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STRUKTURFUNKTIONSSCHARAKTERISTIK DES DRÜSEN- APPARATS DER GALLENBLASE UND ABLEITENDEN GALLENWEGE DES MENSCHEN

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Der Zweck des Werks ist eine komplexe Forschung der Gesetzmässigkeiten der Strukturorganisation des Gallenblasendrüsensapparats und Drüsensapparats der extrahepatischen ableitenden Gallenwege des Menschen in postnataler Ontogenese. Das Untersuchungsobjekt ist der Gallenblasendrüsensapparat und Drüsensapparat der extrahepatischen ableitenden Gallenwege von 243 Leichen der Menschen von verschiedenen Älter und Geschlechtern gewesen. Davon wurden mikro- und makroskopisch totale Präparate von 171 Leichen (87 Männer und 84 Frauen) untersucht, histologisch und histochemisch - 72 Leichen (36 Männer und 36 Frauen). Unsere Forschung hat gezeigt, dass die drinnen in den Falten liegenden Drüsen grösser sind als diejenigen, die sich zwischen den Falten befinden. Morphologische Besonderheiten der Drüsen von extrahepatischen ableitenden Gallenwegen ändern sich während des Lebens. Zum Beispiel, Gesamtmenge von Drüsen in Gallenblasenwänden in postnataler Ontogenese variiert sich von 72 bis 170, in Blasengangwänden - von 30 bis 95, in Wänden des gemeinsamen Lebergangs - von 20 bis 56. Gesamtmenge der Drüsen in dem gemeinsamen Gallengang ändert sich während des Lebens von 50 bis 132. Nach von uns erhaltenen Angaben, variiert sich Gesamtmenge von Gallenblasendrüsen und Drüsen der extrahepatischen ableitenden Gallenwege von 170 bis 450. Ähnlich ist regionäre Dynamik der Abmessungswerte von Drüsenanfangsstück, das alterabhängig von 0,08 bis 0,22 mm lang und von 0,05 bis 0,21 mm breit sein kann. Bei Blasengang variiert sich der Längewert von 0,05 bis 0,19mm und der Breitewert von 0,02 bis 0,15mm; bei dem gemeinsamen Lebergang - von 0,05 bis 0,19mm und von 0,02 bis 0,16mm dementsprechend. Länge des Anfangsstücks der Drüsen von gemeinsamem Gallengang macht 0,06-0,17mm. Unsere Angaben sind indirekt bestätigt von den Meinungen der gewissen Kliniker, die auf die wesentliche Entwicklung von Drüsenstrukturen sowohl in den Gallenblasenwänden als auch bei dem gemeinsamen Gallengang weisen. Anscheinend hat die von uns bewiesene Gradientenverteilung von Drüsen einen funktionellen Grund.

Es ist allgemein bekannt, dass die Gallenblase die Galle konzentrieren lässt und dabei nimmt durch die Schleimhaut an Wasserrückresorption teil. Man weiss, dass der Prozess nicht nur durch Deckepithel sondern auch durch Drüsenepithel vor sich geht. Deshalb kann anscheinend optimale Entwicklung von Gallenblasenwanddrüsen morphologisch dieses funktionelle Bedürfnis befriedigen, dass heisst Rückresorption gewährleisten.

Wir haben auch gezeigt, dass Überkonzentration von Drüsen (10 - 25 zusammen liegende Drüsen) Schliessmuskelzonen der ableitenden Gallenwege kennzeichnet.

Drüsenverteilung in Geisters Schliessmuskelzone ist 1,10-3,33 mal dichter als in den nebenliegenden Schleimhautstücken der extrahepatischen ableitenden Gallenwegen, in Mirizzis Schliessmuskelzone – 1,2-3,5 mal dichter, in Oddis Schliessmuskelzone – 1,20-2,7 mal dichter.

Somit sind zum erstenmal als Ergebnis der Forschung neue Angaben von Morphogenese der Gallenblasendrüsen und extrahepatischen ableitenden Gallenwege festgestellt worden. Das ist von der wesentlichen theoretischen und praktischen Bedeutung.

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ESTIMATION OF BIOLOGICAL EFFICIENCY OF POTABLE WATER «AQUA FORTE» (TEMPO)

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The experimental estimation of biological efficiency of the samples of potable water «AQUA FORTE» (TEMPO) was carried out. The samples are received by means of low-temperature activation of the tap water by original technique of The Company «Cryonord». Morphological, functional, biochemical and analytical methods are used in the work.

Rats-males of Wistar line with initial body weight 180-200g and the age of 3-4 months were given water «AQUA FORTE» (TEMPO) within 2 months. Control group of animals were given initial tap water. The peripheral blue blood and the central lymph (a lifetime taking) and also thymus, lymph nodes and mesentery of a small intestine were chosen as objects of research. received after eutanasia of the animals under Ether narcosis. Morphometric and cytologic research was conducted by methods of light microscopy after histologic processing of the taken material. Revealing of the must cells and microvessels in the mesentery of small intestine was carried out after colouring according to Romanovsky-Gimza by means of light microscopy.

Ratio and distribution according to share contributions of the basic substrata of lipid peroxidation – the free fat acids – was studied by the method of highly effective capillary gas-liquid chromatography in the tests of the central lymph and blood whey. The free fat acids are capable to act as markers of development of the oxidizing stress leading to infringement of integrity of cellular membranes.

Biochemical researches of the blood whey were carried out for definition of general protein, albumin, urea, creatinin, cholesterol, triglycerides, β -lipoproteids, activity of

enzymes AST and ALT. Lifetime flowmetry research of a peripheral capillary blood-groove in a small pillow of foot of the left finiteness of an animal was carried out by means of the serial laser analyzer of a capillary blood-groove. Analysis of profiles of the maintenance of microelements in the tests of blood and the central lymph was conducted by the method of atom-issue spectrometry with arc excitation of spectra.

Conclusions:

1. Specific biological effects of potable water «AQUA FORTE» (TEMPO) are revealed:

- Gentle metabolic changes in an organism of experimental animals: shift of the parameters, characterising albuminous and lipid metabolism, testifying to decrease in toxic loading on an organism of animals;

- Transformations of the structural organisation of the central body of immunity – thymus (morphometric and cytologic research), testifying to activation of lymphoproliferative function, activation of the cellular immunity;

- Activation of drainage-detoxication function of the mesentery lymph nodes: biological processing of a flowing lymph (barrier-filtration function) and acceleration of xenobiotics removing from an organism;

- Reduction of expressiveness of macrophage reaction in the structural elements of lymph nodes that testifies to decrease in toxic loading on an organism.

- Blood-groove activation, due to formation of its optimum regulation through must cells device, (change of the structural organisation of hemomicrocirculatory channels, parities of forms of the must cells).

2. Potable water «AQUA FORTE» (TEMPO) causes characteristic changes, comparable on intensity of appearance:

- Activation of lymphopoesis in the thymus;

- Activation of drainage-detixication function of the lymph nodes;

- Soft shifts in metabolism of the proteins and lipids.

3. Biosafety of potable water «AQUA FORTE» (TEMPO) is revealed; use of “thawed” water:

- Does not cause significant changes in the microelement status of an organism;

- The offered drinking mode does not render damaging action on permeability of cellular membranes, but shows the tendency to stabilization of antioxidant balance;

- Does not cause sharp changes of a peripheral blood-groove, but thus strengthens functional activity of microcirculatory vessels.

The regular use of potable water «AQUA FORTE» (TEMPO) promotes stimulation of protective forces of an organism, blood- and lymph-detoxication of the internal environment.

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 T.A. Astashova
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ESTIMATION OF BIOLOGICAL EFFICIENCY OF POTABLE WATER «AQUA FORTE» (TERMO)

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The experimental estimation of biological efficiency of the samples of potable water «AQUA FORTE» (TERMO) was carried out. The samples are obtained by means of technological activation of the tap water at the raised temperature by original technique of The Company "Cryonord". Morphological, functional, biochemical and analytical methods were used in the work.

Rats-males of Wistar line with initial body weight 180-200g and the age of 3-4 months were given water «AQUA FORTE» (TEMPO) within 2 months. Control group of animals were given initial tap water.

Thymus, lymph nodes, mesentery of small intestine were chosen as objects of research, obtained after eutanasia of the animals under Ether narcosis. Morphometric and cytologic research was conducted by methods of light microscopy after histologic processing of the taken material. Revealing of the must cells and microvessels in the mesentery of small intestine was carried out after colouring according to Romanovsky-Gimza by means of light microscopy.

Ratio and distribution according to share contributions of the basic substrata of lipid peroxidation – the free fat acids – was studied by the methods of highly effective gas-liquid chromatography and chromato-mass spectrometry in the tests of the central lymph and blood whey. The free fat acids are capable to act as markers of development of the oxidizing stress leading to infringement of integrity of cellular membranes.

Biochemical researches of the blood whey were carried out for definition of general protein, albumin, urea, creatinine, cholesterol, triglycerides, β -lipoproteids, activity of enzymes AST and ALT. Lifetime flowmetry research of a peripheral capillary blood-groove in a small pillow of foot of the left finiteness of an animal was carried out by means of the serial laser analyzer of a capillary blood-groove. Analysis of profiles of the maintenance of microelements in the tests of blood and the central lymph was conducted by the method of atom-issue spectrometry with arc excitation of spectra.

Conclusions:

1. Potable water «AQUA FORTE» (TERMO) biologically safe. Its regular consumption does not cause:

- Authentic metabolic changes in an organism of experimental animals: nor expressed shifts of homeostatic parametres neither in microelement status of an organism.

- Infringements in integrity and permeability of cellular membranes, saving functional activity of the cells.

- Changes in the structural organization of the thymus - the central body of immunity.

- Sharp changes of a peripheral blood-groove.

2. Potable water «AQUA FORTE» (TERMO) activates:

- A blood-groove, forming its optimum regulation through the must cells device (change of the structural organization of hemomicrocirculatory channels, parities of must cells forms);

- Processes of digestion and food absorption (maintenance change of lipid fractions in the blood, of micro- and macroelements in the blood and central lymph);

- Drainage-detoxication and lymphopoetic functions of mesenteric lymph nodes (regional lymph nodes of an intestinal tract): biological processing of the flowing lymph (barrier-filtrational function), clarification of pericellular (intercellular) space, removing of xenobiotics and metabolic products from an organism.

3. Regular consumption of potable water « water «AQUA FORTE» (TERMO) leads to activization of protective functions of an organism, strengthening of the general and local blood-groove that promotes escalating of the health resource and preventive maintenance of age changes in biological tissues.

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**PREVENTIVE AND ECOLOGICAL LYMPHOLOGY:
DEVELOPMENT OF ITS DIRECTION, FUNDAMENTAL AND
PRACTICAL ASPECTS**

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Deterioration of ecological conditions leads to “pollution” of the intercellular microhabitat, insufficiency of drainage-detoxication processes in lymphatic regions that leads finally to an aggravation of the majority of chronic diseases and to deterioration of the general life quality. In the Institute of clinical and experimental lymphology, SB of the Russian Academy of Medical Science, a new scientific direction – preventive lymphology develops actively. This direction studies mechanisms of action of resort, natural and physical factors on functional activity of lymphatic system. In this section of lymphology we use actively the methods of traditional therapy entering into concept of natural and regenerative medicine.

In the process of development of preventive lymphology in our Institute the concept of lymph-sanation – sanitation (clarification) of intercellular space, activation of lymph-drainage mechanism in the tissues has been introduced. In the frameworks of lymph-sanation we allocate three types of influence of lymphatic system: 1. Lymph-stimulation – stimulation of the lymph drainage; 2. Lymph-protection – detoxication of intercellular space; 3. Lymph-correction – restoration of structure and function of the cells.

For the purpose of studying of lymph-sanation mechanisms, knockings over endogenous intoxication in various pathological processes we carried out investigation of various natural and physical factors of non-medicamentous influence on an organism – herbs (bioflavonoids), products of the animal origin (pantohepatogen, caviar of sea hedgehogs), electromagnetic radiation (light, infra-red, noise range), sorbents (synthetic and natural) etc. The main goal of researches is to reveal lymph-stimulating, lymph-protecting and lymph-improving properties of curative factors.

In parallel with fundamental experimental researches in the Institute during last decade the work on introduction to practical public health services of new original means and methods of preventive and regenerative medicine, preventive lymphology and balanced diet was conducted. The program of improving actions of lymph-sanation and detoxication is developed. The main goal of the Program is improvement of an organism by the means of sanitation (“clarification”) of intercellular space and of the regional lymphatic structures (lymphatic region), stimulating processes of natural lymph-detoxication against endo- (ecso-) toxicosis.

T.A. Astashova

FREE FATTY ACIDS IN THE ESTIMATION OF DEVELOPMENT OF ENDOTOXICOSIS, OXIDIZING STRESS AND THEIR CORRECTION

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The choice of lipoperoxidation substrata - free fatty acids (FFA) as endotoxiosis markers allows to study processes of lymphodetoxication as a link in the mechanism of an oxidising homeostasis under conditions of chronic and acute lymphtoxicosis. Methods of highly effective gas-liquid chromatography and chromato-mass spectrometry were used for studying of accumulation and distribution of FFA as elements of estimation of pro-antioxidant balance in the central lymph and blood of rats under conditions of their physiological pregnancy in end and fading of the reproductive cycle, experimental adentia, toxic hepatitis and their non-medicamentous correction.

The analysis of FFA pools and their share distribution has revealed development of oxidising stress under conditions of physiological pregnancy. The obtained data show

expressed lymphotoxicosis and testify to stability in experimental dynamics of processes of lipid peroxidation (LP) and in antioxidant balance in the blood as compared with the central lymph.

The analysis of FFA accumulation, of the cumulative contribution of reactionary pathogenic non-saturated FFA and the share contribution of the LP basic substratum – arachidonic acid in the tests of the central lymph and peripheral blood shows the greatest development of oxidizing stress at strengthening of pro-oxidant processes in the central lymph. Defects of the tooth alignment cause insufficient mechanical and biochemical processing of food and constant alimentary damage of a mucous membrane of the digestive channel that leads to pathogenic LP activation and, as consequence, to development of chronic lymphotoxicosis and tissue pathogenic damages in the lymphatic region of a small intestine.

The comparative analysis of accumulation of general FFA pool and distributions of share contributions of acids in the tests of the central lymph and blood under conditions of a toxic hepatitis has revealed pathological activation of lipid peroxidation and development of acute lymphotoxicosis. Conditions of adaptation failure have allowed revealing the mechanism of dump of a part of the modified lymph with the prevailing maintenance of the acids incapable to oxidation in a blood channel. This mechanism, obviously, regulates important for achievement of an oxidizing homeostasis constancy of FFA share contributions in the blood, compensating endotoxiosis development.

The defeat of lymphatic system is caused by development of lymphotoxicosis and easing of drainage-detoxication function that predetermines necessity of search of ways of restoration of pathological shifts in the microhabitat cell surrounding. Studying of accumulation and profiles of FFA distribution allows not only estimating depth of LP pathological activation and development of lymphotoxicosis as a stage of endotoxiosis, but also estimation of efficiency of the improving means.

Features of influence are revealed and the estimation of efficiency of electromagnetic radiation of short-wave frequencies and of the natural complex «Harmony of Forces» was carried out for study of stabilisation of the LP processes in intact animals. Lymphoprotective action of the complex «Harmony of Forces» and of combined correction is shown. In the subgroup of the pregnancy which has come after influence on animal of electromagnetic radiation of short-wave frequencies set of the obtained data about the FFA pool and a parity of share contributions specifies in the expressed easing of activity of oxidizing processes in the central lymph.

It is shown that use of the complex «Harmony of Forces» for previous to pregnancy dietological correction leads to the stationary LP level in the central lymph. Absence of the LP pathological activation in the central lymph is revealed at the pregnancy of the animals which have come after combined influence of electromagnetic radiation of short-wave frequencies and of the complex «Harmony of Forces». Set of the obtained data testifies to lymph-improving action of the chosen methods of correction.

Set of the obtained data about dynamics of the FFA distribution and accumulation in

the tests of the central lymph and blood reveals easing of the LP pathological activation, development suppression of lymphotoxicosis and endotoxycosis as a whole at experimental adentia and a toxic hepatitis in rats, testifying to activation of mechanisms of reparative regenerations in the damaged tissue under the influence of electromagnetic radiation of short-wave frequencies. Studying of the FFA as markers of endotoxycosis and of development of oxidizing stress has proved efficiency of enteral application of the natural phyto-complex «Harmony of Forces», possessing antioxidant and sorbitional properties, for improvement of chronic and acute lymphotoxicosis. Realization of the mechanisms of lympho-detoxication and lympho-protection is revealed in the level of region of a small intestine.

It is shown that combined correction of physiological pregnancy, experimental adentia and a toxic hepatitis promotes easing of the LP pathological activation and restoration of oxidizing homeostasis in the most expressed way, rendering antioxidant, sorbitional and gastroprotective influence on the organism internal environment.

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**INVESTIGATION OF FREE AMINO ACIDS, FATTY ACIDS
CONCENTRATIONS IN SOME MEDICINAL MUSHROOMS**

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Cordyceps sinensis (Berk.) Sacc., *Ganoderma lucidum* (Curtis) P. Karst., *Pleurotus ostreatus* (Jacq.) P. Kumm. and *Schizophyllum commune* Fr. are popular medicinal mushrooms throughout the world and have been the subject of various studies because of their therapeutic effects: anti-inflammatory, antitumor, antibacterial, immunomodulating, hepatoprotective, nerve tonic, hypercholesterolemia, hyperlipidemia, cardiovascular disorders and some diseases. In addition, some mushrooms may be as potential source of the most critical component contributing to the nutritional value of a food, specially amino acids and fatty acids.

The species of mushrooms used in this study were obtained from the culture collections of the N.G. Kholodny Institute of Botany National Academy of Sciences. Mycelia of *C. sinences*, *G. lucidum*, *P. ostreatus* and *S. commune* were grown in liquid nutrient medium which basis was the flour from waste of amaranth waste meal. The media was sterilized by autoclaving for 40 min at 121 °C. Fungi were grown as solid cultures in 250-mL flasks. Mycelial biomass harvested after 14 days of growth at 26±2 °C. Mycelia were separated from the medium by filtration, washed with distilled water, dried to at 60 °C and pounded.

The content of amino acids was estimated on amino acid analyzer T-339 „Mikrotechna”. Lipids were extracted by Folch’s method, fatty acids were estimated on chromatograph „Kristal Lux” (Russia) with flame-ionization detector on the capillary column SP-2560 (Supelco).

Mycelial proteins of all species included 17 amino acids, with aspartic (6,34–14,29%) and glutamic (15,12–17,51%) acids predominance, which is also typical for other species of Higher Basidiomycetes. Studies of amino acids in mycelia of all mushrooms showed quite differences between species in the qualitative composition of individual constituents. All essential amino acids were presented in the proteins of studied species of fungi. It is interesting to note that the proteins of mycelia of *C. sinensis* contained a high quantity of lysine (8,36%), threonine (7,24%) and isoleucine (3,89%). The amount of leucine (7,52%) in mycelia *G. lucidum* was higher than in other investigated species of mushrooms. Valine and tyrosine content was maximal in mycelia *P. ostreatus* – 3,61 and 3,52%, respectively. Mycelia *S. commune* had a higher content of methionine (2,31%) and phenylalanine (3,87%) compared to mycelia *C. sinensis*, *G. lucidum*, *P. ostreatus*.

The crude fat in mycelia of *S. commune* was the high and it composed 8,37 g/100g. In *G. lucidum* fat was found in concentrations of 7,69 g/100g, in *C. sinensis* – 6,51 g/100g, in *P. ostreatus* – 5,14 g/100g. This crude fat includes representatives of all classes of lipid compounds including free fatty acids, mono-, di-, and triglycerides, sterols, sterol esters, and phospholipids. Lipids in the mycelia of species *C. sinensis*, *G. lucidum*, *P. ostreatus* and *S. commune* consisted of ten fatty acids in our experiences. Differences in content of individual fatty acids between species were not considerable. The major acids were linoleic ($C_{18:2}$) – from 52,26 to 67,41 %, oleic ($C_{18:1}$) – from 10,47 to 24,15 %, and palmitic ($C_{16:0}$) – from 16,43 % to 18,06 %.

In general, the differences between the results in this study and those in other reports are assumed to be caused by growth stages, harvesting times, method, conditions of experiments, and so on.

On the basis of the results of our study, *C. sinensis*, *G. lucidum*, *P. ostreatus*, and *S. commune*, were displayed the highest content for amino acids and fatty acids in medicinal mushrooms. Overall, for this species of mushrooms had a great potential as food value for human consumption. Cultivation of this mushrooms showed on product of amaranth waste meal for improving their food and nutritional quality. The next step is high-quality clinical research, which is also needed to explore the efficacy and safety of mushrooms.

T.E. Belousova

ROLLE DER SYSTEMKOSMETOLOGIE IN DER REGENERATIVEN MEDIZIN

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Die Wiederherstellungsmethoden, die heutzutage Basis der modernen regenerativen Medizin bilden, schließen in sich ein breites Spektrum von verschiedenen Verfahren ein, darunter: Regime- und Diät-orientierte, psychotherapeutische, kosmetologische, naturgemäße, phyto- und faunotherapeutische, homöopathische, antihomotoxische, auf

Akupunktur basierte, bewegungstherapeutische, physiotherapeutische, biomechanische (u.a. Massage und manuelle Therapie) Heilweise etc. Für gesunde ArbeiterInnen sind gutes Allgemeinbefinden und schönes Outfit von gleicher Bedeutung. In der Tatsache legt aber die moderne Kosmetologie einen größeren Wert auf das Outfit der PatientInnen, wobei langfristige Programme für Reduzierung des biologischen Alters und Förderung psychologischer und physischer Gesundheit gar nicht angeboten werden.

