatsache, dass der Muttermund zu ist.

Die praktische Erfahrung mit dieser Kategorie der Patientinnen ermöglichte die Erfassung von einigen organisatorischen und klinischen Empfehlungen, u.a.: die stationäre Aufnahme der Schwangeren mit einer schweren Verletzung soll in multiprofile Einrichtungen erfolgen, erfahrene Ärzte für Gynäkologie und Geburtsheilkunde sollen an allen Behandlungsphasen teilnehmen, der Umfang der Untersuchung und Behandlung darf nicht begrenzt werden (aus den perinatalen Gründen). Die Fragen der Taktik der Schwangerschaftsführung und die Varianten der operativen Eingriffe in Abhängigkeit von der Pathologie und anderen Faktoren müssen separat betrachtet und weiter untersucht werden.

D.I. Karpovich

TREATMENT OF PERICORONITIS IN ATHLETES WITH THE USE OF DIODE LASER

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In the RSUPEST within the frame of health screening of young sportsmen stomatologic investigation of 3 junior women's volleyball picked team from the different cities of Moscow Region has been performed. 35 girls of 1995-1997 years of birth. The average sports experience has made 7 years.

The work objective: to define prevalence and frequency acute pericoronitis and to offer an adequate method of treatment. In 21 girls from the group of 35 girls various forms of complications connected to eruption of the bottom wisdom teeth were found. Probably, it is caused by age peculiarities. In 9 of 21 female athletes complications in the form of acute pericoronitis were detected. Herewith working capacity and overall performances in this group sharply decreased.

In 4 sportswomen traditional treatment was carried out: (pericoronarotomia), antibacterial and anti-inflammatory therapy, anti-septic solutions mouth rinsing. The complete recovery of working capacity occurred on third-fifth days.

To 5 sportswomen treatment with use of the diode laser with length of a wave of 810 Nm, on capacity 0,7-0,5Wt, in the continuous mode, the activated fiber, with the subsequent 2-3 multiple radiation of a wound surface by the same device, on the same wave, capacity 0,5Wt, disabled fiber was carried out. Working capacity was completely restored next day in three cases and in two for the second day after treatment.

Having analyzed the above-stated indicators it is possible to make the following conclusion:

Treatment of pericoronitis of athletes with use of the diode laser reduces terms of restoration of working capacity in 2 times and allows not to apply medicamentous therapy. Such method of treatment for athletes can be recommended in periods of important competitions when restoration of working capacity of athletes in the shortest possible time becomes extreme valuable.

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APPLICATION OF THE METHOD OF INTERSTITIAL ELECTROSTIMULATIION IN ORDER TO INCREASE THE EFFECTIVENESS OF TREATMENT OF SPINE PAIN SYNDROMES

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Topicality. Today spine pain syndromes are one of the most widespread problems among the population, taking a leading role in the disease structure. Medicamentous treatment methods are only effective in 20-40% of cases. 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), 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 132 patients (73 men and 59 women, mean age 30-64) with pain syndromes which accompany spinal osteochondrosis. The method of interstitial electrostimulation was the only treatment method used in the main group.

The control group consisted of 157 patients with symptoms similar to those in the first group. These patients were treated in hospitals and in the outpatient setting using the 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 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, 60 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.

Results of the research. At the end of the treatment the absolute majority of patients – 97 (73%) had a full relief from the pain syndrome, 21 patients (16%) had positive dynamics, 9 (7%) had slightly positive dynamics and 5 (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 92 patients (59%), 65 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 in the control group.

Conclusions. The application of the method of the interstitial electrostimulation for the treatment of patients with spine pain syndromes:

1. Contributes to the regression of exacerbation of chronic diseases of inflammatory or degenerative kind.

2. Accelerates the recovery process and is more economical in comparison to the 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 this treatment method for the wide use both for hospital and out-patient treatments.

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CHANGE IN THE BLOOD PLASMA OF RATS WITH MOLYBDENUM POISONING

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Experiments on animals showed high toxity of molybdenum compounds. Acute poisoning can be one of the reasons for bad irritation of the gastrointestinal tract. The studies of animals confirm the ability of molybdenum to cause dysfunctions of lungs, which are symptomatically similar to pneumoconiosis.

The objective of this work was to study the biochemical structure of the blood plasma in experimental animals with molybdenum sulphate poisoning.

The tests were conducted on laboratory white rats with the weight of 180-200 g, which were divided into 2 groups. The first group (n=5) was the control group. The second group included animals which intragastrically received chronic doses of the molybdenum salt (5 mg/kg) in the course of three months. The blood sampling for biochemical tests was taken from the carotid artery. The tests determined the ferment activity – alanine aminotransferase (ALT), aspertate aminotransferase (AST), content of whole protein in blood plasma, glucose and urea content. The biochemical blood parameters were determined with the help of a biochemical analyser. The Reitman-Frenkel method was used for the determination of the ALT and AST activity, the biuret method for the determination of the whole protein, glucose oxidase method for glucose and the unified method of colour reaction and diacetyl monoxime method for determination of urea.

In the course of the conducted experiment we have established that the content of the ALT in the blood plasma of the laboratory rats after the intake of the molybdenum salt increased by 168.4% ($p<0,001$), that of the AST by 85.8% ($p<0,001$) in comparison to the animals of the control group. The concentration of the whole protein in the blood

plasma decreased by 32.9% (p<0,001). The level of glucose in blood after the molybdenum sulphate poisoning went down by 64.0% (p<0,001). The content of urea in the blood of animals after the chronic dose of the molybdenum salts decreased by 27.9% (p<0,001) in comparison to the control group of the experimental animals (table 1).

Table 1 – Parameters of the biochemical blood test of the experimental rats with chronic intoxication by the molybdenum sulphate

Parameters	Control	Molybdenum
ALT, nmol/s*l	152,25±5,82	408,75±3,26***
AST, nmol/s*l	170,0±4,71	316,0±5,66***
Protein, g/l	83,25±0,68	57,5±0,76***
Glucose, mmol/l	5,46±0,29	1,95±0,01***
Urea, mmol/l	4,15±0,02	2,99±0,02***
Note - * (p<0,05); ** (p<0,01); *** (p<0,001) – accuracy in comparison to the control group of animals		

Conclusion: it is possible to assume that the increase of the ALT and AST, decrease in the concentration of protein, glucose and urea in the blood plasma shows a dysfunction of the gastrointestinal tract, liver, kidneys and heart of the experimental animals after the poisoning by the molybdenum salts.

V.N. Khromova

"THE FORGOTTEN" FOREIGN BODIES

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Unintentional intraoperative abandonment of foreign bodies - an accident in medicine, which is not guaranteed by any one of the surgeons. According to statistics from the World Health Organization, one of the 1000-1500 patients undergoing surgery for abdominal organs, leaves the operating room with a foreign object in the body. According to experts, the real number is much higher than similar oversights mentioned figures, however, published unit of observation. The samples were transparent analysis of these errors has left NI Pies. Currently, the most important pedagogical principle has outlived itself, which precludes analysis of cases as a means of learning. The purpose of this study was to examine the nature, occurrence, circumstances abandonment, limitation of stay, outcome, and morphologic changes in the area of foreign objects inadvertently left behind during surgery.

The analysis of the results of surgical treatment of 395 patients admitted to the clinic of general surgery at Saratov State Medical University with pyo-inflammatory complications of real-time access after surgery for abdominal organs during the period from 2001 to 2005. Among the study were 225 (56.9%) women and 170 (43.1%) men, whose average age was 42 ± 7,5 years. Intraoperatively were studied macroscopic cause complications, confirmed

by histological examination of the data. In 46 (11.6%) patients with repeated surgery for septic complications we found 46 foreign bodies in the abdominal cavity and tissues of the abdominal wall, left by chance during a previous surgery. Among the neglected foreign bodies dominated by textile and latex - gauze balls and towels 19 (41.3%), drainage 18 (39.1%), less frequent metal - surgical instrument 7 (15.2%) and in rare cases, foreign objects accidentally origin, which are not used in the operation, but which belong to the environment the operative field 2 (4.3%).Foreign bodies more frequently in 32.2% left in the performance of routine operations. Dates of stay of foreign bodies in the body to identify them and remove ranged from one month (51.3%) and 15 (48.7%) after primary undergone surgery. In the area of finding the fabric (gauze), foreign body inflammatory reaction expressed by developing the type of granuloma formation, as well as compensatory processes of encapsulation and germination of textile material of granulation and connective tissue. In the area of location of foreign bodies of metallic nature, there was little pronounced proliferation of connective tissue and atrophy of the effects of pressure. In 6.1% of the patients stay in the body of foreign bodies of any morphological changes in their areas were not observed. Morphological features of limitation of stay in the body of a foreign body were: the degree of proliferation of granulation and fibrous tissue, the presence of multinucleated giant cells and ploidy of nuclei in them. Injury caused by foreign body was determined by the actual outcome, which was considered to be determined only by the removal of foreign body during surgery. In all cases the presence of foreign bodies was not accompanied by a life-threatening injury or pathological condition and the injury caused by the stay of the foreign body was not determined because the outcome was not defined. Measures for the prevention of surgical leaving foreign bodies of origin are well known. However, our investigation has shown that almost all subjects that are relevant to the implementation of operations could suffer the sad fate of the “forgotten” foreign body.

N.G. Klyukvina

THE CLINICAL AND LABORATORY FEATURES OF MALE LUPUS IN RUSSIA

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Purpose: to evaluate the clinical and laboratory features at disease onset and thereafter in 146 males with lupus.

Methods:

The study consisted of 146 consecutive male SLE patients that were diagnosed and followed up in Institute of Rheumatology of RAMS (Russia) between 1990 and 2006.

Results:

The mean age at onset was 20 year (range 6-64 years). The distribution of disease onset by decade of age was the following: between the ages of 6-20 years – 78 pts (53%), 21-40 years – 48 pts (33%), 41-64 years – 20 pts (14%). Mean duration from the disease

onset to time of diagnosis SLE was 12 month (range 1-336 month). The frequency of clinical manifestations and the laboratory features observed in pts at disease onset and thereafter were summarized in table 1.

Table 1. The main manifestations in male lupus (%)

Manifestations	Disease onset	Follow-up
Photosensitivity	17,8%	51,4%
Discoid lupus	8,9%	13%
Malar rash	30,1%	56,2%
Mucosal ulcers	4,8%	27,4%
Arthritis	49,3%	71,9%
Serositis	15,7%	32,2%
Renal disease	16,4%	54,1%
Neuropsychiatric	4,8%	50,7%
Hematological abnormalities (anemia, leucopenia, thrombocytopenia)	21,9%	71,2%
Immunological abnormalities (ANA, high dsDNA)	19,2%	93,2%

Conclusions:

Older age at disease onset has frequently been reported among men with SLE, but that was not the case in our pts. One half of our pts were younger 20 years at disease onset. We found high frequency of arthritis, renal disease and neuropsychiatric manifestations in male lupus during the course of SLE. CNS involvement was the rare initial symptom in our patients.

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ANTIPHOSPHOLIPID SYNDROME IN MALE LUPUS PATIENTS

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Background:

Antiphospholipid syndrome (APS) is characterized by vascular thrombosis, and/or pregnancy morbidity associated with anticardiolipin antibodies (aCL) and lupus anticoagulant (LAC). Incidence of APS and antiphospholipid antibodies (aPL) in men is not known. We analysed 146 male patients with SLE to estimate frequency of aPL and aPL-associated complications.

Materials and methods:

We studied 146 male patients (pts) fulfilling at least four of the American College Rheumatology criteria for the classification of SLE. Mean age was 30,5 years (range 15-

64 years), mean disease duration was 84 month and ranged from 2 to 504 month. APL was measured by standardized ELISA. Presence of LAC was detected by according to the quidelines of the International Society on Thrombosis and Haemostasis. Diagnosis of APS was based on the Sapporo criteria. Additionally we analyzed frequency of aPL-associated symptoms not included in the revised criteria (heart valve disease, livedo reticularis, thrombocytopenia, neurological manifestations).

Results:

Vascular thrombosis developed in 39 from 146 male pts (26,7%), recurrent thrombosis occurred in 27 out of 39 pts (69,2%). Number of thrombosis varied from 1 to 7 in one pts. 24 pts (61,5%) had only venous thrombosis, 8 pts (20,6%) – merely arterial trombosis. Presence of arterial and venous localization was register in 7 (17,9%) pts. Positive titers of IgG-aCL (>25 GPL) was observe in 57/125 pts (39,3%), positive titers of IgM-aCL (> 25 MPL) – in 36/145 (24.8%) pts. LAC was positive in 22 from 60 pts (36,7%). 39 male pts (26,75) satisfied classification criteria of definite APS. Pts with APS had higher frequency of livedo reticularis (33,3%), pulmonary hypertension (20,5%), heart valve disease (46,2%) in comparison to pts without APS (10,3%, 5,6% and 16,8% respectively, $p<0,05$ in all cases). Statistically differences were not observed in frequency of thrombocytopenia and neurological involvement between pts with and without APS. Clinical manifestations of APS added to SLE symptoms in 28 (72%) pts (average 2-199 month after SLE onset). In 9 pts (23%) aPL-associated signs preceded SLE-related manifestations. Only 2 men (5%) developed APS and SLE simultaneously.

Conclusions:

We observed high incidence of definite APS in male patients with SLE. Main localization of thrombosis was vein vessels. Some aPL-associated manifestations not included in The Sapporo criteria (livedo reticularis, heart valve disease, pulmonary associated) were more frequently in patients with APS. Clinical manifestations of APS may precede SLE symptoms.

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CHARACTERISTICS OF RIGIDITY OF THE VASCULAR WALL, DAILY RHYTHM OF THE ARTERIAL PRESSURE IN PATIENTS SUFFERING FROM ARTERIAL HYPERTENSION AFTER INSULT DEPENDIN ON INTENSITY OF PSYCHO-EMOTIONAL DISORDERS

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Aim: To evaluate the data of contour analysis of the pulse wave, the functions of endothelium and the daily rhythm of arterial pressure in patients suffering from arterial hypertension (AH), who survived insult, depending on the intensity of psycho-emotional disorders.

Material and Methods: In our study 122 patients (males -62, females -60) suffering from AH stage III who survived insult during the period of one year were exposed to the common clinical examination, the contour analysis of pulse wave and the test with reactive hyperemia (the device AngioScan-01 professional). We studied the intensity of anxiety and depression according to the hospital scale HADS and daily monitoring of AP (a device). Depending on the severity of psycho-emotional disorders all examined patients were divided into 2 groups: group 1 was composed of 59 persons (55,0±2,0 years) without the signs of anxiety (3±0,8 scores) and depression (4±0,7 scores); group 2 - 53 persons (56,0±1,0 years) with moderate and expressed anxiety (11±0,6 scores) and depression (12±0,7 scores).

Results: In patients of group 1 during the performance of the contour analysis of pulse wave the average index of rigidity of the large arteries (SI) comes to 6,58±0,06 m/s, the index of reflection of the resistant arteries (RI) - 33,81±6,9%, the augmentation index (Alp) - 38,98± 7,0%; herewith in 85% 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 96% examined patients the dysfunction of endothelium was recorded which leads to the increase of the amplitude of the pulse waves in 1,81±0,02 times and to the shift of the phases between channels (C2 - C1) before and after occlusion - 5,4±0,3 ms. The average systolic arterial pressure (ASAP) was 138,3± 6,2 mm H., the average diastolic arterial pressure (ADAP.) - 82,4 ±2,2 mm H., the average index of time (AIT), ASAP - 49± 4,7%, AIT. DAP- 33,5 ±6,5, SNSSAP - 10,9± 5,3%, SNSDAP - 14,8±3,9% that corresponds to the normal high level of AP. In daily rhythm AP dippers composed 47,5%, non dippers - 45%, over dippers - 5% and night peakers - 2,5%.During taking the contour analysis of pulse wave in patients of group 2 in compare with group 1 the increasing indices were noted: SI - before 7,8 ±0,3 m/s (r<0,001), RI - 39,74±6,7% (r<0,5), Alp - 42,55 ± 6,8% (r<0,5); the type of the wave "A" was registered in 100% events. The endothelial dysfunction was marked in all examined patients which reduced the increase of the amplitude of the pulse waves - in 1,44±0,2 (r=0,05) times and reduced the shift of the phases between channel (C2 - C1) before and after occlusion- 4,2±0,2 ms (r<0,001); AAP was 140,7±7,2 mm Hg., DAP - 81,7± 4, mm Hg., AIV SAP - 54,1± 6,2 %,AIV DAP - 51,5±8,4 %, SNSASP - 10,1± 5,4%, SNSDAP - 12,8±3,2%. In this group of patients disadvantage changes of the daily profile AP were revealed: non dippers were in 50%, dippers – in 37,5%, over dippers - in 7,5% and night peakers - 5%.

Conclussions: Thus, in the group of patients suffering from arterial hypertension who survived insult the most unfavorable changes of daily profile AP were observed: non dippers were in 50%, dippers – in 37.5%, over-dippers – in 7.5% and night peakers – in 5%. Anxiety and depressive disorders are associated with an increased rigidity of the vessels expressed by the dysfunction of endothelium, as well as the disturbance of the daily rhythm of AP leading to the formation of cardio-cerebral syndrome the degree of which should be necessary accounted at the decision of expert questions.

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THE MAINTENANCE OF MANAGEMENT'S RULES ON NEUROLOGICAL PATIENTS WITH DISORDERS OF THE HIGHER BRAIN FUNCTIONS IS THE GUARANTEE OF SUCCESS OF REHABILITATION

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There are some rules of management of neurological patients with disorders of the higher brain functions. An influence of maintenance of these rules at rehabilitation of these functions practically wasn't studied. Present circumstances were at the bottom of the research which aim was to increase the efficiency of rehabilitation of neurological patients with disorders of the higher brain functions.

Methods. The rehabilitation of 700 neurological patients with aphasia, alexia, agraphia, apraxia, agnosia has been analysed. There were 529 patients with the consequences of stroke, 127 – with craniocerebral injuries's consequences and 44 – with consequences of operative treatment due to brain tumors. The patients were divided in two groups, depending on maintenance or non-maintenance of management's rules of patients with the aforementioned syndromes.

For the patients with aphasia, alexia, agraphia the rules are following: it's necessary to be in the patient's field of vision during the conversation with him; an exception of noise and extraneous irritants; the conversation with the patient should be slow, silent and accurate; the questions that you ask the patient must be short; not to hurry up the patient while you are waiting for his answer; if the verbal answer isn't possible, ask the patient to use gestures, and nods; the repetition by the patient the sounds and the alphabet; identification by the patient the general subjects in surrounding conditions; the patient mustn't repeat for several times the words which were correctly told after a long silence, in order to avoid an occurrence of speech emboluses.

For the patients with apraxia the rules are following: the concentration on the therapy on the actions which are directly used in patient's daily life; revealation of priorities according to wishes of the patient and his relatives; division the multi-phases activities on the short phases; definition of appropriate time of the day for the concrete task; minimizing of direct verbal prompts as they can suppress the initiative of the patient ("Do you want to drink?" is better than "Take a cup"); recognition by the patient his own mistakes; it is necessary for the patient to create in his mind an image of the forthcoming action ; it is important to maintain the motivation and to praise the patient in case of successful performance of the task.

For the patients with agnosia the rules are following:the possibility for the patient of manual inspections of subjects which are different in weight, consistence and size; training of the patient to define the position of his own body visually; concentration of

the patient's attention on the defeated side; maintenance the patient with calendar, watch, and pictures of the members of his family; correcting any patient's misinformation; an explanation to the patient the features of surrounding conditions; taking away from surrounding conditions the subjects and the moments which can potentially distract the patient; division the period of activity into short time intervals; maintenance of motivation and praising in case of correct performance of the task.

The definition of the higher brain functions's rehabilitation was carried out with the help of the scale of speech estimation based on the hemisphere stroke's scale and the scale of an estimation of gnosia and praxia.

Results. In a group of patients where rehabilitation management's rules were maintained with sufficient rehabilitation of speech, reading and writing was marked at 80.7%, 58.3% and 44.8% of patients accordingly. In the group of patients where the rehabilitation management's rules weren't maintained similar indicators have made 59.5%, 40.3% and 31.8% accordingly. The maintenance of the rules with the patients with apraxia and agnosia promotes an elimination of these syndromes in authentic degree. So, in this group sufficient rehabilitation of praxia was marked at 75.9% of patients, while among the patients who didn't maintain the rules – at 53.2%. Sufficient rehabilitation of gnosia in the first group was marked in 84.7% of cases, in the second – in 68.5%.

Conclusions. The maintenance of management's rules on neurological patients with aphasia, alexia, agraphia, apraxia and agnosia reduces their prevalence and raises efficiency of rehabilitation in authentic degree.

Vitaly Kovalchuk

POSSIBILITIES OF IMPROVEMENT OF PSYCHOEMOTIONAL CONDITIONS OF NEUROLOGICAL PATIENTS

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Psychoemotional disorders are immemorial companions of neurological diseases. Depression which appears due to severe neurological diseases impedes to the adequate rehabilitation of patients, the activation of their social and household role in life and by that harms both to the patients and to their relatives. Therefore the timely determination of depression, its degree and adequate therapy have essential value in the complex treatment of neurological patients.

The aim of the present research –is to improve psychotherapeutic rehabilitation of neurological patients.

Methods. The middle age of 385 patients (180 women and 205 men) is 52.7 years. There're 225 patients with the consequences of stroke, 65 – with craniocerebral injuries consequences and 95 – with the consequences of traumas of a spinal cord. The efficiency

of several methods of psychotherapy has been studied, such as persuasion, suggestion (suggestion in patient's waking hours, in a condition of natural and hypnotic sleep), auto-suggestion Que, auto training, art-therapy, catharsis, casual, game and behavior methods of psychotherapy. The psychoemotional conditions were defined with the help of Bek's questionnaire and Wakefield's scale of a self-appraisal of depression.

Results. Depression in a year after beginning of neurological diseases among patients whose psychotherapeutic treatment was fulfilled with the help of the rational psychotherapy, or persuasion, was absent at 76.5% of patients and at 26.7% – in group of patients who didn't passed the given kind of psychotherapy.

Suggestion was a following kind of psychotherapy which has undergone to our analysis. Suggestion in patient's waking hours has appeared the most effective from all the variants of suggestion concerning improvement of psychoemotional conditions of neurological patients. So, in a year after the beginning of neurological diseases among the patients who had psychotherapeutic treatment with the help of the suggestion in patient's waking hours depression was absent at 72.4% of patients. In a group of patients who didn't pass the given kind of psychotherapy depression was absent at 29.9% of patients.

Two other kinds of suggestion (suggestion in a condition of a natural and hypnotic sleep) haven't influenced upon the neurological patients.

As the result of the present research the Que's method's of auto-suggestion efficiency was found out. Depression was absent in a group which has passed the Que's method at 75.1% of patients, in a group which hasn't passed this method – at 28.2%.

Unlike the Que's method the other kind of auto-suggestion – autotraining – not only hasn't promoted the improvement of a psychoemotional conditions, but also has harmed the mental and, as a consequence, physical spheres of the patients. So, depression was absent in a group which has passed the autotraining depression at 28.3% of patients, in group which hasn't passed this method – at 49.1%.

Such methods of psychotherapeutic treatment as causal and behavioral psychotherapy didn't influence psychoemotional conditions of neurological patients.

As the results of the present research efficiency of the game psychotherapy, the catharsis and the art-therapy were found out. Depression was absent in a group which has passed these methods at 64.9%, 62.2%, and 69.4% of patients accordingly, in group which hasn't passed – at 35.1%, 37.8%, and 29.9% accordingly.

Conclusions. As the result of the present investigation the different methods of psychotherapy's efficiency was found out. Use of some methods with the aim of rehabilitation of neurological patients is not always well-founded and some of them lead in negative results. The most efficient methods of psychotherapy in neurological patients' rehabilitation are persuasion, suggestion in patient's waking hours, Que's auto-suggestion and art-therapy.

Vitaly Kovalchuk

THE FEATURES OF MANAGEMENT OF STROKE PATIENTS WITH A NEGLECT-SYNDROME AND A PUSH-SYNDROME

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The main factors impeding carrying out the adequate rehabilitation of stroke patients are a neglect-syndrome (residual ability to react on influences or to perceive the information from the side opposite to the damaged hemisphere), and a push-syndrome (disorders of dominated pose in sitting position – deviation at the defeated side, and the difficulties with patient's verticalization – impossibility to transfer body's weight to a healthy foot).

The presented research is devoted to an estimation of efficiency of rehabilitation of stroke patients with a neglect-syndrome and a push-syndrome with a maintenance of management's rules of this category of patients.

Methods. 550 patients were divided into two groups depending on the maintenance or non- maintenance of management's rules with aforementioned syndromes. These rules are the following:

- an arrangement of subjects before the patient, gradually, from one lesson to another, displacing them towards the damaged side;
- appealing to the patient during a talk with him from the damaged side;
- an arrangement of stimulating objects from the damaged side;
- an arrangement of a patient's bed so that the ward's door is situated at the damaged side;
- drawing bright marks on surrounding subjects;
- using the games demanding wide space;
- analysing the images of the subjects having the symmetrical right and left parts (a dial of clock).

The definition of functions's rehabilitation was carried out with the help of the Bartel's scale, Lindmark's scale and Scandinavian's scale; household and social adaptation – with the help of the Merton and Satton's scale.

The efficiency of rehabilitation was also estimated on absence of various signs of a neglect-syndrome:

- a gemi-inattention (absence of the adequate patient's answer to the irritating stimulus, such as approach of people, various sounds);
- tactile fading (loss of the ability to react on tactile stimulus at simultaneous tactile stimulation of both sides);
- visual fading (loss of the ability to react on visual stimulus at simultaneous stimulation of both fields of vision);
- alloesthesia (sensation of stimulus on the opposite side to stimulation);
- anozognosia (negation of disorders of neurological functions);
- negation of an accessary of extremities of one side to the own body.

The efficiency of treatment was also estimated by means of testing for ability of keeping

the stability: ability of keeping the static balance in sitting position within one minute; ability of keeping the static balance in a standing position within ten seconds.

Results. In the group of patients with the observance of the rules of their management the sufficient rehabilitation of functions was marked at 65.4%. Among patients in whose rehabilitation the rules of management weren't observed, the similar indicator was marked at 32.5%. In the first group sufficient degree of household adaptation was observed at 68.3% of patients, in the second – at 35.5%. Besides, the observance of the given rules in authentic degree promotes elimination of a neglect-syndrome and a push-syndrome. So, in the first group these syndromes were marked at 22.7% and 23.5% of patients, in the second – at 60.8% and 70.6% accordingly.

Conclusions. The maintenance of management's rules of stroke patients with a neglect-syndrome and a push-syndrome reduces their prevalence in authentic degree and accordingly raises efficiency of rehabilitation, increasing degree of rehabilitation of patients's functions, the level of their household adaptation and quality of life accordingly.

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BIOTHERAPEUTIC APPROACHES TO REDUCTION OF THE RISK OF GIVING BIRTH TO SICK CHILDREN

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Nowadays a birth of a healthy child in Russia can truly be regarded as a rare event.

According to medical statistics, only 2-5% of healthy children are born in different regions of the country. Weak health of preschoolers (in 1994 only 15% of children were considered healthy) becomes one of the difficulties for them to adapt to school workload. Within the nine years of school education (1-9 grades) the number of healthy pupils decreases by 4-5 times and comprises only 10-15% of the total amount of school children.

To solve this complex problem, a mere increase in the quality of life of the population is not sufficient. Many young women today are afraid to give birth to a sick child; that is why the problem of medical support in the area of giving birth to healthy children is of great importance.

The change for the worse in the ecological environment, especially in large cities (megalopolises), increases the risk of birth of children with indications of encephalopathy (cerebral spastic infantile paralysis, minimal brain dysfunctions). This problem is especially important in the regions of the Far North in Russia, where the oxygen content in the atmosphere is low.

Today the medical-biological preparation of married couples and improvement of their health before conception on the basis of natural therapeutic technologies are becoming more and more important.

The existing methods of obstetrics and control of the health state of pregnant women

are only there to reduce the risk of the birth trauma of a newborn.

Nowadays, however, we do not see a clear and scientifically well-grounded system of preparation of partners for the conception of a healthy child in any traditional practice, in contrast to the one that has been developed by us.

The leading role of hirudotherapy in our method is based on the fact that this method has more than 20 healing effects, and is also connected to a series of important discoveries of the last few years: energy-informational effect (1993), neurotropic factors (1996), acoustic (wave) effect (2001), desintoxication effect (2003), negentropic effect (increase of the level of order in a human body) (2005), aqua structure effect (2010)

The suggested technology has been developed over the last 18 years and proved itself well in the treatment of infertile couples. Children who were born in these "infertile couples" didn't only have a high level of physical health (Apgar score: 8-10) but also showed good dynamics of physical and mental development, and were in this regard even better than their peers. At the same time, the health of mothers was maintained.

Approximately 3000 children were born in Russia in the last 16 years with the help of our technique. They all had the highest numbers in the Apgar score.

Hirudotherapy is a traditional technique in Russia, but it is also known in medicine science of other countries and is one of the branches of Ayurveda, the most ancient medicine.

The demographic situation in Russia on the edge of XX-XXI centuries can be called critical without exaggeration: the reproduction of population has been behind its decrease by approximately 1 mln. people every year, starting from 1992.

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BIOPHYSICAL NATURE OF THE ENERGY-INFORMATIONAL EFFECT OF HIRUDOTHERAPY

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Up to this moment a considerable amount of experimental data to determine the dynamics of flows of informational entropy when using different medical technologies (hirudotherapy, osteopathy, EHF therapy, „controlled respiration") or different types of art therapy (music, dance) has been developed, which makes it possible to receive the experiment results in the form of a formalized chaos criterion (K_c) or order criterion (K_o).

As a result of this research, we have obtained a series of new experimental data, which

makes it possible to make an assumption that the „end point of application“ of various medical technologies is the influence on the water structure in a human body.

This hypothesis also follows from multiple experiments with the use of the Gas Discharge Visualization technique (the GDV method or Kirlian effect) during the study of the influence of the hirudotherapy method on a human body.

Today there is a large number of experimental works which allow making a conclusion that the GDV is defined by the water state in the epithelial cells of human fingers and water, situated in the intercellular area or sweat glands of skin.

Earlier we have found out that the influence of the medical leech on a human being has an energy-informational nature (A.I. Krashenyuk, S.V. Krashenyuk, 1993). As an experimental proof we have used experiments, in which the influence of the medical leech has been assessed with the help of the thermopuncture test (Akabane test) or the GDV method or the Kirlian effect.

With the help of these experiments we have been able to establish that the increase in the area of glow of human fingers after the influence of the medical leech, using the Kirlian effect, can be used as a fine diagnostic and prognostic test in medicine. This work has demonstrated that an individual response of a human being towards the influence of the medical leech can be quantitatively assessed.

On the basis of numerous experiments with the use of the medical leeches as a medical technology we have come to the conclusion that the main parameter (from the mentioned above) is the structure (or cluster) water state in the epithelial cells on the skin of fingers. It is precisely this water that appears on the surface of fingers during the effusion, and the structural state of this water has a considerable influence on the character of GDV-grams.

An important argument in favour of structural changes of the intracellular water is our work, in which we have used the inductive dielectric method.

The water state, when using this method, is characterised by the frequency value , at which there is the maximum tangent of the angle of dielectric losses (tgd) in the researched object. The lower the frequency , the larger the size of clusters made up of water molecules in this object, and, therefore, the higher the degree of water structuring. The experiments have been conducted on frogs. A special interest towards frogs can be explained by the fact that the frequency dependency tgd of their tissues has extremes, which characterise the community of the water state in frogs with that of animals of different evolutionary levels, and the extreme with the lowest frequency is also characteristic for mammals.

The similarity of frogs and mammals also manifests itself in the fact that the stress condition of a frog (due to it being outside the familiar habitat in the course of several days) leads to the appearance of an additional extreme tgd in its tissues at the same frequency ~200kHz as that of a mouse. Due to the fact that this extreme tgd disappears after the hirudotherapy process, it is possible to make a sound conclusion about a drastic

decrease of the stress condition of an animal and the increase in the structuring of water in its tissues after the influence of the medical leech.

It is highly probable that biological and healing effects of this treatment method are caused by the structural changes of water in human and animal tissues under the influence of hirudotherapy.

We suggest the term of aqua structure effect or aqua communication effect to be used for this for the first time discovered phenomenon of the change in the water state in animal tissues under the influence of hirudotherapy.

This effect can be caused both by the biological substances, which are introduced to the animal tissues by the medical leech, and by the purely physical, acoustic (wave) effect of hirudotherapy, which we have discovered first.

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ARTHROSCOPY IN COMPLEX TREATMENT OF METAEPIPHYSEAL OSTEOMYELITIS IN NEWBORNS

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The objective was to improve the results of treatment of metaepiphyseal osteomyelitis in children in the first months of their lives and later periods of time on the basis of the modernisation of the already existing methods of treatment and diagnostics.

Materials and methods: the work was based on the observation of 126 patients diagnosed with the acute hematogenous osteomyelitis who were treated in the hospital of paediatric surgery of the Russian State Medical University n.a. N.I. Pirogov on the base of the surgical department for newborn and premature babies of the Children's City Hospital Nr. 13 n.a. N.F. Filatov. The arthroscopy of knee and hip joints was performed for the purpose of sanation and decompression and estimation of the intensity and character of the intra-articular inflammatory process.

Results: the indications for the sanation and diagnostic arthroscopy were developed and implemented. The endoscopic method, which was used for children with acute hematogenous metaepiphyseal osteomyelitis in the first months of their lives for the first time, has diagnostic and therapeutic functions. We also suggested a method of a single-step minimally invasive prepatellar draining in case of the para-articular distribution of the inflammatory process.

Conclusion: the use of the sanation and diagnostic arthroscopy in the complex of curative measures makes it possible to reduce the treatment period of patients with metaepiphyseal osteomyelitis by 19.1% in comparison to the puncture method and improve functional results of the given category of patients.