Heute ist die höchste Zeit die kosmetologischen Methoden zusammen mit dem ganzen Spektrum der Wiederherstellungsverfahren zu verwenden. Auf der Basis von zwei diesen Techniken entsteht die s.g. SYSTEMKOSMETOLOGIE, eine Kombination von traditionellen Kosmetologiemethoden (medikamentösen und physiotherapeutischen) und einigen Wiederherstellungsmethoden, die das Effekt „der inneren Verjüngung“ fördern. Dabei spielen die Wiederherstellungsmethoden eine große (oder sogar eine führende) Rolle bei der Erreichung von stabilen Ergebnissen der „äußeren“, kosmetologischen Einwirkungen. Alle oben genannten Wiederherstellungsmethoden der regenerativen Medizin ebenso fördern die Outfit-Verbesserung, da durch „innere“ Heilung das Sehvermögen, der Zustand der Hautdecke, der Haare und Nägel, sowie der Gelenke und des Rückgrats sich verbessert, weniger Falten entstehen, endokrine Drüsen besser funktionieren und Gehirndurchblutung stimuliert wird. Endergebnis: allgemeine Verjüngerung des Organismus, Reduzierung des biologischen Alters und Erhöhung der Lebensqualität. Heutzutage können drei Kosmetologiearten ausgliedert werden: dekorative, chirurgische und regenerative Kosmetologie.

Wir haben insgesamt 53 Patientinnen im Alter von 27-52 Jahren untersucht, an denen im Laufe von 3-5 Jahren Methoden der regenerativen Kosmetologie verwendet wurden. Das Programm der Systemkosmetologie bestand aus Diät mit ermäßigtem Fettverbrauch (2-3 Jahre), angemessene Körperbelastung und Heilungskursen (2 Mal pro Jahr). Der Zustand der Patientinnen wurde bei klinischen Untersuchungen durch Bewertung des vegetativen, psychologischen und hormonalen Status, der Gehirndurchblutung (Rheoencephalographie), der Neurodynamik (Elektroenzephalographie), durch wiederholte Einschätzung des Allgemeinbefindens, der Lebensaktivität und der Laune, durch R.Voll-Elektropunktur-Diagnostik, dynamische segmentäre Diagnostik, individuelle Umfragen und Techniken für Einschätzung des biologischen Alters kontrolliert. In der Regel bestand die Wiederherstellungskurse aus Kombination von Akupunktur, Homöosiniatrie, niederfrequentem Magnetoskop, polysensorischer Relaxierung, antihomotoxischer Therapie. Um Verwendungseffektivität dieser Methoden bewerten zu können, haben wir 34 Patientinnen in vergleichbaren Altersgruppen untersucht, die 2 Mal pro Jahr sich an einen Neuropathologen wegen vegetativer Dystonie und primärer Erscheinungsform der Gehirndurchblutungsinsuffizienz wandten, wobei sie der Standardtherapie nach (Nootropikum und Heilmittel für Regelung der Breite der Blutgefäße, Elektrotherapie) behandelt wurden.

Die Untersuchungsergebnisse zeugen von Stabilisierung des psychologischen und emotionalen Zustands, Normalisierung des Gefäßdrucks, des Allgemeinbefindens, der

Lebensaktivität und der Laune, des vegetativen Status, der Gehirndurchblutung und Neurodynamik der Elektroenzephalographie nach, von Turgorerhöhung der Gesichts- und Körperhautdecke, Vermeidung von neuen Falten und von Reduzierung des biologischen Alters um durchschnittlich 0,9 Jahre bei Patientinnen der Hauptgruppe nach 2-3 Therapiejahren.

T.V Bendas

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: **GENDER PROBLEMS IN REGARD TO HEALTH AND ILLNESS**
.....

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.....

Until 1990s gender problems were not investigated as related to health and illness. But nowadays this is viewed as a whole. We can single out 10 problems.

1. Gender differences in pain sensation. According to Ph.Greenberger (USA), adult men and women (35 years old and older) are the most studied group. Women are more sensitive, than men to pain in muscle and bones, stomach and bowels, and headache.

2. Gender differences in analgesic effect. Some medicines (opiates) weren't effective as analgesic for men, but were useful for women especially in the second phase of menstrual cycle (data of B. Hellstrom, Sweden).

3. Gender medicines or gender dose. We haven't data about gender effect of other medicines, but as men and women differ in such parameters as height, weight, organism peculiarities, in future practice we'll have either gender medicines or, at least, gender doses of them.

4. Male and female psychotherapeutic criteria. D. Ivey and C. Conoly (USA) stated that women-patients were thought ill by professional men-psycho-therapists more often, than by their women colleagues. And in general normative scores of adults' psychic health and illnesses are more male, than female.

5. Attitude to health and healthy way of life. There is a myth about women being ill more often than men and the following joke: "Women fall ill, but men die". And in general women pay more attention to their health than men (they prefer healthy food, take care of slender figure, visit doctors more often and discuss their health with other people - E.Lahelma et al. – data in Britain and Finland).

6. Life duration as a consequence of the mode of life and health care. According to I. Stuart-Hamilton, the biological (inheritance, inborn illnesses, low height) and social (the mode of life - nourishment, drinking, smoking, move activity; social-economic conditions, cultural habits) factors influence life duration of both genders (but we cannot determine the most important factor). In spite of longer female life duration in developed countries, there is a special phenomenon in Russia such as "the male super-death-rate".

7. Gender illnesses: the biological and social factors. In Orenburg (Russia) the male

(drug addiction, alcoholism, active tuberculosis - the last only in deviant men) and female illnesses (connected with non-safe sex - only in deviant children and small girls) are the consequences of unhealthy way of life. In many countries men of working age are seriously ill more often, than non-working women and perhaps identical pension age for both sexes might be introduced.

8. Gender differences in personality of medicine managers. 100 university and medicine academy managers (50 women and 50 men, average age 45.7 years) were investigated by methods: MMPI, Cattell, TAT, Guilford-O'Sullivan. The results: 1) women had such features (in comparison with men) as: femininity, extraversion, motivation of affiliation, emotionality and emotional non-stability, high socio-emotional success, egalitarian views to male and female leadership, high sexual appeal and activity, using of qualitative (unlike men - quantitative) strategy of solving tasks, unfavorable private life; 2) men had such features (excluding the above mentioned as: high intellect, dominance, aggressiveness, confidence, high sexuality.

9. Medicine managers' psychological well-being. Other results of previous investigation: female family situation and psychological well-being was less harmonious than the male one (in psychological health, hypochondria, hypomania, anxiety, fear of success, marriage failure, in absence of men-relatives' approving their leadership).

10. Russian doctors' attitude to gender problems of health and illness. 34 doctors (26 women and 8 men, 25-55 years old) were interviewed. Results: the answers of both sexes were as scientific (male answers more often, than female ones) as stereotypic. We can state such phenomenon as "sex patriotism" (if a person promotes the peculiarities of his/her own sex contrary to professional views). And some of the interviewed did not know anything about gender differences, because "they didn't see such problem in general".

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V. Astashov
O. Kazakov
V. Chapick

STRUCTURAL ORGANIZATION OF THE HEAD AND SMALL INTESTINE REGIONAL LYMPH NODES UNDER THE DENTITION DEFECT AND IN PHYTO CORRECTION ENVIRONMENT

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The work is devoted to the study of the structure of superficial cervical lymph nodes (regional for the maxilla and mandibula bones, palate and gums) and mesenteric lymph nodes (for the small intestine lymph region state estimation), also small intestine, capillary

blood flow in the gum under dentition defect and correction by phyto preparation “Harmony Vita G”.

The upper (coronal) part of incisors of maxilla and mandibula bones has been extracted from the animals. Since the rats’ incisors have got self-regeneration ability, their extraction was carried out every two weeks during 2 months period (at the age from 4 to 6 months). Periodicity of the extraction kept the incisors from regeneration. The last two weeks of the experiment the animals were in the dormant state. The following experimental groups of the animals were involved in the study: 1. intact group, 2. animals with the dentition defect, 3. animals with dentition defect in phyto-correction environment. The phyto preparation “Harmony Vita G” was added during correction procedure to the standard dietary intake of the vivarium (daily dose 10mg for 100gr of the animal’ body weight) two weeks before the end of the experiment. The content of the phyto preparation includes complex of dietary fibers (bran) and medical herbs (sanguinary, Siberian fir).

The study has demonstrated that structural-functional conversion in the lymph region of the animal’s gum under the dentition defect formation occurs by the six months age. The conversion process became evident by the increasing of the blood flow in the gum (two times increase of the perfusion) and lymph flow (enlargement of the marginal sinus) to the regional (cervical) lymph nodes, change of their structural-functional organization from fragmentation to intermediate type and activation of the lymph proliferative function (increase of the primary and secondary lymphoid nodes area – for 52%, increase of the lymphoblasts, cells at the mitosis). Typical conversion, expressed in the small intestine wall structure change (decrease of the muscular tunic area, the inter-epithelial lymphocyte number for 50%, plasmatic cells and macrophages in the mucous tunic) and weakening of the drainage function of the mesenteric lymph nodes (compact type of the structural-functional organization, the decrease of the medullar sinus area, edema and decondensation of the paracortical zone with increase of the macrophages and reticular cells number) have been found out in the lymph region of the small intestine. The conversion took place during dentition defect formation against ednotoxicosis resulted from the lipids peroxidation.

Enteral use of the phyto preparation “Harmony Vita G” on dentition defect formation, favoring the activation of the antioxidant processes, results in regeneration of the blood flow in the gum (2,4 times increase of the capillaries’ myogenic activity in flowmetry) and lymph drainage activation in the gum’s lymph region that is exhibited in the increase of the medullar substance area in the superficial cervical lymph nodes (at the expense of the medullar taenia and medullar sinus), B-dependent zone area and the number of mature plasmatic cells. The use of the phyto preparation bares the lymph corregating influence on the structural-functional organization of the small intestine lymph region, forwarding the small intestine wall structure regeneration, mesenteric lymph nodes transporting function activation (increase of the marginal and medullar sinus area for 72%, medullar taenias and the number of small lymphocytes in them against the decrease of the T-dependent zone area).

Thus, the use of the phyto preparation “Harmony Vita G” under dentition defect formation, decreases the degree of the organism endogenous intoxication, caused by constant dysfunction of food chewing by activating the lymph detoxification process.

T.P. Bilousova

EINE AUTORENMETHODIK DER WIRBELSÄULENHEILUNG

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Unser Gesundheitszustand hängt in vielen Aspekten von der Körperhaltung an. Die Leute, die meine ärztliche Hilfe brauchten, habe ich analysiert, gruppiert, und bin zum folgenden Beschluss gekommen. Die meist kranke Menschen sind die, die in der folgenden Position schlafen. Auf der rechten Seite, der rechte Arm nach oben ausgestreckt, umarmt den Kissen, das linke obere Bein gebeugt und das rechte Bein ausgestreckt.

Solche Leute haben in der Regel Gallensteine, leiden an Herz-, Kreislaufpathologien, neigen zum Übergewicht. Oft haben sie Schilddrüsenerkrankungen, Wechselstoffstörungen, Hormonschwankungen. Diese Leute haben oft Bandscheibenvorfälle, begleitet von schwer zu lindernden Schmerzen. In solchen Fällen wird in der Regel operative Behandlung als einzig mögliche vorgeschlagen. Wir behandeln das konservativ durch die Beseitigung der Wirbelsäulenstörungen. Wir behandeln Skoliosen verschiedenes Grades, Hyperlordosen, Hyperkifosen, andere Pathologien der Wirbelsäule.

Bei der Wiederherstellung der richtigen Körperhaltung fange ich mit der Kopfmassage und Korrektur der Schädelknochen an. Vor der Korrektur wird die HWS untersucht durch tasten, die Störung diagnostiziert, und das Programm der Korrektur erstellt. Bei der linksseitigen Halsverkrümmung leidet der Mensch unter Hyperthonie, deswegen führe ich die Korrektur durch und beseitige diese Pathologie. Bei der rechtsseitigen Halsverkrümmung leidet der Mensch unter Hypothonie und die Korrektur wird in die andere Richtung ausgeführt. Wenn die HWS nach vorne entstellt ist, mache ich die vordere Korrektur. Beim tauben Gefühl in den oberen Extremitäten beseitige ich die Blocks und vergrößere damit den Raum zwischen den Bandscheiben.

Bei der Beseitigung der Skoliose strecken wir den Bogen aus in dem wir die entsprechenden Bandscheiben zu der Mittellinie führen. Wir benutzen dabei die Elemente der Vibrationsmassage und speziellen elastischen Instrumente. Das betrifft die Skoliosen des 1 und 2 Grades.

Bei den Skoliosen des 3 und 4 Grades rotiert die Wirbelsäule. Dieses muss in jeder Behandlungsstunde geheilt werden. Ausführlicher dazu können Sie im Patent Nr. 27587 lesen. In der letzten Zeit kommen Bandscheibenzerstörungen öfters vor. Insbesondere bei jungen Menschen. Diese Zerstörung wird von Wirbelsäulenverkrümmung begleitet. Diese kann man nicht beseitigen ohne dass man die Wirbelsäule zu einer geraden Linie richtet. Dann wird auch die zerstörte Bandscheibe entlastet. Die operative Behandlung ist nur in seltenen Fällen nötig.

Solche Behandlung ist im Patent Nr. 27987 beschrieben.

Wir wissen, dass Rückenmark ein informativer und energetischer Kanal ist. Seine unterste Abteilung, das Steißbein, spielt eine wichtige Rolle. Bei der Untersuchung wird immer das Steißbein geprüft und korrigiert (Patent 12419 A).

Zum Schluss kann ich sagen, dass diese Methode sehr schonend und sehr effektiv ist, und kann in jedem Alter angewendet werden. Die kann jeder beherrschen und ich bringe sie gerne bei. Meine Lehrbücher dazu gibt es beinah in allen Ländern der Welt, in Deutschland auch.

E.V. Donchenko

**VASCULAR ATHEROSCLEROSIS AND POSSIBILITIES OF
ECOLOGICAL HUMAN MEDICINE IN ITS TREATMENT**

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Vascular atherosclerosis is a disease, which leads to severe complications such as infarctions, strokes and vascular aneurism. Until now the mortality from atherosclerosis complications ranks as the first in the whole world. The existing methods of conservative treatment do not result in the lowered probability of lethal complications and increase of the lifespan.

At present the surgical methods are used more and more widely in the treatment of vascular atherosclerosis. But these methods also do not influence significantly the increase of the lifespan and lowering of the mortality in this patient group.

Within the limits of ecological human medicine the approaches to the treatment are developed, which make it possible to achieve the high efficiency in the treatment of such severe diseases.

We have examined and treated more than 3,000 patients with different atherosclerosis manifestations. The data for 146 patients have been statistically processed. The age of the patients varies from 45 to 92 years. The mean age is 66 years \pm 8.5 years. Out of them 95 patients are males and 51 patients are females.

The following groups have been distinguished: aneurism of abdominal aorta (12 patients); vascular atherosclerosis of the lower extremities (77 patients); atherosclerosis of coronary arteries (32 patients); cerebral atherosclerosis (25 patients).

It should be noted that all patients had been receiving pharmacotherapy for the long time before taking medical advice at our clinic. Surgery on the coronary arteries (stenting, coronary artery bypass grafting) was performed in one third of the patients; 5 patients had an artificial pacemaker; 23 persons had myocardial infarction in anamnesis, insults were in the medical history of 15 patients.

All patients were examined according to existing standards (clinical, biochemical investigations, ECG, ultrasound examination); besides that, we investigated the lipid

peroxidation processes and the condition of the antioxidant protection system.

All patients received the treatment basing on the ecological human medicine methods including the endoecological rehabilitation program based on the patented method of hyperthermal intestinal dialysis (E.V. Donchenko, patent No. 2078555 of 13.06.93), enterosorption, methods for hepatic and pancreatic secretion drainage, visceral massage according to the Old Russian method. Besides that, the therapeutic program included immunomodulating, antioxidant therapy, modern homeopathic treatment (organotherapy, antihomotoxicology, vaccine-like, isopathic therapy), hirudotherapy, osteopathy, physiotherapy.

The effectiveness of such therapeutic approach was 92%. The subjective improvement, i.e. disappearance or relieve of symptom intensity, was observed in 100% of the patients. 92% of the patients showed positive laboratory and instrumental dynamic.

Follow-up period was in the range of 6 months – 12 years. Two female patients at the age of 82 and 102 years died during this period in the group of the examined patients.

The duration of the first therapeutic course varied from 4-5 months to 2 years. Subsequently the courses were repeated 1-2 times per year and lasted for 1-2 months.

Example: 1996. Patient A., 68 years old. Exertional angina pectoris, II functional class. Ciliary arrhythmia (paroxysms). Atherosclerosis of aorta, dissecting aneurism of the abdominal aorta. Atherosclerosis of coronary arteries, cerebral atherosclerosis. Chronic obstructive bronchitis. Atherosclerotic cardiosclerosis. Cardiac insufficiency II A.

Cholelithiasis (concrement of gallbladder, 4.5 cm), nonfunctioning gallbladder. Atopic colitis. (Habitual) constipation. Chronic pancreatitis. Aneurism of the abdominal aorta (d – 4 cm) for the space of 5 cm.

The patient was observed and treated for 11 years. At the last examination diameter of the abdominal aorta was normal (2.0 cm). The scarry thickening of the aorta wall was revealed for the space of 3.5 cm. There was no hospitalization during the follow-up period of 11 years, the subjective general sensations were satisfactory.

Thus, the suggested technology of ecological human medicine aimed at activation of own regeneration possibilities of the organism shows the extremely high effectiveness and safety and absence of side effects.

A.E. Dorokhov
G.V. Serdiuk
A.P. Momot

HETEROGENEITY OF LUPUS ANTICOAGULANTS AND THE RISK OF THROMBOSIS IS THERE ANY CORRELATION?

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The methods of LA investigation based on defining of the time of blood clotting in four standard phospholipids-dependent tests such as kaolin clotting time (KCT),

activated partial thromboplastin time (APTT), dilute protrombin time (dPT) and dilute Russell's viper venom time (DRVVT) were used in our research.

Besides, in all cases the time of blood clotting (dilute eshis multisquamatus venom time (DEMVT)) in the phospholipids-independent test was defined. Certainly, mixing and correction tests were conducted.

The number of examined patients constitutes 284 patients (SLE – 146 patients, RA – 19 patients, primary immune thrombocytopenia – 15 patients, women who have recurrent fetal loss – 62, patients with unexplained thrombosis – 42). 94 of them had LA. As for their ability to prolong the tests of clotting LA turned out to be heterogeneous. According to this feature LA were subdivided into four groups: the first type is represented by LA prolonging only KCT and/or APTT, the second one – LA prolonging only dPT and/or DRVVT, the third – LA, prolonging three or four phospholipids-dependent tests the fourth type – LA prolonging both phospholipids-dependent tests and phospholipids-independent DEMVT. The patients with LA of the first type had thromboses in 6% of all the cases, the patients with LA of the second type – in 14% of all cases, the patients with LA of the third type – in 78% of all cases, patients with LA of the fourth type – in 98 % of all cases. While comparing homogeneous groups of patients with LA of the first and second types and without LA no statistically reliable difference in the frequency of thromboses was found. However, patients with LA 3 and 4 had thromboses more frequently.

So LA are heterogeneous according to their functional features and can be subdivided into four types according to their ability to prolong phospholipids-dependent and phospholipids-independent clotting tests. Besides LA of the 1 and 2 types do not have any considerable trombogenicity while LA of the 3 and 4 types can be characterized as having a high level of trombogenicity.

V.N. Doroshchenko

THYROID CANCER INCIDENCE RATE WITHIN BRYANSK OBLAST BEFORE AND AFTER ACCIDENT AT CHERNOBYL NUCLEAR POWER PLANT

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After the accident at the Chernobyl Nuclear Power Plant most of Bryansk Oblast was exposed to radioactive contamination. Iodine radionuclides were determinative factors for internal irradiation of the population living in the contaminated territories in April and May 1986. It is because of the very fact that priority was placed on the study of the patients' thyroid state as a lot of radiogenic thyroid cancer incidences were reported.

143 thyroid cancer incidences were diagnosed in the territory of Bryansk Oblast in 1981–1985, including one case of thyroid cancer diagnosed in a nine-year-old girl in 1984.

During this period, the thyroid cancer incidence rate fluctuated from 1.3 per 100,000 people in 1984 to 2.6 in 1991-1992.

From 1986 to 2008, 3547 thyroid cancer incidences were diagnosed in the territory of Bryansk Oblast. Between 1986 and 1991, the thyroid cancer incidence rate increased from 3.3 per 100,000 people to 5.4. Since 1992, the rate has been steadily rising ($p < 0.05$) vs. the one across the Russian Federation. Moreover, these rates have been 3–4 times higher ($p < 0.001$) than the figures observed across the Russian Federation every year since 2002. The all-Russia highest thyroid cancer incidence rate — which amounted to 6.3 — occurred in 2007.

The ratios of males to females living in Bryansk Oblast and diagnosed with thyroid cancer before and after the Chernobyl accident changed from 1:4 to 1:8. There were no regularities identified with regard to the ratio of males to females diagnosed with thyroid cancer before the Chernobyl accident vs. the one calculated after the accident.

Between 1981 to 1997, the ratio of papillary thyroid cancer incidences to follicular one diagnosed in Bryansk Oblast was, on average, 1:1. From 1998 to 2008, it amounted, on average, to 4:1. Therefore, we can state that thyroid cancer which was diagnosed in some patients in Bryansk Oblast after the Chernobyl accident is likely to be of radiogenic nature. The younger the person was at the time of the exposure, the higher the risk of this pathology development is.