Aleksandras Krisciunas

THE COMPLEMENTARY AND ALTERNATIVE MEDICINE THERAPIES IN REHABILITATION

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The barrier to integration of complementary and alternative medicine (CAM) therapies into conventional physical medicine and rehabilitation includes a small number of evidence-based studies concerning the problem, lack of the established standards for practitioners licensed for some therapy modalities, absence of protocols for management of specific conditions, and an inconsistent third-party reimbursement.

It is very important from the positions of physicians engaged in physical medicine and rehabilitation to have answers to the following questions:

1 What alternative systems of medicine and health care methods are to be used as complementary or alternative?

2 Who are entitled to apply these methods of treatment?

3 Who have to teach these methods of treatment?

4 What education programmes are to be used?

Integration CAM into the practice of healthcare providers is both potentially dangerous and beneficial. Potential benefit should exceed potential risk. CAM therapies should be practically accessible, and affordable. Discussion concerning their usage is very important as patients are interested in CAM therapies, they use them, may ask questions about CAM therapies, CAM therapies may offer a treatment option that works.

Integration of CAM therapies into the rehabilitation setting is still in its infancy, it holds great promise for expanded management options and patient satisfaction.

With the increasing cross training of rehabilitation, professionals in conventional and CAM therapies and a growing body of evidence-based validation, the field of physical medicine and rehabilitation can move forward in innovative treatment of patients with the highest levels of care and safety.

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EBV-ASSOCIATED CHRONIC GASTRITIS AND EXPRESSION OF KI-67 AND P53 IN GASTRIC MUCOSA

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The association between Epstein-Barr virus (EBV) infection and chronic gastritis in children and adult were demonstrated in our previous investigations. Epstein-Barr viruses influence a degree of activity of a chronic gastritis both at children, and at adults. In certain circumstances, however, long-term virus carriage can result in the appearance a

number of EBV-positive tumours. Although at least 80% of stomach cancer is associated with Helicobacter pylori infection, there is a subset of cancers that are HP-negative. Epstein-Barr virus is now implicated as the cause of many of these. The role of EBV infection in development of precancer variations of a gastric mucous membrane remains to be defined.

The aim of the study was the analysis of a cellular population heterogeneity at Helicobacter pylori (Hp) – negative chronic gastritis at patients with Epstein-Barr viruses (EBV) infection.

Materials and methods: An immunohistochemical study of the KI-67 (marker of proliferation) and the apoptosis-stimulating protein of p53 using the streptavidin-biotin-peroxidase method were studied in two groups of gastric biopsies selected by results of immunohistochemical revealings of EBV antigens. The first group has consisted of 15 EBV positive gastric biopsies, group 2- of 12 EBV negative. On first step of the study patients at age of 18–78 suffering from chronic gastritis were examined. The chronic gastritis was diagnosed by endoscopic and morphological examination. Biopsies were obtained from the mid antrum and mid corpus. Biopsies were placed in 10% formalin and routinely embedded in paraffin blocks, then cut and stained in each local centre. The stained slides were examined by pathologist using the updated Sydney classification. Helicobacter pylori were identificated by complex of methods (histology, Helpil-test, breast test HelicoSence).

On second step of the study EBV antigens were determined by immunohistochemical methods at patients without Helicobacter pylori only. Monoclonal antibody to latent membrane protein of EBV (Novocactra) were used as primary antibody. Peroxidase – abelled steptavedin biotin complex were used for detection of virus antigens on deparaffined sections. Peroxidase activiti was visualized with a standart diamino-benzidine reaction. Brown granules were founded in structures of gastroduodenal mucosa as a result of reaction.

On step 3 of the study Ki-67 and p53 antigens were determined by immunohistochemical methods. Following primary antibodies: p53 (clone DO-7; dilution 1:80; DakoCytomation®, USA), Ki-67 («Novostain Universal Detection Kit», «Novocastra») were used. The proteins expression was quantified through manual counting of at least 1000 epitheliocytes in 10 different fields at a magnification of x400. The positive index (PI) was expressed as the number of positive nucleas on 100 considered. The positive and negative control were used.

Results: Expression of KI-67 in cervical and ground epithelium, in antral and fundal stroma were above in group 1 and conformed to an arrangement of mucous membrane proliferative compartment. In antral stroma (2,62±0,13 and 6,5±0,3; $p<0,05$) and in fundal stroma (2,21±0,11 and 6,02±0,28; $p<0,05$) expression of P53 in group 1 were marked less often, than in control group. Expression of KI-67 and p53 antigens in foveolar epithelium were equal in both groups.

The conclusion: In HP-negative and EBV positive gastric biopsies were founded

increased expression of KI-67 in a zone of gastric mucous membrane proliferative compartment, specifying on acceleration of cellular updating. These changes, along with decrease in frequency of apoptosis, can assist increase of risk of progress of precancer variations of a mucous membrane of a stomach.

V.E Kudryavtsev

NON-MEDICAL METHODS IN PEDIATRICS TO TREAT COMPLEX NEUROLOGIC PATHOLOGY BY MEANS OF COPPER THERAPY

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Noninvasive methods in acupuncture and especially in pediatrics are of primary importance. It is attributed mainly by the fact that a child is very vulnerable in his perception to any impact of pain. Therefore the development of both painless and effective methods of treatment is of great importance.

The aim of this report is to explain the author's method of treatment of complicated disease – children's cerebral paralysis (the method of Doctor Kudryavtsev V.E.) as well as to prove the efficiency of its application in medical practice to treat this pathology .The application of this method can give positive result in combination with complex therapy.

The object of the report is to show rational application of presented method and its techniques in use. The report deals with positive aspects of constructive features of copper plates and the reason of their zone application in case of serious neurological pathology.

Currently the method is granted a patent of Russian Federation as well as certificates of authorship and conformity. For the period of work substantial amount of clinical material has been collected. Besides, the author's therapy has been applied for the last 3 years in treatment of children's cerebral paralysis and other serious neurological pathology. The foundation for application of this method is a state specialized medical establishment for children with lesions of central nervous system.

Non-invasiveness, neither traumatism nor pain are the main advantages of application method in author's interpretation. Another positive feature of the method is the absence of overdose that can be attributed to the barrier function of skin. Application of copper plates on particular areas of skin in practice of complex treatment of children's cerebral paralysis according to specially designed schemes gives positive result even in cases of serious neurologic diseases.

The unique feature of the method suggested is a small size of the plates (about 2 cm) and their thickness (0,8 mm); the plates are of oval configuration that can't make

any injuries. Due to their specific 'structure they can be fixed on any part of skin even with rather complex anatomic structure (facial, parotid etc.).It's possible to apply any modification either at a hospital or at home that gives positive result on complex medicamental and rehabilitation programs supplementing each other.

T.V. Kulemzina

THE PSYCHOLOGICAL COMPONENT OF MEDICAL PRACTICE

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According to the classification of E. Klimov, belongs to the category of "man - a man." The effectiveness results of medical practice are strongly influenced by psychological factors, related both to him (the doctor) and patient (and relatives).

In addition, great importance as various socio-psychological phenomena that occur in the interaction of the above persons. Knowledge of the psychological factors influencing the processes of diagnosis, treatment and rehabilitation of can significantly increase the effectiveness of these interventions.

In the doctor can identify the diagnostic and therapeutic, rehabilitative components, which, with a certain conventionality of its stages can be considered.

Formation of a model of physician-patient relationship in each case is determined by prevailing in a given period of time in the community normative conceptions of medical practice, personal characteristics and patient, physical and mental condition of the patient, the nature of ongoing medical events, motivated doctor and patient in their interaction (the patient, in addition to professional help can be expected from a doctor understanding and care, receiving certain social security benefits in connection with the confirmation of the diagnosis, etc.) and other factors.

For the psychological characteristics of any profession, you must first describe its content and context in which it occurs. In the doctor's professional activities include the following stages: diagnosis, treatment plan, bringing the appointments to the patient and the urge to follow them, conduct treatment interventions, monitoring the results of therapy, making the necessary adjustments.

Doctor-patient relationships in these processes can be described as a model, the main parameters of which are the predominance of business or interpersonal (emotional) communication in their relationship, the prevalence of non-directive or directive, empathic, or neutral behaviors doctor.

The global task of the doctor is the ability to mentally competent to organize not only their interactions with patients and medical personnel to assist in improving the effectiveness of psychological diagnosis, treatment and rehabilitation phases of patient care.

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ASSESSMENT OF ENDOGENOUS INTOXICATION IN PATIENTS WITH ASCARIDIASIS

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Lately investigation of endogenous intoxication has a great importance. It has established that endotoxemia develops under all pathological states, which are conditioned by increased catabolism or damages of detoxication system of organism.

Molecules of middle mass are substrate responsible for appearance of pathological effects of endogenous intoxication. Accumulation of these molecules influences on life activity of all organs, so molecules of middle mass are markers of endogenous intoxication. The fact is level of molecules of middle mass increases under cancer, meningitis, rheumatoid joint inflammation, infectious diseases, dermatitis.

Lately is actively investigated pathogenesis under helminthiasis. It is known that during helminthes invasion, especially during migration of larvae, in host organism enter great amount of metabolic products of helminthes. These products are complex of proteins, antigens, biological active substances, which cause different pathologies.

O. Bekish has proved, that products of ascaridiasis, toxocariasis, trichiniasis metabolism damage inherited apparatus of somatic and generative cells of host, depress spermatogenesis, cause intoxication of host organism by antigens, damage free radical processes. The main toxic substrates in this case also are partially decayed products and protein toxins – molecules of middle mass.

Information about influence of helminth invasion on reproductive health of human is practically absent in literature. In consideration of this fact purpose of our work is investigation of helminth toxins influence on human reproductive health.

Results and discussion.

For all individuals with ascaridosis was defined level of endogenous intoxication on the concentration of molecules of middle mass in sperm. Was revealed exceeding of middle mass molecules in 1,2 times in comparison with control group.

So, revelation of excess level of middle mass molecules in sperm of patient with ascaridiasis indicates about progress of endogenous intoxication as a result of accumulation of protein degradation products. In compliance with our opinion, it associated with intensification of proteins proteolysis, which causes cell membrane destruction, damage of spermatogenesis, changes of physiological parameters of ejaculate: change of active and inactive sperm quantity, morphological structure of sperm.

V.V. Kursenko

SEMICARBAZIDE – CADMIUM THERAPY. RESULTS OF 2-YEAR OBSERVATION OF CANCER PATIENTS

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Methods of semicarbazide-cadmium therapy of cancer (known as Kachugins method) for several years were used in our clinic as a palliative therapy for patients with cancer. However, our observations of patients who received treatment in 2010 suggest that the method of SCT can not only alleviate symptoms and improve quality of life, but also to cure.

It is known that therapies with metal-containing drugs are not universal. This applies to this technique, too, which uses drugs on basis of cadmium and gadolinium. From scientific literature it is known that there are types of cancer cells having a reduced sensitivity to ions of cadmium and other metals. Therefore, it is necessary to develop ways to test the sensitivity of tumors to this class of drugs. Currently applied methods for determining the sensitivity of tumor cells to metal-containing drugs require sample of living cells obtained from tumor of certain patient and a special laboratory. Due to the fact that in clinics conduct of these screening tests is often difficult, we have used a three-month trial period of treatment just as it is done with use of chemotherapy. This helped to keep treating patients who had a reaction to the therapy. During first weeks and months of test phase there was a large drop-out of patients. Some patients not receiving an immediate improvement of health stopped the treatment not waiting for results of test period. There were patients who discontinued therapy on advice of their oncologist. They switched to a free symptom treatment after they learned from doctor that curing is impossible. Some patients stopped trial treatment because it was difficult for them to comply with terms of therapy. Due to the fact that the work was carried out with patients receiving palliative therapy, the drop-out of patients was predictable. Of 16 patients who started receiving semicarbazide-cadmium therapy only 4 people undergone the 3-month trial period who later shown good clinical results. 4 patients who received a three-month test cycle of treatment were divided by location and type of tumor as follows: two men – with prostate cancer, one of them with metastases to the skeletal system; 1 man had melanoma with damage of axillary glands after surgery, and 1 woman undergoing interferon therapy – with a 3rd stage breast cancer. These people have completed the full trial period of treatment. The following results were achieved: stabilization of general condition of patients, normalization of laboratory values in blood tests, regression of metastases according to scintigraphy. Tolerability of therapy was good for all patients including the persons who were screened before the end of trial period. As at May 2012 follow-up period for 4 patients who undergone a full cycle of therapy is 2 years. 3 patients have disease-free steady state. They continue to work, lead active lifestyle. One patient with metastatic prostate cancer a year after the end of therapy showed a moderate local tumor growth according to ultrasound examination of prostate without evidence of metastasis. Probably this case required a more prolonged treatment.

Due to the fact that Semicarbazide-Cadmium Therapy is well tolerated and can provide not only for improvement of quality of life, but full recovery, we have decided to extend the work with this therapy in our clinic.

G.I. Kuzovleva
V.G. Geldt

EVALUATION OF RENAL HEMODYNAMICS DURING URETEROHYDRONEPHROSIS IN A FOETUS AND ITS IMPORTANCE IN THE POSTNATAL PERIOD

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The widening of the renal pelvis is one of the most widespread prenatal ultrasound markers of the defect formation in the urinary tract of the foetus. Hydronephrosis takes 26% in the structure of urological diseases detected during pregnancy.

The objective was to study the possibilities of the complex prenatal evaluations of the kidneys of the foetus with hydronephrosis with the use of dopplerometry and, based on that, to determine the postnatal prognosis.

Materials and methods. We examined 27 pregnant women with hydronephrotic transformation of one kidney of the foetus and 3 pregnant women with bilateral hydronephrosis in the second and third trimester. We used standard 2D mode of the colour and energy Doppler mapping and pulse wave dopplerometry. We measured linear dimensions of kidneys, thickness of parenchyma, sizes of the pelvis, renal calices and proximal and distal ureter departments, and then carried out colour Doppler mapping. After that we applied impulse dopplerometry. We evaluated the qualitative characteristics of the Doppler curve spectrum: maximum and minimum blood flow velocities and resistive indices in the main, segmental and interlobar renal arteries of the foetus. We used the parameters of maximum and minimum blood flow velocity and the resistive index (RI) during the pulse wave dopplerometry.

Results: The kidneys of the foetus with hydronephrosis were enlarged, anteroposterior size of the pelvis always exceeded 11 mm and the echogenicity of the parenchyma was increased. The colour and energy Doppler mapping of foetuses with the obstructive type of the urodynamic defect showed that the blood flow was poor, the vascular pattern was not traced to the capsule and the segmental and interlobar branches were moved apart by the expanded elements of the collecting system. The pulse wave dopplerometry detected changes in the blood flow velocities and RI in all examined branches of the renal arterial tree. The difference between the dopplerometric parameters was highest towards the end of the pregnancy. The foetuses with bilateral hydronephrosis had increased velocity and resistive characteristics: the resistive index approximated 1, which was a sign of a considerable disorder in the renal blood supply. The maximum velocities in the main arteries increased

significantly in the 20th-30th week, stabilized in the 30th-35th week and decreased in the 26th-40th week. The resistive indices decreased since the 31st-32nd week towards the end of the pregnancy. Maximum velocities in the segmental arteries decreased with the gestation time, minimum velocities stayed practically the same, the resistive indices decreased from the 31st week towards the delivery. Maximum blood flow velocities in the interlobar arteries increased sharply towards the 30th week and then decreased. The RI was lower than normal.

Discussion: it is prognostically very important to determine the state of the renal blood flow in cases of prenatal detection of hydronephrosis. If the pelvic dilatation is moderate and hemodynamic parameters are closed to normal in the postnatal period, children have to be medically observed in the course of the first year of life. Patients with postnatal unilateral hydronephrosis must be examined, the hemodynamic state of the damaged kidney must be registered and its parameters must be compared to those in the prenatal period, after which a decision about a surgical interference is made. The prognosis for the health of the baby was unsatisfactory in the case of severe damages in both kidneys with a significant blood supply disorder due to parenchymal dysplasia or atrophy, causing a discussion about a possible termination of the pregnancy.

A.B. Kuznetsova
E.L. Kazachkov

FEATURES OF THE RECEPTORS EXPRESSION TO STEROID HORMONES IN THE ASTROCYTIC AND GLIAL BRAIN TUMORS DEPENDING ON THE GRADE OF CELLULAR ANAPLASIA, TUMOR PROLIFERATIVE ACTIVITY AND ITS ANGIOGENESIS

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Actuality. The field of Neurooncology is characterized by a rapid improvement of diagnostic methods and treatment of central nervous system tumors as well as by targeted biomedical research (Guevara P. et al). To treat brain tumors effectively it is necessary to identify them in proper time and to obtain information about the location and size of the tumor, its sources of blood supply, the links with the surrounding brain structures and anatomical entities. Neurons and glial cells are found to contain enzyme systems necessary for sex steroids metabolism, and therefore, they are able to transform the classic steroids into their diverse derivatives. But the distribution of estrogen and progesterone receptors on cells of astrocytomas and gliomas has been insufficiently studied. The aim of the investigation is to study the intensity of expression of estrogen, progesterone receptors in astrocytic and glial brain tumors, the proliferative activity of tumor cells and their angiogenesis characteristics.

Materials and Methods. Sixty patients of Chelyabinsk Regional Oncology Center enrolled in the study - females aged 30 to 45 years – were affected by histologically verified astrocytomas of the brain with varying grades of cellular anaplasia (grades I, II, III and IV). Histopathologic specimens of tumor tissue stained with hematoxylin and eosin were examined, and immunomorphological examination of the tumors was performed to determine the expression of estrogen receptor (clone 1D5), progesterone receptor (clone PgR 636), the proliferative activity marker of tumor cell Ki 67 (clone MIB-1). The study of stem cell antigen and endothelial cell CD 34 (Class II, Clone QBEnd 10) was conducted to evaluate the tumor angiogenesis by means of method for quantifying tumor angiogenesis. In assessing the progesterone and estrogen receptors the result was considered positive if expression in 5 out of 100 examined tumor cells was detected.

Results and discussion. In 11 cases expression of estrogen receptors, with predominance in tumors of Grade II cellular anaplasia (8 cases), was detected. In 15 cases expression of progesterone receptors, with predominance in tumors of Grade II cellular anaplasia (7 cases), was detected. But the expression of progesterone receptors, in contrast to estrogen, equally occurs both in tumors of Grade II and of Grade IV cellular anaplasia (3 and 4 cases, respectively). The increased index of proliferative activity is predicted in tumors depending on increasing grade of cellular anaplasia from 3.2% (.028) (Grade I) to 71.1% (.072) (Grade IV). This study shows that tumor vascularization progresses distinctly with increasing grade of cellular anaplasia. Thus, in the astrocytic and glial tumors of the brain the higher the grade of cellular anaplasia and higher proliferative activity and more intense angiogenesis, the more intense expression of progesterone receptors, and expression of estrogen receptors is rarely detected.

S.B. Lazurenko

USE OF EDUCATIONAL TECHNIQUES FOR REHABILITATION OF NEUROPATHIC INFANTS

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Relevance: Statistics evidence that severe associated central nervous system pathologies restrict life activity in 19.6% infants registered as disabled at the age of 0 to 4 years. Identifying forms, methods, and techniques of correctional education of neuropathic children aimed at increasing the level of their social integration is obviously an urgent problem of pediatrics and special education.

Objective: Establish the relationship between health status and cognitive development of 256 infants (from 18 to 36 months) with neuropathies for the purpose of explicitation of correctional education within the social rehabilitation.

Materials and methods: E.A.Strebeleva psychoeducational examination technique, G.V. Pantyukhina, K.L. Pechora and E.L. Frukht neuropsychic development test; analysis

of infant life history and clinical data, comparative and follow-up study, quantitative and qualitative data processing.

Results and discussion: All one and two year old children with neuropathies, who need institutional rehabilitation, may be divided to three groups by rate of mental development, quantitative and qualitative peculiarities of social performance.

Group 1 included infants with organic damages of central nervous system and genetically determined diseases that caused moderate deficiency of cognitive activity. For the activation of their psychological capabilities, social-educational methods and techniques has been developed in the treatment process, which contributed the formation in children of habits of independent practical orientation in the environment and methods of social communication with adult.

Group 2 comprised infants with combined neuropathies: different infantile cerebral paralyses, symptomatic epilepsy, hydrocephalus, parencephalias, and analyzer disorders. They had severe cognitive deficiency. Correctional education within the scope of the social rehabilitation was aimed at shaping of the social interaction with adult, committed elementary learning activity in the environment.

Group 3 included infants with combined severe developmental abnormalities: chronic or hereditary neuropathies, analyzer disorders, mental disorders (psychopathy-like syndrome, schizophrenia, infantile autism). Severe cognitive deficiency was combined by behavior and emotion control disorders, which is why correctional education was aimed at development of the need for social interaction with adults and further formation of cooperation habit and practical orientation in the environment.

Results: After two complex rehabilitation courses (6 – 8 months), we managed to develop contextual communication habits in group 1 infants and observed their practical activity being formed. We imparted to group 2 and 3 infants techniques of social interaction with adults and investigatory actions in the environment.

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I.P. Baranova
D.Y. Kurmaeva

CLINICAL AND IMMUNOLOGICAL CHARACTERISTICS IN FREQUENTLY ILL CHILDREN CARRYING INFECTIOUS MONONUCLEOSIS AND SUBSTANTIATION OF IMMUNOREHABILITATION

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Actuality of the problem of infectious mononucleosis (IM), caused by the virus Epstein-Barr (EBV) and cytomegalovirus (CMV), is conditioned by the wide circulation of pathogens among the population, by the height of cases of clinically manifest mononucleosis and the probability of a chronic course of disease. Research aim: to

study the catamnesis of frequently ill patients, carrying infectious mononucleosis, reveal the features of immune disorders, justify the use of immunotherapy and increase the effectiveness of therapy. Research methods: the verification of the etiology and activity of infection was defined in the blood markers of Epstein-Barr virus (VCA IgM, IgG EA, VCA IgG, DNA - EBV) and cytomegalovirus infection (IgM, IgG, DNA CMV) methods of immune-enzyme analysis and PCR; standard laboratory and immunological researches were conducted.

Results of researches. The analysis of clinical features of frequent inflammatory diseases and immunological indexes is conducted for 50 children with the kissing disease of EBV, CMV and mixed etiology in anamnesis. The average age of patients - 4,6±2.3 years, boys - 32 (64%), girls - 18 (36%). The duration of observations was from 3 months to 2 years after suffering IM. In 29 patients (58%) EBV etiology of the disease is diagnosed, in 4 (8%) - CMV mononucleosis, in 17 patients (34%) - mixed etiology (EBV and CMV). The frequency of the disease for 25 (50%) of the children was 5-6 times a year, and 23 (46%) – addressed to the doctor monthly with the use of antibacterial therapy. For 27 (54 of patients the factors of the burdened obstetric anamnesis are educed, there were 26 (52%) children on the artificial feeding, lymphatic diathesis was marked at 6 (12%%), cerebral ischemia - at 16 (32%%), atopy - at 9 (18%) children. In the analysis of currents of IM the next clinical features are identified: 17 (34%) of the patients had incomplete symptoms of IM , erased forms were observed in 8 (16%) patients, initially-protracted course in 4 (8%) of the children. Clinically persistence of viruses EBV and CMV manifested chronic course, mainly in the form of atypical and minor forms (long subfebrile temperature - in 7 (14%), recurrent sore throats - in 11 (22%), stomatitis in 6 (12%), pharyngitises with fever - in 13 (26%) of patients), and the 4 (8%) was accompanied by the development of the symptoms of IM. The most adverse course of postinfectious period noted after a mix-infection. All patients with chronic infection are revealed changes of immune indexes: the violation of humoral immunity in 17 (34%), reduction of the phagocytic activity of leukocytes in 14 (28%), lack of cellular link of immunity in 18 (36%) of the patients; the combination of disturbances in the immune system are marked in 23 (46%) patients. Carrying out of combined immunotropic therapy in this group of patients with the use of isoprinosine (antiviral and immunomodulatory effects) and bacterial lysates (rybomunyl, IRS-19) makes it possible to decrease the frequency of inflammatory diseases in 3.2 times, the duration of one episode in 1.7 times and reduce the duration of antimicrobial therapy in 2,9 times.

Conclusions: 1. The clinical features of the carried IM (atypical, deleted and protracted forms), the etiological factor (mixed infection EBV + CMV), as well as the unfavorable premonstratensian background contribute to the formation of persistent infection. 2. Active persistence of EBV and CMV after carried IM is often accompanied by persistent immune deficiency and the increased morbidity. 3. The combined therapy of isoprinosine and bacterial lysates diminishes the frequency and duration of inflammatory diseases in children with persistent EBV and CMV infection.

Margarita Lovacheva

SU JOK ACUPUNCTURE

International Su Jok Association, Moscow, Russia

Su Jok Therapy is a kind of synthesis combining holistic approaches with treatment based upon phylosophical principles, initially created as a method of hand and foot acupuncture, nowadays including such branches as Twist Therapy, Triorigin Theory and Smile Meditation.

The author of a method is Prof. Park Jae Woo (South Korea, Seoul). In Korean, Su means hand, Jok means foot. On hands and feet there are special treatment systems embodied, created according to the similarity principle: a hand and a foot are similar to the body of a human being. Hand and foot are treatment correspondence systems.

Ancient medicine had knowledge on certain parts of the body where the whole organism reflects. The connection between body and its correspondence systems is carried out through the resonant and wave interaction. Su Jok Therapy is used in more than 20 countries throughout the world and especially in Russia where the International Su Jok Academy Centre has been created serving as a part of the International Su Jok Association. Hand anatomy correspondence to the whole body is obviously expressed and proves the deep internal connections between hand and body. A lot of similarity features does certainly prove the correspondence of a thumb to head, of a forefinger together with little finger to arms, of a 3-rd and 4-th fingers to legs, of a palm and sole to the trunk.

According to representations of Oriental Medicine, at the root of pathogenesis of each disease lies a disharmony of energy balance. So hands and feet are considered not only to be a miniature body correspondence systems, but do also contain the whole correspondence to the energetic body system.

According to the theories of Prof. Park Jae Woo, there are different elements of energy system in the body, including the spiral system, it serves as a controller upon the other systems.

One of the most effective methods to recover the spiral energetic system is twist therapy method. So does the Su Jok contain different specific methods serving to promote the health of a human race.

Lily Luzina-Chju
Camilla Luzina

THYROID PATHOLOGY TREATMENT WITH TRADITIONAL CHINESE MEDICINE METHODS

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Recently the growing number of researchers have paid attention to the problems of the thyroid diseases' etiology, it is indicative that the study of this widespread pathology

hasn't approached a satisfactory level.

About 10% of all children and 10-30% of the adult population suffer from endemic goitre. 12.1% of the children examined in Moscow have developed the hyperplasia of the 1-st and the 2-nd degrees. Recently the sickness rate of autoimmune thyroid diseases has become especially high, the most numerous are the cases of autoimmune thyroiditis (AT).

Hormonal thyroid dysfunctions cause autoimmune diseases. Thyroid hormones are essential for the normal growth and development of an organism. Practically all processes related to metabolism – immunity, thermogenesis and also many systems' and organs' functioning depend upon thyroid hormones.

Modern studies performed under the guidance of such competent scientists as have offered only medication treatment of thyroid diseases. However the practices of such diseases' treatment have shown that medication methods are not always positively effective so far. That's why enlarged research of the non-medication thyroid diseases' therapy and, primarily, of the treatment methods that have been developed by Chinese traditional medicine are of the barest necessity.

When 16 years ago I started to treat my first patients suffering from this pathology, it turned out that I myself had two knot formations in the both thyroid lobes. It happened so that I became my first patient myself. I have found out that thyroid pathology induces dysfunctions of the main organs and systems which in turn provide for the development of the following illnesses:

1. cardio diseases, as thyroid hormones increase both the frequency of systoles and miocardia contractions;
2. bone illnesses since there are changes of osteosystem under the influence of thyroid hormones; there is growth acceleration in children; the catabolic action of the hormones results in the losses of the bone tissue albumin which induces osteoporosis (that is the cause of back and bone pains);
3. pulmonary diseases, since hypothyroidism is connected with the obstructive dyspnea syndrome in sleep, snore and the grave course of bronchial asthma;
4. psychic abnormalities; dysfunctions of the central nerve system;
5. genital glands dysfunctions;
6. autoimmune ophtalmopathy.

Since 1990 105 patients with different autoimmune thyroid dysfunctions (95 women and 10 men, aged from 29 to 54) have been treated in the Centre of Chinese Medicine "Sin Ya Chju". In addition 8 patients with postoperative hypothyroidism have received treatment.

Practical recommendations

Acupuncture is indicated for the recovery treatment of the non-complicated hormonal thyroid dysfunctions inducing diffuse and knot forms of this organ's hyperplasia which is usually consequent on an autoimmune process. The acupuncture treatment includes the usage of auricular and corporal points.

The effect on the following auricular points is recommended: 45 – thyroid gland; 22 – internal secretion glands; 28 – pituitary; 55 – shen-men; 51 – sympathic nerve system; 34 – cerebral cortex; 23 – ovary; 97 – liver; 95 – kidney. The choice of the points is determined on the basis of the existing symptoms and the pain sensibility of the representative points on the ear conch.

I.V. Lysikov

INFLUENCE OF THE IMPROVEMENT IN THE SYSTEM OF ADMINISTRATION OF MEDICAL AID ON CHILDREN'S STATE OF HEALTH

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Measures taken within the framework of the National Priority Project „Health" have had a great influence on the improvement of the system of administration of medical aid. Each measure of the National Project means introduction of innovative technologies which contribute to the prevention of diseases and facilitate their early detection and increase the accessibility and quality of administration of medical aid to children of all age groups.

The measures within the project have been developed and implemented in regard to the priority, influence on children's qualitative health parameters, demographic parameters, orientation towards the disease prevention and disability.

The programme „Childbirth Certificate" has been implemented since 2006. Its objective is to improve the quality and accessibility of medical assistance to women during pregnancy and childbirth, to create conditions for healthy children to be born and to strengthen the reproductive health of the population.

The introduction of the third coupon to the "Childbirth certificate" for the usage in children's polyclinics made it possible to develop and introduce a new standard of clinical examination of children under 1 year of age. The creation of perinatal centres, which have modern equipment and highly qualified specialists, made it possible to organise timely and qualitative medical aid to pregnant women with high perinatal risk and to newborns.

An important direction in the reduction of the infant mortality rate, number of diseases and cases of disability is neonatal screening for 5 hereditary diseases, which has been implemented since 2006, and introduction of audiologic newborn screening.

The organisational technologies within the framework of the high-tech medical aid to the population including children are also improving.

In the Russian Federation there has been clinical examination of orphans and children without parental custody since 2007, and orphans and children in difficult life situations, which attend various institutions of health, education and social systems, since 2008.

The National Priority Project "Health" included a new chapter "Prenatal detection of disorders in the development of children" in 2010.

The regional programmes to modernize the health care in the regions of Russia have been implemented since 2011. These programmes have been developed to improve the quality and accessibility of medical aid to the population of the Russian Federation taking into consideration regional peculiarities and the structure of the death rate and diseases in these regions.

The regional programmes of modernization of the health care include measures which assist the development of the medical care for children and aim at the improvement of the material and technical base of medical institutions, introduction of modern standards of medical aid and computer technologies into the health care system. These programmes create modern conditions of nursing newborns with especially low and extremely low body weight, departments (beds) of neonatal surgery, palliative aid and medical rehabilitation of children and help to carry out a thorough clinical examination of teenagers.

The implemented measures influenced the maternal death rate, which decreased from 25.4 to 18.4 among 100 000 children born alive, and the infant death rate, which decreased from 11 to 7.5 among 1000 newborns in the period of 2005-2010. These measures give evidence to positive tendencies in the improvement of administration of medical aid to children.

G.B. Lyubomirskiy
Y.S. Ibakaeva

APPLICATION EFFECTIVENESS OF DIODE LASER SET PICASSO LITE (AMD LASERS, THE USA) IN THE TREATMENT OF CHRONIC GENERALIZED PERIODONTITIS OF MILD AND MEDIUM SEVERITY LEVEL

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Introduction:

The search for modern methods which can increase the anti-inflammatory effect remains vital.

The goal of our work was to determine the efficiency of gingival pockets treatment with diode laser set Picasso Lite (AMD Lasers the USA) in patients with chronic generalized periodontitis of mild and medium severity level.

Materials and methods:

We have examined and treated 248 patients aged from 20 to 60 years with chronic generalized periodontitis of mild and medium severity level. Patients were nominally

divided into two groups. The first group included 24 patients aged from 20 to 60 years with chronic generalized periodontitis of mild and medium severity level. The scaling provided for purposes of professional hygiene was accomplished with the help of PIEZON-MASTER 400.

The second group included 224 people aged from 20 to 60 years with chronic generalized periodontitis of mild and medium severity level. Professional hygiene was accomplished with the help of PIEZON-MASTER 400 and for gingival pockets treatment diode laser set Picasso Lite (AMD Lasers, the USA) was used.

Contact brittle method was applied for gingival pockets treatment, time of exposure – 1 minute for one gingival pocket with installed capacity 0,4W.

The evaluation of paradontium tissue was carried out with the help of indexes PMA, KPI and the index of connective tissue insertion loss; the estimation of gingival pockets depth and gingival recession were accomplished with the help of calibrated broach.

The statistical processing was done with the software Stat Soft Statistika ver 6.0

Results and discussion:

During the research we have determined that after standard professional hygiene and scaling by PIEZON –MASTER 400 the index evaluation in the first group accounts PMA - 31.5%, KPI- 1,55, herein the gingival pockets depth shows average decrease by 0.5 mm and the index of connective tissue insertion loss shows average decrease by 0.5 mm. In the second group PMA accounts 14% ($p<0, 001$), KPI -1,1 ($p<0,001$) the gingival pockets depth shows average decrease by 2,5 mm and the index of connective tissue insertion loss – 2.0mm ($p<0.0001$)

The indexes of gingival recession in both groups stay practically the same either after the scaling by PIEZON –MASTER 400 or after gingival pockets treatment with diode laser set Picasso Lite (AMD Lasers the USA)

Conclusion:

Thus, we have determined that diode laser set Picasso Lite (AMD Lasers the USA) provides anti-inflammatory effect within the treatment of chronic generalized periodontitis of mild and medium severity level. The most effect of diode laser usage was noticed for gingival pockets with depth 3,5-4 mm and gingival recession which does not overpass 2 mm.