Between 1986 to 1990, which is a five-year period after the Chernobyl accident, no child living in Bryansk Oblast was diagnosed with thyroid cancer. In 1991–2000, the thyroid cancer incidence rate fluctuated from 0.3 per 100,000 children in 1991 to 2.5 in 1994. The pediatric thyroid cancer incidence rate across the Russian Federation with regard to the same period ranged from 0.07 in 1991 to 0.2 in 1999. In subsequent years, sporadic cases of this disease were observed in children living in Bryansk Oblast.

The period between 1981 and 1991 is the time of occurrences of spontaneous cancer (taking into account the latency period of 5–6 years, i.e. from 1986 to 1991). The relative risk (RR) was about 1, which means that pediatric incidence rate in Bryansk Oblast was close to the rate observed across the whole country both among boys and girls.

In 1992, the RR increased and then remained relatively constant up to and including 1999 ($p < 0.05$).

From 1993 to 1999, the incidence rate of thyroid cancer diagnosed in boys was higher ($p < 0.05$) than the figures across the Russian Federation. The highest RR occurred in 1999 and amounted to 43.01 (with the 95% confidence interval (CI) = 13.93 – 100.21).

The incidence rate of thyroid cancer diagnosed in girls was higher ($p < 0.05$) than the figures across the Russian Federation in the period from 1994–1997. The highest RR occurred in 1995 and amounted to 17.85 (with the 95% CI = 8.85 – 45).

The data obtained bear evidence that 70% of thyroid cancer incidences diagnosed in patients living in Bryansk Oblast are of radiogenic nature. This assumption should be confirmed with further statistics supported with dosimetric investigation of each thyroid cancer incidence to be held in accordance with the “incidence-control” epidemiological survey methodology.

R.G. Fattakhov

DAS PROBLEM DES OPISTHORCHOSIS IN TJUMEN REGION

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Opisthorchosiserreger wurde zum ersten Mal im Jahr 1891 in dem Ob-Irtyshbecken von dem Professoren K.N. Vinogradov entdeckt. In diesem Zusammenhang bezeichnete K.I. Skrjabin im Jahr 1929 Opisthorchosis als ein "schwerwiegendes Sanitäts- und Sozialproblem des Tobolskij Nordes". Seitdem ist das Problem nicht nur ungelöst geblieben, sondern auch auf dem Wachstumstrend ist.

Im Jahr 2009 wurden in der Russischen Föderation 43485 Fälle des Opisthorchosis registriert, darunter 14848 Fälle in Tjumen Region, was beträgt 48,3%. Im ganzen ist die Morbidität in Tjumen Region auf dem Herabsetzungstrend, aber in einigen Gebieten bezeichnet man Morbiditätswachstum. Unter Helminthosen herrscht Opisthorchosis vor, dessen Anteil in dem allgemeinen Krankenstand über 50% ausmacht. Daran leidet am meisten arbeitsfähige Bevölkerung. Opisthorchosis morbiditätswachstum wird durch Erhöhung des Anteils von der Fischfamilie Cyprinidae und Verringerung des Anteils von den Fischfamilien Coreginidae und Salmonidae in der Kost verursacht. Das ist mit der Verschlimmerung der Umweltsituation in den Flussniederungssystemen der Region verbunden. Inzwischen isst man weniger Rohfisch zu Hause und mehr davon in Restaurants der orientalischen Küche. Eine andere Ursache: Einwohner und Arbeiter des Medizinsbereichs der Region haben wenige Kenntnisse davon, wie man Fisch von Opisthorchosiszysten freimacht.

E.P. Filimonova

OPPORTUNITIES OF COLORPSYCHOSOMATICS IN SPORT

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Colorpsychosomatics (CPS) computer technology includes diagnostics and correction program package which allows to reveal a person's individual pattern on the basis of original stimulus material, define his/her typological behavior, reaction type, emotional state at the moment of checkup. CPS offers impressive opportunity to determine stress and estimate degree of personal disintegration. Qualitative analysis plays important role in determining typological behavior and psychological characteristics of states: correlation of psychosomatics with the level of personal development and type of character organization allows to exactly understand level of anxiety, defense mechanisms and object relationships in case of psychosomatic disorder. Any method using color has more or less to do with

emotions. Colorpsychosomatics contains methodic-software package providing diagnostics and correction of mental development, socialization processes and formation of aesthetic consciousness of personality and united by common methodological approach that is emotional regulation of human behavior and human mind development.

Comments to “Generator of sports efficiency” correction package

CPS-terminal can be used to medically provide high sports efficiency. CPS-technology is an absolutely safe non-molecular mobilizer which stimulates and strengthens the whole system of information-energy metabolism. Research has revealed the fact that CPS-technology application leads not only to harmonization but as well to intensification of organizational-power flows in chakras system and acupunctural bioenergetical meridians. As a result integral potential of mobilizational preparedness of sportsmen’s organism grows dramatically which positively affects sports characteristics. Mobilizational generation of sports efficiency increase first of all results from harmonic energization of sportsman’s psychoemotional state. Specialists acquainted with basics of medical control and sports medicine know how important it is to control sportsman’s mood. Mood control affects reaction speed, clonus force and hemodynamics let alone concentration ability and accuracy of actions. The biggest advantage of CPS-technology application to increase sportsmen’s efficiency is that it is no dope. Wave flows of colour and music nourish organism without urging it on or exhausting it either mentally or somatically. CPS-terminal helps to regulationally tune organism before important sports event letting the organism exploit at most all its potentialities. CPS-treatment (i.e. color-correction package “Generator of sports efficiency”) has to be provided not less than 2 times a day; it makes no sense to start the course earlier than 10 days before the event. As during color correction sessions sportsman’s organism is transferred to a regulationally more powerful state the results of competition cannot but improve. One can draw an analogy to high-calorie diet before the period of overloads.

E.A. Glikman

TREATING ILLNESSES BY MEANS OF AFFECTING THE CHAKRA AND DANTYANG POINTS

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Objective: to justify the use of chakra points in acupuncture practice as well as their practical application for various treatments.

Methods: Clinical observation of patients, applying traditional Chinese treatment methods, Korean Sutdzi-Chimsur therapy, methods of functional diagnostics and laboratory methods while conducting diagnostics.

Results: an approach to treatment of illnesses by means of affecting the chakra and dantyang points is offered.

In the human body there is an energy system along with the physiological systems responsible for the body and its metabolic processes. This system organizes and regulates our emotional, intellectual, psychological and spiritual existence as well as coordinates all of the body functions.

This energy system is a substance consisting of energy fields. Among them are the seven energy centers (chakras), dantyang and a lot of energy channels along which the energy exchange is being conducted. The most important vital energy (Prana, Chi) is concentrated in the chakra and dantyang points.

There are a lot of energy centers in the human body but traditionally one points out the basic ones – 7 chakras and 5 dantyangs, which are situated along the principle energy channels.

Each of the 7 chakras and 5 dantyang are centers that have and active influence on the energy channels and therefore the human body as a whole. Each of the chakras and dantyang is characterized by a certain influence on the general state of a person and is responsible for different qualities and abilities. Lack or distortion of energy leads to function failures in all of the body systems.

Chakras and dantyang influence on the physical and psysical levels.

We have conducted a thorough study of applying acupuncture for various treatments with the use of chakra and dantyang points.

1 chakra , Muladhara VG1. Connected with channels R, IG,GI.

2 chakra, Swadhistana VC 4 and a back exit on the level of 4-5 lumbar vertebra.

Connected with channels V,GI,RP.

3 chakra, Manipura, on the RP 10 level and 5-7 cm above the navel.

Iz localized on the back between the 2 and 3 lumbar vertebrae. Connected with channels RP,F,VB,E

4 chakra, Anahata is situated in the VC-17 point in front and on the back on the level of 4-5 neck vertebra. Connected with channels VB,C,P.

5 chakra Vishuddha is situated between VC 22 and VC 23 in front and on the back between 6 and 7 neck vertebrae. Connected with channels C,TR,MC

6 chakra Ajna is situated around VG23 .

Connected with channels TR,E,IG.

7 chakra Sahasrara VG 20. Connected with channels C, VB, MC.

Upper dantyang PC3, PC4

Front dantyang VC17

Back dantyang VC4

Middle dantyang VC6

Lower dantyang VC1

Mechanism of using the chakra and dantyang points as well as their combination with known acupuncture points was worked out. Chakra and dantyang points can be influenced by means of acupuncture, plaster application, oils inunction etc.

Conslusion. Use of the chakra points and their projections allows to improve the

treatment quality significantly as well as influence the psychical, physical and spiritual spheres of people's being.

O.V. Gorchakova
Yu.I. Borodin
V.N. Gorchakov

**PHYTOTHERAPY FOR OPTIMIZATION OF LYMPHONODE
STRUCTURE AND FUNCTION IN ELDERLY PATIENTS**

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The problem of improvement of life quality and duration of life in elderly people is actual problem of 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 get worse with age. These facts clearly define the role of lymphatic system and the necessity to search correction therapies. Phytotherapy as a method of optimization of functions of lymphatic system of persons of old age is experimentally proved. We used original herbal collection including leaves and root of *Bergenia crassifolia*, *Rhodiola rosea*, *Hedysarum*, *Vaccinium myrtilus*, *Vaccinium vitis-idaea*, Currant, Rose, Thyme, dietary fibers.

The intake of phytopreparations does not 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. Phytocorrection of old animals leads to deposit of 3-4% liquid in lymphatic node. The volume of total water in lymphatic node is connected with cortical medullar proportion and development of medullar substance.

Phytocorrection 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 phytocorrection. 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). Phytocollection 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 phytotherapy.

Judging by changes of lymphatic node the immune potential and drainage function are improved as a result of phytocorrection in old animals. Phytotherapy helps to achieve lymphostimulation effect, which has a preventive character.

V.V. Gref
N.N. Burchak
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V.V. Astashov

RESEARCH OF VASCULAR CHANNEL OF GENITALS IN AGE ASPECT AND SUBSTANTIATION OF USING METHODS PREVENTING AGING

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Studying of processes of aging of female organism and search of prevention in connection with increase of proportion of elderly women are actual. Features of aging of female organism are concluded in fall of level of sex hormones after exhaustion of ovarian follicular, hormonal function of which depends from blood supply and lymphatic drainage. Lymphatic system is a basic collector of interstitial liquid, and they result frustrations of microcirculation, connected with age or physiological features, to change of structure of lymphatic channel in interstices of uterus and ovaries. Thus, research of character of structural reorganization of a lymphatic part of microcirculation is actual. In recent years for differentiation of blood and lymphatic capillaries is used a ferment histochemistry - double histochemical colorings with definition in tissues nonspecific alkaline phosphatases and 5-nucleotidase (Kato S. , 1997-2003). Differentiation and morphometric studies were conducted on experimental animals, object - submucous layer of myometrium and ovaries, it is used in experiment 120 female rats of line Vistar of several age groups. In groups with application of methods preventing aging – before the pregnancy rats received phytospecies “Garmonia Sil” and irradiation of area of projection of thymus and of ovaries the Extremely-High-Frequency (EHF)- therapy. Extremely-High-Frequency (EHF) - therapy is a therapeutic application of the electro-magnetic waves in the millimeter range. It is revealed on datum of histochemical analysis that at animals of active reproduction age absolute area of blood microvessels above lymphatic prevails ($474, 4 \pm 4, 21$ in contrast with $116, 63 \pm 3, 97$) in submucous layer of uterus, given tendency is kept during pregnancy. In period of fading of reproductive function more expressed changes are undergone by lymphatic channel, particularly in myometrium. Consequently, with advancing age in genitals occurs deterioration of microcirculation, what results to alteration of interstitial humoral transport and lymphatic drainage of tissues, in intracellular space products of lipid peroxidation are accumulated and processes of oxidizing tissue damage started. In groups with correction was used the phytospecies “Garmonia Sil”, consisting of medicinal plants with high concentration of bioflavonoid and lyophilized caviar sea urchin. Leded revealed morphometrical and histochemical observations, what on background of reception of this complex, normalization of permeability of walls of lymphatic capillaries of tissues of genitals and stimulation of metabolic activity of lymphocytes in all age groups occur, strengthened drainage – detoxics functions of lymphatic system, what promotes the restoration and preservation structural integration of tissues. On background of irradiation of animals of EHF- therapy increase of absolute area of blood microvessels is revealed, mainly, in the field projection of ovaries also at animal all age groups.

Such image, the changes of blood and lymphatic vessels of microcirculatory channel of tissues of genitals on background of complex use of phytospecies - superconcentrators on bioflavonoids and Extremely-High-Frequency (EHF)- therapy to improve tropism of tissues and drainage of interstitial space at old animals, what allows to attribute given methods regenerative medicine as methods preventing aging.

G.V. Hakobyan
A.G. Khachatryan

ALVEOLAR BONE EXPANSION TECHNIQUE FOR PLACEMENT OF ENDOSSEOUS DENTAL IMPLANTS

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Actuality. Insufficient volume of bone tissue is one of the major factors of poor prognosis in dental implantation. The edentulous alveolar processes are often affected by resorbition which results in bone loss. Alveolar bone augmentation techniques include different surgical approaches such as guided bone regeneration, onlay grafting, interpositional grafting, distraction osteogenesis, ridge splitting, and socket preservation. Unfortunately, bone-grafting techniques require a longer treatment time, a need for a second surgical appointment, and an additional surgical site if autogenous bone is used. This may add significant cost and complexity to the treatment. Another technique for placement of dental implants in narrow bone ridges is repositioning and remodeling of alveolar bone by condensing and expansion with the help of bone osteotomes. This study presents the efficacy of using lateral bone expansion technique in 32 patients during implant placement.

Materials and Methods. Bone expansion technique is indicated for partially edentulous healthy patients, with insufficient localized jaw bone volume to receive dental implants.

Presurgical radiographic evaluation is used to determine the severity of ridge resorption (CT, panoramic, and periapical radiograms) followed by clinical examination to evaluate the type of gingiva (attached or mobile). The patients should receive a detailed explanation regarding the technique and sign an informed consent prior to the procedure. The site was anesthetized using local anesthetic in the immediate buccal and lingual vestibule. A crestal incision was used, but only minimal tissue reflection was done in order to preserve the periosteum attachment surrounding the buccal and lingual bone. A full-thickness mucoperiosteal flap was raised. The osteotomy was started by using the pilot burs in 1.0-mm diameter followed by the 1.8-mm diameter bur. This was followed by condensing of the bone using the 2.3-mm diameter condensing bur. Because the bone quality was subjectively judged to be Type III bone, it was decided to skip the 3.0-mm-diameter condensing bur and progress to the threadformers. Further osteotomy widening was started by the use of the thinnest threadformer (2.7-mm diameter) initially fitted to the threadformer carrier by

hand and then by using the disengaging ratchet. Primary stability was tested by torquing the implant to 30 Ncm. The soft tissue flap was approximated, and primary closure was achieved. Patients were instructed to wash the mouth with chlorhexidine 0.2% twice daily, continue antibiotic therapy for 7 days.

Results. Six weeks postsurgery showed good soft-tissue healing. After 3-5 months, the implants were uncovered and restored with either a fixed bridge. The mean period of observation after prosthetic loading was 5 years. The bone levels were monitored radiographically. Marginal bone loss around the implants was within established limits. The results indicated that 95.5% of the implants survived.

Conclusions. The results of this paper suggest that this technique can be used as an effective method to widen alveolar ridges during implant placement.

The major benefits of this technique:

Can be used in both the maxilla and mandible with some technique modification

Allows immediate placement of implants in narrow ridges at the time of expansion

Is an alternative to block grafting in select cases to increase ridge width for implant placement Requires less time from first surgery to final restoration as compared to the use of block grafts is minimally invasive, is cost effective. This technique offers a viable alternative to bone grafting in select cases for lateral bone expansion where teeth have been missing for a considerable time with resultant buccal bone concavity.

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V.B.Shadlinski

VERGLEICHENDE BEWERTUNG VON DRÜSEN DES RECHTEN UND LINKEN STAMMBRONCHUS IN VERSCHIEDENEN ALTERN DES MENSCHEN

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Wir haben makro- und mikroskopisch Anatomie und Topographie von Drüsen der beiden Stammbronchien an 56 Leichen von Menschen verschiedener Älter untersucht. Nach Färbung mit dem Methylenblau sehen die Drüsen wie dunkle (dunkelblaue) anatomische Strukturen aus, die im Hintergrund hellrosa Bronchuswand haben. Die in der Haut- und Knorpelluftröhrenwand liegenden Drüsen haben verschiedene topographische Besonderheiten. In der Knorpelwand der Bronchien befinden sich die Drüsen in Zwischenknorpelräumen und auf Knorpel Ebene.

In dem Zwischenknorpelraum der Hauptbronchienwänden gibt es einige Drüsen, deren Anfangsstücke entweder eierförmig oder gestreckt sind; dabei übereinstimmt Längsachse der Anfangsstücke mit Knorpelwandrichtung. Vorknorpeldrüsenanfangsstücke sind entweder eierförmig oder rundförmig, ausserdem abgeflacht, in 1 oder 2 Reihen verteilt und befinden sich genau vor dem Luftröhrenknorpel.

In der Hautwand der Luftröhre und Hauptbronchien liegen Drüsennfangsstücke

in verschiedenen Tiefen. Bei beiden Hauptbronchien zeigen sich Drüsenanfangsstücke ausserhalb der Muskelbündel episodisch oder fehlen. Diese Anfangsstücke sind hauptsächlich eierförmig. In Hautwand der Hauptbronchien fehlen in der Regel solche Drüsen nach 8 Jahren des Lebens oder sind selten. Drüsen sind sowohl in Knorpel- als auch in Hautwänden der Hauptbronchien am häufigsten pilzförmig.

Wir haben Drüsengrössen und Drüsenanzahl in verschiedenen Stücken von der rechten Hauptbronchuswand mit denjenigen von der linken Hauptbronchuswand verglichen. Es ist bewiesen worden, dass Drüsenanzahl in den rechten Hauptbronchuswänden weniger, Länge, Breite und Fläche von Anfangsstücken und Anfangsstückenanzahl in den rechten Hauptbronchuswänden grösser ist als bei dem linken Hauptbronchus. Zum Beispiel, Drüsenanzahl bei dem rechten Bronchus im Vergleich zu einem linken in der Frühkindheit ist 1,55 mal weniger ($p < 0,001$), in der ersten Kindheit – 1,34 mal ($p < 0,01$), in der Adoleszenz – 1,28 mal ($p < 0,05$), in der ersten Periode Erwachsenenalters - 1,28 mal ($p < 0,05$), in Greisenalter – 1,20 mal ($p < 0,05$).

Wir haben Drüsenanfangsstücklänge von dem rechten und linken Hauptbronchien gegenübergestellt. Bei dem rechten Hauptbronchus sind Anfangsstücke in der Frühkindheit 1,13 mal länger als bei dem linken Hauptbronchus ($p > 0,05$), in der ersten Kindheit – 1,10 mal ($p > 0,05$), in der Adoleszenz – 1,06 mal ($p > 0,05$), in der ersten Periode Erwachsenenalters - 1,06 mal ($p > 0,05$), in Greisenalter – 1,07 mal ($p > 0,05$).

In der Frühkindheit sind Drüsenanfangsstücke von dem rechten Hauptbronchus 1,18 mal breiter ($p > 0,05$) als in dem linken Hauptbronchus, in der ersten Kindheit – 1,11 mal ($p > 0,05$), in der Adoleszenz – 1,07 mal, in der ersten Periode Erwachsenenalters - 1,25 mal ($p < 0,01$), in fortgeschrittenem Alter – 1,14 mal ($p > 0,05$), in Greisenalter – 1,13 mal ($p > 0,05$).

In der Frühkindheit ist die Fläche von Drüsenanfangsstücken in der Wand des rechten Hauptbronchus 1,46 mal grösser ($p < 0,01$) als in der des linken Hauptbronchus, in der ersten Kindheit – 1,64 mal ($p < 0,001$), in der Adoleszenz – 1,70 mal ($p < 0,001$), in der ersten Periode Erwachsenenalters - 1,32 mal ($p < 0,01$), in Greisenalter – 1,35 mal ($p < 0,01$).

Morphologische Analyse hat gezeigt, dass Anfangsteilanzahl in Drüsenanfangsstücken von dem rechten Hauptbronchus im Vergleich zu dem linken Hauptbronchus in der Frühkindheit 1,24 mal grösser ist ($p < 0,05$), in der ersten Kindheit – 1,16 mal ($p > 0,05$), in der Adoleszenz – 1,13 mal ($p > 0,05$), in der ersten Periode Erwachsenenalters - 1,34 mal ($p < 0,01$), in Greisenalter – 1,30 mal ($p < 0,01$).

So hat unsere Forschung gezeigt, dass Drüsenanzahl und Drüsenverteilungsdichte in dem rechten Hauptbronchus in verschiedenen Altern weniger ist als in dem linken Hauptbronchus, während Länge, Breite und Fläche von Anfangsstücken und Anfangsteilanzahl in den Drüsenanfangsstücken des rechten Hauptbronchus grösser sind im Vergleich zu dem linken Hauptbronchus.

Ignat Ignatov

WHICH WATER IS OPTIMAL FOR THE ORIGIN (GENERATION) OF LIFE?

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http://www.medicalbiophysics.dir.bg/en/water_memory.html

New achievements in the studies of water structure allow to better analyze the conditions for the emergence of life. It is difficult to presume that life has originated in “chaotic” water (Ignatov, 2010). Living organisms and water (Antonov, Galabova, 1992) are complex self-organizing systems. Schrödinger clearly defines that living organisms reduce their own entropy at the expense of increasing the entropy of the environment.

Self-organization can most logically explain the origin of living matter.

The term itself was introduced in 1947 by Ashby. The dissipative structures of Prigozhin and the hyper cycles of Eigen show that life is most probably not the result of chaotic processes. Prigozhin demonstrated that the formation of dissipative structures and the increase of their complexity is associated with changes in entropy. For their achievements, both scientists separately received the Nobel Prize.