I.N. Makarova

ROLE OF MOTOR-VISCERAL RELATIONS IN PHYSIOTHERAPY

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A human body constantly reacts to irritations from external and internal environment. In doing so, there is some reaction of the muscular system in the form of a change in tonus.

The objective of physiotherapy is to normalize tonus. For this reason, the choice of special physical exercises must be oriented towards the correction of the existing pathological disturbances of the organs and systems, characteristic for a specific disease, and towards elimination of changes in myofascial structures.

The primary study of 475 patients with bronchial asthma revealed characteristic dysfunctions of the respiratory system and presence of the muscular imbalance caused by the pathological changes in the muscles innervated by the segments C3-4, T3-9 of the spinal cord and the muscles linked to the general biomechanical and anatomical connections. After the application of the miocorrection method the muscle imbalance decreased significantly, the respiratory function increased in the case of 86% of patients, the tolerance towards physical activity and the coefficient of oxygen use during it improved in the case of 82% of patients, the doses of drugs went down in the case of 60% of patients with bronchial asthma, and 19% of patients stopped taking drugs altogether. The results drastically differed from those in the control group.

The positive effect of miocorrection was observed during the complex treatment of patients with the ischemic heart disease, arterial hypertension, degenerative arthropathies, e.g. arthrosis of the shoulder joint. Common causes for acute and chronic pains of the shoulder joint are pathological muscular changes (myofascial trigger points) and degenerative-inflammatory damages of tendons of deep muscles. At that the pathological changes are diagnosed in m.m. supraspinatus, infraspinatus, subscapularis, teres minor. The main objective of the physiotherapy was to reduce the pain syndrome, eliminate the muscular imbalance and restore movements in the shoulder joint. In the beginning of the treatment the patients did respiratory and relaxational exercises and movements that didn't involve the shoulder muscles directly but were connected to them through common biochemical acts and anatomical chains. In the subacute period the patients did special exercises for muscles of the affected shoulder joint and other joints on the arm on the same side.

We observed 26 patients with the arthrosis of the shoulder joint in the stage of a subsiding exacerbation. During the examination the tenderness and limitation in movements in the shoulder joint was by 50-60% larger than the normal amplitude. After a single set of sequential, starting from the fingers, special movements with the maximum muscle tension, the movement amplitude during bending and abduction increased on average by 8 and 5 cm accordingly, the inner rotation grew by 4 cm. The sensation of pain decreased as well. After a 2 week treatment course the volume of movements during bending, abduction and external rotation normalized in the case of 62% of patients, the inner rotation improved significantly. The muscular imbalance went down on average by 42.3%. These results clearly differed from those of the patients in the control group.

The obtained results allow us to make a conclusion about the advisability of the research in the area of the muscular system in order to diagnose myofascial pathological changes and eliminate them with the help of special physical exercises in case of patients with different diseases of the internal organs and locomotor system.

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CORRECT CELL APOPTOSIS IN ATHEROSCLEROSIS

KRMU, Almaty, Kazakhstan
Kaznanomed, Almaty, Kazakhstan
Aksham, Almaty, Kazakhstan
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Experimental researches of apoptotic parameters in atherosclerosis were conducted with experimental determination of the correction of cell apoptosis in atherosclerotic injured vessels.

In experiment thirty male Chinchilla rabbits, age 6 months, weight average 3500 grams were fed with Purina rabbit chow with 2% cholesterol-enriched diet for 6 months. 5 rabbits with regular diet served as control. After 6 months of feeding, rabbits were subdivided into 3 groups of 10 animals each with continued feeding of cholesterol - enriched diet. Group 1: without treatment. Group 2: treated with 0.57 mg/kg conventional oral isosorbide dinitrate (ISDN) two times a day. Group 3: treated with 0.57 mg/kg PI encapsulated ISDN (PI+ISDN) with transdermal application two times a day. Drug doses were calculated according to the interspecies coefficient of doses recalculation. Animals were sacrificed after 10 and 20 days of treatment with 5 animals in each group. After termination, part of abdominal aorta was snap frozen in cryostat for Oil Red O staining for neutral lipids, part was exposed to routine techniques for complex morphology and electron microscopy and part was stained with Apoptag peroxidase in situ Oligo ligation (ISOL) method for calculation of apoptotic index. Statistical analysis was performed with SPSS 16, authenticity was calculated by Student's T criteria and conducted correlation according to Pearson.

Apoptotic process increases in vessel walls of animals with atherosclerosis. Apoptotic index of aortic walls in the animals with atherosclerosis (62,06±2,01%) was 45 times higher then that of intact animals (1,35±0,49%), $p<0.001$. Use of isosorbide dinitrate (0.57 mg/kg) decreases apoptosis in vessel walls in animals with atherosclerosis. Apoptotic index in the vessel walls after use of isosorbide dinitrate for 20 days authentically decreased by 5,8 times as compared with the animals with atherosclerosis without treatment, $p<0,001$. Use of experimental combination of isosorbide dinitrate (0.57 mg/kg) with phosphotidylinositol decreases apoptosis in cell wall and decreases lipid infiltration in animals with atherosclerosis. Apoptotic index in animals getting experimental combination for 20 days was 16 times less as compared to the animals not getting the treatment ($p<0.001$). Lipid infiltration in the vessel of the animals getting the experimental combination for 20 days was 16.6 times less then that of the animals in atherosclerosis group not getting the treatment, $p<0.001$.

Therapy with combination of isosorbide dinitrate and phosphotidylinositol could be a new potential therapeutic drug for the treatment of atherosclerosis and correct cell apoptosis

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A NOVEL METHOD TO DIAGNOSTICATE VASCULOGENIC ERECTILE DYSFUNCTION BY HARMONIC ANALYSIS OF PENILE BIOIMPEDANCE

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Actuality. Assessment of the blood flow in deep penile arteries with ultrasonic diagnostic methods is complicated by small resolving power and by the effects of mutual position of an artery and the radiator-receiver axis, as well as structural peculiarities of the vascular bed on the results of examination. In contrast, the bioimpedance methods can recorder the volumetric changes across the entire depth of an organ, which is explained by the pronounced difference in the ability of electric and acoustic waves to penetrate into the biological tissues. The paper examines feasibility of the long-term harmonic analysis of penile bioimpedance variations in diagnostics of vascular pathology in penis.

Materials and Methods. Healthy volunteers (n=18) and the patients with erectile dysfunction (ED, n=28) aging 18–76 years were examined. The study was carried out with an original hard- and software complex, which recorded small variations of penile bioimpedance caused by pulsatile and neurogenic oscillatory processes in penis. The long-term epochs of these variations comprising hundreds of cardiocycles were analyzed with fast Fourier transform.

Results. Analysis of the penile bioimpedance variations within the frequency range 0.05-15 Hz covering the Mayer frequency (0.1 Hz), the respiration rate, and the heart rate with the cardiac (pulsatile) harmonics revealed significant differences between the healthy volunteers and ED patients. In the normal spectrum of penile bioimpedance, the Mayer and respiratory peaks were several times higher than the largest (first) cardiac harmonic. This relation is considered as indication to neurogenic origin of Mayer and respiratory rhythmic oscillations in penile bioimpedance. In healthy volunteers, the amplitudes of the first 3-4 cardiac harmonics formed a decreasing monotone series corresponding to the structure of the pulse wave in major arteries. In contrast to these stable cardiac harmonics, the following 'near-resonant' cardiac harmonics 5 to 7 violated the monotone decrease of the harmonic series and could vary during a few minutes probably reflecting the corresponding changes in bioimpedance due to varying vascular tone.

The most patients with vascular ED (89%) demonstrated not only the first 3-4 monotonically decreasing cardiac harmonic series and the near-resonant harmonics, but also the stable (during a 6-min sampling time) 'far-resonant' cardiac harmonics in the range of 8-14 Hz. It is hypothesized that these high-frequency oscillations of penile bioimpedance reflect the sclerotic alterations in the regional arteries manifested by an increase in vascular rigidity, which elevates the frequency of resonant oscillations in these vessels in comparison with the norm. In ED patients, a trend to a decrease of the first three cardiac harmonics in

comparison with the norm was observed, which was accompanied by significant decrease of respiratory R1 and Mayer M1 peaks, the latter being 3-fold smaller than the normal M1 peak.

Conclusions. The data obtained attest to a high value of the novel noninvasive method in diagnostics of vasculogenic ED.

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MODERN DIAGNOSTICS, RESTORATIVE TREATMENT AND REHABILITATION PATIENTS WITH NEUROGENIC DISORDERS OF URINATION AND ERECTION

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Actuality. To study the role of pelvic floor Denervation in the urinary disorders and erectile dysfunction pathogenesis.

Material and methods. On the basis of their own material with a needle electromyography in 14 healthy volunteers, designed regulatory framework for the electromyographic activity of pelvic floor muscles and the corticospinal tract conduction. A total of 72 patients: lower urinary tract diseases with disorders of urination - 29, idiopathic erectile dysfunction - 28 and 15 patients who applied with erectile dysfunction and urinary arising after previous surgery for prostate diseases.

Results. The needle EMG changes were observed in patients with chronic inflammatory changes in lower urinary tract symptoms in the experimental muscle denervation are minimal and no significant alteration of MUP. Patients with pelvic pain and erectile dysfunction detected changes of MUP and the state of muscle fibers in neuretic type, as evidenced by the increase in the average values of the amplitude and duration on the background of the current denervation process. Similar results were obtained in patients with urinary incontinence - in most cases there were signs of the current denervation process. The group of patients undergoing surgery revealed gross disturbances as the conduction of spinal tract and disorders of the contractile ability of pelvic floor muscles. Denervation revealed changes in the pelvic floor muscles need to be considered in the overall assessment of patients with erectile dysfunction and urination, as well as in the choice of treatment. In the treatment of patients, we are widely used drugs that enhance the nutrition and conductivity of nerve tissue, as well as extracorporeal magnetic stimulation of the muscles of the perineum.

Conclusion. In the studied patients groups an increase in the velocity urination parameters on average 13.3% decrease in residual urine volume by 25 - 50%. In neurophysiological study stated improving the conductivity of corticospinal tract by 13.5%, reducing the number of polyphase MUP.

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EXPERIMENTALE MODELLBILDUNG UND EINE BEHANDLUNGSMETHODE DER ANALEN INKONTINENZ

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Die anale Inkontinenz (Enkopresis) ist eine Schwäche des Verschlussapparates vom Rektum mit einer Störung des willkürlichen Abzuges vom Dickdarminhalt (Worobjev, 2001). Die Erweiterungsrate dieser Erkrankung ist 2–4% unter der erwachsenen Bevölkerung (nach einigen Angaben – sogar bis zu 8%). Die Erkrankungshäufigkeit nimmt mit dem Alter zu: die Enkopresis wird bei 45% der Patienten der Altersheime diagnostiziert; verschiedene Defäkationsstörungen bei den Kindern treffen sich mit der Frequenz 1,2–8% (Nagle, 1999; MacArthur, Glazener et al., 2005; Chitkara, Talley et al., 2007; Palsson, Turner et al., 2009). Die Enkopresis ist eine ermüdende Erkrankung, die zu wichtigen sozialen und ökonomischen Problemen führt (Brown, Wadhawan, Nelson, 2010). Die Menschen mit analen Inkontinenz haben die bedeutenden Schwierigkeiten mit der Anpassung in der Gesellschaft. Bei den Patienten mit Defäkationsstörungen steigt die Häufigkeit von den psychosozialen Erkrankungen auf (Athanasakos, Kemal et al., 2010).

In unserer Forschung benutzen wir Wistar-Ratten. Wir entwickelten das originelle Modell der Enkopresis, die in der chirurgischen Exzision des Dickdarmbereichs (bis zu 35% des Anuskreises) mit der Datensatzsperrung der Muskeln des äusseren Analsphinkters bestand. Um das Risiko von der Infizierung der Wundeoberfläche von den Stuhlmassen zu senken, hatten die Tiere die Glucose-Diät (10% die Glucose in Getränk) 2 Tage vor und 2 Tage lang nach der Enkopresismodelirungsoperation. Ohne jegliche Behandlung entstand Deformierung und eine chronische Entzündung des Analgebiets nach der Operation.

Für die Korrektion der experimental entstandenen Enkopresis entwickelten wir eine Methodik der allogenen Knochenmarktransplantation. Unmittelbar vor der Transplantation erstellten wir mit der kleinen chirurgischen Aggression eine Hypoksiezone in der Perianalregion. Das umgesetzte Material (30–32 Mio. Knochenmarkzellen für jedes Tier) wurde in die Zone der Operationswunde und in die umliegenden weichen Gewebe eingeführt. Daraufhin beobachteten wir die beschleunigte Epithelisierung der Wundeoberfläche (zu der vollständigen Epithelisierung kam es nach 5–6 Tagen, ohne Behandlung geschah sie erst nach 14–17 Tagen). Am 10. Tage nach der Transplantation klärten sich bei der histologischen Untersuchung in dicker Muskelgewebe die Zellengruppen vom Blastentyp. Die Granulationsgewebe wuchsen aber nicht. Am 21. Tage wurde die Wiederherstellung der Funktion Rektumsverschlussapparates ohne Bildung der

Bindegewebenarbe beobachtet, dabei merkte man die Gewebehypotrophie des äusseren Analsphinkters und ihre unbedeutende neutrophile Infiltration. Die Erscheinungen der Enkopresis wurden nicht mehr zu sehen.

Es erstellt das originelle experimentale Modell der analen Inkontinenz (Enkopresis). Die entwickelte Methodik der allogenen Knochenmarktransplantation führt zu der beschleunigten Regeneration der beschädigten Gewebe, dabei wurden die Narben nicht gebildet und die Funktion korrigiert.

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SURGICAL TREATMENT OF ESOPHAGEAL ATRESIA IN CHILDREN IN MOSCOW REGION

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The study presents our experience of complex treatment of 114 neonates with different forms of esophageal atresia (EA) accounting for 22% of all developmental anomalies. Among all forms, atresia with inferior tracheoesopha-geal fistula (TEF) prevailed (87.7%). Atresia without fistula was found in 5.26% of cases, atresia with fistula of the proximal segment – in 0.87%, and that with two isolated segmental fistulae – in 3.5%. Premature children with body mass < 1500 mg accounted for 6.1%, and those with intrauterine infection (sepsis) – for 30.7%. Congenital heart diseases were revealed in 32.4% of children, severe defects of the urinary system – in 12.3%, duodenal pathology – in 3.4%, and anal and rectal atresia – in 11.4%. Multiple defects of fetal development were noted in 20.2% of cases, mongolism – in 1.7%, and CNS defects – in 7.1%.

While treating EA, we used a tactic of restoration of child's own esophagus. Paliative operations (TEF ligation and gastrostomy) are carried out in severe associated defects, in deep prematurity, and diastasis between segments > 2.5 cm, keeping proximal esophageal segment for further radical plasty. We refused to perform urgent surgical interventions, preoperatively preparing patients during a day or more to achieve stabilization of child's condition. Children undergo urgent operations in cases of a wide TEF associated with duodenal, anal, or rectal atresia, or when artificial lung ventilation (ALV) is ineffective. Up to 2000, a dowble-row Haiht's suture was used in esophagoplasty which in 24% of cases led to insufficiency of shunt sutures.

Since 2000, the end-to-end shunting has been carried out using a single-row suture with atraumatic needle (vicril 5/0). In these cases, the probe was left in the stomach and drainage – in mediastinum which in cases of shunt incom-pleteness were kept there till full closure of the fistulae. As a result, the suture incompleteness decreased more than 2 fold. Anastomosis healing after conser-vative therapy took, on the average, 24 days. Stenosis development in the shunt area, according to the literature, ranges within the wide limits of 11 to 52%. We noted stenosis in 14.6% of cases: stenosis bougienage was applied by a

closed mode, along a cord. Further, if esophagoscopy showed a shunt < 4 mm (18-20th day after operation), the thrice-repeated preventive bougienage was performed. EA children are followed up for a year after operation. GER was revealed in 7 (6.1%) children who were treated conservatively. According to the clinical material, there were no indications for antireflux operations for our patients.

Today, serious surgical problems are associated with EA having wide diastases between segments. The methods existing today to replace esophagus with a stomach or colon tissue are traumatic to a child and don't provide a high quality of life for him. To keep child's own esophagus, a staged plasty of eso-phagus was worked out. In the neonate period of children with wide diastases between segments, TEF is divided, maximal mobilization of the proximal segment and a sparing one of the distal segment are carried out, both segmental ends are sutured, stretched and fixed to the paravertebral fascia, followed then by gastrostomy. Near one year of age, in conditions of decrease of between-segmental diastasis to 2-2.5 cm, toracotomy with direct shunting is performed.

Such a tactics in treatment of EA children allowed us to achieve good results during 3 last years, without lethal outcomes.

T.V. Melenberg

SPLINTING OF TEETH WITH PERIODONTITIS

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At the present time the spread of periodontal disease is not decreasing, that proves the inability of the existing comprehensive treatment (Abolmasov NG et al., 2009). In recent decades, a wide range of splinting constructions were offered, although but not many of the stabilizing devices take into account the biomechanics of a tooth, the dental arch, and the stress-strain state (VAT) of the mandible.

Research objective is to develop a splint and method of splinting of teeth with periodontitis, taking into account the stress-strain state of the mandible during the function.

Material and Methods for study: the software package ANSYS, the device «Periotest», 48 patients diagnosed with chronic generalized periodontitis of medium-heavy severity level, aged 35-55, with the depth of periodontal pocket 4-8 mm, without evident somatic diseases. All the patients were made splinting of the anterior teeth in the mandible (from canine to canine). The patients were divided into 4 groups: I - with solid coronal splints (or solid splints with ceramic veneer); II - with a ligature splint (double twisted ligature wire with composite); III - with one-row cable-stayed splints by Professor A.N.Ryahovskiy and IV - the usage of the author's cable-stayed splints (RF patent Nr. 86450 from 10.09.2009g.) with the use of the author's method (RF Patent Nr. 2436540 of 20.12.2011g.). Twelve people of similar social status were taken into each study group. Observations were carried out in terms

of up to 2 years. Statistical analysis was performed in a spreadsheet editor, Excell Microsoft Office'2003 and software packages SPSS 11.5 and Statistica 6.0. Evaluation of the clinical relevance of therapeutical effects was carried out by means of contingency tables. The key indicator is the tooth mobility.

Results: Analysis of the stress-strain state (VAT) of the intact mandible, mandible with periodontitis, and different variants of splinting revealed that the hard blocking of mobile teeth leads to an increase in sagittal (20%) and vertical (28%) components, which causes loosening of splinted block of teeth. Our splint is less traumatic for the dental tissue and marginal periodontium (the groove of 0.5 mm in the equatorial area of the tooth), fixes the mobile teeth, does not cause tooth displacement, creates the conditions for full recovery of biomechanics of the mandible. VAT rates correspond to the intact periodontium.

The periotestometrii data coincide with the results of the stress-strain state (VAT) of mathematical models of the mandible. Thus in periodontitis figures were 22,7 ± 5,3 cu, hard blocking of the teeth by means of coronal splints gave negative quantity of the device «Periotest» -3,2 ± 2,6 cu. The use of ligature splint reduced the mobility of the teeth up to 7,8 ± 2,3cu, while using the cable-stayed splint values, 2,4 ± 2,7 cu (splint of Professor A.N.Ryahovskiy) and 2,8 ± 1,5 cu (The author's cable-stayed design of the splints) correspond to the normal parameters of the tooth mobility 2,6 ± 1,2 cu with intact periodontium.

Analysis of the clinical efficiency revealed that the usage of cable-stayed splints were justified for removal of tooth mobility. In comparison with the coronal and ligature splints the number of patients need to be treated by the author's method in order to achieve a favorable effect for one additional patient, is 1, but with one-row cable-stayed splints by Professor A.N.Ryahovskiy this figure is 2.

Conclusion. Based on the results of the studies we can say that the usage of cable-stayed splints is more reasonable for elimination of the abnormal tooth mobility. Cable-stayed splints fixes the mobile teeth securely and allow to restore the full biomechanics of the mandible.

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THE USE OF A NEW IODINE-CONTAINING DRUG IN THE TREATMENT OF CHRONIC TONSILLOPHARYNGITIS

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Microorganisms play an important role in the development of chronic tonsillopharyngitis, therefore, antibacterial agents, including antibiotics are essential in the treatment of this disease. However, the constant increase in the number of microorganisms that are resistant

to antibiotic drugs, the growth in side effects from their use, including fungal diseases, create an urgent need for the development and application of new therapeutic agents with anti-bacterial action.

Our attention was attracted by a new antibacterial drug on the basis of iodine - Stellanin (1,3-diethylbenzomidazole). The drug has a broad spectrum of antibacterial activity against bacteria and fungi. The antibacterial activity of Stellanin is comparable with the action of antibiotics, but it has not produced resistance. At the same time, this drug possesses pronounced regenerative properties, it potentiates repair processes, has an antipyretic, antioxidant effect.

The drug can be applied locally and orally.

The preliminary bacteriological examination of the tonsils, the posterior pharyngeal wall of the patients revealed that the microbial flora, represented by the associations of the representatives of both resident and pathogenic micro flora with the predominance of such microbial species as β-hemolytic Streptococci, Staphylococcus aureus, Candida fungi, was detected in the microbial focus. In the association there were present α-hemolytic (greenish) Streptococci, Corynebacteria, Neisseria (protozoa). The concentration of the microorganisms in the microbic focus was in general high (92%) and exceeded 10 6.

Stellanin was used during 10 days locally and orally up to 6 times a day: 1 teaspoon of 8.5% solution was mixed with 50ml of water, it was taken orally after the preliminary rinsing throat with the same solution.

The bacteriological examination was repeated on the 5th and 10th day of the drug taking. The analysis of the results showed that already on the 5th day of the drug taking, the discovery of β-hemolytic Streptococci, Staphylococcus aureus, Candida fungi decreased significantly (more than 1.5-fold) in the microbial focus. The reducing of the microorganisms concentration on the 10th day of treatment is even more pronounced. The total number of the microorganisms in the microbial focus decreases on average by 2.5 times. The concentration of β-hemolytic Streptococci reduces most significantly. The clinical picture is also changing: hyperemia and infiltration of the arches and tonsils decrease significantly, as well as the amount of purulent discharge in the gaps. The obtained results indicate the feasibility of Stellanin use in the treatment of chronic tonsillopharyngitis.

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KINESITHERAPEUTIC COMPLEX AS AN APPROACH FOR REVITALIZATION OF ELDERLY PEOPLE

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Summary

The physical and psychological benefits from the exercises for the elderly people are considerable. Regular exercises help to avoid health deviations and conditions typical of old age. It was ascertained that the benefit for the health from regular energetic physical

activity exceeds the risks.

Objective of the study. Tracing of the dynamics in the volume of movements of the joints of upper and lower limb and the muscle strength of an upper limb as a result of an approbated kinesitherapeutic complex of elderly and old people with initial degenerative damages of the locomotory system.

Method: Epidemiological prospective cohort study with intervention – clinical testing of the effect of a prophylactic event. The test was performed on elderly people over 65 included in a group for physical training. Technical measuring unit – gym for remedial physical training at the Clinic of Physical Therapy and Rehabilitation at the Military Medical Academy – Sofia.

Conclusion: An overall revitalizing effect of the rehabilitation complex applied for a period of five months was observed, expressed in increased volume of joint movements and increase in the muscle strength. Optimization of the capacity of resilience and tone leads to equivalent "rejuvenation" of the elderly people with years. The improvement of the quality of life of patients with initial damages of the locomotory system is a factor of dominant importance for the target geriatric rehabilitation.

Key words: elderly people; active physical training; flexibility; motor functions; muscle strength

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TREATMENT OF ACUTE LARYNGITIS AND ACUTE EXACERBATIONS OF CHRONIC LARYNGITIS IN PATIENTS WITH CAREERS INVOLVING A LOT OF SPEAKING: EVALUATION OF FUNCTIONAL RESULTS

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The objective of the research was to justify the effectiveness of the new treatment method of acute laryngitis and acute exacerbations of chronic laryngitis in patients with careers which involve a great amount of speaking from the point of view of the functional recovery of the vocal apparatus.

We examined 123 patients: 43 with acute laryngitis (group I) and 80 with acute exacerbation of chronic laryngitis (group II). Depending on the treatment method, each group was subdivided into the main group (1a - 22, 2a - 58 patients) and the control group (1b - 21, 2b – 22 patients).

Starting from the 2nd or 3rd day of the disease or its exacerbation, the patients of the main groups were exposed to hardware-controlled vibrations in the larynx and neck and shoulder area, instillation of bacteroiophage together with traditional medicamentous therapy. The patients of the control groups only received standard medicamentous therapy. The duration of the sick leave for the patients in the main groups was 8,14±3,0 and 16,8±5,1 days, which was significantly less than that in the control groups: 19,0±6,0 and 29,0±7 days; P_1 = 0,000 and P_2 = 0,000.

The patients were examined before and after the treatment. Besides the clinical observation, we also analysed the time of the maximal phonation of vowels "A", "O", "U", "I" and "E" in seconds and the electronic laryngostroboscopy data. We took into consideration vibration disorders of the vocal folds, change in the closing and opening phase and index of the vibration insufficiency, in points.

We found out that the inclusion of vibration and instillation of bacteroiophage into treatment makes it possible to restore the clinical symptomatology in a more qualitative way and within a shorter period of time. During treatment the time of maximal phonation of the vowels in patients with acute laryngitis increased significantly. However, in 30% of cases in group 1a and in 52% of cases in group 1b it changed only insignificantly. The difference in the improvement of the parameters of the electronic laryngostroboscopy between the patients of the main group and the control group was also insignificant; the only exception was that the same effect was achieved within a shorter treatment period.

A significant prolongation of the vowel phonation was observed in patients with the exacerbation of chronic laryngitis after the treatment; however, in the case of 40-58% of patients in the main group and 50-68% of patients of the control group it didn't reach the normal values for healthy people. At the same time, the phonation of "A" and "E" in the main group was longer than that in the control group (P < 0,05). The frequency of disorders of all stroboscopic parameters in the main group reduced considerably. There were no cases of disorders in the synchronism or amplitudes of vibrations in the vocal folds in the patients of the control groups. The mean values of the mentioned parameters after treatment differed significantly (intergroup analysis P = 0,03) from those in the main group.

Thus, the presented research makes it possible to consider the inclusion of the hardware-controlled vibrations and bacteroiophage instillation into the treatment of patients with laryngitis advisable. In the case of patients with acute laryngitis it only reduces the period of treatment; however, in the case of patients with acute exacerbation of chronic laryngitis it reduces both the treatment period and improves the quality of the restoration of the functional status of the vocal apparatus.

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THE MICROBIAL SPECTRUM OF THE URINE IN PATIENTS WITH COMPENSATED AND DECOMPENSATED FORMS OF DIABETES MELLITUS

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Introduction & objectives. Urinary tract infection (UTI) is a frequent complication in cases of diabetes mellitus (DM). Decompensation of the carbohydrate metabolism is a risk factor for development and aggravation of an infectious inflammatory process in the kidneys. The generally recognized uropathogens in cases of DM include the representatives of the Enterobacteriaceae family, in particular E.coli, non-fermenting gram-negative bacteria, and yeast-like fungi of the Candida genus.

Purpose: Assessment of the microbial spectrum of the urine of the patients with DM, including not only the optionally anaerobic (OA), but also nonclostridial anaerobic (NA) bacteria.

Materials & methods. A bacterial examination of urine was carried out for 30 female patients with compensated DM (Group I) и 36 female patients with decompensated DM (Group II). At admission to the hospital, the middle portion of the morning urine was taken for examination, before administration of antibiotics. The bacteriological urinalysis was performed on an extended range of nutrient media for the OA and NA bacteria. The inoculations were incubated in the aerobic and anaerobic conditions of cultivation (10% CO_2, 10% H_2, 80% N_2). Identification of the isolated bacteria was made based on the morphological, tinctorial, cultural, and biochemical attributes, using entero-, staphy-, nonferm-, and anaero-tests (Lachema, Czech Republic).

Results. In all Group I and Group II cases, a mixed aerobic/anaerobic infection was found in the urine. A formally allowable level of bacteriuria was recorded in 13.3% of the Group I patients. In both groups we found, in all cases, the NA bacteria dominated by Eubacterium sp. (60.9% and 56.2%, respectively), and the representatives of the gram-positive flora, where Corynebacterium sp. prevailed (73.9% and 46.9%, respectively). The taxonomic spectrum of the NA bacteria isolated from the urine of the Group I and II patients was wide: Eubacterium sp., Peptostreptococcus sp. (43.5% and 37.0%, respectively), Propionibacterium sp. (39.1% and 50.0%, respectively), Peptococcus sp. (39.1% and 31.2%, respectively), Bacteroides sp (4.3% and 6.2%, respectively). The specific weight of the generally recognized pathogens (enterobacteria) was 56.5% in Group I, and 62.5% in Group II. In the Group II patients, the enterobacterial pattern was represented by E.coli (43.5%) and K.pneumoniae (13.0%). It was wider in the Group II and included the following species: E.coli (37.5%), P.vulgaris (9.4%), E.cloacae (6.3%), K.pneumoniae, C.freundii and A.hydrophyla (each at 3.1%). In both groups the mean level of bacteriuria was lg4.5 0.5 cfu/ml for the representatives of the Enterobacteriaceae family, lg3.5 0.3 cfu/ml for the gram-positive flora, and lg4.0 0.4 cfu/ml for the NA bacteria. No yeast-like fungi of the Candida genus were found in the urine.

Conclusions. In all cases we found, in the urine of the patients with compensated and decompensated forms of DM, a mixed bacterial infection dominated by the NA bacteria and representatives of the gram-positive flora in a quantity exceeding the formally allowable norm ($\geq 10^3$ cfu/ml). Enterobacteria were found in the urine in slightly more than 50% of all cases. This should be taken into account for the performance of bacteriological examinations of urine with the use of the aerobic or anaerobic methods of cultivation, and administration of an antibiotic therapy.

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HAUTLYMPHOME – IHRE KLASSIFIKATION UND THERAPIEOPTIONEN

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Primär kutane Lymphome entstehen in der Haut bzw. manifestieren sich zuerst an der Haut. Anders als bei den primär nodalen Lymphomen, überwiegen an der Haut zahlenmäßig die Lymphome der T-Zellreihe (ca. 75% T-Zell-Lymphome, ca.20% B-Zell-Lymphome, ca. 3-5% Natürliche Killer-Zell-Lymphome und Lymphome dendritischer Zellen). Das häufigste T-Zell-Lymphom ist die sogenante Mycosis Fungoides, hat –außer im Tumorstadium - meist einem relativ gutartigen Verlauf. Die primär leukämische Variante, das Sezary Syndrom, hat hingegen nur eine mittlere Überlebenszeit von nur 4 Jahren. In der Frühphase müssen diese T-Zell-Lymphome von Ekzemen und der Schuppenfleche (Psoriasis) abgegrenzt werden. Für die Pathogenese dieser Tumore spielen Apoptosedefekte der Zellen eine größere Rolle als eine Hyperproliferation. Eine weitere Variante der kutanen T-Zell-Lymphome ist das großzellig-anaplastische, CD30+ Lymphom das eine gute Prognose hat und damit im Gegensatz zur der primär systemischen CD30+ Form steht. Pannikulitische T-Zell-Lymphome wachsen im Fettgewebe und die Expression des T-Zell-Rezepor-Typs (TCRalpha/beta versus TCR gamma/delta) bestimmt ihre Prognose.In den frühen Stadien der T-Zell-Lymphome sind externe (UV-Licht inclus. Extrakorporale Photopherese) und systemische immunmodulatorische Therapien (Interferone, Retinoide, Methotrexat, anti-CD25-Antikörper, anti-CD52-Antikörper, HDAC-Hemmer (zB Vorinostat, Rhomidepsin), etc. indiziert. Erst bei Wirkungslosigkeit kommt primär eine Mono-Chemotherapie(pegyliertes Doxorubicin, Gemcitabine ua) und ggfs auch die allogene Knochenmarkstransplantation in Frage.

Die primär kutanen B-Zell-Lymphome manifestieren sich meist von Anfang an als Knoten (singulär oder disseminiert) und müssen besonders von Pseudolymphomen abgegrenzt werden. Die histologischen Untergruppen beinhalten das kutane Marginalzonenlymphom und das Follikelcenter-Lymphom. Beide haben meist eine gute Prognose und systemische Therapien sind nicht indiziert. Eine auslösende chronische Infektion (zB Borrelien) muss ausgeschlossen werden. Das diffus- großzellige kutane Lymphom, das histologisch einen sogenannten aktivierten Phänotyp aufweist, hat eine

deutlich schlechtere Prognose, insbesondere wenn es multilokulär am Bein auftritt, mit einem mittleren Überleben von 5-6 Jahren. Rituximab ggfs in Kombination mit einer CHOP-Chemotherapie sind hier indiziert. In Abhängigkeit vom Typ des kutanen B-Zell-Lymphoms unterscheiden sich die molekularen Aktivierungswege erheblich.

Die seltenen CD56-positiven Varianten der primär kutanen Lymphome (NK-Lymphome) haben, je nach Subtyp, eine teilweise sehr schlechte Prognose.

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CHRONIC KIDNEY DISEASE. NEW PERSPECTIVES IN TREATMENT

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Today chronic kidney disease remains one of the serious health care problems worldwide. The diagnostics of chronic kidney disease can be based on detection of any morphological and clinical kidney damage markers. CKD is divided into stages according to the level of glomerular filtration rate (GFR). The estimation of the severity of CKD is done according to the reduction of the level of GFR, which characterizes the global kidney function. GFR is an indicator that reflects the number of working nephrons and the total amount of their work. The apparent activity of the main pathological process in kidney tissue remains one of the main reasons determining the high progression rate of CKD. It is advisable for patients with CKD to have an early correction of metabolic disorders connected to the renal dysfunction. Diet therapy, correction of dyslipoproteinemia, anemia and disorders of calcium-phosphor homeostasis can play a certain role among modern approaches towards the correction of metabolic disorders.

One of the approaches which have certain proofs regarding the slowdown of the CKD progression and prevention of a series of metabolic complications of renal failure is intestinal lavage (IL).

Intestinal lavage (IL) is a new medical technology. IL takes a special place among the methods of efferent therapy (hemodialysis (HD), hemosorption (HS), plasmapheresis etc.), because it allows to carry out the detoxification of both the parenteral (blood, plasma, lymph) and enteral environment (gastrointestinal tract) – the deposit sector, exotoxins and endotoxins, which increases the efficiency of the whole body detoxification. A significant distinction of IL from HD and HS is explained by the fact that IL removes all toxicants from the body independent of their molecular weight.

The research included 84 patients with CKD in stage 3A, 16 men and 18 women aged between 39 and 70, which were observed in the City clinical hospital №1 in the department of nephrology. CKD was diagnosed in regard to the morphological and clinical kidney damage markers with the determination of GFR according to the MDRD formula. Patients with high-grade stages of chronic heart failure, primary kidney damages within

systemic diseases of connective tissues, chronic active glomerulonephritis and oncological diseases were not included into the study. All patients had a general clinical examination: creatinine, uric acid, glycolysed hemoglobin, general urinalysis, daily excretion of protein with urine. All patients were prescribed 3 sessions of IL with an interval of 48 hours.

After these sessions the concentration of the urea creatinine and albumin in blood serum were determined. GFR was calculated according to the MDRD formula.

As a result of the study, the levels of GFR were increased to over 60 ml/min in the case of 14 men and 16 women. The filtration remained at the same level in the case of 2 men, and it decreased to some extent in the case of 2 women. All the patients were observed in the nephrology centre in the course of one year.

During the second examination it was found out that CKD was not progressing in the case of 26 patients (12 men and 14 women).

We have come to the conclusion that IL can be recommended for patients with CKD of the stage 3A, because the carrying out of the renal replacement therapy is very costly and it is obvious that it is necessary to look for new methods of CKD treatment.

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CLINICAL EFFICACY OF BRONCHIAL ASTHMA ASSOCIATED WITH GASTROESOPHAGEAL REFLUX DISEASE COMBAINED LASER THERAPY

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Introduction. Association of bronchial asthma (BA) and gastroesophageal reflux disease (GERD) leads to reciprocal deterioration of both diseases. This research is about laser therapy efficacy for treatment of patients with bronchial asthma associated with gastroesophageal reflux disease. The combination of low intensity laser radiation of different wavelength and methods has been used.

Materials and methods. Research was done in Voronezh hospital Nr. 20. There were 60 patients with association of moderate and severe uncontrolled BA and GERD. They were divided into four groups. Patients of main group (19 patients) received pharmacotherapy, supravenous laser therapy (wavelength 0,63 micrometer, power 5 milliwatt, exposition 15 minutes) and laser irradiation (wavelength 0,89 micrometer, power 5 watt, frequency 80 Hz) on region of adrenal glands and epigastric region in 3 minutes. There were 10 diurnal procedures. 2 group (15) received pharmacotherapy and placebo. 3 group (21) received only pharmacotherapy. 4 group (12 healthy persons) were for estimation of normal data of indices. Standart clinical, X-ray, functional studies including spirometry, endoscopy, pH, biochemical and laboratory tests were carried out before treatment, after 12-14 days and 1, 6 and 12 months after treatment. Vegetative state was examined by data of heart rhythm variability with ECG recorder «VALENTA MN-08». Adrenal cortex hormones

were analyzed by immunoenzyme automated method with apparatus «Emmulite».

Results. In 12-14 and 28-30 days after beginning of treatment there was a positive dynamic of most clinic and laboratory parameters: decrease of dyspnea from 2,74±0,04 to 2,21±0,04 at 12-14th days and to 2,2±0,15 at 28-30th days ($p<0,05$), patients noticed significant improvement of cough at 28-30th days ($p< 0,05$), towards the end of period of treatment intensity of such symptoms as heartburn (47%), eructation (21%), dysphagia (9,8%) and it's connection with changing of pose (29,5%) was decreased ($p< 0,05$). At 28-30th days of treatment significant increase of cortisol, testosterone and estradiol level in blood was detected. Evident increase of vegetative reactivity (SDNN) in 46,7% ($p=0,0002$) and decrease of parasympathetic activity (rMSSD) in 31,8% ($p<0,05$) occurred. Beneficial dynamic of test indices had continued after 6 and 12 months. Invalid dynamic of clinic and laboratory data was in placebo group. In 3th group there weren't significant changes of tested indices.

Conclusion. Experimentation has shown that combination of basic pharmacotherapy and repeated courses of laser therapy has the best efficiency and the most evident beneficial effect on clinical course of BA associated with GERD because of alternate action and activation of adaptive and compensatory response. This method of treatment influences on different parts of pathogenesis of BA and GERD. Consequently, introduced method of treatment makes it possible to increase effectiveness of therapy, shorten patient's stay in hospital, corrects level of hormones and vegetative imbalance as well as reduces drugs dose.

K.V. Nikitin

THE TREATMENT OF PATIENTS WITH HERNIAS OF INTERVERTERBAL DISKS WITH THE HELP OF SCENAR-THERAPY

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The difficulty of pathology at hernias of interverterbal disks is well-known. It is connected with serious violation of exchange processes and is accompanied by heavy symptomatology from a pain syndrome to the full impossibility to go.

The treatment is interfaced to great difficulties. In orthodox medicine it is dispersed to the conflict against symptoms or operative intervention which is, in fact, palliative action as doesn't change factors brought to degenerate processes. However, it is not a simple task for the skenar-therapist as to restore an exchange for a long time in separately taken site is not possible, it is necessary to restore it in all an organism, and it, almost always, a problem.

We chose skenar-therapy as the main method of treatment because it allows to restore various systems of an organism at their damage. Thanks to some features (existence of the express diagnostics, return biological communication, influence by neurosimilar impulses), skenar-therapy acts as a universal regulator and the adjuster of physiological processes.

We treated 186 people. Age – from 24 to 68 years. Number of treatment courses – from 5 to 11. Duration of a course – from 15 to 25 days. Duration of all treatment from 5 months to 2 years. In all cases the existence of hernia of one or several interverterbal disks of a backbone is confirmed by means of tomographic research.

At receipt complaints to pains in various parts of a backbone, in buttocks, in feet, a dumbness of the top and bottom extremities, weakness, a hyper tone and an undernourishment of muscles can be possible. In the anamnesis numerous inflammatory processes (tonsillitis, pharyngitises, otitises, antritises) at which treatment applied massive doses of antibiotics, and since the childhood. 34 (~18 %) patients are diagnosed stomach ulcer of a stomach and a duodenal gut, 86 (~46 %) patients had the phenomena enterocolitis and cholecystitis, 22 (~12 %) – hepatitis B. 120 (~64 %) patients had a considerable excess of weight and violation of a fatty exchange.

From the first sessions we explained to our patients that their real condition was the result of long combined influence of damaging factors of environment in which they lived and, partly, created. We analyzed a dietary habits in details and introduced all necessary amendments.

Steady positive result in the form of disappearance of pains, improvements of the general condition, restoration of working capacity is reached at 129 (~69 %) patients (follow-up from 2 to 9 years). From this number 96 (~51 %) patients by tomographic research had reduction of the phenomena of osteochondrosis, restoration of the damaged fibrous rings and disappearance of hernias of interverterbal disks.

From the remained 57 patients 19, having got rid of pains after the first plan of treatment, didn't appear any more and their destiny isn't known to us. The other 38 didn't want to change something in their life, especially to starve. After two courses of treatment they received considerable improvement in the form of disappearance of pains. Now they continue to visit us two-three times a year in process of renewal of painful feelings.

Thus, the treatment of similar diseases demands a complex influence and depends not only on qualification of the doctor and correctness of the chosen technique, but also on the courage of determination and understanding of the patient. And skenar-therapy can be considered as rather adequate method of treatment of similar conditions.

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COMPETENCY OF A CYBERNETICS DOCTOR AS A CONTRIBUTION TO MEDICAL WORK

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The qualification of a cybernetics doctor is given to a graduate of a medical university in accordance with the Russian Federal Standard of Education. The competency is seen as the ability to demonstrate knowledge and skills, which have been acquired according to the qualification characteristics, in practice.

In a clinical situation a cybernetics doctor acts as a system analyst equipped with modern information technologies. The attending physician turns to the analyst with a problem, and the latter helps him to solve the situation, drawing attention to various sides of disease manifestations, offers him information sources to choose an action or minimize mistakes and risks. He uses transdisciplinary cognitive models of cybernetics, synergetics and system analysis in his work.

For example, a clinical situation can be regarded from the point of view of components of the medical information resource (classifications and standards, library of evidential medicine, archives of case histories, theoretical knowledge about local and system life activity mechanisms), doctor's ways of thinking or sources of mistakes. Various information resources require different ways of thinking and algorithms of decision making. When working with reference books and handbooks, the state of a patient is classified according to the set of parameters. Evidential medicine requires thinking in categories of statistics. The main thinking action during work with an archive of case histories is analogy recognition. Highly specialized medical knowledge is used in the mode of a logical conclusion. System images about an organism help to mentally build an integral pattern of the pathological process, which is hidden behind clinical manifestations. The complexity of medicine is caused by the uncertainty of assessment, which demonstrates itself in the form of diagnostic and treatment mistakes. Depending on sources of origin and methods of elimination, there is statistical, diffuse, epistemological and stochastic uncertainty. Statistical uncertainty in medicine exists when average statistical parameters (laboratory norms, frequency characteristics of evidential medicine) are used to make a decision. Diffuse uncertainty occurs in differential diagnostics or when the state of a patient is characterised by such terms as "heavy", "paleness of face" or "massive edemas". Epistemological uncertainty is caused by incomplete knowledge about the assessed object. Sources of epistemological uncertainty could be insufficient attention to body parts outside the narrow specialization or lack of knowledge about individual peculiarities of a patient. Stochastic uncertainty is conditioned by the nature of the phenomenon and cannot be reduced. This property is characteristic for coin-tossing or the roulette game. In nature it is a combination of determinism and chance, which occurs everywhere. In a living organism stochastic behavior is associated with an endless variety of compensatory-adaptive reactions, which are limited by learning and living conditions. That is why we have a fundamental unpredictability of a body reaction towards interference.

The goal of the cybernetics doctor in medicine can be achieved if he is able to realize the qualification he obtained from university in practice in the form of the transdisciplinary competency. It is only possible if he, besides having profound knowledge in the area of individual medical and cybernetic subjects, can also master special competencies which guarantee the generalization of the obtained knowledge (system thinking, ability to work with doctors, independence of judgment). The report offers a technology that helps to create a structure to master the curricular material according to the results of testing. If the test tasks are properly chosen, this technology can be used to detect interdisciplinary

connections and synergy effects (which give evidence to the effectiveness of the education) in the knowledge system of a graduate.

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TRANSURETHRAL LITHOTRIPSY. OUR EXPERIENCE OF 10 YEARS

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Urolithiasis is one of the most widespread urological diseases, the occurrence of which among human population reaches up to 3%. The employable population between 20 and 50 years of age suffers from it very frequently, which defines the special topicality of the problem. Patients with urolithiasis make up 30 to 40% of patients in urological hospitals. Procedures regarding urolithiasis are one of the most frequent operations performed on the organs of the urogenital system and comprise 19.1% (N.K. Dzeranov, E.K. Yanenko 2004). A similar tendency is seen in our hospital. Over the last years one of the leading places in the treatment of patients with urolithiasis is given to contact lithotripsy, based on the fragmentation of concrements through their contact destruction. This method is one of the most progressive methods of stone removal today.

The urological centre in Togliatti is composed of 2 urological departments, which attend to the needs of more than 1 million people. Transurethral contact lithotripsy has been performed in the urological departments since 1999. In the last 10 years 4575 transurethral endoscopic operations with concrements of different localisation have been performed on 3973 patients.

Contact lithotripsy was performed on urethra in the case of 10 patients (0.2%), on the urinary bladder in the case of 362 (8%), in the ureter - 2588(58.7%), ureterolithoextraction -845(18.5%), transurethral contact lithotripsy on the kidney - 312(6.8%), ureteropyeloscopy- -321(7%) patients. 2768(60.5%) patients had concrements in the lower third of the ureter, 1144(25%) in its middle part and 640(14) % in its upper part. Single-step lithotripsy of stones in both ureters was performed in 23(0.5%) cases. In 24% of cases contact lithotripsy on the ureter was an emergency procedure. The complete removal of stones from the urinary tract was achieved in 88% of cases. In most cases contact lithotripsy in bladder was accompanied by transurethral resection of the benign hyperplasia or prostate cancer. If the stones were found in the urethrocele, there was a section of the bladder wall with the subsequent disintegration of the concrements in the case of 37(0.8%) patients. Contact lithotripsy on kidney was performed in 312 cases with migration of stones from the upper third of the ureter or the ureteropelvic segment. Operations were performed with epidural, spinal or intravenous anaesthesia. In our work we have used a pneumatic lithotripter from Calcusplit, semirigid

endoscopes from Karl Storz 8 and 9.5 Fr and a fibre uretheroscope 7 Fr. The percentage of men and women was 37% and 63%. The duration of operation was between 15 and 90 minutes. The sizes of concrements in ureters were between 6 and 15 mm, reached up to 40 mm in the bladder and 2 cm in the kidney. Among complications we can name ureter perforation, migration of stone fragments through the opening of the urinary tract, separation of ureter, impossibility to perform stone disintegration due to its thickness and transfer to an open operation, concrements migration to the pelvicalyceal system, acute pyelonephritis.

Our experience shows that transurethral lithotripsy with the localisation of concrements in different sections of the urinary tract is a safe and efficient method of treatment of patients with urolithiasis. The probability of complications decreases considerably with the increase in the experience of the surgeon. The consistent implementation of all stages of the operation is necessary for their successive use.

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THE RESEARCH LABORATORY OF MEDICAL AND PHYSICAL REHABILITATION OF CHILDREN, TEENAGERS AND YOUNG PEOPLE

Crimean humanitarian university, Yalta, Ukraine

Since the 1st of September, 2011 the new research laboratory has been opened in Yevpatorian institute of social sciences Republican higher educational establishment "Crimean humanitarian university" (Yalta). It was the beginning of the new age of sanitation and rehabilitation of children, teenagers and young people who live in the Crimea.

The director of the laboratory is V. G. Pashenko, an academician of Ukrainian National Olympic academy, an academician of International academy of the scientific researchers, an academician of the European academy of natural sciences.

The results of the research made an essential contribution to the world science in such spheres as:

1. Preschool education.
2. School education.
3. Higher education (sanitation and rehabilitation of the students from special medical groups).
4. Military medicine.
5. Sport medicine.
6. Disaster medicine.
7. Space medicine
8. Medicine for gerontological patients and invalids.

All elaborations are worked out on the level of inventions and patents and awarded five medals of Nobel prize winners: I. Pavlov, I. Mechnikov, P. Khapitsa, Paul Erlikh, Robert Kokh.

The geography of elaborations includes the work from intensive therapy and reanimation to the space medicine. The system of sanitation and rehabilitation of children, teenagers and young people developed by academician V. G. Pashenko doesn't have any analogy in the world. It consists of 40 different inventions and patents, 15 monographs in the fields of prophylactic, clinical medicine, physical education, physical training, physical and medical rehabilitation, 1 scientific handbook with the stamp of the Ministry of education and science of Ukraine (translated into 4 languages).

The practical implementation of elaborations:

1. Yevpatorian institute of social sciences;
2. Yevpatorian cardiological boarding;
3. Yevpatorian kindergarten Nr. 29;
4. Yevpatorian children's camp.

The academician V. G. Pashenko in collaboration with the senior lecturer A.Y. Nikhiforov worked out the model of complex system for rehabilitation of different groups of population from the countries of the CIS.

The efficiency of using these elaborations has been published in 265 scientific works and 10 electronic publications.

The International academy of the scientific researchers awarded V.G. Pashenko diploma "Intelligence, valance, honour" and awarded the honorary title and order "Knight of science and art" as a scientist who made great contribution to the development of the World and National science , education and culture.

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S.N. Makarenko

NEW APPROACH TO THE TREATMENT OF THE METABOLIC SYNDROME

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World Health Organisation experts described the metabolic syndrome (MS) as a „pandemic of the XXI century". The prevalence of the MS is 20-40%. The MS is more common among middle-aged and elderly population (30-40%). Cardiovascular diseases and the mortality rate are significantly higher in the case of people with the MS in comparison to others. The MS increases the risk of developing type 2 diabetes and arterial hypertension. The MS is associated with subclinical damage of vital parts.

The objective of the research is to evaluate the effectiveness of treatment of patients with the MS with the help of an intestinal lavage (IL).

The presence of central obesity and two additional criteria was the basis for diagnosing the metabolic syndrome.

This symptom complex can progress with the prevalence of one or another type of metabolism disorder, which in the end determines the priority direction of the therapy in the given case.

The research observed 28 patients (18 men, 10 women) with the MS, which was diagnosed on the basis of the criteria defined by the All-Union Scientific Society of Cardiologists (2009). The mean age of patients was 46.2+-0.3 years. All patients were taken anthropometric measurements (height, weight with body mass index (BMI), waist circumference (WC)). We found the corresponding abdominal obesity. The arterial pressure was measured by using the usual method. We also determined the fasting glucose level, creatinine, uric acid, general cholesterol level, high-density and low-density lipoproteins (HDL and LDL), triglycerides.

All patients received non-medicamentous treatment, which included dietary measures and physical exercises. The patients were divided into 2 groups: the first group (10 people) only received non-medicamentous therapy; the patients of the second group (18 people) received both the non-medicamentous therapy and 3-5 sessions of the intestinal lavage.

The method of intestinal lavage is a washing out of the whole gastrointestinal tract in the natural direction, using a special saline solution for the purpose of the detoxification of the body, correction of homeostasis parameters, functional disorders of organs and systems and microbiocenosis. The composition of the solution in regard to its electrolytic, pH and osmolarity structure is identical to that of chime.

The enteral mixture contains main macroelectrolytes, microelements and a vitamin complex in balanced proportions, as well as pharmaceutical substances on the basis of products of vital activity of the normal intestinal microflora, eubiotics and pectin in the daily dose. The physiology of the mixture and presence of probiotics and pectin ensure normalisation of the mineral and vitamin metabolism between enteral and internal body environment and microbiocenosis. As a result of the therapy, the body mass decreased in 1.2 times in the group with IL.

There was a definite reduction in the level of the uric acid in 1.3 times, that of the general cholesterol in 1.1 times and that of the glucose in 1.5 times.

Conclusion

IL is a highly effective and safe method that can be used for treatment of patients with the MS: The reduction of the body mass and especially of the visceral fat mass contributes to the correction of metabolic disorders, increase in the tissue sensitivity towards insulin and to the reduction of the blood pressure, which significantly decreases and puts off the risk of complications. This method is approved and allowed to be used by the Ministry of Healthcare and Social Development of the Russian Federation.

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THE USE OF THE DRUG „KUDESAN" (COENZYME Q10) IN THE COMPLEX TREATMENT OF DISEASES OF THE CARDIOVASCULAR SYSTEM

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Nowadays basically any cardiovascular disease should be treated within the framework of the cardiovascular continuum – a continuous chain of interconnected changes in the cardiovascular system caused by risk factors to the gradual occurrence and progression of cardiovascular diseases to the development of chronic cardiac insufficiency, terminal heart disease and lethal end.

One of the key links in the cardiovascular continuum, including arterial hypertension, is the endothelial dysfunction.

In this regard it is necessary to study the clinical effectiveness of drugs containing coenzyme Q10 in patients with arterial hypertension.

The main objective of the research is to evaluate the clinical effectiveness and safety of the drug Kudesan® as a part of the complex treatment of arterial hypertension under real clinical conditions. The additional aim of the research was to study the influence of the drug Kudesan on the endothelial dysfunction in patients with arterial hypertension.

The results of the research.

In accordance to the objective of the research to evaluate the effectiveness and safety of the drug Kudesan as a part of the complex therapy of arterial hypertension we chose patients for two clinical groups. The main group included 60 people (23 men, mean age 51.7 ±0.1 years; 37 women, mean age 52.1 ±0.2 years) with mild and moderate hypertension, who received basic antihypertensive therapy (in accordance to the clinical standards) and Kudesan in the dose of 3 ml/day (90 mg of coenzyme Q10). The body mass index didn't exceed 30 and was 27.3±0.2 on average.

The additional aim of the research was to study the influence of the drug Kudesan on the endothelial dysfunction in patients with arterial hypertension, which in its turn determined the use of additional observation methods (determination of the velocity of the pulse wave, elasticity of vascular walls etc.).

To sum up the above, it is possible to make a conclusion about a real influence of Kudesan, which reveals itself more than just a drug for metabolic support. It is evident from the results of biochemical analyses, in particular, from a significant change/improvement of the AST and ALT parameters and the lipid spectrum.

The obtained results from the study of the vascular components, in particular, the study

of the vessel elasticity, responsiveness of vascular walls and, importantly, normalisation of the lipid spectrum, which significantly changed in patients after the treatment with Kudesan, allows speaking about the real improvement of the endothelial component in patients suffering from arterial hypertension.

It is possible to make a conclusion about the advisability of use of this drug in the complex treatment of arterial hypertension. Taking into consideration the absence of side effects, this drug can also be recommended as a preventive measure.

Eckhard Peterson

BOTULINUMTOXIN IN DER BEHANDLUNG DER MS - INDUZIERTEN SPASTIK

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Die Spastik ist eines der häufigsten und behinderndsten Symptome der Multiplen Sklerose. Sie ist gekennzeichnet durch eine inadäquate und überschießende Muskelaktivität, die auf eine Unterbrechung der supraspinalen Kontrolle der spinalen Reflexaktivität beruht.

Eine spastische Muskeltonuserhöhung findet sich hauptsächlich in den Muskeln, die der Schwerkraft entgegenwirken, das heißt den Armbeugern und den Beinstreckern.

Die spastische Tonuserhöhung von Muskeln kann eine Reihe von sekundären Komplikationen und Beeinträchtigungen zur Folge haben. So kann der spastische Spitzfuß Stürze verursachen und der gebeugte spastische Arm ist zumeist ein großes Hindernis beim An- und Auskleiden.

Die Spastik kann durch oral verabreichte Medikamente vermindert werden, welche die Dehnungsreflexe auf spinaler Ebene ergänzen (z. B. Baclofen, Tizanidin, Benzodiazepine) oder muskelrelaxierend wirken (Dantrolen).

Besteht eine umschriebene Muskelspastik, ist eine Behandlung mit Botulinumtoxin zu erwägen.

Botulinumtoxin blockiert die neuromuskuläre Übertragung in der injizierten Muskulatur und dämpft somit die spastische Muskelaktivität fokal.

Botulinumtoxin A ist im Erwachsenenalter in Deutschland nur zur Behandlung des Handgelenkes nach Schlafanfall zugelassen. Der Einsatz bei anderen Indikationen erfolgt im Rahmen eines Heilversuches.

Ziele der Botulinumtoxinbehandlung sind in erster Linie die Erleichterung der Pflege, eine Schmerzlinderung sowie die Prophylaxe von Hautinfektionen oder von Subluxationen, die durch schwere Gelenkfehlstellung hervorgerufen werden können. Eine Verbesserung kann nur selten und nur bei ausreichender Kraftentwicklung der Antagonisten erreicht werden.

Botulinumtoxin A wird seit mehr als 10 Jahren zur Behandlung der Spastik eingesetzt.

Die Wirksamkeit wurde in einer Vielzahl von klinischen Studien systematisch untersucht und belegt.

Placebokontrollierte Studien liegen für die Adduktorenspastik bei Multipler Sklerose, die Armspastik nach Schlaganfall und für den spastischen Spitzfuß vor.

Der dort nachgewiesene Behandlungseffekt rechtfertigt auch den Einsatz bei fokalen spastischen Extremitätenfehlstellungen sowie bei schwerer Adduktorenspastik bei MS.

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A.A. Dubovova
S.Yu. Khudaya

INNOVATIVE TECHNOLOGIES IN SCIENTIFIC AND METHODICAL BACKUP OF TRAINING OF HIGHLY QUALIFIED SPORTSMEN

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Objective of the research was to study dynamics of highly qualified sportsmen's psycho-energetic and emotional state during competitions in order to make up correction and relaxation programs and to organize rehabilitation measures.

Research tasks included: carrying out corrective and rehabilitation measures on the basis of data about body psychofunctional state by means of ROFES technology and Colourpsychosomatics technology (CPS) und revealing the most important characteristics of sportsmen's functional and psycho-energetic body state indicators dynamics to put these data at coaches' disposal.

Research methods and organization.

The research was conducted in 2010-2011 at Kuban state university of physical education, sports and tourism in the laboratory for scientific and methodical problems of preparing the Olympic reserve. The research involved members of rhythmic gymnastics team of the Krasnodar region and acrobatic gymnastics team of Russia, including multiple medal winners and gold medalists of international competitions (men's pair). The age of the research participants lied in the range from 15 to 20 years old, their qualification is either sub-master sportsman or master of sports.

The participants were those sportsmen who had a tight schedule of competitions, felt lack of self-confidence, anxiety before competitions, emotional instability.

Corrective measures were carried out stagewise in precompetition period as well as during competitions of different levels.

The following individual characteristics of a sportsman's bioelectrical homeostasis were determined with the help of hardware-software complex "Kvantum PRO" by making BOE- grams of 10 fingers: 1) Area of glowing and distribution of bioenergy in the body; 2) FEB - functional and energetic balance; 3) FEI – functional and energetic index; 4) level of energy deficiency; 5) symmetry of energy deficiency distribution.

Dynamics of the qualities important in sports such as activity, purposefulness, stress resistance, self-confidence, psychological stability was studied with the help of the program "Sport-rating". This dynamics indicates the volume of psychoenergetic resources along with prenosological changes (introspection, unmotivated anxiety, performance decrement, affectability, irritation) and states of dysadaptation (anxiety and hypochondriasis, aspiration for solitude, vegetative dysfunction, energy deficiency).

Physical and emotional biorhythms were detected by means of ROFES hardware-software system, thus preparedness of the body for physical exertion was assessed. Balance of inner physiological and psychological state was determined by the vegetative nervous system state and psychoemotional state and functional state of body.

On the basis of psychosomatic condition indicants, physical and emotional state biorhythms individual techniques for CPS sessions which were conducted twice in the presence of a coach and every day by a sportsman by himself/herself within a week microcycle have been created.

Results discussion

Analyzing the results, it should be noted that the important indicants of bioenergy level like level of energy deficiency and symmetry of energy deficiency distribution changed irregularly but tended to increase. This tendency got especially strong after two months of CPS sessions and autotraining sessions during competitions.

All the woman-gymnast's indicants of energy level obtained positive tendency after four months of the proposed measures, especially during the competitions where she won a prize.

All the qualities important in sports, revealed themselves, except for stress resistance, being an indicator of the person's ability to endure considerable emotional stress. This fact points at the necessity of further corrective sessions which would improve will power and psychic self-regulation.

The qualities important in sports revealed themselves vividly in the acrobats who won prizes during international competitions. However, top partner lacked psychological self-regulation and stress-resistance. Under the influence of correction sessions within the limits of the program "Colourpsychosomatics" the area of glowing and the symmetry of bioenergy distribution got better, while energy deficiency reduced.

Positive effect of CPS sessions on the basis of ROFES became evident after 2 months of regular CPS sessions and rehabilitation measures. It was noted that adaptative potential increased considerably; psychic, emotional and functional body state became normal.

Thus, the research results show that highly qualified sportsmen who participate in a large number of high-level competitions during the year need systematic scientific and methodical backup in their training. Use of innovative methods like gas-discharge visualization (GDV) and the program "Sport-rating" for monitoring dynamics of psychoemotional state allows a coach to do timely corrections with the help of ROFES hardware-software complex along with Colourpsychosomatics method or auto training during precompetition period. Basing on the indicants registered with gas-discharge visualization (energy deficiency

level, symmetry of energy deficiency distribution, functional and energetic index) and the ones registered with ROFES, as well as on laboratory scientists' and psychotherapist's recommendations, a coach can modify training schedules within microcycles as soon as needed, include in competition preparation program vitamin and mineral complexes, sports drinks, functional diet, sleep and rest schedule.

A.G. Polyakova

EHF-PUNCTURE IN COMPLEX REHABILITATION OF PATIENTS WITH VERTEBRAL AND SPINAL TRAUMA

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In recent years for correction of a muscular tone influence by electromagnetic radiation through acupuncture zones is used by electromagnetic radiation of extremely high-frequency (EHF) of the range which spasmolytic effect it is proved experimentally and confirmed with multicenter placebo-controllable clinical researches.

The aim of investigation is to determinate the clinical-functional possibilities of EHF-puncture in the complex rehabilitation of the patients with cerebrospinal injuries controlled by the data of the neuro-functional diagnostics.

Material and the methods. We have studied the results of the rehabilitation 78 patients aged from 26 to 37 with cerebrospinal injuries.

The basis of complex rehabilitation consist of: kinesotherapy, massage and hydrotherapy. The main group consisted of 42 patients, who were treated by the complex basis rehabilitation with EHF- puncture under the control of neurofunctional diagnostics

The control group comprised 36 patients with the same pathology who were treated by complex basis rehabilitation without EHF- puncture.

The frequency band of apparatus was 53-78HHz and the exposition of radiation 20-30 minutes. The course was during for 10 days (daily). EHF-puncture was performed on points for normalize abnormal homeostatic functions and it started sanogenesis processes.

The investigation methods consisted of the clinical, biomechanical and neuro-functional diagnostics before the start of treatment courses and after its completion. We studied the specific characteristics of the electroconduction about our patients by neuro-functional methods.

Results: The assessment of an initial condition of a vegeto-trophic innervation allowed to establish its expressed violations in 89%, considerable – in 10% and insignificant – in 1% of cases. At control research of dynamics of electroskin conductivity in representative acupuncture zones at the end of EHF-puncture course at patients of the main group

against clinical improvement of function of a urination in 46% of cases positive dynamics of vegeto-trophic providing segments of the spinal cord which is responsible for function of uric bladder was registered.

The obtained data were verified at the end of a course of regenerative treatment with dynamics of a tone in extremities and evakuatorny-accumulative function of uric bladder. In the main group of the patients receiving in complex regenerative treatment to EHF-puncture after treatment authentic decrease in a muscular tone is noted. In the main group the number of patients with a normal tone at the end of treatment was for 18 % more in comparison with baseline level. In control group the number of patients with a normal tone changed only for 1% (p=0,00064). The tone at seven of 10 patients with slightly raised tone, at 10 of 40 with moderately raised was normalized, the tone decreased by one point at five patients with expressed and two – with a rough spasticity

Conclusion: The carried-out research showed efficiency of application of a method of EHF-puncture in complex regenerative treatment of patients with a vertebral and spinal trauma: decrease in a muscular tone in extremities, improvement of evakuatorny-accumulative function of uric bladder is noted. Decrease in pathologically raised tone of muscles of a back and the bottom extremities promoted improvement of mobility of patients.

Thus, the found clinical-functional violations of a muscular tone at patients with a vertebral and spinal trauma testify to expediency of their correction. The obtained data prove need of carrying out the complex regenerative treatment including a modern method of medical influence by means of EHF-puncture of patients with cerebrospinal injuries.

Mandy Protze-Kälberer

NEUE MÖGLICHKEITEN DER PSYCHOSOMATISCHEN BEHANDLUNG

IAGEH, Waldbreitbach, Germany; http://www.iageh.de/home.html

Unser Körper ist aus mehr als 100.000 Milliarden Zellen zusammengesetzt. Die Zellen des physischen Körpers sind in ihrer Beschaffenheit und Reaktion abhängig von der ihnen vorliegenden Information. Jede Reaktion dauert ca. 1 Nanosekunde und löst eine Lawine langanhaltender Nachwirkungen (Photonen) aus (Prof. Popp). Biophotonen sind Träger der Informationen von Zelle zu Zelle. Unsere Intelligenz sucht sich die Möglichkeiten aus den vorhandenen gespeicherten Informationen aus. So kann es im Laufe der Zeit des Lebens sein, dass durch Traumatisierungen Gefühle blockiert werden und damit Fehlinformationen gespeichert und von Zelle zu Zelle geleitet werden. Fehlinformationen führen zu Einschränkungen im Bewusstsein und damit zu Krankheiten, folglich stören sie das Regulationssystem. Der Körper als Resonanzfläche

ist sozusagen abhängig vom Bewusstsein des Menschen. Zellen sind die kleinsten Bau- und Funktionseinheiten des Organismus. Sie können Stoffe aufnehmen, umbauen und wieder freisetzen, also am Stoffwechsel teilnehmen. Pro Sekunde gehen mehrere Millionen Zellen zugrunde und ebenso viele werden neu gebildet. Die Zellgeburt dauert einen Tag, jede Zelle enthält 50-70 Millionen Informationen. Pro Sekunde finden im Durchschnitt ca. 100.000 chemische Reaktionen pro Zelle statt.

Die Informationen, die die Materie, bzw. deren Schwingung enthält, können verändert werden. Durch Veränderung der vorhandenen Informationen können die entstandenen seelischen Blockaden aufgelöst werden. Deren Ursachen sind auf der Informationsebene, der Molekularebene des Körper-Geist-Systems, gespeichert. Hier wirkt der materialisierte oder physische Körper als Resonanzfläche. Dieser und die entsprechende Information stehen über Energie-Verbindungen im Quantenfeld in Resonanz. Es gibt also für jede Blockade jeweils eine Entsprechung in der Matrix. Durch die Auflösung erweitert sich das Bewusstsein, die Summe der Möglichkeiten an auswählbaren Informationen verändert sich. Dabei ist Gott die universelle Norm, der Geist der augenblickliche Beobachter und damit das Gehirn der Ort, wo die Informationen des Geistes gespeichert werden.