In late 2009 and early 2010 I carried out experiments with control “deionized” water, mineral water, sea water, and mountain water from Bulgaria. Water from karst springs was also studied. The experiments were made with Antonov’s device for spectral analysis of water. Cactus juice was studied too (Ignatov, 2009). The cactus was selected as a model system because the plant contains about 90% water. Also, photosynthesis is carried out by the enlarged stems, which serve for storage of water as well. Mineral water from different springs was examined.

Closest to the spectrum of sap, however, is the spectrum of mineral water, which reacts with calcium carbonate (CaCO_3). Karst springs have a similar spectrum. Closest to the spectrum of sap is the spectrum of karst springs water, which interacts with mineral water.

In nature there are places with different water and identical external conditions. 25 km away from Teteven there is the Zlatna Panega karst spring with a temperature from 10 to 12,5 °C. Three mineral springs with an average temperature of 21 °C pour into the lake formed by the spring. Only a few kilometers away is the Vit river with an average temperature of around 15 °C. Photographs demonstrate the obvious difference between the plant life in the water of the river and the karst spring. This is visible proof of the optimally good place for the active life of algae under identical external conditions. The difference is only in the structure of water.

Close in value peaks in the amplitudes of the spectra of sap and of karst and mineral springs, which interact with calcium carbonate are observed. Peaks are found at -0,1112, -0,1187, -0,1262, -0,1287 and -0,1387 eV. The average energy of the hydrogen bonds among water molecules in the creation of cluster formations is measured. Similar

amplitudes in the spectrum between the sap and the mountain and sea water is observed at $-0,1362 \text{ eV}$. The spectrum of the control “deionized” water is substantially different from that of sap, mineral and mountain water.

There are three components that are exceptionally important before we proceed further. Modern physics can determine the composition of mineral water to the nearest atom. If, however, we mix these ingredients in deionized water, we will not obtain mineral water. Without analysis of parameters that are associated with “vital” energy, it is difficult to explain the origin of life as a mixture of organic molecules. Which are the factors that preserve information in a “self-organizing” structure. The more logical outcome is for it to self-destruct. Naturally all these processes have occurred due to energy from the environment.

Oparin, theoretically, and Miller, experimentally, have indicated the possibility for formation of organic molecules in the conditions of the young Earth.

Experiments and analyses indicate close quantum-mechanical distribution according to energies of water molecules between a liquid, which is directly connected with the vital activity of a plant, and mineral and karst water. Mineral water in springs and geysers flows with a nearly constant composition, and long enough. In contact with calcium carbonate (CaCO_3), sulphur (S) and other elements (Na, K, Ca, Mg, etc.), stable cluster formations are established. And since the external factor is repeated, they are more difficult to destroy. Energy required for maintaining the self-organizing structures directly depends on the heat from the volcanic activity and the magma. It also depends on the solar energy. Entropy depends on the amount of heat and the self-organized structure does not self-destruct because the energy balance is maintained.

The effect of Antonov and Yuskeselieva of 1983 showed that the water droplet evaporates discretely (in a salutatory fashion). This effect depends on the energy states of hydrogen bonds between the oxygen atoms of water molecules and the hydrogen atoms of the neighboring molecules. Water molecules themselves are linked into clusters. One of the evidences is the clusters of water molecules sized $1,1 \mu\text{m} / 1,1 \mu\text{m} / 203 \text{ \AA}$, photographed by Zenin with an electronic microscope. The obtained result has not been replicated in other laboratories. A team of Japanese scientists headed by Naguib published information that small clusters of water molecules and carbon have been observed with an electronic microscope. Their size was 20 to 50 nanometers.

The smallest bacterium *Micrococcus progreadiens* is sized $0,1 \mu\text{m}$ or 100 nanometers in diameter. This means that self-organization and structuring of living matter may begin within the stable cluster formations.

In 2005 a team from Berkeley University, USA – Geissler, Saykally and Smith, demonstrated with Raman spectroscopy that hydrogen bonds among water molecules are constantly tearing, changing and moving. These results correlate with my quantum-mechanical analysis of water spectrum. In these analyses the relative stability of clusters depends on external factors. Water is different in its structure, and a similarity in the spectrum can be observed in the presence of certain external factors (Ignatov, 2005).

Water changes the position of water molecules depending on the energy of hydrogen bonds. The apparatus results and analyses for the presence of “stationary” clusters can hardly be accepted. Cluster formations themselves are dynamic and the “memorization” of information depends on a series of factors. The first results and analyses with Antonov’s device were obtained in 1997.

The research from Proceedings of the National Academy of Sciences (PNAS), USA shows the possible number of hydrogen bonds depending on the number of water molecules. Upon an increase of the number of hydrogen bonds, the nano-droplets stability is reduced. This result correlates with my quantum-mechanical analysis regarding dynamic movement of water molecules in their attempt to find a relatively stable condition of clusters of the order of nanometers.

Studies with the device of Antonov of the spectrum of water that interacts with living tissue show an increase in the parameters of the spectrum between -0.1362 eV to -0.1387 eV. Cancerous tissue in this part of the spectrum decreased these parameters. One cluster formation “begins” to self-organize when it seeks to “preserve” the stronger energy interaction between the molecules in it. We can define “life” energy as “conservation” of “self-organization” of stronger energy levels in clusters of molecules (Ignatov, 2010).

The evidence shown indicates that the emergence of life depends on the properties and structure of water and also on additional conditions. Mineral water, which interacts with calcium carbonate is closest to these conditions and has left a trace in plants with its structure, and entropy. Next in line with regard to quality are sea and mountain water (Ignatov, 2010).

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ALLERGIC RHINOSINUSOPATHY. SOME PECULARITIES OF PATHOGENESIS

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The urgency of the topic under discussion is explained by high morbidity of allergic rhinosinusopathy connected with its weighting and course modification. Considering extreme climatic conditions this problem is highly important for people of Eastern Syberia.

Allergic rhinosinusopathy is one of the most common displays of allergic clinical implications. Since 40% of Earth population suffer from allergic diseases, the share of AR is 25%. Thus more than half of allergic diseases has respiratory displays in the form of allergic rhinosinusopathy. (See Figure 1).

Earth Population Incidence Rate of Allergy

Allergic rhinosinusopathy is a disease or syndrome which is evident as paroxysmal

rhinorrhea, sneezing, nose irritation and respiratory difficulty. These symptoms are based on the change of hyperreactivity and nose mucitis as a result of damaging action of allergic mediators, which elution is mediated by immunal and/or non-immunal mechanisms.

The Research Aim:

To allocate clinicopathogenetical variants of allergic rhinosinusopathy on the ground of research of its prevalence and pathogenesis patterns. To develop differential methods of its diagnostics and therapy.

To fulfil the desired goal the following tasks are defined:

1. To study the concentration pattern of IL-2, IL-4, IL-6 and IFN- γ in blood serum and nasal swabs depending on AR clinicopathogenic form.
2. To specify the pattern of population and subpopulation structure of blood lymphocytes and their intrinsic cellular metabolism depending on AR clinicopathogenic form.
3. To study characteristics of microbial spectre of nasal mucuous coat on AR clinicopathogenic form.

The Scope of Carried out Research:

Materials and means of the rasearch	Number of people
Total examined, of them	
The study of population and subpopulation structure of blood serum lymphocytes by immunofluorescence procedure with the help of homogeneous antibodies	121
Identification of local and systemic profile of some cytokines in blood serum and nasal swabs by the method of solid-phase enzyme immunoassay	73

AR PATIENTS SURVEY METHODS

Otolaryngological

Allergological

Immunological

Microbiological

- population and subpopulation structure lymphocytes by immunofluorescence procedure with the help of homogeneous antibodies

- cytokines – solid-phase enzyme immunoassay

Statistical

Various clinical displays of allergic process are the result of damaging action of allergic mediators, which elution is mediated by immunal and/or non-immunal ways and which depend upon:

- The way of admission of allergen and/or non-immunological activator to the body;
 - he “shock” organ of immune complex fixation or non-immunological cell activation
- organistic localisation of allergic (pseudo allergic) reaction.
- The type of immunopathologic base of allergic reaction startup.

AR Classification based on pathogenesis

Pathogenetic forms	Clinicopathogenetic variants of AR
I. Original allergic rhinosinusopathy	I.1 – Mediated by immune mechanisms I.1.1 – atopic (reagin-dependent) I.1.2 – non-atopic (not reagin-dependent)
	I.2 - Mediated by combined (immune and non-immune) mechanisms I.2.1 – in the presence of atopic mechanisms (reagin-dependent) I.2.2 - in the presence of non-atopic mechanisms (not reagin-dependent)
II. pseudoallergic rhinosinusopathy	II.1 – Pseudoatopic (atopic analog) in connection with: II.1.1 – introduction of monoamines mechanism II.1.2 – abnormality of arachidonic acid metabolism II.1.3 – abnormality of digestive apparatus functions
	II.2 - Pseudoallergic (non-atopic analog) in connection with: II.2.1 – abnormality of complement activation II.2.2 – abnormality of digestive apparatus functions

To confirm pathogenetic differences of AR basic forms and specify new differential diagnostic criteria we carried out the following clinical laboratory researches: identification of local and systematic cytokines profile; population and subpopulation structure of blood lymphocytes.

Local and System production of cytokines has its own features depending on clinical pathogenetic variants of AR:

- with atopy there is predominance of cytokine production Th2-lymphocytes (IL-4, IL-6)
- with pseudo atopy there is predominance of cytokine production Th1-lymphocytes (IL-2, IFN- γ)

The results of the research confirmed that AR of atopic genesis is possible in the lack of suppressor influence of T- lymphocytes upon B- lymphocytes, which leads to hyperproduction of IgE

The discovered antipode changes of populational and subpopulational structure of blood lymphocytes depending on pathogenetical form of AR confirm its different setters.

Differential diagnostical patterns of original AR and pseudo AR are based on:

- Otolaryngologic and allergologic anamnesis
- Data of clinical examinations
- Figures, showing immunologic and allergologic reactivity condition
- Functional condition of digestive apparatus (gastrointestinal tract, hepatobiliary system)

Differential diagnostical patterns of original AR and pseudo AR obtained during the research:

1. The discovered antipode changes of immunological reactivity (structure of CD-cells)

depending on pathogenetical form of AR confirm their different evolution mechanisms.

2. Cytokine profile has its own features depending on clinical pathogenetical variant of AR. Thus, in the presence of original AR of atopic genesis the increased content of IL-4, IL-6 in blood serum and nasal swabs is discovered, which indicates the prevalence of Th-2 immune response. Cytokine concentration in blood serum and nasal swabs with pseudo AR is characterised by the prevalence of Th-1 immune response (increase in IL-2, IFN- γ).

3. The differences in the microflora were found: in the case of pseudo AR there were *S.delphini*, *S.arlettae*, *S.chromogenes*, *S.lugdunensis* and in the case of original AR there were a species of *Micrococcus*, yeast-like fungi, *S.schleiferi*. The discovered characteristics in the components of nasal mucuous coat microflora are probably associated to various etiological factors and pathogenetic mechanisms.

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ULTRASCHALLDIAGNOSTIK DER EXTRAUTERINGRAVIDITÄT

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Untersuchungsziel: Anwendung des transvaginalen Ultraschallscannungs für komplexe Diagnostik der Extrauteringravität in Kombination mit Laboratoriumsmethoden, klinischen und endoskopischen Methoden.

Fakten und Methoden. 30 Frauen mit Extrauteringravitätsverdacht wurden in der gynäkologischen des Stadtentbindungsheimes in Pensa, Russland, untersucht. Darunter waren 3 Patientinnen im Alter von 17 bis 20 Jahren alt (10%), 12 – von 21 bis 25 Jahren alt (40%), 10 – von 26 bis 31 Jahren alt (33%), 5 – von 32 bis 36 (17%). Alle Patientinnen wurden mit Beschwerden über ziehende Schmerzen im Bauchunterteil und gestörten Menstrualzyklus (Menstruationsaufschub auf 7-25 Tage) eingeliefert. Ultraschallscannung wurde in den ersten Stunden nach der Einlieferung im Alokapparat mit dem transvaginalen Messwertgeber 5,5 Megahertz durchgeführt. Bei allen Frauen wurde es geprüft ob es in dem Harn Ghoriongonadotropin gab (Schwangerschaftstest). 21 Patientinnen wurden einmal mit Ultraschal untersucht, 6 – zweimal, 3 – dreimal.

Forschungsergebnisse. Bei allen 30 eingelieferten Frauen mit Extrauteringravität ätsverdacht wurde Ghoriongonadotropin in dem Harn nachgewiesen. Bei der ersten transvaginalen Untersuchung hat sich eine Leibesfrucht in dem Gebärmutterhohlraum sichtbar gemacht, so wurde ein Fall der Extrauteringravität ausgeschlossen.

Bei 2 Patientinnen mit Extrauteringravitätsverdacht hat sich eine Leibesfrucht mit einem lebenden Embryo (Herzklopfen wurde registriert) in den Eierstöcken sichtbar

gemacht. Bei 14 Patientinnen hat sich ein Hohlraum mit dem Mischgefüge und einem hyperechogenen Rand in Gebärdemutteranhängen sichtbar gemacht, dasselbe wurde bei Patientinnen mit Tubenschwangerschaftverdacht nachgewiesen, darunter bei 8 Patientinnen enthielt der Douglasraum gemässe Menge der freien Flüssigkeit (das ist ein echographisches Zeichen der Tubenschwangerschaft am Rande der Unterbrechung).

Bei 9 Patientinnen hat transvaginale Untersuchung Gebärdemuttervergrößerung und M-echo-Verdickung gezeigt, nur bei 2 Patientinnen unter denen hat sich Pseudoleibesfrucht sichtbar gemacht. 5 Tage nach der ersten transvaginalen Untersuchung wurde eine Wiederholungsuntersuchung durchgeführt und bei 6 Patientinnen aus 9 wurde eine Leibesfrucht in dem Gebärdemutterhohlraum sichtbar gemacht, was frühe Phase der uterinen Schwangerschaft bestätigt hat. Bei den anderen 3 Patientinnen wurde durch transvaginale Ultraschaluntersuchung keine Diagnose gestellt und Extrauteringravidität wurde bei chirurgischem Eingriff bestätigt.

Zusammenfassung. Bei 11 Patientinnen (36,7%) wurde durch transvaginale Ultraschaluntersuchung uterine Schwangerschaft nachgewiesen, bei 16 (53,3%) – Extrauteringravidität, bei 3 (10%) – keine Pathologie diagnostiziert. Der Befund der dynamischen transvaginalen echographischen Untersuchung bei Extrauteringraviditätsverdacht erlauben, frühe uterine Schwangerschaft, entwickelnde ektopische Schwangerschaft und gestörte Tubenschwangerschaft zu diagnostizieren. Transvaginale Ultraschalluntersuchung soll in die obligatorische Komplexuntersuchung von Patientinnen mit Extrauteringraviditätsverdacht eingeschlossen werden. Das lässt Untersuchungsdauer verkürzen, Untersuchungsinformativität erweitern und in einigen Fällen Operationseingriff vermeiden.

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**EXERCISE – INDUCED ULTRASTRUCTURAL AND
INTRACELLULAR ENERGY METABOLISM CHANGES IN
CARDIOMYOCYTES IN RATES OF DIFFERENT AGE –
EXHAUSTION CRITERIA**

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Aim of the study. The estimation of ultrastructural response and energy metabolism (NAD⁺ depending and electron transport systems) under chronic exercise in different age groups of albino rats: 1) 22-50 days old, 2) 5-10 month old, 3) 11-18 month old, 4) 24-30 month old were into control and exercise groups until exhaustions (5 hours swimming per day during 14 days).

Cardiomyocytes from left ventricule were collected both sedentary and post-severe exercise

conditions. Simples for electron microscopical histostereometrical and biochemical analysis were carried out using a statistical analysis for revealed most informative morphological sings of exhaustions.

Among the morphological phenomena most common were destructive changes in cardiomyocytes mitochondria, appearance of mitochondria with the several additional compartment and different electrondensity matrix, also unusual atypical mitochondria wich corresponds criteria of chronic exhaustion in young animals .

Inhibition of NAD depending reactions, NAD/NAD⁺ 0,19 B and low level of oxidative phosphorilation have seen as results of physical load.

In the old-aged animals the decrease of the myofibrillar and vascular components volume and the diminish of the correlation between myofibrils and mitochondria were revealed, which caused the defective contractive function on cardiomyocytes. Apoptotic degeneration of myocytes was seen in old-animal cardiomyocytes, induced its metabolic changes and ischemization wich latter manifested with angio- and cardiosclerosis. Quantitative evaluation of the density of the capillaries and their diameters in on young animals myocardium was made.

We also observed that exercise in young animals were ineffective and may serve a cause of exhaustion and sudden deth. The development of mega-mitochondria having different morphology is demonstrated. Exercise alterations of myofibrils, dysrupture of intercalated disks with detectable decrease of reduction potential (Φ^0) are seen.

As a result we conclude that longterm exercise in young and old animals are not adequated and provoqe myocardial dysfunction. The estimate of the quantitative and qualitative data of the ultrastructure shows that under the chronic load by swimming in old aged animals group may provoques the disturbance of the compensative processes.

V.A. Ivanov
A.V. Khayrulova

: **KOGNITIVE KYBERNETIK**

.....
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Im Versuch, das Problem der psychischen Abhängigkeiten und chronischen Erkrankungen des Menschen zu lösen, haben wir entschieden, die Theorie der Funktionssysteme von P.K. Anokhin unserer Forschung zugrunde zu legen. Lass uns das genau besehen. Wir wissen, dass die Realität sich in uns durch die höhere Nerventätigkeit widerspiegelt, diese Tatsache hat Ivan Pavlov, Nobelpreisträger, festgestellt. Das Verhalten verwirklicht sich durch Entstehen und Festlegung der Funktionssysteme nach dem Gesetz des Anlernens. Wenn das Funktionssystem ein universell angewandtes theoretisches Prinzip ist, dann... Könnten Funktionssysteme in dem Menschendenken entstehen? Wenn ja, dann was sind die Komponenten dieser Systeme? Wie sehen die aus, wie werden die Merkmale der Funktionssysteme in dem Denken ausgedrückt: zum Beispiel, Aktionsakzeptor? Es scheint erstaunlich zu sein, aber die Antwort existiert schon seit langem. Die ist jedem bekannt.

Bedingte Reaktionen unterscheiden sich durch die Länge der Latenzzeit, Ausarbeitungsgeschwindigkeit von Differenzierungen, Verlernenskurve. Und nicht nur dadurch. Ihre unterschiedliche biologische Qualität und prinzipiell unterschiedliche biologische Bedeutung für Aufbau des aktiven Verhaltens bleibt beiseite. Im Jahr 1974 schrieb Herr Anokhin: „Die Emotion ist ein Komplex von Prozessen, die sich nach ihrer morphogenetischen Herkunft und ihren physiologischen Eigenschaften wie ein ganzheitliches Funktionssystem mit seinen eigenen Gehirnrinde und Zwischenhirn vereinigenden Regelmässigkeiten entfalten. Der Komplex ist ein genau koordinierter Verlauf von den zentralen und humoralen Prozessen – die Kombination, die in jedem Fall spezifisch ist und lässt die biologisch unterschiedlichen Typen der emotionellen Äusserungen (Lachen, Tränen, Zorn, Freude) untereinander nicht mischen“. Wenn die Emotion ein Funktionssystem mit seinen Eigenschaften ist, hat die ihren Anpassungseffekt, Aktionsakzeptor, Afferenzapparat und ihre Rückmeldung!

Wie sieht Rauschgiftsucht von diesem Standpunkt aus? Rauschgiftsucht ist eine wiederholte Aufbereitung und ein wiederholter Gebrauch des Rauschgiftes; der Prozess der Zentralintegration von Nervenprozessen, humoralen und kognitiven Prozessen, in dem kognitive Komponente eine Reihenfolge von den Geistesvorstellungen der Rauschgiftaufbereitung und Gebrauch darstellen. Nach etwas Zeit wird er zu dem dominierenden bedingten Reflex. Genau diese Reihenfolge von den Vorstellungen ist ein krankhafter Trieb zu einem Rauschgift – so genannter Hang. Wenn es so ist, kann man diesen Hang mit eigenen Augen „sehen“ – in der Form von Reihenfolge der Vorstellungen. Diese Vorstellungen sind in Physiologie nicht nur kognitive Komponente des Systems sondern auch Reizerreger, die reflektorische Reaktion starten. Es ist bemerkenswert, dass Überschreiten des Afferenzminimums bei Rauschgiftsucht in der Totalbeseitigung durch Verlernen der Gedanken an Rauschgift besteht, weil die Prozesse der Emotionszentralintegration unvermeidlich Elemente der von Herrn Pavlov beschriebenen Zeitverbindungen einschliessen. Genau das hat V.A. Ivanov, Psychologe aus Moskau, im Jahr 1997 getan. Aufgrund dieser theoretischen Voraussetzungen hat er die Technologie des Iterativen Verlernens geschafft. Die Technologie führt zu dem Zerfall der pathogenen Funktionssysteme, beider effektorischen und inneren. „Der Hang“ wird in einem Verfahren zerstört.

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„HELIOPLANTUM“ BEI DER BEHANDLUNG DER
NEUROLOGISCHEN UND PSYCHISCHEN STÖRUNGEN

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Es ist bekannt, dass die Abwehrkräfte und Resistenz gegen Krankheiten die Dauer der Erkrankung bestimmen. Das ist ein Allgemeinbiologisches Gesetz und gilt bei den Erkrankungen verschiedener Herkunft.

Der Verlauf der Psychoneurologischen Krankheiten hängt ebenso davon ab. Der

Umgang mit diesen Abwehrkräften gehört zu den Aufgaben des Arztes. Wir haben nach den Mitteln gesucht, die diese Resistenz steigern, die die Funktion der Organen und Geweben aktivieren.