Unser Gehirn besteht zu 80 Prozent aus Wasser, unser Blut zu 92 Prozent. In unseren Zellen schwimmen die Kerne und darin unsere Erbsubstanzen und auch zwischen den Zellen ist Wasser. Das Wasser bzw. die Körperflüssigkeit des Menschen unterliegt den Gesetzen der Thermodynamik und der Entropie. Wärme oder thermale Emission ist eine sehr unordentliche Energieform mit Entropie. Führt man also einem System Wärme zu, erhöht man seine Entropie. Die in den Mitochondrien der Zellen gespeicherte Energie verändert sich, die Arbeitskraft wird erhöht. Dabei fließt die Energie immer zum schwächeren, bzw. dem Ort der niedrigeren Temperatur. Durch gezielte Energiezufuhr oder Energiewegnahme können Wasserschwingungen gelöscht aber auch induziert werden. Indem wir Energie gezielt entziehen, beseitigen wir die Schwingungen im Körper, die krankmachende Informationen beinhalten. Indem wir Energie geben, können wir dem Organismus heilsame Informationen einprägen. Sowohl die Löschung als auch die Neuprogrammierung breitet sich im Körperwasser aus und geht auf den Organismus über.

Wie geschieht bioinformative Selbstbeeinflussung?

Nach der MPK-Methode® wird nach Kenntnisnahme der krankmachenden Fehlinformation deren Ursache im biophysikalischen Feld lokalisiert. Das blockierte Gefühl wird durch die Verbindung mit dem Großen Geist in Einklang gebracht und somit gelöscht. Die Fehlinformationen werden der anderen Person bewusst gemacht, um einen Lerneffekt zu erzielen. Die Informationen des Großen Geistes werden gleichzeitig eingeprägt. Je nach Krankheitsbild findet ein entsprechender Energieausgleich im Körper statt. Dies geschieht durch eine spezielle Atemtechnik mit der die Person mit bioinformativen Fähigkeiten in der Lage ist, ihre Energie um ein Vielfaches zu erhöhen, und so die Selbstheilungskräfte im Körper der anderen Person anzuregen.

I.V. Roganova

PATHOGENIC SIGNIFICANCE OF ENDOTELIAL DYSFUNCTION IN INFLUENZA OLDER PATIENTS

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The purpose of the study - definition of pathogenetic significance of vascular endothelial status of the influenza in older aged patients.

Material and methods. A comprehensive survey of 44 patients with moderate uncomplicated influenza at the age of 51-65 years was conducted. Fon Willebrand factor in the ristomitsin-platelet aggregation test, microcirculation in the conjunctival vessels by biomicroscopy and the relationship of ristomitsin platelet aggregation time with the parameters of microcirculation were determined.

Results. Ristomitsin platelet aggregation time in the older aged patients and convalescents under the influenza was reduced ($p<0,01$). Persistent changes in basic components of the microcirculation system were determined: the perivascular - swelling and microgemorragical syndrome, uneven caliber and increased tortuosity of capillaries, arterioles and venules, intravascular changes - sludge-phenomenon and microthrombogenical syndrome. Perivascular edema was most pronounced at 1-3 days of illness ($p<0,05$), microgemorragical symptoms at 6-8 days ($p<0,05$) changes in the capillaries at 4-5 days of illness ($p <0,0001$), arterioles ($p<0,01$) and venules ($p<0,05$) - at 6-8 days, at 4-5 days - sludge-phenomenon ($p<0,001$) and microthrombogenical syndrome ($p<0,0001$).

During the correlation analysis time between ristomitsin-platelet aggregation time with impaired microcirculation system we received reducing ristomitsin platelet aggregation time accompanied by microcirculatory changes increase. We identified a statistically significant negative correlation with perivascular shifts - microgemorragical syndrome ($p<0,0001$), changes in the capillaries, arterioles and venules ($p<0,0001$), as well as intravascular - sludge-phenomenon and microthrombogenical syndrome ($p<0,0001$) . It is proved that the ristomitsin-platelet aggregation time is a significant predictor for the development of perivascular violations - perivascular edema ($p = 0,0003$) and microgemorragical syndrome ($p = 0,0000001$), changes in microvessels - capillaries, arterioles and venules ($p = 0,0000001$), intravascular - sludge-phenomenon and microthrombogenical syndrome ($p = 0,0000001$).

Discussion. A special place in the hemostatic system belongs to the Fon Willebrand factor. It is released by the blood vessels endothelium and has a role of damage molecular marker. Reducing ristomitsin platelet aggregation time in the older aged patients and convalescents under the influenza shows persistent endothelial damage with the release of Fon Willebrand factor in the environment by damaged vessel wall in this patient group. They develop disorders in the microcirculatory system in the form of perivascular edema, microgemorragical syndrome, changes in the capillaries, arterioles and venules structure, sludge phenomenon and microthrombosis. A negative relationship exists between ristomitsin-induced platelet aggregation time and the development of microcirculatory changes. Thus, the endothelium structure features results in microcirculation and affects the rheological

properties of blood in the older age patients under the flu. Vascular endothelium damage is an important pathogenetic factor and predictor of disturbances in the microcirculation. This proves the importance of endothelial dysfunction in patients with influenza older aged group. The findings should be considered when treating patients, organizing and conducting rehabilitation activities.

S.V. Saakyan
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COMPLEX HI-TECH MODERN DIAGNOSTICS OF SMALL UVEAL TUMORS

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Purpose. To reveal differential diagnostic symptoms of small uveal tumors, using fluorescence angiography (FAG) and time-domain optical coherence tomography (3D OCT).

Material and methods. The analysis of tomographycal and angiographycal changes, revealed by time-domain OCT (SOCT Copernicus HR, Optopol Technology S.A., Poland) and fundus - camera 91/202 (Germany) in 140 patients (140 eyes) with small malignant (melanoma - 80, metastatic carcinoma - 10) and benign (suspicious nevi - 20, melanocytoma - 7, delimited hemangioma - 23) uveal tumors, was carried out. The thicknesses of prominent focuses ranged from less than 1 to 3.2 mm, basal diameter no more than 10 mm.

Results. Melanoma (n=80). 3D OCT: local microdetachments of neuroepithelium(NE) over tumor and in a contiguous zone -61%; cystoids retinal edema -57%; in all cases bow-shaped choroidal profile, hyperreflective strip in inner choroideus with effect of shadow and choroidal vessels not visble. FAG: own tumor`s vessels - 47%, «pin-points» - 31%, «hot spots» - 41%, subretinal fluid - 51%, big choroidal vessels - 28%, hypofluorescence ring - 47%, angiopathy of retina - 28%, hyperfluorescence in late phase.

Metastatic carcinoma (n=10). 3D OCT: in all cases retinoshisis, extended micridetachment of neuroepithelium over the tumor and in contiguous zone, micro-waved changes of choroidal profile, detachments of retinal pigment epithelium, low-reflectivity strip in deeper layers of choroideus with extended to suprachoroideus spatium. FAG: hypofluorescence in early phase without own vessels in all cases, symptom of «scattering of groats» - 75%.

Suspicious nevus (n=20). 3D OCT: in all cases increase of the thickness of the hiperreflective layer, isolated microcysts over tumor, little change of choroidal profile, hyperreflective tissue in inner choroideus. FAG – similar (54%) or confluent (46%) druzen over hypofluorescence focus.

Melanocytoma (n=7). 3D OCT: in all cases elevated thinning hyperreflective layer elevated over tumor with effect of «shadow», destructive changes in contiguous zone – 23%. FAG: hypofluorescence of lesion at all stages, blocked retinal vessels in all cases.

Delimited hemangioma (n=23). 3D OCT: detachment of the neuroepithelium over tumor and contiguous zone with big cavity with fluid – 45%, segmentary detachments of the neuroepithelium -55%, middle or low reflective strip in inner choroideus without effect of «shadow» in all cases. FAG: early hyperfluorescein of lesion with big paralleled own vessels, «wash-out» fenomen in all cases.

Conclusion. Thus, 3D OCT and FAG detects differential diagnostic symptoms of small uveal tumors for following adequate eye-saving treatment.

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POSSIBLE VARIANT OF IMATINIB SECONDARY RESISTANCE OF CHRONIC MYELOID LEUKEMIA PATIENTS WITH FAILURE OF TREATMENT OR SUBOPTIMAL RESPONSE

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Imatinib resistance considered to be a serious clinical problem of Chronic Myeloid Leukemia (CML) treatment [Silver R, Talpaz M, Sawyers CL, et al., 2004; Guilhot F., 2004, JE Cortes, et al., 2009]. In spite of imatinib efficacy we sometimes witness suboptimal response and failure of treatment [O'Brien S.G. et al., 2008]. Treatment success of tyrosine kinase inhibitors mostly depends on the introduction of effective monitoring system of treatment results that let doctors change therapeutical CML tactics in time in each particular case.

Imatinib resistance can have the primary character (for example, phenotype specificities of HLADRB1*13(06) or HLA-DRB1*01 and HLA-DRB1*12(05) may be markers of fast CML progression with death outcome) [Ovsyannikova E.G. et al., 2011]. The secondary resistance is losing effect upon positive treatment response [O'Brien S, Guilhot F, Larson R, et al., 2003]. It is subdivided into true (that depends on pharmacodynamic (PD) and pharmacokinetic (PK) distinctive features) and false. PD causes of the first rank are the clonal proliferation of leukemia cells consisting point mutations in domain of ABL-kinase [Branford S, Rudzki Z, Walshet S, et al, 2002; Hochhaus A. & La Rosee P., 2004; Melo J & Chuah C., 2006]. PD causes of the second rank often arise as a result of mutations that provocate conformation changes or change critically significant tyrosine endings in imatinib binding regions of Bcr-Abl oncoprotein. [Apperley JF. Part I, 2007]. PD causes of the third rank are clonal progression connected with additional chromosome abnormalities in cells with Ph(+) chromosome [O'Dwyer M, Mauro M, Kurilik G, et al., 2002]. PK causes imply the decreasing of intracellular imatinib concentration that is conditioned by binding plasma proteins; the decreasing of drug transport in cell and the increasing of drug transport out of cell (because of hiper/hipoexpression of some transporters, for example MDR1) [Hochhaus A & La Rosee P., 2004; Le Coutre P, Tassi E, Varella-Garcia M, et al.,

2000]); the activation of kinases from Src family, such as Lyn [Apperley JF., 2007; Li S., 2008; Wu J., 2008].

In our special focus is false resistance, conditioned by such subjective factors as non-treatment compliance. Low imatinib plasma concentration can be a reason of treatment failure and might be a case for a serious talk with a patient about the importance of treatment compliance.

The study was located in Nijegorodsky Regional Clinical Hospital and Dzerdjinsky District Hospital within the period of 2006-2010 years. The total number of CML patients in Chronic Phase (CP) was 42. All of them had imatinib in doses 300-800 mg once a day. 23 patients had treatment failure and 6 patients had suboptimal response. All of them had suspicion of non compliance. There was the study of minimal plasma level concentration (C_{min}) of imatinib that was measured by HPLC/MS/MS method. The second measurement of imatinib plasma level concentration performed after the talk with the patient about importance of treatment compliance or doses escalation. On getting results of minimal imatinib concentration all the patients were divided into four quartiles (Q_1-Q_4). Quartile 1 (Q_1<647 ng/ml) had 56,52% of patients at the first measurement and 13,04% of patients - at the second measurement in group 1. Also Q_1 included 33,33% of patients and 0% of patients in group 2 at the first and second measurements accordingly. Quartile 2 (Q_2) (range, 647 to 1170 ng/ml) included 34,78% and 39,13% of patients in group 1, 66,67% and 50% of patients in group 2 at the first and second measurements accordingly. Quartile 3 (Q_3) (range, 1170 to 2000 ng/ml) included 8,7% of patients and 34,78% of patients in group 1; but 0% and 33,33% of patients in group 2 at the first and second measurements accordingly. Quartile 4 (Q_4) (>2000 ng/ml) included 0% and 13,04% of patients in group 1; but 0% and 16,67% of patients in group 2 at the first and second measurements accordingly.

In conclusion, the measurement of imatinib plasma level concentration is an objective criterium of CML patient compliance.

P.V. Seliverstov

CLINICAL AND PHYSIOLOGICAL MECHANISMS OF ACTION OF PHARMACEUTICAL SUBSTANCES IN THE LARGE INTESTINE

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Both traditional clinical approaches and fundamental knowledge about the structure and functions of the body areas, which pharmaceutical drugs are going to influence, are required in order to understand the mechanisms of action of high-technology pharmaceutical substances and their use for the effective treatment.

The large intestine together with other physiological body systems continuously ensures

the stability of physiochemical conditions in the fluids of the inner body environment by supporting homeostasis. Colonocytes are structural-functional units of the mucous membrane of the large intestine. The main function of the large intestine is performed by absorbing prismatic colonocytes. The structure of the absorbing colonocyte is adequately adjusted to absorb water, sodium, other electrolytes and, of course, pharmaceutical substances. The absorbing colonocyte has a polarized plasmatic membrane consisting of apical, lateral and basal parts. The movement of the substances mentioned above takes place in all parts of the plasmatic membrane in a different way: by force of passive transportation, simplified diffusion and by active transportation, which takes place against electrochemical gradients and that is why requires expenditures of energy to transport, for example, sodium ions. From this point of view the large intestine is a unique bioreactor which synthesizes short chain fatty acids (SCFA). The SCFA synthesis takes place in the large intestine lumen with the help of normal microbiota. SCFAs are used in the colonocyte mitochondrions by means of β-oxidation for the synthesis of ATP. The ATP, which was obtained from SCFAs, is necessary for the transportation of sodium ions and other substances through the basolateral membrane into the interstitial fluid against the concentration gradient, because the concentration of the sodium ion is 30-40 mmol/l in the colonocyte and 140 mmol/l in the blood capillary. The clinical effects of Zacofalc are based on the physiological components of this drug. It contains both butyrate for the preparation of the potential energy for the intracellular ATP synthesis and inulin, substrate for the production of the additional amount of energy material, which will be used in its fermentation process by the microflora of the large intestine in order to receive an additional amount of SCFAs. This way Zacofalc takes part in maintaining of the normal work of absorbing colonocytes and also performs an important function of the colon protection. Based on that, we developed a complex of therapeutic and preventive effects on the epithelial cells of the large intestine in order to ensure normal function of both separate colonocytes and the mucous barrier of the intestine as a whole. The colon protection ensures the interaction of the colonocyte membranes with nutrients and the intestinal microbiota, thereby regulating homeostasis of the most important constants of the inner body environment.

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V. Adjan
N. Semennikova
E. Polikarpova

LASER THERAPY OF CHRONIC DISRUPTIVE FORMS OF PERIODONTAL DISEASE COMPLICATED BY ODONTOGENOUS MAXILLARAE SINUIT

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Urgency of the problem. Currently, technique and tactics of chronic disruptive forms of periodontal disease complicated by odontogenous maxillarae sinuit, is to eliminate the source of infection by removing the “causal” tooth and integrated antibacterial, anti-

inflammatory treatment. Subsequently require surgical intervention as sinusotomii and plastics Oro-antral′n fistula and complex orthopaedic activities aimed at restoring the aesthetics and functionality of chewing apparatus (Robustova T.G., 2006; Kruger, 1993). This defines how how do not preserve body and highly expensive technology. Therefore, improving treatment of this pathology is the actual problems of Stomatology.

The purpose of this research is to improve the quality of the treatment of chronic desructive forms of periodontal disease complicated polipozn neighbouring sinuit.

Material and metods. The treatment of chronic desructive forms of periodontal disease complicated odontogenous maxillaris sinuit, unlike traditional methods – removal of the tooth as source in the neighbouring area, was to address the sinus infection through remediation system root canals and periapikal′n infection. Endodontic treatment was carried out. At the final stage of the applied laser channel sterilization and coagulation granulomy and polyps in maxillarae sine, localized in the field of "causal" tooth diode laser with a diameter of 400 mm cable with an output power of 5 Watts, wavelength of 980 nm and Exposition of 2 seconds in pulse mode ("Prometey, USA"). Sealing ducts were "Èndometazon (Septodont, France) together with cold guttaperč method lateral condensation or hot guttaperč" Thermafil (Dentsply, USA), where a Seal is used "siller Apex (Kerr, USA).

Results. The clinical and radiographic studies (71patient) showed that the endodontic treatment using transkanal′n laser sterilization granulemy and coagulation polyps in neighbouring sine leads to fully restore the bone in time up to 12 months and degradation local polyps 94% of patients (p< 0,02).

V. Semennikov
E. Netrebskaja
N. Semennikova
M. Taktak

THE LONG-TERM RESULTS OF ANY TREATMENT METODS OF DESTRUCTIVE FORMS OF PERIODONTITIS

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Significant number of means and ways of destructive forms of periodontitis indicate unsatisfactory results. The efficiency of any treatment method is based on long-term results.

The aim of the paper is a comparative assessment of chronic granulomatous periodontitis treatment (CGP) based on use of different methods.

Materials and methods. We did a simple longitudinal prospective research in 2 randomized groups of patients. (age differential 40,8±3,7 years). The 1st group had one-session method of treatment of CGP in aggravation stage (117 patients), the second group had multisession one. Follow-up period was from 1 day to 10 years. The results was based on clinical, x-ray, laser-Doppler flowmetry and periosteometry data.

Results. It was ascertained that indexes of the pain syndrome (Hossly-Bergman scale)

were minimal or absent in 139 (93,8%) of 142 cases the next day after treatment. 71 patients (50%) had pain syndrome while biting which was over in 2±0,5 days. 13 patients (7,2%) had pathological mobility of the teeth. It was over in 30 days after the end of the treatment in 139 cases (93,8%). All the 142 teeth was immovable in 180 days after the end of the treatment (Periosteometr C 2,5±1,0). X-ray showed resorption process in bone around apex and marginal periodontium before treatment and we found its reduction in all the cases (142 patients) in 3, 6, 12, 36, 48 and 60 days after treatment. We found full regenerate of periodontium in 138 cases ((96,5%) $p<0,02$). The indexes of blood microcirculation in periodontal tissues: M – arithmetic mean of blood microcirculation level (perfusion units), δ – root-mean-square deviation of oscillation amplitude of blood flow (perfusion units), Kv – variation coefficient, correlation between tissue perfusion and the amount of its variability (%), flaxmotion index – the integral sign of active and passive modulations of blood flow (standard units). The changes of laser-Doppler flowmetry indicate clinically apparent abnormality of blood microcirculation in periodontium of damaged teeth. They indicate the decrease of arithmetic mean of blood flow and erythrocyte oscillation. The result of observed changes is decrease of microcirculation efficiency index in periodontium in both groups. All the indexes improved after the treatment but we did not find significant differences. Significant differences were observed in 180 days(U-T criterion, $p<0,05$) but even in 6 months there was not full recovery of blood flow. So, there were not significant differences between norm and final results in long term.

Conclusion. The derived data indicate absence of significant differences of the nearest and long-term results of CGP treatment. Treatment efficiency depends on quality of antibacterial therapy in teeth roots and airtightness of their filling. That is why one-session use is the most reasonable and rational.

V. Semennikov
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N. Semennikova
M. Taktak

CLINICAL AND BIOCHEMICAL RATES OF INFLAMMATORY PROCESS DYNAMICS AFTER TRANSCANAL ELECTROGRANULOTOMY IN COMPLEX TREATMENT OF THE DESTRUCTIVE PERIODONTITIS IN EXCERBATION STAGE

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The research is relevant because of high frequency of occurrence of destructive periodontitis forms, complexity of treatment and high probability of further complications.

Material and methods: the complex single-session method of treatment of destructive periodontitis was proposed by V.I. Semennikov and O.E. Shishkina in 2004. To study its

efficiency we tested the results of the treatment. 53 patients of both sex (25-65 years old), who had destructive forms of periodontitis in exacerbation stage, took part in our research. We analized the pain syndrome characteristic using Hossli-Bergman scale as well as we analyzed the frequency of the pain syndrome and its connection to complication frequency.

The objective rates of pain syndrome and its connection to inflammatory complications were analyzed using the method of adrenalin, histamine and bradykinin detection (high-speed liquid chromatography) in saliva.

Results: We found out that 48 patients (85.9%) did not have the pain syndrome. 7 patients (12.5%) had pain during occlusion that is why we prescribed Nimesulide and Diazolinum up to its elimination. 1 patient (1.6%) had severe pain with associated with albuminous periostitis that is why we prescribed antibacterial, anti-inflammatory agents and magnetic laser therapy that stopped the further development of the disease in 3 days. The patients whose level of adrenalin, histamine and bradykinin in their saliva was 2.5-3 times higher had signs of inflammation, so these objective data correlated with subjective ones.

Conclusion: The contrastive analysis of traditional and proposed methods has shown that the use of transcanal electrogranulotomy reduces pain and complications 2-2.5 times.

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THE METHOD OF TREATMENT OF ODONTOGENOUS CYSTS USING HIGH FREQUENCY DIODE LASER

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Siberian State Medical University, Tomsk, Russia

For treatment odontogenous cysts, sprouted in sinus maxillaris used oronazal cystectomy, cystotomi. Their disadvantage is the large amount of damage, hemorrhage, traumatic nervous infraorbitalis, vascular bundle, developed odontogenous sinuitis, always needed hospitalization

To address these deficiencies have been metod lasercystèctomy

Material and methods. The operation is performed in the policlinic. Under local anesthesia is performed mucoso-periosteo-bone flap W-shaped generated using a scalpel and apparatus piezosurgeryi. This preserves the bone wall and separated from her part of cysts. Drops shell cyst contiguous to the bone of the alveolar process. Part of the shell welded with sinus maxillaris mucosa, koagulation using laser focused beam pulse mode 60W and 810 nm wave length. This defect is full osteokonduktor. Muco-periosto-bone flap cables, fixed prolen. Methodology applied for the treatment of 11 patients in accordance with the rules of ethics and informed consent of patients. Of these, 7 females and 4 – male, average age 47.1± 1.6 years

Results are based on data radiovizeography, densimetry, elektrotermometry gums in area of the cysts, concentration in oral fluid through fibronektin before and after 3, 6 and 12 months after treatment IFA method. Full restoration of bone density defect 12 months 9 patients (84.6%), 2 patients (15.4)-85% ($p<0,02$). Temperature mucous in area cysts normal level at 10-12 per day-35.4°C, fibronektin-3.6±1.0 months. Date of disability of patients - 3.5±0.5 day

Conclucion. Application of the method allowing to avoid operation sinusotomy and associated complications and reduce the time and material costs of 2,3 times compared to traditional methods.

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ANALYSIS OF THE RESULTS OF USE OF SLIM-IMPLANTS FOR NON REMOVABLE PROSTHETICS WITH THE FULL ALVEOLAR PART BONE ATROPHY

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Use slim-implants for non removable prosthesis shows with no teeth in the front office and distance between teeth 0.5 see their Single application results in lateral divisions jaw indicate a broader range of use.

Aim is to investigate the possibility of applying slim implants with total atrophy of the alveolar part without a transposition of the nervus alveolare inferior.

Material and methods. Examined 7 patients with total atrophy of the alveolar part mandible bone at 60-75 years. With spiral computer tomography revealed that jaw width equals 12 ± 1, 0 mm, distance between the compact disc with vestibular side before the canalis mandibulare on the level first molars 3.5 ± 0,5 mm, at the first premolars with lingual party 3.3 ± 0.3mm, height of jaws 12.3 ± 0,4 mm. Introduced implants L- 10 mm and d-2.4 mm in these locations. Obtained informed consent of patients. To avoid damage to the vascular nervous beam implantation was carried out under an infiltration anesthesia. Each patient is introduced on 8 implants. Constructed of plastics fixed constructions within 2-3 days. All patients on the upper jaw had good sticky removable Panel prostheses.

Results. Found no damage vascular nervous beam u 6 patients one experienced numbness lower lip, the past four months after the physiotherapeutic treatment. Data clinic-functional studies revealed a new x-ray and lack of periimplantitis, rezorbcii bone, motility implants were 1.5 ± 0.5 (Periotest C., Siemmens, Germany) through 4 years ($p < 0.001$). All patients were satisfied by the functional and aesthetic features of prostheses.

Zulfiya Serazhiyeva

TREATMENT OF BRONCHIAL ASTHMA IN CHILDREN AND ADOLESCENTS BY ACUPUNCTURE

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Bronchial asthma is an allergic disease manifested in the form of attacks of asphyxia and labored breathing with prolonged expiration. Normally the attack is caused by a contact with the allergens, such as dust, farina, insects (e.g., mites) etc.

The main clinical manifestation of the bronchial asthma is asphyxia (often at night) which can last from several minutes to several days. During the attack the patient is in the forced position, breathing becomes short and expiration is prolonged. The patient suffers from shortness of breath and coughing. At the peak of suffocation the cough is accompanied with the viscous difficult to discharge sputum, but at the end of the attack the amount of sputum increases, and it discharges easily. Asthma is common in children and adolescents.

The disease may be caused by:

- Noninfectious allergens such as pollen, drugs, insect stings, foods, etc.
- Infectious allergens (bacteria, viruses, fungi);
- Chemicals (acids, alkalies);
- Physical factors (air temperature, atmospheric pressure changes).

The development of the bronchial asthma may be also caused by: a hereditary genetic predisposition, history of viral respiratory and allergic diseases, some working and living conditions.

The aim of the study was to investigate the effectiveness of acupuncture in the treatment of bronchial asthma in children and adolescents with moderate clinical manifestations.

For the period of 2007 to 2011 years 18 children and adolescents aged 7 to 14 years with asthma, and moderate initial manifestations of the disease applied to the Center of Traditional Oriental Medicine. The concomitant diseases included: the biliary dyskinesia in 15 (83%) patients, the chronic tonsillitis in 10 (55%) patients, the hypertensive syndrome in 7 (38%) patients, the allergic dermatitis in 5 (27%) patients, and 2-3 degree adenoids in 5 patients, all children had a history of manifestations of exudative-catarrhal diathesis in early childhood, and dysbacteriosis, as well as frequent cold and viral respiratory diseases. Along with the acupuncture all patients underwent a comprehensive phytotherapy, psychotherapy, color therapy and the point massage and cane massage.

The course of treatment was10 days.

As a result the improvement after 3-4 sessions was detected in 12 patients and by the end of the treatment course in all patients. Clinical presentation of the bronchial asthma completely disappeared after the first course of treatment in 15 children. The rest patients underwent the second course of treatment. After which they showed positive results. In 1 to 2 years only three children with mild asthma symptoms applied to the Center. After the course of acupuncture the patients showed stable remission.

Conclusions.

1. Acupuncture is effective in the treatment of bronchial asthma in children and adolescents in 83% of cases, and in case of the repeated treatment courses 100% stable remission of symptoms is obtained.

2. In 16% of cases the relapse of disease may be observed within 1-2 years. One course of acupuncture fully eliminates the symptoms of the disease.

3. One annual course of acupuncture is a good measure for prevention of bronchial asthma recurrence.

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DYNAMICS OF DAILY INTRAGASTRIC ACIDITY IN PATIENTS WITH PEPTIC DUODENAL ULCER AND HEALTHY INDIVIDUALS

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The aim of research and methods: we have examined 69 patients aged 19 to 65 years, of whom 46 patients with DU and 23 healthy people. To confirm the clinical diagnosis fibrogastroduodenoscopy diagnostic biopsy for morphological analysis was carried out to all the examined. Acid-forming function of the stomach was studied by long-term continuous monitoring of pH of the esophagus and stomach - "Gastraskan-24." Active antimony electrodes were placed intranasally in the esophagus 5 cm. above the cardia, body and antrum of the stomach.

Results: during examination of the body, antral stomach, the esophagus for 24 hours in both healthy people and patients with DU the circadian rhythms of intragastric acidity (IGA) are similar in nature in the corresponding parts. In the stomach the maximum level of IGA was observed in the period from 00.00 to 04.00 a.m., from 08.00 a.m. gradually decreased and reached minimum values at 12.00. In the antrum the maximum level of IUC was observed from 12.00 to 08.00 p.m., with a subsequent decrease to minimum values from 04.00 to 08.00 a.m. In the esophagus similar circadian rhythms have not been identified with patients with DU and healthy individuals. The lowest pH (5.52) with patients with DU was observed between 12.00 - 04.00 p.m., and the highest pH (6.05) was observed in the period from 04.00 to 08.00 a.m. With healthy people a statistically significant difference in the dynamics of pH hasn't been identified. The minimum pH value was - 6.4, maximum - 6.58

Conclusions: healthy people and patients with DU have similar circadian rhythms of IGA in the corresponding parts of the stomach. The body and antrum have opposite circadian rhythms of IGA of negative feedback type. Patients with DU have the lowest pH in the esophagus in the daytime which is associated with the largest number of gastroesophageal reflux during this period. The marked strengthening of the night IGA

suggests the advisability of using of antisecretory drugs taking into consideration the onset of the effect after 08.00 p.m.

Vagif Bilas Shadlinsky
Gulgiz Agagasan Huseynova

MICROANATOMIC FEATURES THE URINARY BLADDER LYMPHOID NODULES IN POSTNATAL ONTOGENESIS

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Keywords: microanatomy, human urinary bladder, lymphoid nodules

Research objective was studying of measure-quantity indicators lymphoid nodules in different departments of the urinary bladder at people in postnatal ontogenesis.On the total preparations, 94 persons of different age received from corpses after coloring on T. Hellman and on histological cuts in the thickness 5-7 microns painted by gematoxylin-eozin, azur-2-eozin, picrophucsin on Van - Gizon, we have studied macro-microscopy and a morphometry urinary bladder lymphoid formations. The death of people has come from the casual reasons (a trauma, etc.), at absence on section of pathological changes of bodies of the urinogenital device. Morph metrical data processing included calculation of arithmetic-mean parameters, their error. Data analysis value are given as means + SE. Comparison of reliability of distinctions spent a method of confidential intervals. Differences were considered significant when $p<0,05$. Under our data, at newborns already lymphoid nodules settle down in mucous and submucosa to a basis on all extent of a urinary bladder wall. Are accurately enough represented in following periods postnatal ontogenesis, their contours always accurate, the reproduction centers usually is absent. The general quantity of lymphoid nodules at early children's ages of postnatal Ontogenesis is the maximum. At the specified age in comparison with newborns this indicator in a bladder wall increases in 1, 6-1, 8 times. At senile age lymphoid nodules constantly are available only in bottom thirds of organ (20, 1+1, 9, from 14 to 33), in top and average its thirds they are absent. As to an indicator of lymphoid nodules density, it also is maximum at early children's age, i.e. 1, 5-1, 6 times more than during the period newborn. The density of lymphoid nodules in different parts of the urinary bladder walls (on total preparations) in postnatal ontogenesis is different. At early children's age the density of lymphoid nodules in bottom thirds of urinary bladder are maximum. Under our data, lymphoid nodules reach the greatest sizes at early children's age when their thickness, in comparison with newborn children in walls of a top part in 1,5 times, an average part – in 1,6 times, bottom parts – in 1,7 times and at a urinary bladder as a whole – in 1,6 times is more. In comparison with newborn children, throughout all wall of the urinary bladder increases in1, 2 times. After that begins gradual involution lymphoid nodules. It is necessary to notice that at senile age and at long-livers they are absent on the whole an extent of a bladder wall that corresponds to the general law according to which peripheral organs of immune system are exposed

involution to a reduction. The analysis of figures has revealed regionally variability of the studied parameters. Throughout postnatal ontogenesis in a top part of a urinary bladder wall, in comparison with bot its part, the thickness lymph nodules increases in 1, 2-1, 4 times. Thus, for the first time on adequately picked up actual material the data about measure-quantity parameters lymphoid nodules of the urinary bladder in different parts of a wall of this organ at people of various age that has both theoretical, and applied value has been received and discussed. In urinary bladder walls in postnatal ontogenesis is available developed lymphoid the device, the lymphoid nodules which do not have the centers of reproduction. Quantity lymphoid nodules are maximum in stage at early children's age. In postnatal ontogenesis it is marked from the top part to bottom part increase in quantity, density, and also the sizes of lymphoid nodules.

R.A. Shakieva

ULTRASOUND DIAGNOSTICS OF MINERAL BONE DENSITY STRUCTURE AMONG ELDERLY PEOPLE OF THE REPUBLIC OF KAZAKHSTAN

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A high frequency of fractures among elderly people is mainly related to low mineral bone density. Osteoporosis is one of the most widespread diseases, which takes a leading place in the morbidity and mortality structure of the modern world's population.

In 2011, the Kazakh Academy of Nutrition and Kazakh National Medical University named after S.D. Asfendiyarov conducted a screening study of mineral density in osseous tissues by ultrasound densitometry of heel bone (Densitometer SONOST 3000, South Korea) with evaluation through T-score. The study was conducted in Kazakhstan.

According to this methodology the normal values lay within the range of +2,5 SD and - 1SD from the mean of mineral bone density for adults of the same sex and age (30 years old - peak of bone weight). The values within the range of < -1SD, but >-2,5SD are considered as osteopenia. The values <-2,5 SD are classified as osteoporosis. In the reference curves used in modern densitometers, deviation - 2SD (T-score) corresponds with 80 % of peak bone weight.

The target populations of the research were groups of high risk of osteoporosis, women older than 40 years (82,9% of those surveyed) and men older than 40 years (17,1% of those surveyed), living in urban (1231 of those surveyed) and rural (979 of those surveyed) in various parts of the republic – the Central (Akmolinskaya and Karaganda regions), the Northern (Kostanayskaya and North Kazakhstan regions), the Southern (Almaty, Kyzylordinskaya, and South Kazakhstan regions), the Eastern (East Kazakhstan and Pavlodar regions), and the Western (Mangistauskaya and Aktyubinskaya regions).

In average, osteoporosis was revealed in 22,0% of respondents in the republic.

Osteopenia was diagnosed in 53,2% of the respondents. A frequency of osteoporosis was very high among the group of people of 70 years and older, and osteopeniya was high in the age group of 50-69. Normal indicators of a ultrasound densitometry were revealed only in 24,6 % of respondents, generally in age groups of 40-59 years.

Based on distribution of osteoporosis in the various regions of Kazakhstan, Kazakh Academy of Nutrition developed the recommendations for the complex program of osteoporosis prevention for national, population, group and individual levels taking into account features of life styles and nutrition the regions surveyed.