Im Laufe dieser Arbeit haben wir einen heilenden Komplex „Helioplantum“ erforscht und in die Praxis eingeführt. Er enthält Substanzen, basiert auf Pentosoheterosiden und Hexosoheterosiden. Sein Rezept ist für jeden einzelnen Patienten individuell.

Dieser Komplex wird schon seit 20 Jahren angewendet. An den klinischen Proben haben mehr als 300 Patienten teilgenommen. Die gehörten verschiedenen nosologischen Krankheitsgruppen an.

Unter dessen onkologische, allergische, autoimmune Krankheiten, bei denen die Schulmedizin versagt hat. Später sind auch neurologische und psychische Krankheiten dazu gekommen.

„Helioplantum“ wird auch bei Multiple Sklerose (eine Motorik-Verbesserung bei 85% der Patienten wurde erreicht), Kinder- Autismus, Depressionen, Schizophrenie, Drogensucht eingesetzt. Diese Methode erlaubt den Verzicht auf Antikonvulsanten für 7-14 Monate aufgrund der Anfall-Reduzierung, psychischen und emotionalen Zustand zu regeln, das Verhalten deutlich zu normalisieren, psychischen Anomalien zu beseitigen, Entzugs-Erscheinungen zu lindern.

Außer Kontrolle des klinischen Zustandes wurde auch Computer-EG eingesetzt (spektrale, polyspektrale und nicht lineale Analyse) zusammen mit der Variabilität des Herzrhythmus. Die alle haben die Besserung der neurobiologischen Werte bestätigt.

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**METHODOLOGICAL APPROACH TO PHARMACEUTICAL
SUPPORT IN PATIENTS WITH OCCUPATIONAL DISEASES
AND METABOLIC SYNDROME**

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Pharmaceutical support in case of occupational diseases is a system of medical, informational and organizational-methodological provision of pharmacotherapy implemented in various public health sectors and general pharmaceutical practice. In order to optimize pharmaceutical help programs for patients with occupational lung diseases and polyopathy we made a medical social portrait of a person with chronic dust-caused lung pathology.

Average age of patients with chronic dust-caused diseases in in-patient care in the clinic of Hygiene Research Institute of Novosibirsk was 59,3±2,3 years old. 9,8% of them had higher education, 67,6% high vocational education. In 88,3% of cases their families consisted of 2 to 4 persons. 40,8% were alcohol addicted, 19% - nicotine addicted. 21,8% were registered as disabled of the second and third degree of disability.

36,5% of the research participants took at least one sanatorium and spa treatment. Total length of work experience made up 29,3±2,7 years, work experience with job hazards – 19,98±1,3 years. All the patients had associated diseases including cardiovascular system diseases (90,4%), gastrointestinal tract diseases (46,34%), bronchopulmonary system diseases (9,8%). 100% of the patients under study suffered from locomotor system diseases, 21% of them had endocrine disorders including metabolic syndrome. 22% suffered from associated occupational diseases.

We analyzed range of medicines used during inpatient treatment. This analysis allowed us to reveal the medicines which were used to treat both occupational and associated diseases.

The most frequently prescribed medicines are vitamin C (85,1%), ambroxol (79,57%), methionine (76,19%), combination of retinol and α -tocopherol (64,29%). Vitamins were prescribed to the patients at least in 9,52% cases (vitamin B6), at most in 85,1% cases (vitamin B1). Vitamin E and glutamic acid were prescribed in 35,71% cases.

Mucolytic agents were prescribed quite often, almost in 100% cases, mostly ambroxol and antitussive drugs (in 79,57% and 45,24% cases correspondingly).

Bronchial spasmolytics were prescribed seldomer: at least in 2,38% cases (serevent), at most in 11,9% cases (berodual).

Drugs to cure cardiovascular pathology were prescribed at least in 2,38% cases (nitrosorbidum dinitrate, atenolol, ednit, nitroglycerine), at most in 28,57% cases (enap), 11,9% (cordaflex), 7,14% (egiloc).

Analysis of frequency of drug prescription in case of chronic occupational diseases at the stage of inpatient care shows that the following drugs are prescribed most frequently: ambroxol (12,95%), vitamin C (11,32%), combination of retinol and α -tocopherol (10,01%), methionine (10,06%). Vitamin E, antitussive drugs, enalapril, diclofenak, berodual, analgin, benadryl enjoyed over 2% frequency of prescription. The rest medicines including the ones for pancreatic diabetes and metabolic syndrome are seldom prescribed – under 1% cases.

The revealed peculiarities of the given group of patients will allow to adjust pharmaceutical help program in the way of rendering specific pharmaceutical services, selling over-the-counter drugs and optimizing range of drugs prescribed by doctors.

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I.V. Olovyanishnikova
L.P. Razlivinskikh
E.P. Sakeyev

**ANWENDUNG DES SYSTEMS VON PHYSIO-
THERAPEUTISCHEN HEILVERFAHREN ZUM ZWECK DER
GEWICHTREDUKTIONSPROGRAMMNUTZEFFEKT-
STEIFERUNG**

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Jedes Jahr werden für die Russen akuter die mit Übergewicht und Obesität verbundenen Probleme. Jeder zweite Russe (54%) leidet an Übergewicht. Unter Ärzten

sind Übergewicht und Obesität zu 24% verbreitet. Die Gesundheit eines praktischen Arztes hat mehrmals die Aufmerksamkeit der Forscher an sich herangezogen. In erster Linie hat man beachtet, ob es Herz-Kreislauf-Erkrankungen und deren Risikofaktoren wie arterielle Hypertension, Hyperglykämie, Dyslipidämie gibt. Ausserdem, sind Übergewicht und Obesität mit den folgenden Problemen verbunden: ischämische Herzkrankheit, deformierende Osteoarthrose, Gallensteinerkrankung, Schlafapnoe, das Risiko bösartiger Neubildungen (Brustkrebs, Prostatakrebs, Gebärmutterkrebs, Dickdarmkrebs). Erarbeitung der Komplexmethoden für Korrektur der pathologischen Zustände scheint, die erfolgsträchtigste Richtung der Regenerationsmedizin und Physiotherapie zu sein.

Wir haben die Konzeption einer der modernen Regenerationsmedizinrichtungen unserer Forschung zugrunde gelegt, das heißt Genesung und primäre Vorbeugung bei ziemlich gesunden Personen. Wir haben eine Gruppe der Mitarbeiter unseres Krankenhauses, bei denen vor zwei Jahren Übergewicht (70%), Obesität (11%), arterielle Hypertension (64%), Dyslipidämie (62%), Hyperglykämie (12%) diagnostiziert wurden, bestimmt. Denen wurden Empfehlungen wegen Gewichtsreduktion und Arzneimittelbehandlung gegeben. Die wurden für gesunde Lebensweise günstig gestimmt und machte Fortschritte in Korrektur ihrer Störungen. Die meisten haben ihr Gewicht wesentlich reduzieren lassen, aber sobald die auf das Problem des "Gewichtplateaus" gestoßen sind, ist die Motivation merklich gesunken.

In diesem Zusammenhang haben wir ein Komplexprogramm der physiotherapeutischen Heilverfahren vorgeschlagen. Das Programm schließt elektrische Reizung, Lymphdrainage, Wasserbehandlung, Reflexmassage durch Elektrostimulator ein. Inzwischen sollten die Exploranden weitermachen alles was ihnen in den vorigen zwei Jahren Gewicht hat reduzieren lassen: den bisherigen Lebensrhythmus, die bisherige Lebensweise, Ernährung (verdauliche Kohlenhydrate und Tierfette beschränkt), Körperbelastung (Laufen, Rennen, Fahrradfahren, Schwimmen, Aerobik). Die Kur bestand aus 10 täglichen Prozeduren.

Die Gruppe unter Beobachtung bestand aus 52 Ärzten und Krankenschwestern unseres Krankenhauses. Darunter 42 (81%) Frauen (Durchschnittsalter - 42 Jahre), 10 (19%) Männer (Durchschnittsalter - 41 Jahre). Am Anfang der Forschung hat man anthropometrische Untersuchung (Messung von Körperhöhe, Gewicht, Taillenumfang, Hüftumfang, Gewichtindexberechnung), Forschung des Bluteslipidspektrums (Gesamtcholesterin, Lipoproteide niedriger Dichte, Lipoproteide hoher Dichte, Triglyzeride), Glukosebestimmung, Blutdruckmessung nach Standardmethode durchgeführt. Dieselben Werte hat man 10 Tage später und drei Monate später wieder vermessen. Vor Anwendung der physiotherapeutischen Prozeduren wurde Übergewicht bei 47% Exploranden aufgesucht, Obesität des ersten Grades - bei 44%, Obesität des zweiten Grades - bei 7%; bei 2% machte Gewichtindex 24,0-24,9 aus. 43% litten an Dyslipidämie, dabei kannten 67% ihren Cholesterinspiegel nicht. Arterielle Hypertension war bei 29% zu vermerken, Hyperglykämie - bei 6%, Schlafapnoe - bei 5%.

Zum Ende der physiotherapeutischen Kur wurde Gewichtsreduktion um 1-4 kg (im Durchschnitt 2,5 kg), Taillenumfangsreduktion um 1-7 cm, Blutdruckerholung,

Allgemeinbefindens- und Gefühlszustandesverbesserung erreicht. Nach drei Monaten reduzierte sich das Gewicht noch um 2-6 kg (im Durchschnitt 4 kg). Die Patienten mit Obesität des ersten Grades wurden weniger und machten jetzt 32% aus, es gab keine Patienten mehr mit Obesität des zweiten Grades. Anteil von Patienten mit Normalgewicht ist bis 10% gestiegen. Arterielle Hypertension war bei 20% zu erkennen, Dyslipidaemie – bei 31%, Hyperglykämie – bei 3%, Schlafapnoe – bei 2%. Es ist erfreulich zu bezeichnen, dass alle Exploranden wünschten, die Kur zu wiederholen.

Zusammenfassung:

1. Patienten mit Übergewicht und Obesität in 94% der Fälle stoßen auf das Problem des “Gewichtplateaus” nach Herbeiführung der gewissen Gewichtsreduktion (2-3% von dem Ausgangsgewicht in zwei Jahren).

2. In der Phase des Gewichtplateaus muss man Motivationsmechanismen aktivieren, um weiter das Gewicht bis zum gewünschten Ergebnis zu reduzieren.

3. Physiotherapeutische Prozeduren im Rahmen von Gewichtsreduktionsprogramm tragen zur weiteren Gewichtsreduktion bis um 6,5kg in drei Monaten bei.

4. Die besten Ergebnisse erreicht man, wenn man physiotherapeutische Prozeduren mit dem richtigen Ernährungsregime, gesunden Essen, richtigen Flüssigkeitsgebrauch, der regelmässigen und adäquaten Körperbelastung kombiniert. Richtig gewählte Prozeduren erlauben Energieaufwand des Organismus zu erhöhen, Stoffwechsel zu beschleunigen und Gewichtsreduktionprozess maximal angenehm zu machen.

J.V. Kim
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A.N. Trunov

DYNAMICS OF CONTENT OF CYTOKINES IN ORAL LIQUID OF PATIENTS WITH CHRONIC PERIODONTITIS AT SPLINTAGE OF TEETH

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Special researches show, that over 80 % of the population has parodontium (Kovalevskij A.M. 1996; Glickman J., 1972.). It is common, that chronic periodontitis proceed on a background of changes of the immune status of patients. The immune and metabolic characteristic of an oral liquid study will allow to prove terms and splinting of mobile prostheses methods in complex treatment of parodontium diseases. In this connection the purpose of research was studying immune and metabolic parameters of an oral liquid “up to” and “after” splintage of teeth.

86 patients aged 25-50 with chronic periodontitis years old, which have been divided into three groups. The first group was made by 75 patients with the phenomena chronic periodontitis, group of the control of 11 patients with intact parodontium, group of

comparison of 56 patients which have received treatment under the standard scheme, and 19 patients which received complex treatment with splintage of teeth. All patients were without the expressed accompanying pathology. The lime content of interleukins (Il-4, Il-6), secretory immunoglobulin A (SigA) determine an oral liquid.

At a traditional method of treatment concentration of anti-inflammatory cytokine Il-4, Il-6 it is statistically significant decreased during treatment within a month (Il-4 on 26,4%; Il-6 on 90,5%) in comparison with control group. In 6 months later of supervision specified concentration Il-4 tended to increase, and concentration Il-6 is statistically significant exceeded a parameter of control group on 13,7%. Concentration SigA also it is statistically significant increases for 6,2%. At inclusion in treatment splintage of teeth concentration anti-inflammatory cytokines Il-4, Il-6 in a month of supervision authentically decreased (Il-4 on 13,2%; Il-6 on 73,2%) in comparison with concentration before treatment. In the remote terms of supervision (6 months later) Marked statistically significant decrease in concentration cytokines (Il-4 on 111,6%; Il-6 on 190,5%). Concentration SigA it is statistically significant decreased after treatment a month later on 91,47%, and statistically significant decrease in the given parameter on 114,73% in comparison with concentration before treatment is marked 6 months later.

Thus, at carrying out of complex treatment with splintage of teeth of chronic periodontitis are marked an average degree of weight statistically significant dynamics of concentration Il-4, Il-6, SigA and restoration of cytokine balance of an oral liquid.

S.S. Kireev
A.F. Matveev
N.T. Serova

OXYGEN TRANSPORT AND WATER METABOLISM DURING THE OPERATION AND IN EARLY POST-OP PERIOD

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Investigation of oxygen status and water metabolism has been carried out during the anesthetic in 30 female patients in emergency surgery and in early post-op period.

The arterial and venous oxygen content, blood circulation minute volume, oxygen delivery to the tissues and water content in the intracellular intercellular and intravascular sectors have been controlled before the operation, in the most traumatic moment of the operation, in a few first minutes after the operation and 12, 24 hours later. The patients were operated for acute pancreatitis and peritonitis.

Decreasing of arterial oxygen content to 85-90 % from age-related characteristics and decreasing of arterial-venous oxygen content difference to 30 % have been expected before operating, rise in blood circulation minute volume at the expense of high-grade tachycardia was noted in 12 patients. In 10 cases the blood circulation minute volume was in 10-15 % lower than age related norms despite of essential tachycardia, only in 8 operated patients the rates of blood circulation minute volume were near to age related

ones. The oxygen delivery to the tissues was lower than age related in all cases, so metabolic acidosis was fixed in all cases too. The essential water deficiency was observed in all sectors. The arterial oxygen content was increased nearly to 100 % during the operation against the artificial lung ventilation and the elevated inhaled oxygen concentration, the arterial-venous oxygen content difference increased, vascular water concentration equalized due to infusion. Blood circulation minute volume and oxygen delivery were optimized, but were not approximated to age related characteristics.

The variations of oxygen delivery and transporting data were different in all cases in post-op period because the toxemia was not eliminated in spite of abdominal sanation. That is why only the intravascular and extracellular water concentrations were stabilized against the infusion therapy to the end of the first post-op day. The deficiency of oxygen delivery to the tissues, metabolic acidosis were steel remained. In 8 cases essential circulation hypodynamia and hyperdynamia in 6 cases preserved.

Finding data indicate high rate toxemia and water metabolism insufficient in patients with abdominal infection before the operation and in early post-op period, which were followed by expressed disturbances in oxygen transport and water metabolism even after the operation and in first days of post-op intensive care.

Peter Klug

**DER EINFLUSS VON SPORT UND KÖRPERLICHER
BEWEGUNG AUF ADIPOSITAS, BIOCHEMISCHE UND
PHYSIOLOGISCHE WIRKMECHANISMEN, REALISTISCHE
THERAPIEANSÄTZE**

Medizinische Hochschule Hannover, Hannover, Deutschland

Fragestellung:

In welchem Maße ist eine sinnvolle Kombinationstherapie von gesunder Reduktionskost und belastungsadäquater Bewegung, erfolgsversprechend auf dem Weg zur Reduktion des Körperfettanteils, bei gleichzeitiger Erhaltung oder sogar Zunahme der Körpermuskelmasse?

Methodik:

Leistungsdiagnostik im kardiopulmonalen (einschließlich Ergospirometrie) und motorischen Bereich.

Training aller Hauptmuskelgruppen in einem ausgewogenen Muskeltraining. Bei durchschnittlich 2 Serien a 20 Wiederholungen zu Beginn des Trainings und Ausdauertraining in der durch den Respiratorischen Quotienten festgestellten Fettverbrennungsbereich.

Ergebnisse:

Auswertung der Ergebnisse durch exakte Messung des Körperfettanteils mittels

Fat-Caliper. Messung von signifikanten Teil-Körperumfängen zur Ermittlung des Fettverteilungsmusters. WHO-Stufentest auf dem Fahrradergometer zur Feststellung der Kardiopulmonalen-Leistungsfähigkeit.

L.E. Kopylova
N.N. Burchak
V.V. Gref
E.V. Starkova
V.V. Astashov

POSSIBILITIES FOR CORRECTION OF TOXIC HEPATITIS BEFORE AND DURING PREGNANCY

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Actuality of the problem is caused by high level of disease of toxic and alcoholic hepatitis's. The hepatitis during pregnancy promotes development of complications, increase perinatal and maternal mortality. «The gold standard» in treatment of hepatitis's during the pregnancy is a pharmacopeias hepatoprotective drug "Essentiale" – this is a complex of «essential» phospholipids and vitamins which promotes activation and protection of phospholipids ferment systems and brakes formation of connective tissue in liver.

At structural research of a liver and regional hepatic lymph nodes in experiment on females of rats and their posterity it is revealed that taking of "Essentiale" during the pregnancy complicated by a hepatitis, causes in a liver – the intensification of blood and lymph kinesis, in lymph nodes promotes the activation of lymphoproliferative processes.

In the spent research, the animals before the pregnancy created model of a toxic hepatitis by combined influence of industrial ecotoxin factors - tetrachlormethane and 5 % alcohol. Using of "Essentiale" at the pregnancy complicated by a hepatitis promotes development «metabolic lymph stimulation» (expansion of periportal spaces it is small in a liver) at level of tissue microregion that provides the accelerated restoration of body. Similar changes are revealed in a liver of posterity from this group of animals. Calculation of perinatal losses has revealed that under the correction of "Essentiale" at rats-females is marked checks out the most high postimplantation embryonic mortality, that depends not only from transferred toxic effect, but and additional, it exogenous receipt in organism of any xenobiotics, including a medical drug of "Essentiale".

In addition, for correction of these changes and a toxic hepatitis at pregnant women the phytospecies of "PikSil". That is complex of bioflavonoids of medicinal plants: flowers of chamomile, balm, hips, grass of st.-john's-wort and turn, sheets of bearberry and birch, fruits of fennel. The phytopreparation was used as monotherapy and in a combination with "Essentiale".

Introduction of a phytospecies of "PikSil" at the pregnancy complicated by a hepatitis renders expressed hepatoprotective and lymph correction actions, promotes restoration of

structural mutual relations in lymph nodes, a liver at a matter and, especially, at posterity. This data testifies that under the reception of a phytopreparation of "PikSil" develops lymphodynamic effect and the drainage interstitial spaces at level of microregion of a liver is accelerated. Thus, combined introduction of "Essentials" and a phytopreparation of "PikSil" renders lymph correction action on hepatic lymph nodes and tissue microdistrict of a liver at the expense of activation of mechanisms metabolic and dynamic lymphstimulation. It is revealed at research of perinatal losses in animals, what the most low postimplantation and general embrionic mortality - in groups of pregnant females with toxic hepatitis on background of monotherapy of phytopreparate "PikSil" and combined correction with "Essentials", what is also caused and additional activation of microcirculatory of placenta (high concentration of bioflavonoids), improvement of uterine-placental blood circulation, and also decrease of endogenic intoxication, developed on background of liver injury.

Results of work allow auxiliary therapy at women, suffering with toxic hepatitis, to expand circuits in condition rehabilitation branches and sanatorium-resort establishments, to use phytopreparate "PikSil" as far as auxiliary therapy at pregnancy, complicated with chronic hepatitis.

V.V. Koryakov

DIAGNOSTICS OF ASTHENIC AND HYPERSTHENIC SYNDROMES

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Cardiopsychoneurosis, juvenile paroxysmal tachycardia, vascular dystonia of involuntary nervous system, adrenal crisis, affective state, nervous exhaustion, hypochondria, depression, chronic fatigue syndrome, tomomania, cardiac neurosis, Da Costa's syndrome and others are just a small part of diagnoses and syndromes within the limits of medical subspecialties meaning the same: noncompensated overexhitation or exhaustion of involuntary nervous system to a certain extent, that is neurotransmitter dystonia in hypersthenic and asthenic phase.

In order to figure out a drug dose correctly and choose a correct physiohaemotherapeutic method one should diagnosticate and differentiate hypersthenic condition from asthenic one. This will help to avoid overdose, side effects and open the way to standardization and control over medical treatment results.

We apply cardioremeter according to R.M. Bayevskiy. As marker indices we regard mode amplitude, i.e. condition of sympathetic nervous system; range, i.e. condition of parasympathetic nervous system; stress index, i.e. integral index of neurohormonal condition.

We studied clinical course variants of 36 patients with asthenia and 29 patients with hypersthenia, aged from 15 to 87 years old of both sexes. We considered asthenic patients with mode amplitude under 45, hypersthenic patients with stress index over 1000, with marked symptoms of disease, as these indices are not absolute indicators because of individual peculiarities by which each case of the disease is characterized. The patients received combined treatment including laser therapy with red, blue and ultraviolet light, beta-adrenoceptor blockers, neuroleptics and symptomatic therapy.

Asthenic syndrome			Hypersthenic syndrome			Initially
Mode amplitude	Range	Stress index	Mode amplitude	Range	Stress index	
34,81	0,22	85,07	85,79	0,04	1662,23	On 8 th day
47,73	0,14	196,28	69,19	0,17	520	1 st month
57,58	0,12	307,25	70,82	0,11	929,57	3 rd month
51,43	0,12	216,74	59,73	0,12	383,43	

Normal indices: mode amplitude – 45-55, range – 0,1-0,05, stress index – 90-180;

Our attention was drawn by changes of range – the latter indicating condition of parasympathetic nervous system – stipulated by participation of intercalary parasympathetic neurons in conduction of adrenergic impulse. Thus, cardiometry is a reliable method of diagnostics of vegetative and emotional disorders.

T.V. Kulemsina

KOMBINATION DER REFLEXION-THERAPIE UND FITOTHERAPIE

Donetsk Nationale Medizinische Staatsuniversität, Donetsk, Ukraine

In der alten China im Laufe der Jahrhunderte wurde Prophylaxe der Krankheiten kultiviert. Folgendes Konzept der Behandlung war ausschlaggebend: „Die Hochkunst der Behandlung ist die Krankheit vorzubeugen“.

In der fernöstlichen Medizin wird Fitotherapie in Zusammenhang mit 5 Richtungen betrachtet. Dichten und hohlen inneren Organen, Emotionen, Farben, Meridianen, Meteorologischen Faktoren, Sinnesorganen und mit Kategorien „IN“ und „JAN“.

Die traditionelle chinesische Medizin kennt 5 Tendenzen, die sich bei der Bewegung der „ZI“-Energie offenbaren. Die werden symbolisch als 5 physische Elementen, 5 Naturkräfte dargestellt: der Baum, das Feuer, die Erde, das Metall und das Wasser. Diese Theorie hat den Namen „U-SIN“. Der Baum repräsentiert die Energie, die entsteht und sich entwickelt. Das Feuer repräsentiert die Energie, die ausstrahlt und sich verbreitet. Die Erde repräsentiert die Energie die sich stabilisiert und konzentriert. Metall ist die Energie, die erhärtet und sich zusammenzieht. Wasser ist die Energie, die sich sammelt, erhalten

bleibt und weg fließt.

Traditionelle Akupunktur kann mit der klassischen Fitotherapie verknüpft werden. Diese Möglichkeiten kann einen dauerhaften Einfluss auf den Organismus des Menschen erleichtern. Aber besonders wichtig ist folgendes. Die klassischen Pflanzen, die im Westen wachsen, können nach den Mechanismen der traditionellen chinesischen Medizin betrachtet und klassifiziert werden. Sindromale Betrachtungsweise gehört zu den Grundlagen der traditionellen chinesischen Medizin. Die Anwendung der Heilpflanzen kann, so die chinesische Medizin, nicht nur innerlich, sondern auch äußerlich stattfinden. In diesem Falle muss man den Syndrom, der die Krankheit „IN“ oder „JAN“ begleitet, sehr präzise qualifizieren und dementsprechend berücksichtigen, welchen Geschmack diese oder jene Pflanze hat. Außerdem, der lokale Einfluss der Heilpflanzen auf die biologisch aktiven Punkte mit Rücksicht auf den Geschmack und den Syndrom erhöht die Effektivität der Behandlung.

Die Kooperation der traditionellen chinesischen Akupunktur mit Fitotherapie sind in verschiedenen Kombinationen möglich. Die kann man sowohl hintereinander, als auch gleichzeitig anwenden. Diese Kombination wird alleine durch den konkreten Patient und seinen konkreten Syndrom bestimmt.

Obwohl für manchen Pflanzen diese Einteilung nicht absolut ist, weil eine Pflanze verschiedene Geschmäcker enthalten kann, was Ihren Anwendungsgebiet deutlich verbreitet. In diesem Falle ist es besser die Pflanze nicht nur innerlich, sondern auch äußerlich zu benutzen.

V.V. Kursenko

**THE SAFETY AND EFFICIENCY OF SEMICARBAZIDE-CADMIUM
THERAPY IN THE EXPERIENCE OF BIOCLINIC WORK**

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We tested the safety of the use of Semicarbazide-Cadmium Therapy (SCT) by the Kacugin method for oncologic patients with stages 3 and 4 cancer and showed the influence of this therapy on the quality of life of these categories of patients. This investigational research therapy was given to volunteers who took standard forms of treatment without success before. The Know-How for the SCT therapy was given to us with the agreement of the holder of patent and author of the license, Dr. Leo Kacugin. In period from January 2008 till January 2010 this therapy was given to 15 patients with malignant tumors of different localizations and histological types. All patients were given SCT as a palliative therapy. The treatment was given to selected stage 3 and 4 cancer patient groups with progressive metastatic lesions.

The result of the application of this therapy showed that safety and effectiveness of SCT depends on the correct combination of all the preparations. Since this therapy has many

components, use of this therapy demands a greater effort from the physician than standard chemical therapy. The optimum combination of components allows the physician to get the desired clinical effects in a couple of weeks after beginning the treatment.

In spite of well-known risks related to the action of cadmium ions on healthy cells, the use of this therapy and foundation of Know-How it represents, was to show its safety. Laboratory tests which were performed during this treatment process showed that the therapy did not have negative effects on the circulation of blood or the functions of the liver and kidneys. Analysis of the patient's blood stayed within admissible guidelines. This means clinical side effects were not detected. In whole, the therapy stood well.

During the first day of therapy a dyspeptic phenomenon was detected in 3 patients which cut short their therapy. During the supervisory period we had stable and positive results from 8 patients. 2 patients had complete clinical and instrumental remission during 2 years, and 6 patients had remission for 6 months.

It is especially important to note that the quality of life of the patients was restored to acceptable levels. 3 of the patients began work in spite of being in stage 2 disability of oncologic disease. SCT showed its effectiveness for patients in this difficult state. Other patients had a positive effect in the form of the reduction of pain syndrome and temporary lowering of expressed tumor intoxication. In our experience we can conclude that SCT meets the criteria for safety and effectiveness. Since our patients were in the final phase of the disease, the experience of using SCT shows the high effectiveness of this therapy even in these cases.

In our opinion this method should be studied by applying it not only as a palliative therapy on patients with 3-4 stages of cancer, but also for the initial stages of the oncologic process.

In our experience, SCT can be combined with such orthodox methods as the chemical therapy of tumors. However the decisions about combinations of certain medical treatments demand subsequent study.

At the present time SCT therapy is included in the spectrum of medical services which are administered at our clinic with the agreement of the owner of the patent and author of the license.

L.V. Lavriv

NEUER BLICK AUF DAS ÜBERGEWICHTSPROBLEM

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Davon ausgehend, daß jeder Mensch einen physischen und einen energetischen Körper hat, sehen wir zwei Gründe des Übergewichts. Einer davon hat die Eigenschaften eines physischen Körpers, der andere - die eines energetischen. Betrachten wir die Aspekte, die den Zustand eines physischen Körpers bestimmen. Insbesondere achten wir auf das Essen.

Sowohl die Qualität der Nahrung als auch ihre Menge beeinflussen den Zustand des physischen Körpers. Sehr wichtig ist auch der Stoffwechsel, der seinerseits von der Geschwindigkeit der Impulsübertragung im Verdauungsprozess abhängt. Dabei entsteht im Blut eine entsprechende Substanz aus den geladenen Partikelchen, die zum Teil den energetischen Sinn des Menschens bestimmen. Jeder physischer Körper befindet sich in einem energetischen Umfeld mit verschiedenen Parametern der Dichtigkeit und energetischer Ausstrahlung. Auf diese Weise beeinflusst der feine Umfeld des Körpers seinen physischen Zustand und umgekehrt.

Also, müssen wir die Gründe des Übergewichts nicht nur in den physischen Eigenschaften des Körpers sehen, sondern auch in dem unsichtbaren Komponent. Die feine Struktur des Menschens hat eine Reihe der enregetischen Eigenschaften. Insgesamt kann man die feine Struktur des Menschens zweiseitig betrachten. Als erstes, als Ausstrahlung der Wellen, die eine bestimmte Länge, Frequenz und Amplitude haben. Als zweites, als Korpuskel- Partikelchen eines bestimmten Gewichts.

Daraus kann man beschließen, das die unsichtbare feine Struktur des Menschens beeinflusst den physischen Zustand zweiseitig.

- 1) Als Wellen (Torsionsfelder, elektromagnetische Ausstrahlung)
- 2) Als Korpuskel- Partikelchen

Der Wellenkomponent der feinen Struktur wird nicht nur durch die Prozesse im Blut bestimmt, sondern auch durch die energetischen Gehirnprozesse, die eigentlich die Hauptrole spielen. Also, die Energie des Menschengedankens, sein Willen, sein Sozialverhalten, seine Einstellung zu den Prozessen des Universums. Für die Gläubigen ist das eine enge Beziehung zum Got.

Der zweite Komponent sind Korpuskel Partikelchen der feine Struktur des Menschens. Das können vermutlich Mikroorganismen, Viren, verschiedene Bakterienarten sein, die den Gewichtszunahmeprozess beeinflussen können.

Daraus beschließen wir, daßmdrei folgenden Hauptfaktoren beeinflussen den Übergewicht des Menschens.

1. Ein Materieller: die Qualität und die Menge der Nahrung.
2. Zwei unsichtberen: a) Gedankenenergie des Menschens; b) Bakterien, Viren, Mikroorganismen.

Also, bei Gewichtsregulierung tritt hervor die Willenkonzentration des Menschens. Dabei verändert sich die Gedankenenergie. Das führt seinerseits zur Veränderung der energetischen Eigenschaften, die die Menge der Viren, Bakterien und Mikroorganismen um den menschlichen Körper herum kontrollieren können. Ausserdem kann der Mensch bewusst die Qualität und die Menge der Nahrung regulieren. Als Ergebnis erzielt er die Regulierung seines Gewichts, weil er die Gründe seines Übergewichts schon kennt.

Mark Litvak

NICOTIMOL – RESULTS OF CLINICAL OBSERVATIONS

Clinic of Doctor Mark Litvak, Tel Aviv, Israel

www.rak1.org

The preparation nicotimol is a practical result of development of « lipid”s theories of regulation». It is possible to assume the presence of an lipid systems of regulation in the organism, and to postulate existence of two types of lipids regulation – anabolic, connected with predominance of sterols and catabolic, connected with fatty acids. Also it has been shown, that catabolic misbalance is connected to violation of binding of fatty acids with an ion of chlorine. The important characteristic of areas of the organism possessing the broken metabolism is presence of free fatty acids which in a normal state are present only at red blood cells, erythrocytes and in cells of a brain. It explains specific sensitivity of such areas to introduction of lipids.

The techniques of treatment of dependences with the help of the preparations directly influential on lipid balance of an organism are developed. One of the most effective preparations appeared lipid derivatives of selenium and sulfur. It has been shown, what exactly selenium and sulfur is the factor positively influential on lipid balance. Their action is similar to action of oxygen of appropriate valence. Other important factor of operation of the medical form of selenium or sulfur is including into a lipid molecule, that sharply reduces their toxicity.

On the basis of minerals of the Dead Sea, in our clinic the method of the treatment, capable to tear this vicious circle of dependence is developed, to save the person of desire to accept alcohol, nicotine, drugs.

The preparation for removal of nicotinic dependence “Nicotimol” was received by 1764 persons in frameworks of 7 days course in period with 2003 till 2009 years.

The experience of smoking of everyone not less than 10 years.

42% - women

58% - men

Middle age of 43.8 years.

Within the framework of observation for accepting a preparation standard interrogation in the beginning of reception was carried out; during reception; at the end of reception and in subsequent by the month during observation.

Duration of observation was from 6 up to 12 months after the termination of course.

On the basis of results of interrogations 1712 person (52 persons have refused to participate in interrogation) the following results have been detected:

1) Side effects

- 7.9% - tested an easy indisposition

- 5.4% - a nausea

- 4.5% - headaches

- 2.9% - tachycardia

All by-effects disappeared in 1-2 days after the termination of course of reception of a preparation

2) After the termination of the course in 1-2 months 12.5% of persons increase in weight no more than 3 kg.

3) 87% of persons - have stopped to smoke

13% have returned to smoking; but in smaller dozes

7.1% from them in the first month after the termination of course

5.9% from them - with 3-rd till 6-th month

Results of the given observations enable to speak about very high (in relation to existing resources on lowering nicotinic dependence) efficiency of preparation "Nicotimol"

Mark Litvak

REASONS FOR DEVELOPMENT OF CHRONIC AND AUTOIMMUNE ILLNESSES, INCLUDING CANCER

Clinic of Doctor Mark Litvak, Tel Aviv, Israel

www.rak1.org

Five levels of life-support by which good operation the person is healthy exist in an organism of the person The first level – cellular, the second – intercellular, the third – tissue, the fourth – the level of organs, the fifth – the whole system level. All these levels are independent from each other and everyone has the protection systems from infections and diseases.

At hit of a virus in an organism the first phase of protection – so-called digestive is drawn up. Enzymes from leukocytes rush on destruction of enemies of an organism – infections. If the first wall of protection has not consulted also illness is not stopped, the second phase of the immediate answer switches on. For this stage of disease sharp rise in temperature, a fever, small rise of pressure are characteristic. In blood the quantity of leukocytes increases, coagulability of blood raises. If the second phase of struggle was completed by a victory, the person, accordingly, recovers. The first phase of protective response is named acid, the second – alkaline. But the person can not recover. In this case the infection remains in an organism. And then fight is entered with the third phase – a phase of framing of antibodies against an antigen. If this process has passed successfully pasting together of antibodies with an antigen therefore appears the new large derivation called as the antigen-antibody complex. A further stage starts, calling superstrong response of an organism with fevers and very high temperature.

Depending on structure fatty acids which were in a primary infection, together with the complex antigen-antibody are attached to those organs where there are fatty acids similar on structure and then already concrete diseases start to develop, at absence of treatment passing in a stage chronic. So, for example, if similar fatty acids were in kidneys,

disease of kidneys will develop; if in a connective tissue– that rheumatic arthritis; if in tissue of the nervous system – that any nervous disease, etc.

If recover nevertheless has not occurred, there is a framing of protein-fatty antibodies (them still name as allergic antibodies) in an organism, capable to destroy the militant complex antigen-antibody in a new phase and to stop illness. They interfere with appearance of new symptoms that creates conditions for completion of the process of recover.

Here so schematically it is possible to explain development chronic and autoimmune diseases. But the picture will be incomplete without an explanation of conditions of occurrence of a cancer. The first condition – congenital defects of anticarcinogenic antibodies or in general their absence. The second condition – the virus infections transferred ever. In fact at these infections the structure of membranes of cells which are subsequently played back defect is broken. And the third condition – toxic factors. For example: smoking, an unfavorable environment, carcinogens in meal, etc.

Mark Litvak

“CLINICAL APPLICATION OF SEMICARBAZIDE-CADMIUM THERAPY IN ISRAEL

Clinic of Doctor Mark Litvak, Tel Aviv, Israel
www.rak1.org

The clinical trial of patented medical technology “Semicarbazide - Cadmium Therapy” has been conducted in our clinic, on the basis of Medical Centre Ihilov with a small group of oncological patients-volunteers.

The therapy includes simultaneous application of semicarbazide hydrochloride and other medicines in a combination with metallic ionic complexes on the basis of cadmium and gadolinium. The purpose of our research was an estimation of safety and tolerability of the method at application as monotherapy for the stationary and out-patient oncological patients receiving palliative treatment.

The treatment was carried out from permission of Medical Management Centre of “Semicarbazide - Cadmium Therapy” in Germany (the owner: Dr.med. Leo Kacugin, Germany).

After passing training in Germany, we obtained permission from owners to the licensed application of the treatment in Israel on base of our clinic. We also obtained a working know-how of this technologies.

The application of the therapy revealed its good tolerance, safety and efficiency.

Serious side effects were not observed. Hematological parameters including biochemical, remained in limits of norm. On the base of the results we decided to include the medical technology in tools of our clinic.

Now, in the cooperation with Medical Management Centre of “Semicarbazide -

Cadmium Therapy”, we develop a model of an ambulatory treatment for oncological patients in territory of Israel. Also we started researches on learning possibilities of a combination of the given therapy with known Revici method.

Successful experience of the application of semicarbazid-cadmium method in our clinic, has allowed us to offer the therapies for oncological patients from other countries.

Our clinical researches confirm a high potential of metallic medicines on the basis of cadmium and preparations of semicarbazide group in oncology.

A.G. Loginov
V.N. Gorchakov

**THE ULTRASTRUCTURAL ORGANIZATION
MICROCIRCULATION CHANNELS OF A GUM IN CONDITIONS
OF EXPERIMENTAL IMPLANTATION OF NICKELIDE
TITANIUM**

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The estimation of ultrastructural changes of gingival trough is extremely important for clinic. Development of clinical symptoms of an inconsistency depends on them implantat. In the analysis of ultrastructural changes the way to exact diagnostics and a choice of optimum methods of preventive maintenance and pathogenetic therapy lays.

White rats of breed Wistar have been taken for experiment. Animals have been divided on two groups: 1 – clinically healthy animals (control); 2 – animals with implantation the nickelite titanium TN-10. In each group was not less than 10 animals. For modelling implantation by a spherical pine forest formed to implantat bed in the field of an alveolar shoot molar tooth of the mandibular bone then entered the sample of an alloy the nickelite titanium TN-10. An operational wound took in.

Experimental implantation the nickelite titan in lymphoregion causes essential changes endotheoliocytes of blood capillaries of a gum. Till 14 day after implantation in endotheoliocytes of blood capillaries of gums of animals with implantation the nickelite titan it is observed: 1) increase in volume mitochondrions and their superficial density of an external membrane at constant (or lowered) superficial density of an internal membrane. Observable swelling mitochondrions of endotheoliocytes is a structural attribute of decrease in their functional activity; 2) increase of numerical density of the attached (free) ribosomes that is an attribute of restoration cells cytoskeleton and their decrease external secretion activity; 3) the volumetric density of total micropinocytotic vacuoles decreases on 24,03 %. It testifies to decrease of mass transfer through a side of a blood capillary. The volumetric density of cytoplasmatic vacuoles has decreased in 2 times,

and volumetric density of luminal micropinocytotic vacuoles has increased for 72,8% in comparison with the control. Similar changes testify that transport processes are carried out mainly from a gleam of a capillary into interstice.

After implantation (30, 60 and 120 days) the majority morphometric parameters of the ultrastructural organization of endotheliocytes of blood capillaries of a gum has no statistically significant differences from corresponding parameters of control group of animals.

We consider, that on early terms after implantation the reason of ultrastructural changes of endotheliocytes is connected with increase of functional loading on system of microcirculation system of a gum.

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V.V. Astashov
L.F. Krylova
O.V. Kazakov
V.I. Chepik

**PROSTATE AND REGIONAL LYMPH NODES UNDER
CONDITION OF EXPERIMENTAL TUMORAL GROWTH AND
TREATMENT BY CISPLATIN AND NEW ANTINEOPLASTIC
AGENTS ON THE BASIS OF PALLADIUM SALTS**

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Detailed studying of the transformations in the regional lymph nodes in experimental tumor growth in the prostate can help to understand a role and functions of the lymph nodes in the pathological process. The analysis of structural changes in the lymph nodes in experimental tumor growth under condition of treatment by platinum and palladium preparations can allow to find differentiated approach to a choice of an antineoplastic preparation.

The work purpose is to reveal structural transformations in experimental prostate tumor (18 days of tumor growth) and pelvic lymph nodes under conditions of parenteral treatment by preparations of «Cisplatin» and new antineoplastic agents on the basis of palladium salts, developed on chair of the general chemistry of Novosibirsk State University, Institute of inorganic chemistry of the Siberian Branch of the Russian Academy of Science.

Materials and methods. The experimental model of malignant tumor growth in the prostate was created by inoculation of dissolved cellular stamm of ascite Ehrlich's tumor in the prostate parenchyma in CVA males-mice. Experimental groups: intact animals; 18 days of tumor growth; 18 days of tumor growth and application of pharmacological preparation «Cisplatin»; 18 days of tumor growth and application of the substance on the basis of palladium salts. Medical products («Cisplatin» and substance on the basis

of palladium salts) were entered daily (in a dose – 2 mg/kg of weight of an animal, intraperitoneally) once a day within 5 days, since 6th day after inducing of tumor process in the prostate.

Results of research have shown that under conditions of experimental tumor growth in the prostate and of introduction of new substance on the basis of palladium salts, in comparison with Cisplatin (pharmacological preparation), expressed transformation of tumor tissue is revealed (expressed necrosis of tumor node, considerable growth of connecting tissue, with preservation of muscular fragments, increase of number of less differentiated atypical cells), marked increase of stroma-parenhyma – on 62,5% and nucleo-cytoplasmatic indexes– on 3,5% is found.

In pelvic lymph nodes under condition of antineoplastic therapy by substances on the base of palladium salts, in comparison with Cisplatin, structural signs of humoral immunity activation were revealed (B - dependent zone is increased by 41,5%, brain – by 59%, lymphoid, plasmatic immature cells numbers and mitotic cells are increased), oppressions of the cellular immunity links are found (the paracortical zone is reduced). Activation of lymphopoetic and decrease in transport function of regional (pelvic) lymph nodes testify to reduction of antigene loading on the lymphatic region, to safety of barrier-detoxication functions of the lymph nodes.

Thus, the obtained data allows to make the conclusion that under conditions of experimental tumor growth in the mice prostate and introduction of new substance on the basis of palladium salts more expressed destruction of tumor tissue is observed (necrosis of tumor node on peripheries, increase of connective tissue component and number of high-differentiated cells in the tumor stroma), in comparison with group with monocorrection by Cisplatin, on the background of structural reorganisation of the regional lymph nodes, with signs of structural activation of transport function and plasmatization of lymphoid parenchyma. Results of research allow recommending substance on the basis of palladium salts for creation of new antineoplastic preparations.