A.M. Shilov
M.S. Dulaeva

HEART RATE AS PREDICTOR OF THE CHF PATIENT'S LIFE QUALITY AND PROGNOSIS: PATHOPHYSIOLOGY AND DRUG CORRECTION

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Heart rate (HRC), as a key risk factor of cardiovascular diseases, is an easily measurable and drug-modified index in physician's practice. At least 20 major epidemiological studies published for the last 20 years evidence: …«Increased HR is an independent risk factor of cardiovascular diseases and mortality».

In order to investigate HR influence on life quality and prognosis, we have undertaken a retrospective analysis of 174 histories of CCF patients. Depending on the initial HR at rest, CCF patients (FC II – IV) were distributed into two subgroups: subgroup I – 43 patients (24 women – 55.8%, 19 men – 44.2%) with HR < 70 per minute, mean HR for the subgroup in general = 62.5 ± 2.6 per minute; subgroup II – 131 patients (77 women – 58.8%, 54 men – 41.2%) with HR ≥ 70 per minute, mean HR for the subgroup in general = 90.5 ± 6.7 per 1 minute. In subgroup I the occurrence of hospitalization equaled to 11.6% (5 cases) during the 1st year and 24.1% (9 cases) during the 2nd year of observation, which in total amounted to 37.2% (16 patients), the total mortality for 2 years amounted to 9.3% (4 cases). In subgroup II the occurrence of repeated hospitalization equaled to 35.9% (47 patients) during the 1st year and 56.8% (71 patients) during the 2nd year of observation, which in total amounted to 90.1%, the total mortality for 2 years being 19%, which is almost twice higher than the mortality in subgroup I. More pronounced clinical progress of CCF (the hospitalization rate, mortality) among patients of subgroup II (mean HR is 90.5 ± 6.7 per 1 minute) versus patients of subgroup I (mean HR is 62.5 ± 2.6 per 1 minute), taking into account the demographic, associated with other diseases, and commitment to treatment inter-group identity, evidences the leading role of HR in development of cardiovascular complications.

So, according to epidemiological studies and our observations, increased HR is a cardiovascular risk factor and should be regarded by clinicians as a therapeutic objective.

With regard to the afore-stated, we have examined and treated 95 patients with CCF of FC I– IV aged 56 to 72 years of age, the mean age for the group being = 62.6 ± 4.7 years, masculine patients numbered 61 persons (64.2%), feminine patients numbered 34 persons (35.8%), the control group consisted of 33 patients (aged 49 to 71 years, on average = 61.4 ± 7.6 years, statistically did not differ from the target group of CCF patients, p>0.05), who, according to anamnesis, clinical and laboratory examination, had no CF signs. The quality of life (the top LQ – 0 points; the lowest – 100 points) of CCF patients was evaluated according to the Minnesota Questionnaire - «has the illness prevented you to live the life you would have liked to live during the last month because of …»

Basic CCF therapy is Bisogamma in a dose of 5 to 12.5mg a day (the mean daily dose for the subgroup equaled to 8.2 ± 0.4mg) + Magnerot 3 grams a day. The duration of treatment of CCF patients varied between 4 – 5 weeks, the average being 4.4 ± 0.2 weeks. The table shows the results of patients' examination before and after the therapy.

According to the table, statistically valid HR decrease by 21.8% was accompanied by similar (by 21%) improvement of LQ, documented growth of tolerance to physical stress by 34.4%. Such LQ dynamics was provided by improvement of the cardiac pumping function – EF increased by 52.3%. Improvement of the cardiac pumping function is based on improved duration of efficient diastole: E\A increased by 12% + IVRT decreased by 12.7%.

	Control (N=33)	Before CCF Therapy (N=95)	After CCF Therapy
HR per 1 min	68.2±3.2	84.5±6.5**	63.7±3.9**
Life Quality (points)	54.4±9.8	74±14.5	58.5±6.2
Tolerance (6min-meters)	487.4±41.5	302.2 ±31.4***	406.1 ± 26.1***
Cardiac Pumping Function Parameters			
MV l\min	4.2±0.7	3.65±0.8*	4.1±0.7*
LVEDV ml	95.2±9.3	108.2±11.2**	101.9±3.5*
LCESV ml	34.3±5.5	67.2±2.7**	38.1±2.1**
SD ml	61.4 ±9.1	43.1±4.4**	63.6±3.9***
EF%	64.6±5.5	40.9±2.9**	62.3±3.1***
LV Diastolic Function Parameters			
E m\sec	0.73±0.1	0.43 ± 0.06***	0.696±0.06***
A m\sec	0.58±0.1	0.47 ± 0.08**	0.686± 0.07***
E\A	1.28±0.1	0.9 ± 0.07**	1.01±0.05**
DT msec	188.5±12.7	209.8 ±15.6**	163.4±13.7**
IVRT msec	69.5±9.6	103 ± 7.1***	89.9 ± 4.1**

CCF Functional Class			
FC I	-	14	22
FC II	-	36	35
FC III	-	38	36
FC IV	-	7	2

* $p < 0.05$, **$p < 0.01$, ***$p < 0.001$

At the time of discharge from hospital, 86 CCF patients (90.5% of cases) demonstrated positive CCF FC dynamics in terms of physical stress tolerance: in 60% (57 patients) cases, the patient condition was assessed as CCF FC I – II (before therapy the index was = 52.6%), 5 patients of 7 with initial FC IV met FC III.

Hence, HR monitoring is an independent objective of CCF treatment, the optimal level being 50 - 60 beats per minute.

E.A. Schischkina

KOMPLEXE MEDIZINISCHE UND SOZIALE BEURTEILUNG DER ÖKOLOGISCHEN GESUNDHEIT

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Die genetische Gemeinschaft des Menschen und seines natürlichen Lebensraums dient als Grundlage, die Gesundheit der Menschen und die Gesundheit der Umwelt aus Sicht ihrer Interdependenz zu betrachten. Produktionsabfälle, Luft-, Wasser- und Bodenverschmutzung, Industrie- und Transportemissionen, Chemisierung der Landwirtschaft und des Alltagslebens sowie viele andere ökologische Risiken sind die somatotropischen und psychotropischen Faktoren, die zahlreiche nosologische Zustände, und später Krankheiten, verursachen. Gleichzeitig, trotz der bereits sohowl in der Wissenschaft als auch in der Praxis bekannten „rein ökologischen" Krankheiten (chemisches Asthma, Kirischi Syndrom (Schwere Allergie, die durch Emissionen während der Produktion von Protein-Vitaminenkonzentraten verursacht wird) , Tikker Syndrom (Entsteht bei Kindern, die in der Nähe der erdölverarbeitenden Industriekomplexen leben), Yusho-Krankheit, Kartoffelkrankheit, „gelbe Kinder"-Krankheit, allgemeine Immundepression bei der Intoxikation durch Schwermetalle u.a.), wird die Mehrheit der ökologisch bedingten nosologischen Krankheiten im Rahmen anderer Klassifikationen, z.B. onkologischer, somatischer, neurologischer, Infektions- oder parasitärer Krankheiten betrachtet. So werden ökologische toxisch-degenerative, metabolisch-allergische und virusbedingte Myokarditen im System der Kardiopathologie, und ökologische Stase- und Refluxösophagiten im Rahmen der Magen-Darm-Erkrankungen erfasst. Bei der Entstehung von Präkarzenosen aller Organe und Systeme spielen ökologische (toxische und virusbedingte) morphofunktionale Störungen der wichtigsten Drüsen des

Verdauungssystems (Leber, Bauchspeicheldrüse) eine primäre Rolle. Solche Erkrankungen werden im Rahmen der Onkologie betrachtet. Diese Situation lässt keine Zustimmung bezüglich der Schätzung vieler Spezialisten zu, die glauben, dass lediglich zwischen 25 und 50 Prozent aller Erkrankungen von ökologischen Faktoren beeinflussst werden. Unserer Meinung nach sind fast alle Krankheiten, mit denen die Menschheit zur Zeit kämpfen muss, ökologisch bedingt.

Dieser Standpunkt wird durch die Entwicklung einer ganzen Reihe von wissenschaftlichen Richtungen bestätigt: die ökologische Epidemiologie, ökologische Hygiene, ökologische Psychiatrie, ökologische medizinische Geographie, ökologische Medizin und andere ähnliche Branchen der Medizinwissenschaft. Man kann mit Sicherheit behaupten, dass das Disziplinspektrum, welches die Notwendigkeit, die allgemeinen Gesetzmäßigkeiten der Wechselwirkungen zwischen der Umwelt und Gesundheit zu studieren, widerspiegelt, wachsen wird.

Die Schwierigkeit, ökologische Erkrankungen richtig auszuwerten, besteht darin, dass sie sehr häufig keine spezifische Symptomatik aufweisen. Außerdem ist die Beurteilung der ökologischen Gesundheit aus Sicht der statistischen, ätiologischen, klassifizierenden, sozialen und räumlichen Ansätzen nicht zufriedenstellend. Beispielweise, in der Statistik der Weltgesundheitsorganisation von 2010 gibt es keine Information über ökologisch bedingte Erkrankungen. Zur Analyse werden soziale und wirtschaftliche Faktoren, allgemeine Immunisierung und therapeutisch-prophylaktische Maßnahmen herangezogen, währenddessen die ökologischen Risiken außerhalb der medizinischen Statistik bleiben. Eine große Anzahl der wissenschaftlichen Untersuchungen, die die ökologische Gesundheit unter Betracht ziehen, ist isoliert und in keine Klassifikation aufgenommen. Dadurch ist es schwierig, die bestmögliche Darstellung der ätiopathogenetischen Mechanismen der ökologischen Pathologie und die Tendenzen ihrer Entwicklung zu schaffen.

Als neue Ansätze zur komplexen Beurteilung der ökologischen Gesundheit können mehrere Parameter herangezogen werden: Vergleich der Erkrankungsmerkmale und der ökologischen Spezifik der urbanisierten und nicht urbanisierten Gebiete, Bewertung der unterschiedlichen Arten der anthropogenen Belastung auf die Umwelt, der ökologischen Kultur der Bevölkerung und anderer medizinischen und sozialen Merkmale mit ihrer unerlässlichen Systematisierung auf dem lokalen, regionalen und Weltniveau.

Anna Shnayder
Marina Pilugina
Natalia Shnayder

THE FREQUENCY OF POLYMORPHIC ALLELES OF CYP2C9 GENE IN RUSSIAN AND TUVAN CHILDREN WITH EPILEPSY

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The Krasnoyarsk region (KR) lies in the middle of Siberia. It is second largest federal subject of Russia. Prevalence of epilepsy at children from newborn till 15 ye.o. in the KR

- 5.04/1000, including idiopathic epilepsy - 0.65/1000, symptomatic epilepsy - 2.52/1000, cryptogenic epilepsy - 1.87/1000. Prevalence of epilepsy in teenagers - 5.75/1000, including idiopathic epilepsy - 1.27/1000, symptomatic - 2.21/1000, cryptogenic - 2.7/1000 [Sadikova et al., 2010; Shnayder N.A. et al., 2011]. The Tuva Republic (TR) is federal subject of Russia also. The republic is situated in the far south of the middle Siberia. Prevalence of epilepsy at childhood population from newborn till 18 ye.o. - 3.19/1000, including idiopathic epilepsy - 0.37/1000, symptomatic - 1.25/1000, cryptogenic - 1.31/1000 [Sharavii L.K. et al., 2010; Shnayder N.A. et al., 2011]. Ethnic polymorphic alleles variability in genes of AEDs metabolism in the study area due to several reasons, including migration population, genetic drift (for example, mountainous geographic isolates of the TR), natural selection (for example, immune response genes, or skin pigmentation), the adaptation of Russian and the Tuvan population to local environmental conditions (for example, genes of metabolism of substances entering by food). However, the main causes of genetic drift in the pediatric population the TR are inaccessible mountainous villages (Tuvan kozhuuns), the problem of communications between the regions (for example, only helicopters), ethnic geographic isolates.

Purpose: study of frequency of polymorphic alleles of CYP2C9 gene in Russian and Tuvan children with epilepsy, and assessment the role of CYP2C9 gene polymorphisms of isoenzyme 2C9 of cytochrome P450 of the liver as unmodified risk factor of ADRs development in case of intake an average therapeutic doses of VPA in ethnic aspect.

Method: All patients passed careful preliminary anamnestic and clinical selection. The research volume includes clinical neurologic inspection, research of the somatic status, psychological testing of higher cortical functions, video-EEG-monitoring, laboratory techniques (clinical and biochemical analysis of blood, pharmacogenetic testing of CYP2C9 gene polymorphisms on chromosome 10q24.1-24.3: wild-type allele variant CYP2C9*1/*1 without mutation, mutant-type allele variants, including CYP2C9*2, 430 C>T; CYP2C9*3,1075 A>C), functional methods (ECG, echocardiography, HM - under indications), neuroradiology methods (MRI/CT, MRA/MSCTA). Selection of patients was carried out by a method of the stratified randomization with using of criteria of inclusion and an exception. The work was carried out pharmacogenetic testing in patients with epilepsy and receiving valproic acid (VPA) drugs. The sample was divided into two ethnic groups: Group 1 – Russian children (KR), Group 2 – Tuvan children (TR). Age of the children - from 1 year to 18 ye.o. Total - 114 children. ADRs of VPA were observed in 31% cases. 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 showed correlation between the genotype CYP2C9 and ADRs. Thus, all patients with homo- or heterozygous carriage of mutant polymorphic alleles CYP2C9*2 and CYP2C9*3 had ADRs of VPA drugs, including liver damage (hepatomegaly, violation of the enzymatic function), defeat of GIT (gastropathy, dyspepsia), skin lesions (diffuse hair loss, peeling skin, acne), CNS (behavioral and cognitive disorders, learning disabilities, confusion, aggravation of epileptic seizures). Such serious ADRs of VPA drugs in patients

with wild allele (homozygous genotype CYP2C9*1/*1) revealed in 11% of cases only. We showed difference frequency of mutant alleles of polymorphic variants of CYP2C9 in the two ethnic groups (Russian and Tuvan). Homozygous genotype (CYP2C9*1/*1) among Russian children have met in 65% of cases, which is 16.5% lower frequency of this genotype (81.5%) among the Tuvan children. The frequency of heterozygous carriers of mutant polymorphic allele variant of a gene (genotype CYP2C9*1/*2) in Russian children (18%) exceeded those frequency in Tuvan children (6%) in 3 times. Homozygous carriers of the mutant allele of a polymorphic variant of the gene CYP2C9 (genotype CYP2C9*2/CYP2C9*2 and CYP2C9*2/CYP2C9*3) was found only in the Russian group of patients living in the KR. Carriers of the mutant alleles of polymorphic gene variants CYP2C9*2 and CYP2C9*3 are "slow VPA metabolizers", they accumulated VPA and its toxic intermediate metabolites in the body. It was the cause of serious ADRs. Selection of the dosages of VPA for these children was conducted, and personalized care with the use of slow titration of daily dosage during month. We have shown that such children need lower initial daily dose of VPA (in ½ - 1/3 times lower than the average statistical).

Conclusion: At present, it is proved that the treatment of human diseases must be not only effective but also safe. The key to understanding this dilemma is the introduction of modern methods of pharmacogenetic diagnostics in routine clinical practice, including the creation of genetic metabolic passports, which should have everyone who cares about their health.

Natalia Shnayder

EXPERIENCE AND PROSPECTS OF IMPLEMENTATION OF PERSONALIZED MEDICINE IN EPILEPTOLOGY

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Epilepsy is socially important chronic disease which is treated for many years. Antiepileptic drugs (AEDs) main aim is full epileptic seizures control, minimization of adverse drug reactions (ADRs), good patient's life quality. However, occurrence of ADRs still remains rather high and is estimated at 7-35%. We have some problems of treatment of epilepsy in Russian Federation: 1) problems with appointment of new AEDs; 2) problems with of old AEDs - usually, patients with epilepsy receive old AEDs (VPA, CMZ, PB), including a lot of generics; generics-to-generics change is very often, generics-to-brand meets less often (60-80% of patients and 75-80% of physicians were aware that pharmacists have the authority to substitute a branded AEDs for a generic without physician consent. However, only 40-50% of physicians are aware of mandatory generic substitution laws for branded prescription medications); 3) problems with therapeutic drug monitoring of AEDs level in serum; 4) problems with surgical treatment of epilepsy - neurosurgery of resistant epilepsies is inaccessible for more patients; 5) economic problems of public health services

in our country.

We know that brand name patients were more likely to have seizure control, less likely to have adverse drug reactions (ARDs), and had higher or lower average serum levels. However, we use generics of AED very often. Brand-to-generic and generic-to-generic changing lead to development of AEDs complications, including control loss over seizures, aggravation of seizure or status epilepticus, increase of specific adverse drug reactions of AEDs, decrease in quality of a life, increase of depression level, increase of suicidal ideation or suicide events. ARDs may influence negatively the patient's social and family adaptation sometimes at a greater extend then the disease itself. Now, the majority of patients with epilepsy accept drugs of VPA (near 40-50% and more, including generics) and have several ADRs (25-38% and more) in RF.

And we have many questions: How can we do choice of VPA starting dosage? What time-frames of TDM of VPA on the stage of dose titration? What is definition of a therapeutic dose of VPA in long-term intake? What are volume and time-frames of laboratory and clinical diagnostics? Do we have genetic prediction of ADRs development?

Very important question is search of predictors of ADRs development during brand-to-generics and generic-to-generic changing. We can use three approach: 1) client-centered approach - children, women of fertile age, old adult; 2) pharmacological (pharmacokinetic) approach - therapeutic drug monitoring of AEDs; 3) personalized (pharmacogenetic) approach - detection of carried of mutant gene polymorphisms of multidrug transporters (ABCB1) and metabolizers (CYP2C9*2 and CYP2C9*3 polymorphisms) of the principal AEDs, which use in our country more often (for examples, VPA drugs, including brand and generics).

Lacks and restrictions of client-centered approach: metabolism changes of AEDs are observed in other groups of patients also (for examples, adolescent, men, patients with hereditary and non-hereditary diseases of liver and kidney); problems of compliance of patients and their relatives with neurologists (for examples, AEDs dosing, dynamic; observation, ADRs monitoring); economic problems of patient and family (cost of AEDs, cost of ADRs treatment); economic problems (for examples, problems of public health services).

Restrictions of pharmacological approach: to carry out a test a single AED marker intake is essential in this case treatment-emergent adverse events may appear; invasiveness (multiple blood sampling is essential) and patients discomfort (difficulties of outpatient usage); the necessity to determine AED concentration and/or its metabolite in blood serum at several temporary points; the tests assess the activity of biotransformation enzymes which can be determined not only by patient's genetic characteristics but by the combined used drugs (inhibitors, inductors), age and sex, daily biorhythm, kind of food, bad habits (smoking, alcohol drinking etc); the tests are difficult to use for studying large populations to assess ethnic AEDs responsitivity.

Benefits of personalized (pharmacogenetic) approach: genetic tests do not require to intake AEDs, i.e. it is possible to predict their pharmacological response before the

beginning of the intake (there is a possibility of high risk of treatment-emergent adverse events groups stratification); a single blood sample or other biological material is needed (for example, buccal smear) at any time once in patient's life (economic effectiveness); genetic tests are based on the method of polymerase chain reaction usage (PCR) and do not require determination at several temporary points; molecular genetic testing results are unchangeable during the whole life of a patient and gives an opportunity to create a so-called Pharmacogenetic Metabolic Passport of a patient with epilepsy; Tests assess only genetic part which influence the AED pharmacologic response; genetic tests are not expensive and do not require equipment for carrying out TDM; using methods of personalized medicine of the tests we can carry out large population studies (for examples, population of developing coutries) and it's of great importance from the point of epileptic characteristics of AEDs metabolism; pharmacogenetic tests have no such disadvantages as they are based on detection of allelic multiform variants of genes of biotransformation systems and AEDs transporters which determine the pharmacologic response, i.e. patient genotyping itself which is the base of developing rapidly during the last 5 years personalized medicine.

The purpose of the research was the assessment of the role of genetic polymorphisms CYP2C9 of isoenzyme 2C9 of cytochrome P450 of liver and genetic polymorphisms of miltidrugs transporter ABCB1 as risk factors of ADRs developing at patients with epilepsy intake valproic acid, The assessment of role of genetics polymorphisms CYP2C9 as higher risk factor of ADRs developing during generic-to-generic changing and the search of ways for decrease in risk of ADRs development (for examples, personalized dosing of VPA drugs, slow titration of dose, use of low doses, exception brand-to-generic and generic-to-generic changing and other).

Methods. Sampling included 184 patients with epilepsy from 1 up to 60 years of age. We analyzed VPA doses, VPA level in serum, biochemical blood analyses of functional liver activity (AsAT, AlAT, bilirubin, amylase, complete albumen); video-EEG-monitoring; testing of SNPs of CYP2C9 gene (chromosome10q24.1-24.3) – PCR real-time method: wild-type allele variant CYP2C9*1, mutant-type allele variants (CYP2C9*2, C430T; CYP2C9*3, A1075C). Blood sampling, picking out of DNA and molecular-genetic studies were performed after a patient had given a documentary confirmation to be followed up and for filling in a patient's case record which is composed in accordance with the aim and tasks of the research. We analyzed number of outpatient appointments, estimated VPA titration rate at the first contact with neurologists, number of patients starting with standard and low VPA doses, number of patients (the carriers of mutant polymorphisms - CYP2C9*2 or/and CYP2C9*3) with ADRs of standard VPA doses. We used the Statistica v. 7.0 (Stat Soft, USA) for calculation of the sample size and analysis of data base.

Results. Study shown that we could found the way to stratification of risk groups of ADRs development during VPA intake and allowed to elaborate the algorithms of starting therapy of epilepsy with VPA. The main purpose of the personalized approach was ADRs prevention in high risk groups: choice of VPA starting dosage, time-frames of TDM of VPA on the stage of dose titration, definition of therapeutic dose in long-term intake, volume and

time-frames of laboratory and clinical diagnostics.

We shown that gene CYP2C9 of isoenzyme 2C9 which reduce VPA metabolism have the most clinical importance in predicting ADRs. Meanwhile the polymorphisms CYP2C9*2 (R144C, c.430 C>T) and CYP2C9*3 (I359L, c.1075 A>C) at chromosome 10q24.1-24.3 were the most important. As polymorphous allelic variants CYP2C9*2 and CYP2C9*3 are bound to rather slow VPA metabolism their carriage with patients with epilepsy leads to the reducing of speed of VPA drugs biotransformation and increasing its concentration in the blood plasma due to the activity reduction of isoenzyme 2C9 of cytochrome P450. The risk of ADRs induced by VPA genetic polymorphisms CYP2C9*2 and CYP2C9*3 both with heterozygous and with (especially) homozygous carriages. Mutant SNPs carriers (homozygous and heterozygous carriers, or combination CYP2C9*2/CYP2C9*3) had ADRs (87% cases) during standard VPA dosage (20-30 mg/kg/day for children, 20 mg/kg/day for adults), even during the initial dose titration (10-15 mg/kg/day for children, 5-10 mg/kg/day for adults) – 4% cases. The homozygous carrier of CYP2C9*2 had the most severe ADRs (serial epileptic seizures aggravation, severe cognitive and behavioral disorders) in case of standard VPA dosage (30 mg/kg/day).

Effects of our study: the proportion of standard starting VPA dosage decreased from 98% in 2009 to 62% in 2011. We used personalized approach at patients which were carriers of mutant SNPs of CYP2C9. At results, the proportion of personalized starting VPA dosage increased from 2% in 2009 to 38% in 2011 ($p<0.001$). Proportion of severe ADRs of VPA decreased from 34% in 2009 to 8.5% in 2011 ($p<0.05$). Healthcare costs of ADRs treatments decreased in 2011 (economy was near 16000 Euro /100 patients in year).

Summary. Certain SNPs of CYP2C9 gene can be used as markers for optimization of epilepsy pharmacotherapy. The personalized approach to VPA dosing in treatment of children and adults suffering from epilepsy is clinically grounded. The personalized approach to VPA drugs dosage with consideration of pharmacogenetic traits of the metabolism is effective medically, socially and economically. Its approach can be recommended for a broad introduction into neurologist's practice.

E.P. Shurygina

BACTERIAL MONITORING OF SKIN AND SOFT TISSUE INFECTIONS

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In the contaminated surgery antibiotic therapy occupies the second place after the adequate surgical invasion. One of the most important characteristics which determine the effectiveness of the antibacterial therapy is the sensitivity of the microbial flora. The resistance of the important microorganisms towards antibacterial drugs requires monitoring of both the nosocomial and out-of-hospital flora.

The objective of the research was to study dynamics of the sensitivity and resistance towards antibiotics of out-of-hospital microorganism strains, which cause skin and soft tissue infections, for the purpose of the rational use of the antibacterial therapy.

Materials and methods of the research. We analysed microbial isolates of the two periods: 1999-2001 and 2007-2011. The intake of the material for the research took place during the operative aid in accordance to the methodical instructions described in "The Technique of acquisition and transportation of biomaterials into microbiological laboratories". A microbiological analyser BacT/ALERT 3D (Biomerieux, France) was used for the indication of cultures. The primary inoculation was carried out in the commercial nutrient solutions for aerobes and anaerobes (BacT/ALERT FA, FAN Aerobic culture bottles; BacT/ALERT FN, FAN Anaerobic culture bottles). The microbiological analyser VITEC 2 Compact (Biomerieux, France) was used for the identification and determination of the bacterial sensitivity to antibiotics.

The results and their discussion. Primary pyodermas are most frequently caused by Staphylococcus aureus and Streptococcus pyogenes. Out-of-hospital strains of the mentioned microorganisms are usually sensitive to methicillin. In this regard it is possible to use β–lactam antibiotics, clindamycin and macrolides. During the analysis of the microbial landscape properties in the mentioned period we noticed the apparent growth of the staphylococcus resistance towards these antibiotics. The resistance to clindamycin and erythromycin approaches 20%. The resistance of the gram-positive cocci to fluorquinolones was 2% in the earlier period and increased up to 20% today. A further significant clinical problem is the increase in the number of out-of-hospital MRSA strains from 2% to 11% in 2011.

Secondary infections develop with coexistent diseases. The gram-negative flora prevails in this group. In order to empirically carry out antimicrobial therapy for secondary infections, it is necessary to use drugs that are active both for aerobes and anaerobes. However, the resistance of gram-negative bacteria to cephalosporins of the third generation reaches 40-50%, to fluorquinolones up to 50%. To simplify the results of the analysis, we united non-fermentative gram-negative bacteria, mainly Pseudomonas spp. and p. Acinetobacter, due to the homogeneity of the patient group, frequency of the mentioned causative agents and severity of the diseases caused by them. Their number increased by 9 times, and the number of resistant strains increased by 40 times in the analysed period of time. The resistance level of the non-fermentative gram-negative bacteria to amikacin suddenly increased up to 70%. The resistance to fluorquinolones increased by 20%.

Conclusions: The resistance of microorganisms to antibiotics gradually increases from low to moderate and then to high level. The attempts if not to stop but at least to slow down this process require limitations in regard to indications for antibiotic therapy. In practical surgery, when treating surgical skin and soft tissue infections, one will have to follow the principle "the best antibiotic is the surgeon's scalpel".

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EMERGENCY ANURIA TREATMENT

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Anuria is a condition in which urine stops going to the bladder. There are several kinds of anuria. Arenal or extrarenal anuria occurs in the case of renal aplasia in newborns. Prerenal anuria is caused by insufficient blood flow to kidneys (shock) or its complete discontinuation (thrombosis of aorta or renal arteries). Renal (secretory) anuria occurs as a result of a significant parenchyma damage (pyelonephritis, intoxication caused by poison or salts of heavy metals). Subrenal (excretory, obstructive) anuria is caused by defective urine excretion from the upper urinary tract.

Anuria develops slowly in the case of chronic kidney diseases; it is acute if the functional abilities of kidneys were normal before its occurrence. The health state of the patient can be satisfactory in the first days of the disease. Starting from 3-4 day, there are symptoms of uraemic intoxication. After 5-6 days there are symptoms of the central nervous system and cardiovascular system damage and hyperkalemia. If the patient does not receive necessary aid, anuria leads to death caused by intoxication on the 10-12 day.

Patients are diagnosed on the basis of absence of urine in the bladder and symptoms of uremic intoxication. In order to perform differential diagnostics of subrenal anuria, it is necessary to apply instrumental and roentgenologic examination methods.

Patients with postrenal anuria need urological help. We analysed 88 case histories of patients diagnosed with postrenal anuria in the period between 2007 and 2011. Urolithiasis – 47patients, urolithiasis complicated by bilateral acute purulent pyelonephritis – 11patients, oncological diseases – 25, consequences of radiation treatment - 4, iatrogenic factors- 1.

Time after the beginning of the disease: up to 1 day- 38 patients, 2-4 days - 37, 5-7 days- 8, and over 7 days - 5 patients. All patients had general and biochemical blood analyses; ultrasound of the urinary system, abdominal and pleural cavities; roentgenologic examination of the urinary system. Depending on the indications, patients had several sessions of hemodialysis for the purpose of preoperative preparation (there is a hemodialysis department in the hospital).

Emergency operational assistance to patients with postrenal anuria, caused by urolithiasis, involved: catheterization + ureterolithoextraction – 10, catheterization +contact ureteral lithotripsy – 14, catheterization + contact ureteral lithotripsy + stenting - 10, catheterization + stenting + distant lithotripsy -4, pyelolithotomy or ureterolithotomy - 4, percutaneous puncture nephrostomy + contact ureteral lithotripsy - 7, bilateral nephrectomy with acute purulent pyelonephritis + programme dialysis- 1, nephrostomy and renal decapsulation + programme dialysis- 7.

Emergency operational assistance to patients with postrenal anuria, caused by the obstruction of the upper urinary tract due to neoplasms, involved: bilateral percutaneous

puncture nephrostomy - 15, unilateral percutaneous puncture nephrostomy - 5, ureteral stenting- 3, nephrostomy as a change to an open aid due to complications during percutaneous puncture nephrostomy - 2, bilateral nephrectomy due to neoplasms + programme dialysis- 1.

Emergency operational assistance to patients with postrenal anuria, caused by cicatrical changes in the pelvic and retroperitoneal cellular tissue after radiation treatment, involved: ureteral stenting - 3, bilateral percutaneous puncture nephrostomy - 2.

A thorough examination of patients with anuria, preoperative preparation, including, where necessary, hemodialysis sessions, and application of modern technologies during operational procedures make it possible to reduce mortality rate and improve the quality of life of patients.

R.A. Singatulin

NEW APPROACH IN DIAGNOSTICS OF IMPELLENT VIOLATIONS BY MEANS OF MULTISPECTRAL INFORMATION AND MEASURING SYSTEMS

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Noninvasive diagnostics with use of multispectral technologies rather perspective area of medical appendices. Diagnostics is based on photogrammetric methods of measurements of position of a body of the patient in various areas of a range. The technology can be used in diagnostics of impellent violations after a stroke and craniocereberal injury; at degenerate and hereditary diseases of nervous system; as visualizing techniques in cardiology; at diagnostics of pain in the musculoskeletal device, etc. The technology is developed in laboratory of information technologies in humanitarian and natural-science researches of the Saratov State University since 2002.

Novelty of the offered approach consists in use of Webcams of infra-red and seen wave bands and special program algorithm. The diagnostic system carries out a binding of objects or fragments of images received from Webcams to system of coordinates by their automatic identification with the corresponding fragments from a database. Orientation and scale of initial fragments can be unconditioned. For identification of fragments are used algorithm of the stereoidentification, allowing to compare the image of different geometry. The sequence of the procedures constructed on the basis of photogrammetric and multispectral technologies, solves a problem of recognition and allocation of characteristic planimetric shapes of a body. Realization of offered procedure is calculated at diagnostics of a typical motor pattern (smoothness of movement at constancy of movement), not optimum dynamic stereotype (emergence of additional compensatory synkinesis in a backbone and extremities), an atypical motor pattern (emergence of additional movements and distortion of a trajectory and speed of movement) and some other cases. For carrying out measurements of the patient it is not necessary to invite in medical institution and compulsorily to place

in special working space of a measuring complex. Measurement of impellent violations can occur in any place (at home, on the street), directly in sight of multispectral system. On an exit of system the three-dimensional description of a form and dynamics of object in the set format is formed. The output data can be transferred on a network. Data also can be visualized as virtual three-dimensional object with own structure.

Advantages: low cost, high precision of measurements, simplicity of application and high extent of automation, immediacy, (diagnostics is made in real time).

Possibilities of further improvement of the multispectral diagnostic system, allowing to speak about real prospects constructive distribution of an offered approach and on more difficult situations are considered. In particular, for patients being in active movement (at any orientation) in real time (the personalized medicine), for preventive diagnostics of small groups of patients (to predict probability of development of a disease; assessment of duration of the asymptomatic period, etc.).

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PROSPECTIVE USE OF BIOLOGICAL PROSTHESIS FROM XENOPERICARD FOR ACHILLES TENDON GRAFT SURGERY

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Topicality: subcutaneous injuries of the Achilles tendon take an important place among tendon and muscle ruptures, make up 47% of injuries and mainly happen in the able-bodied age. A particular difficulty for surgeons is a surgery of old ruptures. This difficulty is connected to the diastasis between the ends of the ruptured tendon, which is difficult to remove.

The objective was to evaluate the surgical effectiveness of degenerative ruptures of the Achilles tendon with the help of biological prosthesis from pericardium of cattle, which was treated with glutaraldehyde.

Materials and methods: During the study 120 patients with subcutaneous degenerative ruptures of the Achilles tendon were observed from 2008 to 2011. The mean age of patients was 40.5; the patients were mainly men (81.6%). The patients were divided into 5 groups.

The first group consisted of 28 patients with open suture repair of the injured Achilles tendon.

The second group was made up by 25 patients with subcutaneous suture of the Achilles tendon.

The third group was composed of 24 patients whose Achilles tendon was repaired with the help of rotation flaps.

The fourth group included 22 patients with lavsan prostheses used for the surgery.

The fifth group consisted of 21 patients who had a surgery with the biological prostheses from xenopericard. The authors have developed new methods of surgery of degenerative

ruptures of the Achilles tendons with the use of biological prostheses from xenopericard. Two prosthesis models were developed, one for the new and one for the old tendon ruptures. For the surgery of new ruptures we have used a prosthesis of the isolating type in the form of a tube, made of xenopericard plate. This plate isolates the suture from the separation of the tendon fibres. In the case of old ruptures with an unrepairable defect we have used a substituting prosthesis made from a specially cut out and rolled up xenopericard plate, comparable in its diameter to the injured Achilles tendon. The prosthesis of the isolating type was used in 12 cases, the substituting one in 9 cases.

Results: The effectiveness of the treatment was evaluated according to the methodology suggested by Leppilahti J., Forsman K. (1998), including 7 parameters: pain, weak mobility, decrease in the strength of the posterior shin muscles, limitations in wearing of shoes, difference in the movement amplitude in comparison to the contralateral joint, isokinetic muscular strength and subjective result (maximum possible number of points is 100).

The mean number of points in the first group of patients was 79.1. The corresponding number was 78.8 in the second, 53.3 in the third and 46.6 in the fourth group. The patients of the fifth group, who were operated by using the new technique, had 94.2 points.

Conclusion: The use of new biological prostheses from xenopericard for the surgery of degenerative subcutaneous ruptures of the Achilles tendon has led to an improvement in the treatment results in comparison to traditional methods.

L.Y. Slatinskaya
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PROTECTION AND SAFETY METHODS FOR PEOPLE EXPOSED TO LOW CONCENTRATIONS OF CARBON MONOXIDE

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Today, under conditions of natural cataclysms and, in particular, vast forest fires, population in environmental emergency areas is required to be referred to as a risk group due to the fact that the poisonous effect of carbon monoxide can possibly cause serious disorders of the psychophysiological body functions even after a long period of time. Even low concentrations of carbon monoxide, which are hardly perceived by people, have a destroying effect on their health in the course of practically all their lives.

It is known than once in a body, carbon monoxide is mixed with (CO) haemoglobin, which transports oxygen to cellular structures, and forms a stable chemical compound carboxyhemoglobin (COHb). As a result, haemoglobin is no longer suitable for oxygen transportation, which deprives blood of the possibility to carry the latter towards vitally important organs – lungs, heart and brain, which suffer from oxygen shortage most.

The chemical compound COHb, even in very low concentration, modulates all body fluids due to its informational frequencies. It becomes a constant, destructive emitter of pathological frequencies, which inevitably leads to a body reaction in the form of different psychophysiological diseases.

It is practically impossible to detect the influence of low doses of carbon monoxide on the human psyche with the help of psychological examination due to the fact that this factor is subjectively nonconscious. The detection of physiological changes after the exposure to carbon monoxide after a relatively long period of time is extremely difficult by means of traditional methods of medical diagnostics.

In our centre "ECOLOGY OF LIFE", in order to detect pathological radiation of the chemical compound COHb and decontaminate the human body, we use biophysical equipment with biological reaction.

It is well known that there are no chemical forces in nature. Interactions in chemical compounds take place due to electromagnetic interactions of molecules. Therefore, the compound COHb also exists due to electromagnetic forces which keep the molecules of the compound bound. It is also known that all chemical reactions are accompanied by physical information. Information of the chemical compound COHb has a certain electromagnetic frequency. Due to the possibilities of our equipment it is possible to find these frequencies in the human body and return them to the lesion focus in the inverted form. During this process the electromagnetic forces, which bound the molecules in the chemical compound COHb, are destroyed. The molecules are no longer connected and the compound, which is pathological for the organism, is dissociated, therefore, no longer exists. As a result, body's own natural oscillations, which were blocked by pathological frequencies, are activated.

Then we carry out correction and dynamic stabilisation of the patient's homeostasis, which contributes to the further self-regulation of the body. The patients return to the healthy state within their physiological norm.

Our methods exclude disease relapses, which can be caused by various similar external factors of the environment, due to the fact that pathological informational frequencies of the chemical compound COHb in the human body have been destroyed.

Thus, we should recognise that biophysical methods of estimation and correction of the individual homeostasis are most accurate in the determination of the primary cause of the occurrence of exoecological diseases and promising in regard to the possibility to eliminate the primary cause of the disease and restore psychophysical functions of the human body.

V.N. Sokolov

ROLE OF MPR, 3 D – RECONSTRUCTION AND VIRTUAL ENDOSCOPY IN THE EXPOSURE OF PATHOLOGY OF COLON

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Introductoin: Last years for timely diagnostics of cancer of a thick gut began to use methods CT. However, the given methods has not received wide application owing to a different interpretation of possibilities CT in revealing of tumors.

Purpose: To define possibilities of MPR, 3-D and virtual endoscopy in diagnostics of

polyposes, divertlculosis and cancer of colon for patients at impossi¬bility of lead through of colonoscopy (cracks of anus, presence of haemoroidal cones, stenosis of rectum, incontinence of water-barium contrast and other).

Materials and methods: CT - colonoscopy was conducted 136 to the patients, from them with sus¬picion on a cancer - 47 patients, with erosion-ulcer pathology - 69 patients, by polyposes - 20 patients. Research was conducted on 4th CT of company "Toshi¬ba", to research of patients conducted on a standard method during 2-3 days (diet, reception of black draught Phortrans the valid for one occasion clear¬ing of intestine. 30 min. prior to research 5 ml of buscopan or cocktail is entered, consisting of 2 ml. of Nospa 2 ml of papaverin and 1 ml of Baralginum. Protocol of scan-out included a collimation (thickness of cut) from 1 to 3 mm; an interval of reconstruction is 1 - 2 mm; pitch - 1.5 - 2.0. The got results of scan-out wore estimated in the option of Colon CT. We used the method of three-dimensional by volume presentation (3D volume rendering), method of reflection of surface shaded display; method of maximally intensive projec¬tion (MIP) at the use of contrasting.

Results of examination: The technique of the above-stated scan out and lead through of aiming (vir¬tual) navigation allowed to expose polyposes sizes no less than 5 MM, endophytic and exofitic new formations in any department of colon, especially in the places of inaccessible neither colonoscopy nor irrigoscopy, to determine the germination of wall of bowel, infiltra¬tion of tatty cellulose near-by localization of tumor, expressly to differentiate a tumor from a joining in¬flammatory process, that predetermines possibility of establishment of the stage of disease, and also allows to expose engaging in the process of lymph nodes, both region and remote.

Conclusions: MPR and 3 - reconstruction virtual endoscopy is a very perspective diagnostic method in the exposure of pathology of colon of 92% made in the exposure of new formations. 76%. This method in a prospect can with screening procedure at the persons of superannuated, having considerable contraindications in the lead through of colonoscopy or irrigoscopy.

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MATURATION CHARACTERISTICS OF RHYTHMOGENIC STRUCTURES OF THE CEREBRAL CORTEX IN CHILDREN OF RISK GROUPS

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Successful adaptation to school education and psychical health of children are caused by different factors, including individual functional abilities of the brain. The functional brain maturity within the scope of the development norm significantly influences the

development of the cognitive sphere and the successful education of children. It is known that the maturity parameters of the main rhythm of the resting EEG correlate with the parameters of psychophysical functions and are key elements in the neural support of cognitive processes.

We examined 104 children (40 girls and 64 boys, aged 7–8) without organic or other apparent brain damage. In order to detect factors causing early dysontogenesis, we interviewed parents and studied children's medical records. We analysed the specifics in the development up to 7 years (questions about pregnancy, labour, hereditary risk factors, peculiarities of the psychophysiological and morphofunctional development). Children were divided into 2 groups: a control one, made up of children without risk factors in the early development, and the risk group, consisting of children with various "damaging" factors. We registered 12 leads of the resting EEG (eyes closed) and during functional load (rhythmic photostimulation and hyperventilation). The arrangement of the leads was unipolar in accordance with the international system "10-20"; we used united ear electrodes as indifferent ones. In order to detect the correspondence of various functional maturity parameters of the cerebral cortex to the age norm, we used a system of EEG parameters, modified into points. The statistical analysis of the functional maturity parameters of the cerebral cortex and the evaluation of differences in the distribution of EEG parameters between children in the control and main group was carried out with the help of a non parametric method of chi-square calculation for cross tables.

The study showed that the risk factors for early dysontogenesis have a negative influence on the formation of the rhythmogenic structures of the cerebral cortex. The children in the control group showed functional maturity of mechanisms of the cortical rhythmogenesis: maturity of the alpha rhythm corresponded to the age norm in 83.3 % of cases; the intensity to follow the rhythm of luminous flickers and the orientation response in 91.7 and 86.5 % of cases, accordingly. The resting EEG in children from the risk group was characterised by the presence of immaturity characteristics of the cortical rhythmogenesis: inadequacy of the main resting rhythms (alpha rhythm was irregular, polyrhythmic, fragmentary or of reduced frequency – 6-7 Hz) to the age norm was observed in 70 (31%) children of different risk groups; immature reaction of the alpha rhythm to functional loads (absence of the following, following the 6-7 Hz rhythm without fixation on the 7-12 Hz frequencies; sporadic following of the 7 Hz rhythm and/or fixation on the 4-6 Hz rhythm, insufficient orientation response) in 58 (14%) children from the risk groups.

The comparison of the EEG data and the results of the examination in regard to the development of the cognitive sphere demonstrated that children without the risk factors of early dysontogenesis had a higher level of development of cognitive functions in comparison to children from risk groups. The most significant deviations from the age norms were observed in the case of children with a birth trauma in the medical history and a combination of a large amount of "damaging" factors.

Thus, our research shows that pathologies during pregnancy and labour, "damaging" influence of various negative factors in the early development period have a large influence on the functional maturation of the neural apparatus of the cerebral cortex, which determines the success of the child's cognitive activity.

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FUEL AND ENERGY COMPLEX AND ITS IMPACT ON THE HEALTH OF THE POPULATION OF KARAGANDA

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Environment – the foundation of human life, and mineral resources and energy is generated from them are the foundation of modern civilization. Without energy there is no future for humanity is obvious. However, modern energy to cause appreciable harm to the environment, worsening living conditions. The basis of modern energy is different types of power plants.

Technology of production of electricity at thermal power plants (hereafter - TPP) of Karaganda is associated with a large amount of waste released into the environment. Today the problem of the influence of the nature of power is particularly acute, as the pollution of the atmosphere and hydrosphere, with increases every year. If we consider that the scale of energy consumption is constantly increasing, and therefore it increases the negative impact of energy on the environment.

The combustion of fuel in thermal power plants to produce products of combustion, which are: fly ash, pulverized particles of unburned fuel, sulfur and sulfur dioxide, nitrogen oxide, the gaseous products of incomplete combustion. When the ignition of fuel oil it is produced vanadium compounds, coke, sodium salt, soot particles. In the ashes of some fuels there is arsenic, calcium dioxide, free, free silica.

Quality fuel for TPP is not enough in Karaganda, and often has to work at the station of low quality fuel; the combustion of such fuels into the atmosphere with the smoke gets a lot of harmful substances, in addition, harmful substances into the soil with ash. The combustion products entering the atmosphere, causing acid rain and increase the greenhouse effect, which is extremely adverse impact on the overall environmental situation and leads to deterioration in weather conditions not only in Kazakhstan but also worldwide.

Another problem associated with coal-fired TPP in Karaganda is ash dumps, besides the fact that they require large areas of resettlement, they also are centers of accumulation

of heavy metals and have high radioactivity. Heavy metals and radiation get into the environment, either by air or by ground water. In addition, TPP pollute the water, dropping them in warm water, resulting in a chain reaction, the pond is overgrown with weeds, it breaks down the oxygen balance, which in turn threatens the life of all its inhabitants. Thermal power plants with cooling water shed 4 -7 kJ of heat per 1 kW/h electricity generation.

Pollute the environment and waste water production TPP Karaganda containing petroleum products. This water station resets after the chemical cleaning of equipment, the heating surfaces of steam boilers and systems for hydraulic ash. The volume of industrial wastewater containing petroleum products do not depend on the capacity of thermal power plants in Karaganda and the type of equipment installed, but at the stations, which use liquid fuel, the volume of discharges of production water is slightly higher. Their number also depends on the quality of installation of equipment power and conditions of use.

Land near reservoirs, directly adjacent to the thermal power plants, are continually sinking due to rising groundwater levels, resulting in the swamping large areas. Under the action of water in the formation of the coastline destroyed large areas of soil are attrition. Abrasion cycles last for decades, and the processing is the large mass of soil, siltation of the bottom of the reservoir and water pollution.

Improving the design of thermal power equipment, strict compliance with its operating permit to minimize the amount of oil entering the waste water, and the use of traps and septic tanks practically excludes them from falling into the environment, but only if the full technical health of these wastewater treatment plants.

The impurities contained in the emission of thermal power plants, falling into the biosphere in the vicinity of the station, entering into interaction with the environment, undergo various changes. Leachable precipitation, they fall into the soil and water. In addition to the major components formed during the combustion of fossil fuels in thermal power plant emissions of Karaganda contains dust particles having a different composition, nitrogen oxides and sulfur oxides, metals, fluoride and gaseous products of incomplete combustion.

Once in the atmosphere, they cause great harm not only the main components of the biosphere, but also businesses, other city facilities, transportation and, of course, health.

During the analysis of morbidity in Karaganda in 2008 and 2010 (per 100 thousand population) it was revealed that the number of respiratory diseases for the above period ranged from 27 to 30 500, including the marked increase in incidence of bronchitis and pneumonia.

Thus, the chemical substances contained in the emissions of existing thermal power station in Karaganda, directly affect the health of the population of Karaganda and nearby settlements.

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SCHOOL OF WOMEN'S HEALTH AS THE BASIS FOR THE PREVENTION OF CANCER IN FEMALE POPULATION OF THE CITY

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Prevention of cancer is one of the priorities of the city clinic oncologist. The main objectives of preventive measures are to increase public awareness of the risk factors, early detection and treatment of cancer; to increase the motivation of people to maintain a healthy lifestyle.

Preventative work includes such methods as information-methodical work of doctors and nursing staff, organization of health schools based on day hospital and outpatient basis, distribution of printed guidelines and manuals, organization of stands and wall newspapers, participation in health programs on television and radio, articles in local newspapers and magazines.

All mentioned above methods have been implemented in the work of the cancer prevention cabinet based in City Polyclinic Nr. 1, Syzran.

In 2011 the following health schools based on the cancer prevention cabinet were operated:

"Women's Health", "Men's Health", "Life with cancer", "Give up bad habits", "Rational nutrition", "Active lifestyle". Different schools are designed to work both among the healthy population and cancer patients including their relatives. Classes are held daily, 5 days a week (Monday to Friday). One class lasts for 30 - 40 minutes. Prior to these classes methods of transferring knowledge to students and a mechanism for developing their skills have been worked out.

Especially popular among the female population is the school of women's health. In 2011 it was visited by 73 women. Their age is from 17 to 74 years old. The main groups are women with non-cancer (85%) and cancer (9%) diseases of mammary glands and 6% of healthy women. While forming groups of students the need for training, motivation, learning, the rate of sustainable skills were taken into account

Themes of the classes in the school of women's health were largely determined by women themselves. The first class included the concept of the anatomy and physiology of the female reproductive system, the rules of personal hygiene. The second one was devoted to the menstrual cycle, hormonal and nonhormonal contraceptive methods. The problem of abortion and its complications was widely discussed. Benign and malignant tumors of the female reproductive system, the need for monitoring, evaluation and treatment of precancerous and chronic diseases, the rules of self-control of the skin and mammary glands were talked about in the third class.

The fourth class was devoted to the rules of healthy lifestyles. Women were told about

the dangers of alcohol and tobacco. The need for a balanced diet, exercise, health training was widely explained.The fifth and the last class was focused on the need for annual visit to examination room and fluorography for women older than 40 years - mammography. To assess the knowledge and skills the women were tested and the test showed that 88% of women listened to the demands of a healthy lifestyle and wished to change their lives for the better, 12% of women took skeptically to what they had heard.

Thus, the training of female health in the school can increase awareness of the causes and early detection of cancer, teach women self-examination of the skin and mammary glands, adjust population to a healthy lifestyle.

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TO A QUESTION OF STUDYING THE STATUS OF NUTRITION OF ELDERLY POPULATION IN KAZAKHSTAN WITH THE METHODOLOGY OF 24-HOUR OF A FOOD REPRODUCTION (24-HOURRECALL)

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Food ration has an impact on health status, quality of life, longevity, labor and social activities of population. In the European region of WHO 77% of diseases are noninfectious diseases. They cause 86 % of deaths (Farrington J., Negru L. Fight against the main diseases in Europe – actual problems and ways of their decision//the Facts and ERB WHO/03/06 figures. – Copenhagen, on September 11, 2006 – WHO. – 2006). In 2011, the Kazakh Academy of Nutrition and Kazakh National Medical University named after S.D. Asfendiyarov studied the status of nutrition of the population above 40 years old within the frame of a screening study of mineral density in osseous tissues by ultrasound densitometry of heel bone (Densitometer SONOST 3000, South Korea). The target populations of the research were groups of high risk of osteoporosis. Majority of respondents were women older than 40 years (82,9% of those surveyed) and men older than 40 years (17,1% of those surveyed), living in urban (1231 of those surveyed) and rural (979 of those surveyed) in various parts of the republic – the Central (Akmolinskaya and Karaganda regions), the Northern (Kostanayskaya and North Kazakhstan regions), the Southern (Almaty, Kyzylordinskaya, and South Kazakhstan regions), the Eastern (East Kazakhstan and Pavlodar regions), and the Western (Mangistauskaya and Aktyubinskaya regions). Data collection on nutrition was carried out by a method of 24-hour reproduction of nutrition (24-hour recall), which was recommended by WHO and widely applied in the present time. Data collection on nutrition was carried out by specially prepared group of interviewers with a set of methodical tools to define quantity and quality of consumed food. For an assessment of quantity of food consumed the researchers used albums with drawings and photos of various dishes represented in full-

scale. According to our preliminary data, consumption of the general protein among respondents was 63,3±0,7g/day, that corresponds to the minimum of the minimum norm of consumption of general protein (Preparation and use of food-based dietary guidelines//to Report of a Joint FAO/WHO Consultation / to WHO Technical Report Series 880. - WHO. – Geneva.–1998.–110). For urban residents consumption of protein was 63,7±0,9g/day., for the rural – 60,2±0,7g/day. The structure of a nutrition of the population of the Republic of Kazakhstan within carried-out research demands further processing of databases and the subsequent analysis for formation of conclusions of this work. Based on numerous scientific researches in the field of dietology, it is possible to note that violations of the main components of a food ration, and also existence of chronic deficiency of many vitamins and micronutrients negatively impact the health status.

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DIAGNOSTIC ALGORITHM OF CERVICAL SPINE INSTABILITY IN CHILDREN AND ADOLESCENTS

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Objective: To develop diagnostic algorithm of cervical spine instability in children and adolescents

Materials and Methods: The study involved 194 children and adolescents with the instability of the cervical spine of a different etiology from FSBI Scientific Center of Children's Health from 2009 to 2012. The average follow up period was 39 months (range 3 months to 2.5 years). The average patient age was 10 ± 3 years (range 5 to 18 years). 73% of the surveyed children and adolescents have previously been observed and treated with a diagnosis of Da Costa's syndrome. The leading clinical symptom was frequent migraine. Within our diversified institution an agreement between various specialists (orthopedists, neurologists, pediatricians, ophthalmologists, ENT doctors, etc.) was achieved to provide patients with headaches, dizziness and pain in the neck with a mandatory orthopedic consultation. The study plan was as follow: 1) orthopedic consultation (complaints, medical history, examination), 2) X-rays of the cervical spine in two standard projections in trans oral projections in the maximal flexion and maximal extension lateral position, 3) ultrasound duplex scanning of neck vessels with turning tests to detect hypoplasia of the neck vessels (most commonly, hypoplasia of the vertebral arteries), the deformation of vertebral arteries is usually associated with compression of the latter in the bone channel (Kimmerle anomaly, an abnormal entrance of the VA into the bone canal, etc.), rotary test are used to determine the changes of the blood flow linear velocity, 4), we performed CT scan on children with pronounced atlantoaxial joint asymmetry as well as with clinical presentation of atlas rotary subluxation 5) MRI of the cervical spine was performed in children with the history of trauma to differentiate traumatic and dysplastic cervical spine instability. In the presence of headaches these children also underwent MRI angiography.

All patients with unstable cervical spine were consulted by a neurologist (for the presence of neurological symptoms and exclusion of other neurological disorders), ophthalmologists (to detect diseases associated with blood circulation in the basin of the vertebral arteries) and ENT - doctors (to identify the various hearing abnormalities that could be indirectly connected with the distortion of hemodynamics at the level of the cervical spine due to the instability of the latter).

Results: It was found that 11% of patients with complaints of frequent headaches, syncope initially were treated by a pediatrician, 27% of orthopedic complaints, especially, pain in the cervical spine in 62% by a neurologist, due to prevalence of headache. Radiography of the cervical spine and neck vessels Doppler sonography with rotating tests have the highest diagnostic value of all the instrumental methods of cervical spine instability diagnosis. Other methods were used under strict indications to perform differential diagnosis between various types of instability and to exclude other pathology.

Conclusion: Objectification of instability of the cervical spine is adequately achieved by radiography with functional tests, as it is almost impossible to detect unstable segment while the head is in neutral position. Rotary tests accompanying Doppler sonography of the neck vessel fully demonstrate the degree of distortion of the linear velocity of blood flow, which dictates the need for vascular therapy, and orthopedic adequate discharge of the cervical spine with the use of various types of orthopedic products (head holder with the necessary degree of stability of fixation) Close cooperation between the narrow specialists of different profile virtually eliminates the statement misdiagnosis. Our proposed algorithm for the examination of patients with unstable cervical spine contributed to the development of an adequate treatment strategy, which will undoubtedly lead to improved quality of life of patients with this type of pathology.

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THE EFFICIENCY OF USING PREPARATION "BIOVESTIN" AMONG ADOLESCENT GIRLS IN NOVOSIBIRSK

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Relevance. Liquid Probiotics are intended to normalize and protect the human intestinal microbiocenoses from adverse influences such as malnutrition, bacterial infection, antibiotics and other antimicrobial agents, stress. "Biovestin" - is a product of microbial origin. It is obtained by culturing the basic human symbionts - bifidobacteria and lactobacillus. "Biovestin" was developed and produced the Novosibirsk scientific-production firm "Bio-West."

Materials and methods. With informed consent and permission of the Ethics Committee, were examined 53 girls puberty. All adolescents were observed following studies: history taking, examination of the pediatrician, gynecologist, ultrasound of the abdomen, pelvic ultrasound, a study of fecal bacteria overgrowth, using polymerase chain reaction (PCR), herpes viruses have been identified I-II type, of human papilloma viruses (16.18 type), urogenital chlamydiosis and ureaplasmosis, content seeding was performed posterior vaginal fornix was investigated microscopy of smears stained by Gram. The preparation took 33 teenage girls from 15 to 18 years. The control group consisted of 20 adolescents of the same age and sex. The preparation "Biovestin" administered to 6 ml, 2 times a day for 30 minutes before eating. The course was 1 month.

Results and discussion. All of the girls surveyed had been diagnosed intestinal dysbiosis varying degrees of severity. The change of intestinal microflora, which are characterized by a decrease of 100% of Escherichia coli, bifidobacteria in 27% of cases, lactobacilli and enterococci in 20%, and Klebsiella, and enterobacter was detected in 13%. Bacteriological and PCR study identified various types of bacterial and viral association: human papillomavirus (16, 18 types), candida albicans, trichomonas vaginalis, chlamidia trachomatis, ureaplazma species, herpes simplex virus (I-II types), E.coli, enterococcus faecalis, klebsiella pneumonia, St. Saprophyticus et al., found facultative anaerobic Lactobacillus, bifidobacterium spp.

After the course, "Biovestin" core group of teenagers in the bacteriological examination of faecal coliform was an increase to 60%, reduced the number of conditional - pathogenic flora. In the study of the vaginal secretions of 100% of the cases detected facultative lactobacilli. Moreover, the increased frequency of bifidobacteria, which are assessed on the one hand as representatives of normal flora and on the other hand, as a compensatory factor in the absence or inhibition of lactic acid bacteria. The number of pathogenic flora has decreased, anaerobic, coccus and diplococcus microflora was not found.

Conclusion. Clinical and laboratory studies suggest domestic product "Biovestin" preparation of choice for initial correction of dysbiosis in patients with somatic teenagers, ENT - diseases, gastroenterological diseases, and chronic pelvic organs.

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IS RESISTANT HYPERTENSION REALLY RESISTANT?

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Managing resistant hypertension is difficult and mostly involves expensive testing seeking an underlying secondary cause. This study was undertaken to determine 1) the extent of the white-coat phenomenon in patients with resistant hypertension, and 2) whether 24-h ambulatory blood pressure (BP) monitoring (ABPM) or having BP recorded by a nurse instead of the referring doctor could clarify how many apparently resistant hypertensive's

actually have controlled BP.

This study involved 611 patients with BP ≥140/90 mm Hg who were referred for 24-h ABPM by their specialist or general practitioner, including 277 patients who were taking no antihypertensive (group 1), 216 taking one or two antihypertensive drugs (group 2), and 118 taking at least three antihypertensive in combination (group 3). Each had BP recorded by one of two nurses before 24-h ABPM. Controlled BP was defined as awake ambulatory BP <135/85 mm Hg and the white-coat effect was the difference between the BP recorded by the referring doctor or nurse and the average awake ambulatory BP.

Those with resistant hypertension (group 3) were older (61 years (12) v group 1: 46 years (14) and group 2: 56 (14) years; P < 0,001), but were of similar weight, height, and arm circumference to the other groups. Referral systolic, but not diastolic BP was higher in resistant hypertensive's (mean 171/95 v 154/95 mm Hg and 164/94 mm Hg, respectively, P < 0,001 for systolic BP only). Twenty-eight percent of resistant hypertensive's and 32% of those taking no antihypertensive drugs had normal awake ambulatory BP and the white-coat effect attributable to the referring doctor was always greater than that due to the nurse (range 16 to 26/12 to 14 mm Hg v 9 to 17/4 mm Hg, P < 0,001). Nurse recorded BP was highly sensitive (97%) in identifying awake hypertension but lacked specificity (57%) to replace ABPM.

Our results show that approximately one in four patients with apparent resistant hypertension referred for ABPM have controlled BP and one-third of patients referred for initial evaluation of office or clinic hypertension have normal BP using ABPM, ie, white-coat hypertension. Twenty-four-hour ABPM appears an appropriate initial step before further investigating or treating patients with apparently resistant hypertension.

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CHARACTERISTICS OF WORKING CONDITIOS OF ALMATY CITY BUS DRIVERS

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Everywhere, the work of bus drivers is considered as one of the most intense and responsible jobs due to very high level of nervous and emotional tension and highest attention and responsibility demanded from them. The data on hygienic assessment of working conditions of public bus drivers is incomplete. At the same time, high psychological tension of drivers is caused by a whole set of factors of psychological load. The leading role in it belongs to control of traffic, an information volume in eye viewing area of drivers. The information receiving by driver comes not only from bus's control panel, but also from movement environment. Cars, pedestrians, a road condition, traffic signs include a

big number of the basic objects of supervision by. At various times days the number and character of separate objects of supervision change, as defines their importance. So, in rush hours the number of cars and pedestrians sharply increases, and at long-distance roots some time the lack of information leads to monotone.

The psychological stress caused by the intensity of received information is aggravated with the additional information from bus cabin, from passengers in connection with sale of tickets, coupons, etc. that can increase driver's nervous and emotional stress.

Driving involves the work of muscles of hands, feet, neck and a trunk for maintenance of a working sitting pose, and at turns of a head for the review of bus doors in a passengers landing time.

Physical factors such as air temperature, humidity and velocity cause various reactions of a body during different seasons of year, thermal resistance of clothes, load and intensity of work.

The basic sources of pollution of the air in a bus cabin by toxic substances are the engine, a case, the carburetor, petrol tank, air of a roadside zone; cargo and passengers. Certainly, main pollutant is exhaust gases from the car engine, gases and dust getting to a cabin from roadside zone.

In air of the bus cabin 3-6 fold excess of oxide carbon of maximum concentration limit, of nitrogen dioxide, sulfur and soot dioxide is observed. At the same time, even rather small toxic substances concentration, especially in a combination to other occupational, can negatively effect on a body of drivers and, hence, lower safety of traffic.

Noise and vibration are adverse occupational factors in bus cabins. Noise levels in cabins of buses makes 71 dBA, and broadband vibration on workplaces is represented by the maximum value in frequencies 1-125 Hz, especially 2-8 Hz.

Thereupon, the necessity of the study of study physical, chemical factors of the occupational environment is obvious, as well as the study of basic physiological indicators of an organism and disease of bus drivers in the conditions of a city with highly polluted environment and overloaded traffic for undertaking preventive recommendations.

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PROTEIN METABOLISM IN EXPERIMENTAL ANIMALS EXPOSED TO CADMIUM SULFATE

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At present, quite significant numbers of employers are under occupational exposure of cadmium compounds which are widely used in various industries. Several researches on health impact were conducted mainly, at the industries of alkaline batteries production. Since 1920s, descriptions of

poisoning cases by compounds of cadmium on the production, mainly by inhalation were published.

Cadmium and its compounds are polytrophic poisons with effect on many functions and systems of the body. Some toxicological researches have stated changes in health status found in workers who were professionally exposed to cadmium.

The purpose of the present study was to study the effect of cadmium sulfate and its combination with other toxins on protein metabolism in experimental animals.

Materials and methods. The study is performed in experimental conditions on rabbits of both sexes, with the initial weight of 2100-2900 grams. The duration of the experiment was 4 months. A set of experiments was taken. Every month, DNA and RNA, total protein in blood and urine of animals were defined with use of well-known methods.

Results. The dynamic of the protein fractions content in the serum after oral exposure to solution of cadmium sulfate of 0.5 mg/kg and 0.5 mg/kg shows that in one month of the experiment with the introduction of cadmium (0.5 mg/kg) the total protein content in both experimental groups in compare with the control did not change, and significant differences were not between the indices. After 2 months in the group of animals treated with sulfuric sour cadmium, total protein was reduced with a significant difference in compare with controls. After 3 months, there almost were no changes in the index in experimental groups compared to control. After 4 months in the group of cadmium content of total protein was elevated with a proven difference between the controls and the group of animals treated with sulfuric sour cadmium, or else the rate of sulfate groups is practically no different from controls. Thus, after 4 months from the start of the experiment, if with cadmium at a dose of 0.5 mg / kg was administered sulfate, then the protective function took place with a proven degree of probability.

With the introduction of cadmium in the mixture with poisons rate in the experimental groups almost has not changed and did not differ from controls at 1, 3 and 4 months from the start of the experiment. After 2 months from the start of the experiment with a mixture of cadmium poison team total protein was reduced with a reliable indicator of the difference with the control group. In the group of animals treated with a mixture of poisons and sulfate reduction of the rate was also observed, but the difference with the control was not proved, that we can say that there has been a positive influence sulfate.

This means that for cadmium intoxication (0.5 mg/kg) at 1 and 2 months after the start of the experiment changes in the content of urea in the experimental groups was virtually no. After 3 and 4 months after the start of the experiment in the group of animals treated with cadmium the rate was raised, and with reliable difference between the control groups. In the group of animals treated with an additional sulfate, the rate was not significantly increased and the difference with the control was not proved. Thus, in intoxicating with cadmium of 0.5 mg/kg in the group of animals treated with sulfate caused changes have been adjusted by sulfate.

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DEPRESSION AT OCCUPATIONAL DISEASES FROM INFLUENCE OF PHYSICAL AND CHEMICAL FACTORS

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Depression - important medical a problem. At patients with somatic diseases depression can lead to serious medical-social consequences: to infringement of psychosocial functioning, deterioration of clinical current of somatic diseases, decrease in quality of a life of patients, decrease in adherence of patients to treatment, deterioration of the forecast (Broadhead W.E., 1990; Hays R.D., 1995). In connection with above told diagnostics of affective infringements at persons with a somatic pathology, in particular, professional has the big urgency.

The purpose of research: to reveal frequency of occurrence and structure of depressive frustration at persons with occupational diseases from influence of physical and chemical factors.

Material of research. It is surveyed 79 person. Depending on character of the influencing professional factor patients have been divided into two groups. The first have made 37 person with a professional pathology from influence of the physical factor (vibration, noise), middle age 59,8 years, the average general experience 35,9 years, the experience in harmful working conditions 25,8 years. The second group 42 persons with a professional pathology from influence of the chemical factor (have made organic solvents of an aromatic series, salt of uranium) middle age 63,4 years, the average general experience 33,4 years, the experience in harmful conditions 20,6 years.

Methods of research. For revealing depression used criteria DSM-4 (Diagnostic and Statistical Manual of Mental Disorders, 4-th., 1994). On the basis of the given criteria allocated a small and big depressive episode.

Results of research. In the first group mental frustration of depressive character are revealed at 37,8 % of persons, in the second group - in 80,9 %. Taking into account, that depressions represent itself as an independent risk factor of development AH and IDH (Larson S.L., 2001), it is important to note, that in group of persons with a professional pathology from influence of physical factor AH is diagnosed in 62, 1 % of cases, in group of persons from influence of the chemical factor - in 76,2 %. In the first group met AH 3 risk (3 risk - at 47,8 %, 4 risk - at 30,4 %) at average duration of disease of 12 years, while in the second group - with 4 risk (3 risk - 34,4 %, 4 risk - 56,3 %) at average duration of disease of 18 years is more often. In the second group it was diagnosed IDH (2 group - 42,9 %, 1 group - 13,5 %) and also diabetes (SD) (2 group - 19,1 %, 1 group - 3,2 %) the second type is more often. Studying of depressive frustration has shown, that the small depressive episode in structure of depression met more frequently in the first group, than in the second (64,2 % and 32,3 % accordingly), at the same time in the second group the "big" depression (2 group - 71, 7 %, 1 group - 35,8 %) much more often came to light.