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NASENATMUNG-STÖRUNGEN UND DEREN BEHANDLUNG

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Ziele der Forschung: 1) Die Hauptgründe der Nasenatmung-Störungen festzustellen. 2) Das Erfolg der allopatischen und osteopathischen Rhinitis-Behandlungsmethoden einzuschätzen. 3) Die Bedeutung der Krümmung der Nasenscheidewand in der Rhinitis-Pathogenese.

Bei der Forschung wurden 150 Menschen untersucht. Aus der gesamten Menge der Patienten wurden die Kranken mit allergischen, atrofischen und hypertrofischen Rhinitis ausgeschlossen. 93 Patienten mit Rhinitis und Rhinosinusitis der neurovegetatischen

Herkunft wurden ausgewählt. Davon waren 48 Männer und 45 Frauen im Alter von 23 bis 46 Jahren. Beliebiger wurden die Patienten auf 2 Gruppen geteilt. Die Hauptgruppe bestand aus 55 Personen und wurde nach der osteopathischen Methode behandelt.

Die Kontrollgruppe bestand aus 38 Personen und erhielt die allgemeine medikamentöse Behandlung. Für die Forschung der Behandlungserfolge wurden folgende Methoden angewendet. 1. Anamnese-Herstellung. 2. Rhinoskopie. 3. Abstriche des Nasenschleims auf Eosinophilen. 4. Computer-Rhinomanometrie. 5. Osteopathische Methode. 6. Kathamnestische Methode. 7. Statistische Methode.

Die Untersuchung hat erwiesen: bei 75% der Patienten – Rhinitis, bei 25% - Rhinosinusitis, bei 77% - Krümmung der Nasenscheidewand. Bei der Kontrolle des Behandlungserfolges haben wir eine neue Methode der Rhinomanometrie angewendet. Das war die physiologische Methode der Nasenatmungsuntersuchung mit der Hilfe mehrerer Sensoren. Die Sensoren waren an einer speziellen Klammer befestigt. Die wurde vor der Nasenhöhle fixiert ohne die natürliche Atmung zu stören. Alle herkömmlichen Methoden bevorzugten die Anwendung einer Maske, die die natürliche Nasenatmung beeinflusst hat. Auf der Klammer waren die Sensoren befestigt, die die Geschwindigkeit der Luftströme beim Ein-, und Ausatmen bemessen haben. Ein spezieller Sensor hat den Druck und die Temperatur gemessen. Das Wichtigste war der Widerstand dem Luftstrom in der Nasenhöhle.

Die Ergebnisse der osteopathischen und der allopathischen Behandlungen wurden 3 Mal registriert.

Vor der Behandlung, nach der Behandlung und drei Monate nach der Behandlung. Die osteopathische Behandlung, die die Hauptgruppe bekommen hat (55 Pers.) sah hervor 3 Behandlungsprozeduren, 1 Mal in der Woche. Das Ziel der Behandlung war die Beseitigung der osteopathischen Schäden, basierend auf dem Konzept der Osteopathie als Wissenschaft. Das heißt, jede Strukturstörung führt zur Funktionsstörung. Jede osteopathische Störung hat zur Folge eine Rhythmus-, und Amplituden-Veränderung.

Die Kontrollgruppe wurde eine allgemeinen medikamentösen Behandlung unterzogen. Das heißt: Protargol Lösung 2%, Öllösung Vitamin A und E, Tubus-Quarz.

Die Ergebnisse der Untersuchungen waren wie folgt. Direkt nach der Behandlung haben die Resultate bei den beiden Gruppen keine bedeutenden Unterschiede erwiesen. Aber nach 3 Monaten sind die Symptome der Krankheit bei der Kontrollgruppe wieder zurückgekehrt. Wobei bei den Patienten der Hauptgruppe ist die dauerhafte Verbesserung der Gesundheitszustandes eingetreten.

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APPLICATION OF ULTRALOW TEMPERATURES AT PANCREATIC CANCER SURGERY

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Introduction. Surgical intervention in case of pancreatic cancer is still the basic method of its treatment. Nevertheless, 5-years survival rate is still low, it makes from 5 up to 12%. One of the reasons of these unsatisfactory results is difficulties in adhering to ablastics principles at mobilization of pancreas from surrounding tissues.

Purpose. Using pancreatic cancer cryotherapy with deep freezing of surrounding tissues - to create optimum conditions for prevention of translocation of tumoral cells to blood and lymph flow during radical operations.

Materials and methods. There were 28 patients under the observation, the patients have undergone pancreatic cancer surgery with liquid nitrogen cryotherapy. In 14 cases it was pancreaticoduodenal resection, in 12 cases – distal resection, in 2 cases - pancreatectomy. Cryotherapy was performed repeatedly during the operation with the final stage at the bed of the removed part of the pancreas. For this purpose we have been using domestic device “Cryo-MT”, the applicator temperatures was -180°C .

Results and consideration. During the period of cryotherapy at the tumor zone, it was always possible to get “ice block” of tumor and surrounding tissues. In such cases the exposure of the affected part of pancreas was accompanied with minimum traumatization and low amount of blood and plasma loss. Mobilization from the main vessels was convenient and technically simple. Three-year observation has enabled to count on an improvement of the results of surgical treatment of pancreatic cancer patients. So, of 28 operated patients, 15 have died (53,6 %).

Conclusion. Application of cryotherapy at radical surgical interventions concerning pancreatic cancer helps to improve considerably a three-year survival rate, which is attributed first of all to the increase in ablastics during surgical intervention.

A.I. Masandilova

ÜBER DIE ASPEKTE DER KRANKENGYMNASTIK FÜR DIE KOMMENDE GENERATION

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Die bekanntgewordene Phrase “Wir stammen alle aus der Kindheit” hat nicht nur einen philosophischen, sondern auch tiefen physiologischen und biologischen Sinn.

Je länger dauert die Kindheit, desto schwieriger und vielfältiger ist der Prozess der

Anpassung an die Aussenwelt, die Vorbereitung auf das Erwachsensein. Während der Kindheit erobert der Mensch mit der Hilfe seines Nervensystems eine große Menge Fertigkeiten, lernt seinen Körper zu beherrschen, mit den anderen Menschen umzugehen, ein Mitglied der Gesellschaft zu sein. Das Nervensystem des Kindes kontrolliert das Bewegungs-motorische System, was eine der Hauptrollen im Leben spielt. Wir wissen alle: Bewegung ist Leben. Ohne die Bewegungsaktivität gibt es kein normales Leben. Eine große Bedeutung für die Entstehung des Knochen-, Muskel-, Kreislaufsystems hat Krankengymnastik. Eine der Grundlagen davon ist Atmungsgymnastik. Als Folge dieser Gymnastik stärkt sich die Immunität, erhöht sich die Resistenz gegen Virusinfekten, Körperhaltungskorrektur, Skoliosebehandlung, Plattfussbehandlung, Heilung des Asthmatischen Syndroms.

Gut reagieren auf die Krankengymnastik Patienten mit Kinderlähmungen. Positiven Effekt versprechen erschwerte Übungen, spezielle Spiele. In der Zeit von 3 bis 5 Jahren in unserem Gehirn formen sich Zentren, die für Motorik und Bewegungsanalyse verantwortlich sind, sortieren sich die effektivsten neuronalen Kontakte. Fängt an die Entstehung von konkreten Bewegungsmechanismen, die sich für konkrete Lebenssituationen eignen. In der Vorschulzeit werden die Bewegungen sicherer, es entsteht ein individueller motorischer Gestalt das Kindes, eigene Posen, Mimik, Gesten, es entsteht eigene Erfahrung der Wahrnehmung. Natürlich ist die Vorbeugung der motorischen Störungen nicht immer möglich. Aber die konduktive Methode erlaubt sie zu dem Minimum zu reduzieren, der mit der kranken Abteilung des Nervensystems verbunden ist.

Innerhalb 7 Jahren habe ich in Riga gearbeitet mit den Diabetes-kranken Kindern. Die Krankengymnastik hat sehr gute Ergebnisse erzielt.

Am Anfang der 90 er Jahren war ich nach Weißrussland eingeladen, wo ich die Kinder - Opfer der Tschernobil-Katastrophe behandelt habe. Ich habe Ihr Immunsystem deutlich gestärkt und sie von schweren Krankheiten gerettet. Ich habe auch Unfruchtbarkeit bei Frauen behandelt. Das führte zur Geburt von 44 Kindern und noch 2 werden bald geboren. Und es ist solche Freude, die glücklichen Augen der werdenden Mütter zu sehen.

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A.V. Yevay

INFLUENCE OF NUTRITION TYPES ON METABOLIC SYNDROME COMPONENTS FORMING IN ARCTIC REGION

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Till recently in literature there was an official opinion that indigenous population of North was not prone to the diseases of civilization. It was mostly explained by genetically determinate mechanism of metabolism programmed to proteinic-fat (polar) nutrition type. But because of Extreme North territories development, growth of man-caused load

and urbanization and, accordingly, change from nomadism to settled living, nutrition type changed radically from polar to carbohydrate which has led to adaptive processes breakdown and further development of metabolic disorders.

Research purpose: to estimate the occurrence of metabolic syndrome clusters like obesity and arterial hypertension among Extreme North natives in connection with the way of life (nomad, seminomad or settled) and nutrition type.

Materials and methods: 98 Nenets men of middle age were examined. They were divided into 3 groups: 1st group - nomads who live in tundra; 2nd group - seminomads; 3rd group - the settled ones who live in settlements. Metabolic syndrome was verified according to criteria of All-Russian Scientific Society of Cardiologists, revision of 2008. Degree of obesity was calculated according to Kettle formula. Arterial hypertension and its degree was determined with Korotkov's method of blood pressure measurement according to classification of All-Russian Scientific Society of Cardiologists, 2004. Patients were fed frequently and in small portions using computer programme called "Analysis of human nutrition state" (1,2 version of Central directorate of Nutrition Research Institute of Russian Academy of Medical Sciences, 2003-2005). The data were statistically processed with SPSS application package (12,0 version) and expressed as $M \pm m$. Credibility value of revealed differences was determined with Student's t-criterion.

Result of examination: it was revealed that nomads who live in tundra have traditional proteinic-fat nutrition type which implies proteins: fats: carbohydrates proportion of 1,8:1:3,4 while in the 2nd group this proportion is 1:1,1:2,7, in the 3rd group - 1:1,09:3,2. The latter is close to European carbohydrate nutrition type. Changes in dietary intake affected adversely state of health of the examined and caused body mass index change. It was revealed that body mass index in the 2nd and 3rd groups exceeded the norm (18-24) and corresponded to first-degree obesity ($31,5 \pm 1,3$) in the 3rd group and to overweight in 2nd group ($28,5 \pm 2,2$) while nomads who had preserved traditional way of living and eating habits displayed normal body mass index ($23,1 \pm 1,2$). Consumption of proteins in the 1st and 3rd groups made up accordingly 204% and 102% ($p < 0,5$), of total fats - 2% and 28% ($p < 0,001$), of saturated fatty acids - 12% and 47% ($p < 0,001$). Notable is the fact that persons having settled way of life are characterized by European nutrition type with protein deficiency and excess of total fat which leads to obesity development. It is known that North natives' need for polyunsaturated fatty acids received from fish is higher than Europeans' need for them by 15% that is why when traditional nutrition type is broken, deficiency of this substance is felt more by North natives than by Europeans. Arterial hypertension is more spread in the 3rd group and was revealed in 37,5% cases, mostly second-degree arterial hypertension, compared to 9,7% hypertensive patients ($p < 0,01$) - mostly with first-degree arterial hypertension - in the 1st group. In the 2nd group share of hypertensive patients made up 17,8% among which 73,7% suffer from second-degree arterial hypertension and 26,3% - from third-degree disease.

Conclusion. When North natives change from traditional nutrition type to the European one which implies reduction of protein consumption and increase of fat

consumption with predominance of saturated fatty acids, their genetically determinate adaptive processes break down, which leads to metabolic disorders.

R.G. Melkadze

ALTERNATIVE RAW-MATERIAL FOR TEA "MATE"

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The tea always was and still is being the most widespread and popular drink all over the world. This popularity is conditioned by a unique wide specter of biological activity as well as variety of produced production: black, green, yellow, red, white, pressed, briquetted, granulated, tinned, tabletted it can also be herbal or made from fruit-berry and so on...

One of the well-known teas, among the teas existed nowadays is „Paraguay tea,” that is known as „Mate,” it is made from the leaves and young sprouts of tropical plant *Ilex Paraguensis* St Hill. It is a species of wild native to subtropical south America: Paraguay, Argentina and southern Brasil.

Tea „Mate” is distinguished by wide spectre of biological activity, it has positive effect on heart and bowels, causes strong appetite, stimulates heart beating and regulates working of other organs, widens the capillaries and drops in pressure. As a result all organs are working better and temperature of the body is falling down by 0.3-0.4°C because of this features it is called „mankind benefactor.”

This unique features conditioned increased demand on this tea all over the world, but because of the limitation of its natural raw material resource it cannot satisfy market demands, for which it is needed to work out the new technology to produce „Paraguay tea” like drink from alternative raw material.

For this reason we have work ed out a new technology of producing a tea-like drink „Mate” from alternative raw material – Caucasian rhododendron leaves. This gives us an opportunity to widen the base of raw material needed for producing the tea „Mate” in subtropical conditions and to realize it in small industries and farming manufactures besides the specialized farms.

Caucasian rhododendron is an evergreen bush. It is nearly 1,5m. long. It flowers in June-July and it grows in highlands 1600-3000m. high from sea level. It is spread in the mixed forests of Alpine and Subalpine zones.

It belongs to the Georgian endemic plants family and is spread in all the mountain regions of Georgia. The leave composition is different in different vegetation periods: In spring surpluses the leaves of last year (of 2 year and of 3 year), but in Autumn of one year. It is known from public medicine, that the dried leaves of rhododendron are used as tea substitute from a long time. It is widely used in Homeopathy in a case of quick-silver intoxication, diseases of mucous membrane cover and headache. It has a high P-vitamine

activation. It is especially widely used when walking on highlands (mountains), because it can release the syndrome of oxygen insufficiency.

The scientific-research works for receiving the tea drink from Caucasian rhododendron leaves began in 90 years of 20-th century. Biopharmacological research of the received product, which was going on in Experimental Medicine Connecting University (Sokhumi C) showed that the working ability of mice has risen 2,5-3 times according to the „Evil wheel” test. But unfortunately, because of the events taking place in Abchazia the works on this matter didn't continue. According to all these continuing this work has on important scientific and practical means.

We have carried out an additional laboratory experiment on manufacturing tea product from the leaves of rhododendron Caucasian following technological operations described below:

Fresh leaves were set up in Kokh's device with water ferry for 3-5 minutes, attached leaves were placed in a layer of 2-3 cm and cooled up to a room temperature then passed through a meat grinder such as “Kutter” and crushed until the size of particles reached 3-5 mm size;

The crushed raw material was then fried on laboratory skillet at a temperature of 150-160 °C 10-15 minutes, then cooled and placed in a laboratory dryer at temperature of 70-75 °C maintained for 4-6 hours. After that, the crushed raw particles were cooled and repeatedly crushed and sorted on vibrating sifters.

According to these, we can conclude that an offered technology will be an important way to widen the raw material base of “Mate” type tea in Georgian subtropical conditions. Besides, its unlimited quantity can be used as the product with no coffee by people of all age and by people who suffer from heart diseases as well as some brain diseases and generally by contingent with limited usage of the caffeine.

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STRESS, PERSONALITY AND DIABETES

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Objectives. 1. To examine the role of major life events, chronic stress and severity of symptoms in the diabetes development
2. To test personality type in mediating the different forms of diabetes.

Research design and methodology. The Holmes and Rahe Social Readjustment Scale (SRRS) was used to measure life stress. The Cartwright and Cooper Scale of Behavioral and Physical Symptoms was used to assess the severity of stress. Specially designed for this study Chronic Stress Scale measures the intensity of stress in different realms (work, family, etc.) MBTI was used for personality type assessment.

Subjects. 55 type 1 and 188 type 2 patients attending Diabetic Clinic of Volfson hospital

at Holon, Israel were selected for the investigation .Their healthy relatives (N= 272) were chosen as controls.

Results. Type 2 patients reported more negative life events than controls ($p<0.5$), but there is no difference between both diabetic groups and controls in overall intensity and number of life events.

In a similar vein, the diabetic patients do not suffer more than controls of chronic stress; neither do they report more severe behavioral and physical symptoms.

Only a quarter of patients consider stress as a precursor to illness. There is no data proving association of stress and type 1diabetes and there is a very weak and inconclusive support for type 2.

On the other hand, there is strong evidence of a relationship of certain personality types to diabetes.

Among 16 types two of them, ESTJ (extraverted sensory thinking judging) and ISTJ (introverted sensory thinking judging) constitute more than half (52.9%) of diabetic patients, comparing with 19.3 % of their total presence in the national sample ($p<0.001$)!

The both types seem to be practical, matter-of-fact, logical and organized, but they are rigid, tuff, impersonal and rather cold.

Conclusion. Evidence characterizing the effects of stress in diabetic patients is weak and contradictory, especially in type 1.

On the contrary, role of personality type is crucial. Two types ESTJ and ISTJ overrepresented in the patients' sample.

As Hippocrates said: "It is more important to know what sort of a person has a disease, than to know what sort of disease a person has."

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PREGNANCY LOSS SYNDROME AND GENETICALLY DETERMINED THROMBOPHILIA

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Because of its social significance, pregnancy loss syndrome is currently one of the most important problems in obstetrics. Several research works have established that some of allele polymorphic genes, responsible for increased blood coagulability, are associated with augmented thromboses and pregnancy loss syndrome risks.

The purpose of this study was to evaluate association between carriage of allele genes variants encoding factor V (Arg506Gln), factor II – prothrombin (20210 G/A), PAI-I (675 5G/4G) and MTHFR (Ala222Val) and recurrent pregnancy loss syndrome in women inhabitants of Altay Region in Russian Federation.

One hundred fifteen women (average age $28,6\pm 1,4$ years) with threatened abortion

and complicated obstetric anamnesis (two or more early pregnancy losses, late pregnancy spontaneous abortions, preterm deliveries or antenatal fetal demise) without apparent gynecologic, infectious or endocrine pathology were examined.

In total, 217 pregnancies and 180 cases of reproductive losses were analyzed. Women with acquired variants of hematogenic thrombophilia as well as antiphospholipid syndrome were not included in this study.

Population data on carriage rate of these allele polymorphisms was established by genetic PCR testing carried out in 572 women inhabitants of Altay Region aged 12-15 (control group). It was found that 29% (n=166) of this group had some sort of genetically determined thrombophilia.

The incidence of single genetic anomaly revealed was 24,8% of women, most often encountered MTHFR polymorphism (0,7% homozygous and 12,9% heterozygous) and PAI-1 (4,2 and 9,3%). Factor V Leiden polymorphism was found in 1,6% (heterozygous), prothrombin gene polymorphism – 0,2% (heterozygous). Combination of two heterozygotes in MTHFR and PAI-1 was encountered in 4,2% of cases.

The incidence of allele polymorphisms in women with miscarriages was 83,4% (n=96), i.e. 3,4 times higher compared to control group. Women with fetal loss syndrome had the following carriage rates of polymorphisms: MTHFR genes (34,9%), PAI-1 (39,6%), factor V Leiden and prothrombine - 36,3% of cases for both mutations. Combination of different allele polymorphisms was found in 53 (46,1%) of women and was 11 times higher compared to corresponding value in control group. In particular, combination of two gene defects was present in 36,5% and three defects were found in 9,6% of patients.

Women with miscarriages had complicated thrombotic anamnesis in 28 (24,3%) of cases, including 2 with normozygous carriage, 11 (9,6%) with single genetic anomaly carriage, 8 (6,9%) with two genetic anomalies carriage and 7(6,1%) – with combination of three allele polymorphisms.

Complicated family thrombotic anamneses (myocardial infarctions, strokes, peripheral vessel thromboses) were encountered in 13% of cases if single allele polymorphism was found and in 19% if there were two or more anomalies.

These results indicate high informative value of examination for genetic thrombophilia in women seeking fetal loss syndrome prophylaxis.

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K.Yu. Korotkevich
A.A. Kruglova
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**HYBRID CELLS, OBTAINED BY THE FUSION OF EMBRYONIC
STEM CELLS WITH SOMATIC CELLS, AT NANO SCALE**

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There are lines of evidence indicating that hybrid cells generated by fusion of the ES cells with cells from adults retain their state of pluripotency comparable to that of

the ES cells, with the consequential reprogramming of the differentiated cell genome. At the same time the detailed structural organization of hybrid nucleus and cytoplasm remains unclear. We have investigated the morphology of stable hybrid cells produced by fusion of embryonic stem (ES) cells with diploid embryonic mouse fibroblasts by transmission electron microscopy (TEM) and with morphometric analysis. TEM investigations have shown that ES cell and fibroblast differ in cell form, nuclear size, the density of organelles in the cytoplasm and form of endoplasmic reticulum. It was found that the mitochondria in these cells have also different morphology. Mitochondria shape in fibroblast is rod-like with dark matrix and narrow cristae directed perpendicular to the envelope. Two types of mitochondria of ellipse shape have been identified in ES cells. The first type mitochondria has light matrix and narrow cristae while the second type has dark matrix and vesicle-like cristae. The comparative TEM studies demonstrated the similarity of hybrid cells with ES cells but not with fibroblasts. In spite that the average sizes of hybrid cells and their nuclei are larger to that of the ES cells, their nuclear/cytoplasmic relations were completely identical. At the same time the nuclear envelope of hybrid cells forms numerous deep invaginations to the nucleoplasm which have never observed in the ES cells. We suggest that it is related with increasing of ploidy in hybrid cell because they contain the chromosomes of both fusion partners. However some fibroblast chromosomes have been eliminated. When hybrid cells are created, not only the nuclear genomes of parental cells unite but their cytoplasm as well. It is interesting that hybrid cells have lost the mitochondria derived from fibroblasts and contain two types of mitochondria with morphology identical to those observed in the ES cells. Hybrid cells contain narrow cisternae of endoplasmic reticulum and do not produce the collagen as fibroblasts. Thus data obtained support the conclusion about reprogramming of the differentiated cell genome in hybrid cells.