Thus, in group of persons with occupational diseases from influence of chemical factors

higher frequency of occurrence and a degree of expressiveness of depressive frustration connected as with higher frequency of occurrence of a cardiovascular pathology (AH and IDH), including their complicated forms, and SD 2 types in comparison with group of persons with occupational diseases from influence of physical factors. In connection with the received data expediently introduction of procedure of screening of depressive resources in this category of patients, and also use of energizers in circuits of medicamentous therapy.

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ANTIHYPERTENSIVE TREATMENT OF METABOLIC SYNDROME (OVERVIEW)

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Summary

Metabolic Syndrome (MS) is an interdisciplinary problem gaining more and more popularity and considerable social and economic significance.

There are two main directions in the treatment of metabolic disorder:

- Modification of the main reasons (treatment of overweight and obesity, treatment of reduced physical activity and insulin resistance);
- Direct medicamentous treatment of the risk factors (atherogenic dyslipidemia, arterial hypertonia, treatment of pro-inflammatory conditions)
- An overview has been made of the antihypertensive medicines applied for the treatment of arterial hypertonia in MS.

Key words: Metabolic syndrome, arterial hypertonia, dyslipidemia

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INFLUENCE OF CADMIUM CHLORIDE ON THE MORPHOLOGY OF ENDOTELIOCYTES OF THE DEEP CERVICAL LYMPH NODE

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Air pollution of Almaty by exhaust gas emissions from internal combustion engines is creating a great danger, especially taking under consideration the fact that the city does not have a lot of wind movement. It is well known that exhaust gases contain a large amount of hazardous and harmful substances, including organic and heavy metal compounds, e.g. cadmium.

It is well known in modern lymphology that the lymphatic system is the first to be involved in all pathological processes. That is why a failure in its functions influences

the origin, development and result of diseases, because it is the lymphatic system that guarantees sanogenesis in tissue by means of drainage and detoxification.

The objective of this study was the assessment of the influence of cadmium chloride on the morphology of endoteliocytes in the blood capillary of the deep cervical lymph node.

The experiments were conducted on white non-pedigree male rats with the weight of 238,50 ± 29,6 g. Cadmium chloride in the amount of 1,5 mg/kg was given daily with feed in the course of 2,5 months. The results were controlled by using intact rats.

The study of the structural organisation of the endoteliocytes in the deep cervical lymph node in all the animals after the introduction of cadmium chloride showed dystrophic changes in the cytoplasm and cellular oedema in comparison to the endoteliocytes of the exchange microvessels in the intact group. Moreover, there was a considerable oedema and enlargement of the interstitial spaces.

The morphometric analysis of the endoteliocytes of blood capillaries detected a considerable enlargement of cisterns of the gastroesophageal reflux (GER) and the Golgy complex. The volume density of the GER increased by 44% in animals that received the toxicant in the dose of 1,5 mg/kg in comparison to the values of the control group. The numerical density of bound ribosomes was reduced by 44%, that of free polysomic ribosomes by 43%. The volume density of mitochondria increased by 49% due to the oedema and swelling of the given organoids. These organoids had almost no crysts. The volume densities of micropinocytic vesicles, reflecting the intensity of transport processes in cells, went down as well: basal micropinocytic vesicles by 53%, luminal micropinocytic vesicles by 48% and cytoplasmic micropinocytic vesicles by 56%. The number of microvilli on the apical surface of the endoteliocytes decreased by 83%.

This way, after the introduction of cadmium chloride, there were unidirectional structural changes in the endoteliocytes of microvessels of the deep cervical lymph node. These changes included the development of dystrophic processes in the endoteliocytes of the blood capillaries due to the cellular swelling, reduction of their protein synthesis processes, energetic and transport functions, which manifested itself in the decrease of the membranes of the gastroesophageal reflux, number of ribosomes, swelling of mitochondria, reduction of micropinocytic vesicles and microvilli.

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FORMATION OF SUBORDINATION MOTIVES IN CHILDREN WITH UNDERDEVELOPMENT OF SPEECH

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From the moment of receipt in school in motivational sphere of the first-grader the central place occupies social motive – aspiration to a new social position of a child. By

means of educational activity problems of achievement of different social statuses are solved. Consecutive orientation of the pupil to achievement of the social status and its subsequent change, transformation of status orientation into inducing stimulus of the doctrine is a necessary condition for development of the person of the schoolboy. The development originality in the school period consists that it is necessary for pupil to show activity in educational activity to reach certain social status. A category at pupils of elementary grades is well acquired in the course of dialogue and knowledge.

Complication of motives, them across and hierarchical construction begins at the child already at preschool age and occurs further during all life: motives lose the direct character, they start to be mediated by meaningly object in view, there is a submission of one motives by another Hierarchy of motives is concerning steady and causes stability of the person. Change of leading motives means change of positions, interests, values. Process of formation of leading motive at children with a speech pathology can lead to infringements of correct formation of the person in connection with underdevelopment of all components of speech activity.

Merge of both functions of motive – inducing and sense occurrence – gives to activity of the person character of meaningly adjustable activity. Easing or distortion of these functions – sense occurrence and incentive – leads to activity infringement. Now theoretically probably to prove at the child with speech underdevelopment hierarchy change sense occurrence motives.

At speech infringements speech activity becomes sense occurrence, it becomes primary in relation to other kinds of activity. As a result undervelopment speeches arise contradictions between speech possibilities and motives of activity.

The motive is understood as the psychological reason of behavior. In development of motivational sphere and subordination motives the basic feature of the person – its orientation and moral stability is formed. The moral behavior assumes sensibleness of motives and acts. Sensibleness is formed on the basis of moral experience in process of communicative dialogue And overcoming of difficulty of a speech transmission and thought registration becomes primary for such children, the problem of correct perception of speech and "fear of speech" detains sense occurrence function of motives. The contradiction between operational-technical possibilities of speech and motives of activity disturb mastering by ability to supervise the activity, to make its purposeful, realized and independent.

Researches of psychologists have shown that moral representations and estimations of children merge with their direct emotional relation to people. Formation of ethical standards goes through merge of an emotional condition and a moral estimation, then the moral estimation separates with emotional experience and becomes independent and dictates behavior of the child further. So, experience of experience of acts leads to development of the moral relation to acts. Approval of adults, then aspiration of children to follow requirements of adults becomes the mastering initial stage moral behavior.

Here also call of duty which becomes the basic motive of behavior of the child starts to be formed.

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TEMPORAL BETONTER HYPERMETABOLISMUS IN DER FDG-PET BEI PATIENTINNEN MIT NMDA-REZEPTOR-ANTIKÖRPER-POSITIVER ENZEPHALITIS

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Die N-Methyl-D-Aspartat (NMDA)-Rezeptor-Antikörper-positive Enzephalitis ist ein erstmals 2007 von Dalmau et al. beschriebenes, schweres, aber potentiell reversibles Erkrankungsbild, welches überwiegend junge Frauen betrifft. Diese Enzephalitis beginnt meist mit psychiatrischen Symptomen, rasch gefolgt von epileptischen Anfällen, Bewusstseinsstörungen, Dyskinesien, respiratorischer Insuffizienz und autonomen Dysfunktionen. Bei bis zu 60% der Patientinnen findet sich eine paraneoplastische Genese, meist aufgrund ein- oder beidseitiger Ovarialteratome. Bei dieser neuen Form der Enzephalitis wurden bisher lediglich vereinzelte, meist pädiatrische Fallberichte mit Hirnmetabolismusverä nderungen beschrieben. Die Diagnosestellung der anti-NMDA-Rezeptor Enzephalitis basierte bei unseren 4 adulten Patientinnen (42 ± 5 Jahre, 2 mit Ovarialteratomen) auf der Kombination aus charakteristischem klinischen Bild, ergänzender Diagnostik (Schädel-MRT, Liquor, EEG) sowie dem Nachweis von spezifischen Autoantikörpern gegen NMDA-Rezeptoren (NR1/NR2B) im Serum und/oder Liquor. Zur Tumorsuche führten wir u.a. eine Ganzkörperbildgebung in Narkose mit ^{18}F-Fluor-2-Desoxy-p-Glukose-Positronenemissionstomographie (FDG-PET/CT) durch, die allerdings in keinem Fall Stoffwechsel¬steigerung im Bereich einer Neoplasie zeigte. Vergleicht man mittels statistical parametric mapping (SPM2) die cerebralen FDG-PET-Befunde der 4 Patientinnen mit anti-NMDA-Rezeptor Enzephalitis mit 5 altersgematchten onkologischen Patientinnen (37 ± 3 Jahre), die mit dem gleichen Akquisitionsprotokoll im PET aufgenommen wurden, so zeigt sich ein signifikanter Hypermetabolimus ($p<0,001$, unkorrigiert auf Voxelebene) besonders temporal bds. (parahippocampal, Hippocampus, Amygdala und temporaler Pol) sowie orbitofrontal am ehesten als Ausdruck der limbischen anti-NMDA-Rezeptor Enzephalitis. Nach den Ergebnissen dieser PET-Studie mit der bislang höchsten berichteten Fallzahl, kann die cerebrale FDG-PET bei der Diagnostik einer anti-NMDA-Rezeptor Enzephalitis einen wertvollen Beitrag leisten.

I.I. Yagodina

CONDITION OF THE LOCOMOTIVE SYSTEM IN PATIENTS WITH ARTERIAL HYPERTENSION

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Physiotherapy is a necessary component of the complex programme of the arterial hypertension (AH) treatment. Physical exercises which influence the cardiovascular and regulatory systems increase functional reserves of the body. Reflex interrelations between organs and systems of the body initiate the occurrence of pathological changes in the muscular system, the elimination of which has a positive effect on the function of the cardiovascular system.

The objective of our research was to detect and study the effectiveness of the myofascial correction on the condition of the cardiovascular system in 102 patients with AH in the primary stage (group A – 43 patients) and AH in combination with cervicalgia (group B – 59 patients). The patients of the group A were subdivided into two groups: the main one (A-m), which had myofascial correction, and the control one, which had physiotherapy without it (A-c). The patients of the group B were divided in the same way, B-m and B-c.

The study of the locomotive system of patients with arterial hypertension with the help of the functional muscular testing demonstrated a weakening of anterior scalene muscles and broadest muscles of back in the abdominal wall of the gluteus medius muscle and tension in the ischio-crural muscle group, abdominal part of the large pectoral muscle, the erector spinae and the upper portion of the trapezius muscle. Patients with cervicalgia had, apart from the changes in the muscular groups mentioned above, tension in the sternocleidomastoid muscle, elevator muscle of scapula and a weakening in the deep cervical flexor muscles. The mean value of the functional muscular testing was 30±0.73 points in group A-m, 29.9±0.79 in group A-c, 47.5±0.69 in B-m, 46.4±1.60 in B-c (norm = 0 points). There were no significant differences between the main and the control group. Pathological changes, e.g., increased tension or a decrease in the force and endurance, were diagnosed in both the muscles connected to the cardiovascular system with the help of general innervation and muscles, connected with the general biomechanical acts mentioned above, which caused muscular imbalance.

In order to evaluate exercise performance, we used bicycle ergometry and a step test. Before treatment the tolerance to physical activities in the patients of group A was as follows: 48% - high tolerance, 12% - medium, 12% - low and 28% - questionable tolerance. The distribution in group B: 8% - high, 10% - medium, 10 % - low and 72% - questionable tolerance.

The main objectives of the physiotherapeutic sessions were: elimination of the muscular imbalance by relaxing and stretching the tensed muscles and strengthening the weakened

ones, correction of the respiratory stereotype, normalisation and strengthening of the optimal motive stereotype, training of the equilibrium function and an increase of the body tolerance to physical activities. After the treatment there were significant differences between the main and control group. After the examination of the muscular system the mean value of the functional muscular testing in group A-m decreased to 17.4±0.53 and to 25.5±0.77 in group A-c; to 18.5±1.05 in group B-m and to 35.4±2.13 in group B-c. The reduction of the muscular imbalance influenced the tolerance of patients to physical activities. The evaluation of the exercise performance according to the data collected after the bicycle ergometry showed positive dynamics in all patients; however, it was more apparent and significant in groups A.

Thus, the elimination of the muscular imbalance, training of the equilibrium and coordination functions with the help of our methods made it possible to influence not only the condition of the locomotive system but also that of the cardiovascular one, which contributed to the increase in the tolerance to physical activities.

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METHODS OF REGENERATIVE MEDICINE IN TREATMENT OF PATIENTS WITH MULTIPLE SCLEROSIS

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Multiple sclerosis (MS) is an outstanding modern health problem due to its ever-growing incidence (120 cases per 100 thousand population in Europe) and contamination of young people (18 - 30 years) followed by their rapid disability, high-costs of state on provision them with medication, rehabilitation programs and disability benefits.

Existing methods of treatment (interferon therapy, use of various immunosuppressive medications of different chemical and biological nature) for many years now have shown little success giving respite from the severe disability of only 5-8 years.

In scope of pilot study on treatment of patients with MS we used cell therapy. Cell preparations were standardized living culture of mesenchymal stem cells (5mln.cells in a therapeutic dose) obtained from Wharton's jelly of umbilical cord of healthy newborn baby. This medical technology for production and standardization of mesenchymal stem cells is approved by supervisory authorities of the Ministry of Health of the Russian Federation; the permission to conduct clinical trials has been received.

The main therapeutic moments for parenteral (intravenous, endolumbal) use of the MSC (mesenchymal stem cells) preparation was their immunomodulatory effects in MS, which consists in blocking the activity of dendritic antigen-presenting cells.

Another important point was the overall regeneration reaction particularly in MS case that lead to a rapid neurotrophic support due to cytokines and growth factors, and, apparently, remyelination.

The following effects have been clinically observed: a decrease, often to the complete elimination of neurological deficit concerning cerebellar and brainstem symptoms, pyramidal insufficiency and pelvic disorders. There was a significant reduction of fatigue in patients with increased time of daily activity, self-care improvement and, most importantly, the ability of independent movement. All this contributes to better social adjustment of patients with MS. Many patients were able to return to work, three women mustered up courage to become pregnant and one of them gave birth to a healthy baby. Improvement rate on the international scale of disability in case of MS (EDSS scale) is 2-2.5 points in average.

Duration of stabilization of patients after single surgery of mini-transplantation of MSC is approximately 1 year; after the 2nd operation it is up to 5 years. The frequency of exacerbations in patients and depth of emerging neurological deficit decreases by more than 2 times.

This type of therapy is effective in 70-75% of patients. The magnitude of therapeutic effect of MSC transplantation in MS is inversely proportional to the depth of initial neurological deficit and duration of the disease. Well established rehabilitation, including psycho-rehabilitation process is also of great importance.

Observation of patients for over 8 years did not reveal their propensity to oncology processes and any other adverse events and side effects.

Thus, along with traditional therapy of patients with MS methods of regenerative medicine, namely allogeneic mini-transplantation of mesenchymal stem cells from umbilical cord of man can be used successfully.

Yu.L. Zeynalov

COMPLICATIONS AFTER TRANSPEDICULAR SPINAL FIXATION IN PATIENTS WITH IDIOPATHIC SCOLIOSIS

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Summary. We studied treatment outcomes of 75 patients with scoliosis of various severity which were treated with the system of internal transpedicular fixation (Vertebra Stabilization System Ø 5,5-6,35) OIM (Turkey). There was one case of damage to the pleura, one patient had pleuritis, and two patients had hemodynamics and intestinal problems in the short term. 10 patients, which were operated in other hospitals, had fractures of metal, relapse of deformities, inflammation of the soft tissues.

Introduction. The appearance of the principally new method of internal transpedicular spinal fixation in the middle of the XX century, which was characterised by a small number of injuries and reliable stabilisation of the spinal motion segment, considerably changed vertebrologists‘ opinion about surgical procedures on the spine. However, this method, like any other, has complications. Medical literature mainly provides descriptions of complications after transpedicular fixation in patients with spinal injuries, whereas there are

also complications in patients with scoliosis.

The objective of the research was to study complications after transpedicular spinal fixation in patients with idiopathic scoliosis.

Materials and methods. We analysed 75 patients, who were operated in Tusi Memorial Clinic, Baku and 10 patients, who were operated on in other hospitals. All patients were diagnosed with idiopathic scoliosis and came to the clinic with various complications after the transpedicular fixation. All patients were examined by using clinical and roentgenologic methods, including CT.

Results of the research.

8 patients (10%) had complications. Two patients had complications connected to the pleura injury during costectomy. The patients received a Bülau drain. The complications were eliminated and did not influence the further treatment outcome. One patient had low arterial pressure in the course of two days after the operation, which was normalised after a medicamentous correction. Two patients had a short-term reduction in the haemoglobin level; however, blood transfusion was not necessary. One patient had an intestinal dysfunction. Two patients had pleuritis in the postoperative period. Later, in order to prevent this complication, we developed a complex of measures, which included strict observance of the hospital routine, physiotherapy and anti-inflammatory therapy. None of the patients had inflammatory processes in the area of the postoperative wound. Patients, which were operated in the clinic n.a. N. Tusi, had a change in the deformation angle by 2-5°in the long term, which in case of patients over 20 years of age was explained by degenerative changes of the spine. There were no complications caused by a fracture of metal or occurrence of neurologic symptomatology in the given group of patients. In the case of patients, which were operated in other hospitals and only came to the clinic with complications, these were caused by fractures of metal, use of non-standard screws or the metal complex used for other fixation methods, which led to a relapse of deformities, formation of postoperative kyphosis after the removal of the scoliotic deformity, neurologic complications after internal transpedicular spinal fixation as a result of the wrong implanting of the screws. Moreover, three patients had complications connected to the inflammation of the soft tissues.

The patients were operated; the treatment outcomes were good.

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STRUCTURE CHANGES IN LIVER AND KIDNEY UNDER INTOXICATION

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Morphological and functional changes of liver and its regional glands under chronic exotoxicosis caused by cadmium chloride have been studied in 130 male rats. Chronic cadmium intoxication resulted in dystrophic change of hepatocytes in the kind of cytoplasm vacuolization, cell hypostasis and destruction as well as disorder of blood

microcirculation. Besides, disorder in the structure of cell nucleus, cell organelle, cell interfaces, spatial configuration of microfibres of exchange poles and gall capillaries were registered. Signs of albumen synthesis disorder were registered in hepatocyte cytoplasm: widened spaces without chromosomes were found in channels of granular endoplasm reticulum. The number of ribosomes and poliribosomes was decreased. Signs of cell power supply insufficiency supported by change of mitochondria density and reduction of crista were found. These changes were accompanied by reduction of glycogen level and accumulation of excess of lipid inclusions. Chronic exotoxicosis exited development of hypostasis of regional liver nodes, reduction of sinus areas, increase of cortical and medullar substance volume. Due to hypostasis of node parenchyma and decrease of sinus gaps drainage function of the nodes was lower and the lymph coming through the node had close contact with the parenchyma of the nodes. Areas of secondary lymphoid nodes were increased reliably. Cell changes in all examined zones of liver lymphatic nodes were based on decrease of small and medium lymphocyte number and reliable increase of big lymphocyte number. This is the indicator of development of immune-morphological proliferative reaction in the lymphoid tissue as the reaction to toxic substance impact. In medullar tension bars and secondary lymphoid nodes increase of the number of plasmablasts, plasmocytes, macrophages, Mot cells, degenerated cells were registered.

Pancreatitis in experimental conditions was reproduced in 30 dogs by injection of autogall in the pancreas duct. Animals dye within 24 hours without treatment. Main reasons of kidney affection during acute pancreatitis are: reduction of blood supply due to arterial hypotension and hypovolamia, toxic action of circulating pancreas enzyme, vasoactive agents and tissue albumin decomposition products to kidney parenchyma. During severe form of acute pancreatitis loss of 30% of circulating plasma is possible within several hours. Hypostasis of paranephral tissue, multiple hemorrhages into the capsule were developing. Intervascular changes, massive glomerulo-thrombosis, unclear gap in the capillary, suppressed with hydropic liquid vascular glomerule prevailed. Aggregation of regular elements in venules was observed. Epithelium necrosis foci were found in tubulas adjacent to glomerula. Tubular epithelium in kidney medullar layer contained vacuoles of various size filled with cytoplasmic liquid. Sometimes the vacuole occupied the whole cell pushing the nucleus to periphery. In cortical layer many peritubular capillaries were empty and with unclear borders, in some places capillary blood flow was completely stopped. Plethora of juxtamedullar glomerules and direct vessels of medullar kidney layer was clearly seen. Changes in kidney tubulas were registered in the kind of epithelium dystrophy and necrosis. Redistribution of inter-kidney blood flow occurred with apparent ischemia of kidney cortex. Most evident changes were registered in venular section that perform drainage and deposit function. In condition of developing plasmorrhagia, hemorrhagia and increased re-absorption venules with thin compensatory widened wall earlier than the other units reached the stage of decompensation with micro-aneurism and thrombus.

R. Zhaxylykova
V. Lukyanets

THE PANDEMIC OF PRIMARY CHRONIC NONREGISTERED DISEASE AS THE MAIN REASON FOR INCREASING MORBIDITY BY "NONINFECTION" ILLNESSES IN PEOPLE IN THE BEGINNING OF XXI CENTURY

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About presence the pandemic of Acariasis, caused by house dust mites, we informed the community since 1981. Acariasis is the primary chronic infection. The absence of struggle against this illness as absence of the struggle against any infection conducts to different complications. These complications are the clinical masks of Acariasis. Nowadays the physicians of different parts of medicine work with this clinical masks of Acariasis. The given fact is confirmed by statistics of morbidity of people so-called "noninfection diseases". In this row are a skin's allergic illnesses. According our data the 70-95% of skin's allergic diseases is complications of Acariasis. At present time there are many facts in official medicine which indirectly testify to presence the pandemic of Acariasis. But we will tell about the facts which conducted us to so responsible conclusion.

The prerequisite for our so serious investigations was the casual detection fact about 100% infectness of sick person with Demodectic Discoid Lupus Erythematosus (contrary to categorical back opinion of dermatologists). Therefore we dilated our main research work by more scrutinizing the coverlets of patients. Involuntarily we began visually estimate the condition of skin on open parts of body of surrounding people. To 1979 we received the strong conviction about the presence the nonregistered Demodecosis epidemic among the population. The following two years was dedicated to intensive studying of all parametres of any scientific discovery. In results we haven't any doubt about veracity of our observation's data. All following years we continued more deeply study this problem, and concurrently informed the corresponding organs about the appearance detection. As a result we learnt about widespread Dermatophagoidic, latent and subclinical variants of Sarcoptic, and others Acariases.

Nowadays we purposefully examined all coverlet on more than 450000 men, an open part of body on more than 2 million representatives of all continents. During our observation with every year increased the quantity of people who had had infected by mites skin. Since the August of 1981 we not met the people with healthy skin. The laboratory examination allowed found out mites at 99,8% people from 7817 who had having infected by mites skin. Etiopathogenetic treatment allowed completely recovery more than 8670 sick people with different masks of Acariasis. Among theirs was the 178 kids with Atopic Dermatitis, 785 persons with Food and Drug Allergy, 762 with Pollinoses, 213 with Allergy on decoration,243 with Photodermatosis, 13 with Vulval Leukoplakia, 16 Vulval Kraurosis, 172 with Discoid Lupus Erythematosus, 926 with Acne, 69 with Alopecia, 359 with Neurodermatitis, 9 with Skin Cancer, and others. Necessarily to say that during

every following year Acariasis became severity and complexity even at babies. For example, if in 1970-s among infecting people 85% hadn't subjective complaints, then in 2009 the same infected was only 27%. If in the beginning of 1980-s for full recovery the sick people from skin's allergic masks of Acariasis demanded nearly one month, then nowadays it demands from six months to two years depending on clinical case. Dear colleagues! Please compare these data with epidemiological data in your part of clinical medicine. Owing to given Congress every of you can inculcate the given knowledge in every days practice and accordingly can give the full recovery to patients from acariatic variants of illness. Unfortunately nowadays Acariasis is present at all people. But pleasantly that the technology on the beginning of XXI century is allow to specialists from different parts of our planet can have the team-work on distance. Such work is suggested by us on EURAAC Newsletter, 2011, Nr. 5, pp. 7-13. We can help the serious clinics in assimilation of the full recovery methods from widespread clinical masks of Acariases. The given team-work will help all of you to convince of presence the pandemic of Acariasis. Detailed information about Acariases on www.allergy.kz.

A.A. Zhidowinov

PROGNOSTIZIERUNG DER FRÜHEN POSTOPERATIVEN KOMPLIKATIONEN UNTER DER VERWENDUNG DES COMPUTERPROGRAMMS „PROGNAS"

Staatliche aus dem Haushalt finanzierte Ausbildungseinrichtung zur beruflichen Hochschulausbildung „Astrachaner Staatliche Medizinische Akademie" des Ministeriums für Gesundheit und Soziale Entwicklung der Russischen Föderation, Astrachan, Russland

Die Aktualität des Problems der frühen Diagnosestellung und Prognostizierung der postoperativen Komplikationen bei Patienten mit akuten abdominalen Pathologien ist zweifellos. Trotz der stetig wachsenden Anzahl von neuen progressiven Technologien und therapeutisch-diagnostischen Möglichkeiten besteht das Interesse an diesem Problem. Dies wird vor allem durch die Zunahme von eitrigen und septischen Komplikationen und hoher Letalität, die 26-60 Prozent, besonders kurz nach den durchgeführten Operationen, erreicht, erklärt. Eine große Menge von verschiedensten Skalen und Indizes zur Gefahrbestimmung, die in die praktische Chirurgie in den letzten zwanzig Jahren mit dem Ziel, eine Entscheidung in einem konkreten Fall eifacher zu treffen, eingeführt wurde, bleibt fehlerhaft. Mangelhaft sind diese aus dem Grund, dass sie hauptsächlich für die Prognostizierung tödlicher Ausgänge bestimmt sind, und keine objektive komplexe Beurteilung des Gesundheitszustandes des entsprechenden Patienten mit dem Ziel der frühen Diagnostik, Prognose der postoperativen Komplikationen und des Krankheitsausganges berücksichtigen, was keine Optimisierung der durchzuführenden

Behandlung zulässt. Unter der Berücksichtigung des bis jetzt ungelösten Problems der frühen Diagnosestellung und Prognostizierung der Entwicklung von den postoperativen Komplikationen kamen wir zu dem Schluss, dass die Entwicklung eines einheitlichen komplexen Programms, das auf dem genugend breiten Bereich der Merkmale (klinischer, Labor- und Instrumentenmerkmale), die in den Prognose-Algorithmus mit aufgenommen und in der Computerform dargestellt werden, basiert, notwendig ist. Unser Produkt umfasst alle möglichen Aspekte der extra- und intraabdominalen Komplikationen bei Patienten mit der akuten abdominalen Pathologie in der postoperativen Periode, wegen der Ähnlichkeit der postoperativen Symptomatik. Gleichzeitig werden die Komplikationen differenziert betrachtet, aber ihre möglichen Kombinationen werden nicht ausgeschlossen. Dabei werden die Komplikationen zu unterschiedlichen Zeiten nach der durchgeführten Operation (Tag 1-10) betrachtet. Die Einführung des Computerprogramms „PrognAs“ in die tägliche chirurgische Praxis mit dem Ziel, ein automatisiertes postoperatives Monitoring täglich durchzuführen, zeigte hohe Effizienz des Programms in der Hauptgruppe (801 Patient (64,4%) aus 1242 Patienten, die beobachtet wurden). Der Prozentsatz der postoperativen Komplikationen bei den Patienten mit der appendikulären Peritonitis verringerte sich um 8,4 %, was in der Hauptgruppe (65,3%) 4,5% betrug. Es gab keine tödliche Ausgänge in der Hauptgruppe; in der Kontrollgruppe (34,6%) belief sich die Letalität auf 1,8%. In der Gruppe von Patienten mit der akuten Dünndarmverstopfung betrug der Prozentsatz der postoperativen Komplikationen 14,6% in der Hauptgruppe (64,9%) und 25,1% in der Kontrollgruppe (35,1%), und war dank dem Computermonitoring 1,7-mal niedriger. Die Letalität in der Hauptgruppe der Patienten mit dieser Pathologie verringerte sich um 1,5-mal und blieb unverändert (13,8 %) in der Kontrollgruppe. In der Kontrollgruppe der Patienten mit der komplizierten Form der akuten Cholezystitis reduzierte sich die Häufigkeit der postoperativen Komplikationen von 6,8 % (35,9%) bis 2,5% in der Hauptgruppe (64%). Sowohl die postoperative Letalität als auch die Häufigkeit der postoperativen Komplikationen in dieser Kategorie der Patienten verringerte sich unter der Verwendung des Computermonitorings auf 2,5% in der Hauptgruppe; in der Kontrollgruppe betrug der Prozentsatz der Komplikationen 4,5%. Die Ergebnisse der chirurgischen Behandlung der Patienten mit der Pankreasnekrose in den betrachteten Gruppen ergaben eine hohe Rate der postoperativen Komplikationen in der Kontrollgruppe (37%) – 32,1%. Der Prozentsatz der Komplikationen in der Hauptgruppe (62,9%) ging auf 25% zurück. Ab dem ersten Tag nach der Operation wurde in der Hauptgruppe das automatisierte Computermonitoring eingesetzt, was zu einem Rückgang der Komplikationen um 1,3-mal führte. Der Prozentsatz der tödlichen Ausgänge verringerte sich in dieser Gruppe auf 24,3%, im Gegensatz zur Kontrollgruppe, wo die Letalität 34,4% betrug. Somit wurde dank der Anwendung des Programs „PrognAs“ (prognostizierender Assistent) in Form des täglichen Monitorings die Häufigkeit der postoperativen Komplikationen bei Patienten mit akuten abdominalen Pathologien um 1,6-mal, und die postoperative Letalitätsrate um 1,5-mal verkleinert.

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V.S. Zueva

POSSIBLE NEW BIOLOGICAL MARKER OF BIOLOGICAL AGE

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A factor causing active proliferation of glia cells in culture is accumulating in the brain and in the blood of aged mice, starting from the age of 10 months. The causal role of this cytoproliferative factor in ageing process is confirmed by results of accelerated artificial ageing of young mice. Injection of highly purified brain extracts of 2-year-old mice to 1,5-month-old animals results in quick blood accumulation of mentioned factor (up to the level of 2-year-old mice) in then, already, by the age of 5 months, and in development of ageing signs (sluggishness of movements, slow response to food and grey hairs). Moreover, morphometric analysis of brain of these 5-month-old animals enabled to discover cardinal ageing signs in them – manifested gliosis and pronounced death of neurons. Therefore, we identified discovered cytoproliferative factor as "ageing factor". It is noted for species specificity of action, low molecular weight (about 10 kD), resistance to higher temperature, trypsin and UV, but high sensitive to proteinase K. Similar factor is found in blood of individuals starting from their age 25 and subsequent growth of its concentration with age. We suppose that operating mechanism of ageing factor is primarly associated with gliosis development in brain tissue. It causes disturbance astrocyte connection with brain capillary, on one part, and astrocyte connection with neuron, on another part, in "brain capillary - astrocyte - neuron" chain. This results in death neurons, causing disturbance in brain operation as a whole. A method of quantitative determination of accumulation dynamic of ageing factor (cytoproliferative activity) in mammals blood was developed, including the individual.

A.I. Kornjukhin

HUMAN DEPENDENCE SYNDROME – THE GROUNDS BASING ON THE ROFES GALVANIC-PUNCTURE DIAGNOSTICS OF THE HUMAN MERIDIAN SYSTEM

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Under the dependence syndrome we mean the human organism condition with constant demand in the substances regarding to drugs, alcohol, toxic etc.

It is possible to consider these needs as a mechanism for the compensation of psycho-emotional disturbances and further disorders in proper human communications. This could

be also a veiled keeping off the struggle for one's own goals and desires, which is realized in a hyper-anxiety in the case of impossibility to turn it into reality by one. We suppose, that dependence states have to be reflected on such human structure as one's meridian system.

For the first consulting, there is carried out the ROFES computer diagnostics of patients' psycho-physiological conditions in the Medical psychological rehabilitation department of the War veterans' Sverdlovsk regional psycho- neurological hospital. The analysis of human meridian system' energy characteristics by the bio-active-points' galvanic- physiologic parameters founds the ROFES diagnostic method.

Working with participants of local wars in Afghanistan and Chechnya, we have discovered some natural results in the energy drawings conforming to these groups, those allowed us to make a number of supposes concerning an issue of the dependence syndrome.

Joining these people groups into the risk group is confirmed with their similar psychological conditions: depression, asthenia, alcoholism, drug addiction, suicide in often. From the experience everybody knows, that, mainly, an alcoholism is the "afghans "'way in their post- war life, using the drugs – the nature for participants of North Caucasian anti-terrorism action, mostly. Though, we can find out the similar appropriateness in the energy drawings for the both of groups. Energy conditions of the TR and MC meridians correspond to the reduction of its normal energy. In psychological interpretations by means of the ROFES diagnostic method, the TR meridian condition keeps the control over affective states and it is an indicator of human reaction to the actions of surroundings. The meridian's weak energy is a showing of hard aggressive surroundings and the reduction of the control over affective states.

Why could we state that this condition of the meridians characterizes the dependence state?

Using the ROFES, we have made the expert researches with chronic alcoholics which had visited psychotherapists in order to get psycho-correction courses. The energy characteristics by the meridians TR and MC were as following. The expected value of the TR meridian' energy non-normality - from normal energy to weak area- corresponded to 94% for the sample of alcoholics. Weak energy of the MC meridian reached up to the expected value of energy non- normality of 70%.

Similar researches were made on drug addicts getting rehabilitation courses in our hospital. The significance of the trail with this group was lower than in the sample of alcoholics because the ROFES tests were taken from the patients with different rehabilitation periods, and the differences affected to their energy drawings as the part of them had got the treatment. The expected value of energy non- normality by the meridians TR and MC corresponded to 65% for the sample of the drug addicts.

Certainly, the determination of the appropriateness between the human meridian system ' energy diagram and the dependence state does not achieve the only aim to take up diagnostic tests.

Such energy diagram, provides the optimum treatment course for the patient's rehabilitation in the combination with psychotherapies.