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J. Najafov

RECAPITULATION DURING EMBRYONIC MYOGENESIS IN ANIMALS

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Study of the mechanism of separate tissues morphogenesis during the embryogenesis, particularly during the transition from one structural level to another, is associated with clarification of the ways of formation of one or another tissue, that has a direct relation to the realization of the morphological diversity in evolution. Meanwhile, as a main driving force of the evolution acts firstly differentiation of the initial cellular components

and then cellular mutual contact, which lead to the formation of the different tissues.

Separation of the myoblasts from myotome and their junction in muscle plate and myosymplast is an indicator of the first stage of histogenetic differentiation of the animals` skeletal muscles. In the sequel, initially myotubes, later on primitive and definitive muscular fibres are formed in these myogenic structures because of the complexation of the myofibrillar apparatus. Such a consecutive morphological rearrangement, on the one hand, is repeated differentiation of the myogenic components and on the other hand, is morphofunctional adaptation of the muscle tissues. Besides, each subsequent form rejects the previous form of existence. In the development of skeletal muscles in vertebrate animals caenogenesis or embryonic adaptation is determined, which exists during the specified periods of ontogenesis and later on disappear, that is, definitive muscle fibres are formed. In our opinion, it is correct to subdivide caenogenesis to - cellular (early) and symplastic (late). Within this period cross-striated muscle fibres still are not differentiated histologically, therefore it is not acceptable to name this period as caenogenesis on fibre level.

Let`s have a look at, which histogenetic recapitulations are present in the development of muscle fibres of these animals. Suppose that, differentiation of the muscle fibres consists of stages: mesoderm, somites, myotome, myoblast, muscular plates, myosymplast, muscular tubes, primitive (young) muscular fibres, definitive muscular fibres. First of them – formation of the third embryonic layer, which is formed by teloblastic (in archaeostomatous) or by onterosol way. Second – emergence of somites , third – myotomes, fourth – separation of the myoblasts from myotomes, fifth - merging of myoblasts into the muscular plates, sixth – formation of the myosymplasts, seventh – formation of muscular tubes and at last, eighth – formation of the definitive muscular fibres. Most of the mycologists subdivide the last-eighth stage into the primitive or young muscular fibres and definitive muscular fibres. Consequently, the eighth recapitulation can be considered as a two-stage.

Not only the fact of historecapitulation`s existence, but also the cases of its infringement has great significance in clarification of the ways of tissues` evolution. Otherwise evolution would not happen. In the development process, on the one hand there has to be conservative inheritance, but on the other hand there must be changeability. Stated transitional moments, periods in differentiation may be example of such infringement.

Above-stated shows the rightness of division of recapitulation into the histogenetic and anatomic directions. As for recapitulation, which is marked by ourselves in the development of skeletal muscles in representatives of different categories of vertebrate animals, it persuasively reveals the presence of first of them – histogenetic recapitulation in embryonic histogenesis.

A.A. Oleynikov
A.G. Remnev

**EXPERIENCE OF APPLICATION OF THE NEW WAY OF
CONSERVATIVE TREATMENT OF HERNIAS LUMBAR
INTERVERTEBRAL DISKS**

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The work purpose — working out and practical application of a way of conservative treatment of hernias lumbar intervertebral disks. For the purpose of conservative treatment of hernias lumbar intervertebral disks in sanatorium "Barnaulskiy" on which base the Regional advisory-methodical vertebro-neurologic centre works, were the way of conservative treatment of hernias lumbar intervertebral disks (patent of invention RU 2368401) is developed.

The essence of this way consists that treatment of hernias lumbar intervertebral disks includes carrying out medicamentous blockade and electric stimulation of a place of introduction an anesthetic a pulse electric current. The way of treatment of hernias lumbar intervertebral disks is carried out as follows. The patient is in a prone position on a stomach. Carry out blockade at pathology of a spinal cord and area backbone intervertebral apertures of lumbar vertebrae of a corresponding segment with hernia presence intervertebral a disk. After that separate a syringe from needles, thus the needle remains in a body of the patient. Then to a needle attach the anode. On a back surface of a shin establish a superficial electrode which connects to the cathode. After connection of all electrodes of 50 Hz, a current strength 10-15 mA, duration of an electric impulse 0,2 ms, duration of procedure of 8-10 min. daily, on course of treatment of 10-12 procedures carry out electric stimulation by a pulse electric current by frequency.

Throughout 2008, 2009 by means of this way have been treated 259 patients with hernias lumbar intervertebral disks at the age from 24 till 59 years. At the reference to all patients it was carried out magnetic resonance imaging or a computer tomography, ultrasonic research of lumbar department of a backbone about revealing of hernias lumbar intervertebral disks. In a clinical picture at patients the painful syndrome of various degrees of expressiveness, and also impellent and sensitive frustration at level of the bottom finitenesses prevailed.

As a result of the spent treatment at the majority sick (204 — 78,8%) has been reached proof expressed (confirmed at the further dynamic researches) positive result. At 36 (13,9%) patients expressiveness of a positive effect was less, or the effect of treatment proceeded smaller quantity of time and it was required to spend additional courses of treatment. 19 sick (7,3%) subjectively did not mark improvement while results of control researches testified to reduction of expressiveness hernia. Application of a new way of conservative treatment of hernias lumbar intervertebral disks has not revealed cases of deterioration of a condition sick, both clinical, and morfo-functional.

Thus, use of a new way of conservative treatment allows to provide treatment of patients with hernias lumbar intervertebral disks. Result of this treatment is elimination of a painful syndrome, reduction of volume of a hernia of a disk, restoration radix conductivity.

S.V. Ovsij
E.V. Sartschuk

**METAPHYSISCHES KONZEPT DER ELEKTROPUNKTURELLEN
DIAGNOSTIK MIT DER HILFE EINES VERBALEN
INFORMATIONSTESTS**

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Es ist wissenschaftlich bewiesen, dass die Reihenfolge der Molekülen der DNA-Struktur auf dem Wellen- Niveau holografische und quasiholografische Gitter bilden. Diese Gitter formen Text-, und Sprachähnliche Strukturen, die den spezifischen Genkod des Organismus bestimmen. Die Struktur der DNA-Molekülen und der ganze biogenetische Stoff weisen die Unzertrennlichkeit des Stoffes und des Feldes nach.

Mathematischen und Linguistischen Forschungen haben bewiesen, dass solcher Grundparameter wie Fraktalität ist einheitlich für die DNA und für die menschliche Redensart. Anders gesagt, die DNA-Struktur hat Ähnlichkeit mit der Struktur der Sprache. Darauf basierend hat Akademiker Sartschuk und seine Kollegen eine neue Methode der neurolinguistischen Diagnostik verschiedener Pathologien erarbeitet und erprobt. Diese Methode ist als ein verbaler Informationstest und mentale diagnostische Durchleuchtung dargestellt. Der Arzt-Operator spricht innerlich oder laut Wörter und ganze Phrasen, die diagnostische Anhaltspunkte einschließen. Wie schon erwähnt, Gedanken sind materiell und sind Informationsträger. Wörter und Phrasen, laut oder innerlich geäußert, sind eigenartige Informationssymbole, Torsionsfeld- Klischees.

Innerliche Darstellung oder verbaler Informationstext, geäußert vom Arzt, formen in seiner Umgebung und in der des Patienten spezifischen Hologrammen. Diese Hologrammen in Berührung mit dem Biofeld des Patienten wirken mit ihm zusammen nach dem Mechanismus der Resonanzfeld-Beziehungen auf allen Niveaus seiner Struktur.

Es muss erwähnt werden, dass das Biofeld des Menschen enthält Informationen über alle seine Strukturen, sowohl über den physischen Körper als auch über seine feinen Hüllen. Wenn die Feld-Hologrammen des Arzt-Gedankens mit denen des Patienten zusammenwirken, löschen sie die nach dem Prinzip der negativen Interferenz der Wellen. Als Folge, auf dem molekularen Niveau der Verschiedenen Organen ändern sich die Elektropotenziale. Sie kommen zu ihrem normalen, gesunden Anfangszustand. Diese Veränderungen in den singularen Punkten der Haut werden über die speziellen diagnostischen Sensoren registriert.

Man muss auch betonen, dass solche Methoden erlauben schnell die lebendige Formen der

Infekt-Erregern von den isolierten Substraten ihrer Informationsfeldern zu unterscheiden. Die Praxis hat gezeigt, dass nicht nur die lebendigen, aber auch die rein energoinformativen Hologrammen des Erregers können klinischen Symptomen hervorrufen.

Also, haben die Methoden des Verbalen Informationstests und mentalen diagnostischen Durchleuchtung die unbegrenzten Möglichkeiten und eine hohe Präzisionsrate.

V.G. Pashchenko

PREVENTIVE AND REHABILITATION MEASURES FOR YOUTH SUFFERING FROM VEGETATIVE-VASCULAR DYSTONIA

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Urgency of the Issue: Nowadays vegetative-vascular dystonia is the most widespread pathology of student youth special medical groups (according to Luhansk students' case rate research: Luhansk Taras Shevchenko National University - 580 students with vegetative-vascular dystonia, V.G. Pashchenko; Medical University - 430 students with vegetative-vascular dystonia, V. Siroshtan; East Ukraine Volodymyr Dahl National University - 720 students with vegetative-vascular dystonia, V.P. Liapin). This is attributed to original disposition and influence of variety of factors, one of these factors is a psychic tension. Pathology process has a tendency to quickening. It is combined with plenty of stress, which decreases a lot "life quality", physical and social adaptation. Over recent years World Health Organization emphasized continually the importance of prevention of cardiovascular diseases from the childhood, which is often the beginning of hypertensive disease, atherosclerosis and ischemic heart disease.

Annotation: Preventive and Rehabilitation Measures for young people suffering from vegetative-vascular dystonia is physical exercise. This enhanced with addition of therapeutic swimming to physical exercises. Swimming load is more than 5 km 200 m in the swimming pool for 20 weeks. It is accompanied with boat-type medical trainer with the charge of 1811600 kg/m for 44-45 days and 20 times of positive psychological impact. Method by p. 1, which is different because of conduction of boating with the charge 181 t 600 kg/m for 44-45 days within 908 minutes and 1860 paddles.

Method by p.l, is effective because of positive psychological impact, which is complemented with music.

Method by p.l, where psychological impact is enhanced with plants, providing sedative and good for vessels influence, essential oil volatile fractions. Method by p. 1, which is different because of filling the room of boating with negative ions within the concentration of 500-5000 ions/sm and relative moisture 30-40%. In the Scientific and Research Department V.G. Pashchenko has invented "Preventive and Rehabilitation Measures for Youth Suffering from Vegetative-vascular Dystonia". Patent of Ukraine Ks 33332 from the year 2008.

These preventive and rehabilitation measures are comfortable and economic, can be used across-the-board. This is extremely important for people general psychosomatic health improvement.

M.M. Polevshchikov
V.V. Rozhentsov

ZEITPARAMETER DES SEHENSSYSTEMS ALS ANZEIGER DES FUNKTIONSZUSTANDES VON EINEM SPORTLER

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Einführung. Die Wichtigkeit des Funktionszustandes (FZ) und der Eigenschaften des Zentralnervensystems (ZNS) bei Forschung beliebiger Tätigkeitsform ist erfahrungsmässig schon seit langem allgemein anerkannt, deshalb wenn man den Funktionszustand eines Menschen erforscht muss man aus praktischen Erwägungen in erster Linie dem Zentralnervensystem Aufmerksamkeit schenken, weil sein Zustand die Potenzen eines Menschen massgebend bestimmt und individuelle Eigenschaften der Regelungsvorgänge abspiegelt. Im Prozess der Lebenstätigkeit bekommt man etwa 90% Informationen über die Umwelt durch Sehenssystem, in Bearbeitung der visuellen Information nehmen 22 Rindenfelder teil, die zusammen bis 54% Hirnrindenfläche besetzen, deswegen werden psychophysiologische Kennziffern des Sehenssystemsfunktionszustandes ebenso wie elektrophysiologische Methoden verwandt, um den Zentralnervensystemsfunktionszustand zu charakterisieren.

Methoden. Informativität der Sehenssystemszeitparameter wurde in Kontroll- und Experimentalgruppen, die aus 8 Personen – den auf zyklischen Sportarten spezialisierten Studenten der Körperkulturfakultät (Langstreckerläufer und Schiläufer) im Alter von 18 bis 22 Jahren alt – bestehen, erforscht, um Funktionszustand der Sportler zu testen. Qualifikation der Testpersonen war entweder Sportler der ersten Kategorie oder Meisterkandidaten.

Ad hoc wurden modifizierte Verfahren der Reaktion auf fortlaufendes Objekt und Lichtflimmernschwellenfrequenzmethode angewandt ebenso wie psychophysiologische Methoden der Sehenssystemzeitparameterbestimmung, i.e. Empfindungszeit, Regenerierungsdauer, Dauer der visuellen Wahrnehmung und Labilitätsdauer.

Durch Modifizierung der Lichtflimmernschwellenfrequenzmethode wurde höhere Präzision der Schwellenfrequenzvermessung erreicht, durch Modifizierung von der Methode der Reaktion auf fortlaufendes Objekt wurde das wahre Verhältnis der Nervenervregungsvorgänge zu den Nervenhemmungsprozessen festgestellt.

Die wichtigsten Ergebnisse. Am Anfang des Übungsprozesses ebenso wie in der Vorwettbewerbperiode wurde eine Testenreihe mit jeder Testperson fahrradergometrisch mit verschiedenen Belastungszuständen, die dem gehörigen Sauerstoffhöchstverbrauch nach Prewarskijs Nomogramm von 50% bis 125% entspricht, durchgeführt.

Dynamik der Lichtflimmernschwellenfrequenzwerte bei verschiedenen Belastungen

wurde analysiert und es wurde entdeckt, dass diese Werte Ermüdungsentwicklung reflektieren und Übermüedungsanbruch nur bei der den 50-75% gehöriges Sauerstoffhöchstverbrauchs entsprechenden Belastung offenbaren lassen. Zugleich hat derselbe Sportler bei nach 3-5 Tagen wiederholten Testen mit derselben Belastung statistisch unterschiedliche Lichtflimmernschwellenfrequenzwerte gezeigt. Das zeugt von der Instabilität und geringer Reproduzierbarkeit der Lichtflimmernschwellenfrequenzmethode.

Die am Anfang des Übungsprozesses durchgeführte Testenreihe mit verschiedenen Belastungen hat Informationen über Wiederherstellungszeitdynamik und Verhältnis des Ermüdungsgrades zu Herzfrequenzwerten zur Verfügung gestellt soeben wie hat es ermöglicht, jeder Testperson Schweregrad und Dauer von verschiedenen Belastungen zu empfehlen, um Übermüdung während des Sporttrainings nicht zuzulassen.

Zusammenfassung. Es wurde versuchsmässig festgestellt, dass Analyse der Dynamik von Nachwirkungszeitparameter, die Zentralnervensystemszustandsveränderung charakterisieren, erlaubt, die Ermüdungsentwicklungsstufen bei physischer Belastung auszuzeichnen und Übermüdung zu vermeiden.

S.E. Postnov
V.A. Zuyev
M.V. Mezentseva
R.Y. Podchernyayeva

BOUNDARY LAYER WATER AND MEDICINES ON ITS BASIS – A NEW TREND IN BIOMEDICAL TECHNOLOGY

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Methods applied:

- Physics: the results under discussion are registered by physical instruments.
- Biology and medicine: universally recognized methods only are used within the limits of this scientific research.
- The results are interpreted and the hypotheses and conclusions are put forward on the basis of classical physics, classical biology and classical medicine.

This scientific research is based on the following pieces of evidence:

- human liquid (lymph, blood plasma, cell liquid and so on) according to its physical parameters is different from the water we drink. One can manipulate them;
- physical parameters of water in the cell of a healthy organ differ from those of an organ affected, let's say, by oncological disease.

The research is based as well on biophysical model of a living body which is an integration of experimental evidence obtained by scientists in the recent decades. According

to the hypotheses based on this model, water in a living body is in the same state like water in boundary layer formed on the surfaces of biological objects. If cells of a sick organ are imparted the physical parameters specific to intracellular fluid of a healthy cell, the organ recovers much quicker.

As a lever to affect physical parameters of human liquid, the water with biased physical parameters extracted from boundary layer 800 micrometers thick was used. On the basis of the elaborated technology we created drug prototype and have been testing it for 4 years on cell cultures of a human being, animals, apes and volunteers in key health care institutions of Russian Academy of Medical Sciences and Russian Academy of Sciences, Russian Federation.

The result shows that the medicine is harmless, has no by-actions and has a wide range of effects on a living body, including human being. Here are some of them:

- slowing-down of neuron death process (the older a mammal is, the faster is the process, this refers to a human being, too);
- very powerful antiviral action which applies to influenza virus, herpesvirus, oncovirus SV40, etc;
- regulatory action;
- good interaction with pharmaceuticals;
- general resetting of immune system, central nervous system, cardiovascular system and blood vascular system of a human being.

Moreover, in some cases we not only established facts of therapeutic action of the medicine but as well revealed its biological mechanism.

The medicine has a physical effect based on change of blood plasma, lymph, intercellular fluid and intracellular fluid physical parameters. Thus, cell membranes do not hinder the medicine from penetrating into cells. Administration route – abluition of mouth and nose mucous coat, dose – 0,2-2 ml in 24 hours. Existing diagnostic systems start registering changes in human organism 4-8 minutes after intake.

A.G. Remnev

**EXPERIENCE OF APPLICATION OF ULTRASONOGRAPHY FOR
DIAGNOSTICS OF THE LUMBAR DEPARTMENT PATHOLOGY**

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About 90 % of the population suffers from periodic pains in a lumbar region. Therefore diagnostics and treatment of pathology of lumbar department is one of the major problems of a modern medical science. The purpose of researches – to develop new, harmless, exact and inexpensive ways of diagnostics of a lumbar pathology. We have developed some new ways of diagnostics of a pathology of lumbar department with the help medical imaging technique - medical sonography (ultrasonography).

Actually the history of application of a method of ultrasonic diagnostics in diagnostics

of a lumbar department pathology begins since 1978, when Porter R.W., Wicks M. and Ottewell D. have suggested to define the sizes of the vertebral channel by means of ultrasonic research (Porter R.W., Wicks M., Ottewell D., 1978). In 1984, Luis A. Portela has informed on possibility of application of forward access for diagnostics of hernias intervertebral disks. Further the considerable quantity of works and the researches devoted to this question has been spent. In Russia most in details professor Kinzerskij A.J., who is the author of two monographies devoted to this theme (2001, 2007) was engaged in questions of ultrasonic diagnostics of backbone pathology.

Results of our work have allowed us to develop some new criteria of objective ultrasonic diagnostics lumbar hernias of intervertebral disks (Patents of inventions: RU 2368401, RU 2371096, and RU 2372849). The method of ultrasonic diagnostics involves noninvasive, full safety for patients and a split-hair accuracy. To researches applied ultrasonic scanner Aloka SSD-4000 ProSound PHD, the sector gauge of 2,5-6,0 MHz.

We do about 2000 ultrasonic researches of lumbar department of a backbone every year. Earlier we had been spent some researches for definition of sensitivity and specificity of author's techniques of ultrasonic diagnostics of a pathology of a backbone rather «the gold standard of diagnostics» for diagnostics of hernias intervertebral disks - a method of a magnetic resonance imaging (MRI). Have been defined sensitivity - a share of positive results of the test in group (in population) sick patients and specificity - a share of negative results of the test in group of healthy patients, our method of relative this standard. Under our data, sensitivity of ultrasonography diagnostics of a dorsal hernias lumbar intervertebral disks, with application of the technologies developed in sanatorium "Barnaulskiy", reaches 94,1 %, specificity - 98,2 % (Oleynikov A.A., 2009; Remnev A.G., Oleynikov A.A., Saldan I.P., 2010).

Thus, modern ways of ultrasonic diagnostics of pathology of lumbar department of a backbone allows to provide objective diagnostics dorsal hernias lumbar intervertebral disks, to establish exact localization of pathological process, to raise quality of research, and also to provide possibility of an establishment of the control of results of treatment.

G.V. Serdiuk
A.P. Momot
A.E. Dorokhov
E.A. Dorokhov

THE ANTIPHOSPHOLIPID SYNDROME: EFFECTIVE THERAPY BY THE DISCRETE PLASMAPHERESIS

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It is well known that antiphospholipid syndrome (APS) and lupus anticoagulants (LA) lead to the development of polythrombotic syndrome, disturbances of blood microcirculation resulting during pregnancy in miscarriages. Under our observation there were 245 patients: 129 women with persistent pregnancy and 116 patients of polythrombotic syndrome.

For successful therapy of APS it is necessary to eliminate LA from blood and liquid mediums of an organism and to prevent new increase to LA after their elimination. To eliminate LA from blood we used the elementary method of discrete plasmapheresis (DPA). DPA should not be identified with the wide-spread method of plasmaexchange when a large volume of plasma is removed off momentarily, and the volume of circulating blood is substituted by donor plasma or other protein liquids. In comparison with plasmaexchange, DPA method makes it possible to remove a small volume of about 300-600 ml of plasma daily 5 days a week. As a rule salt isotonic liquid is used for substitution. From 3 to 6 liters of plasma are removed during 2 or 3 weeks. In this case we successfully eliminate APL and at the same time avoid complications characteristic for plasmaexchange, electrolytic and protein complications, dangerous immune reactions, ricochet increase of LA level, hemodynamic disorders, etc. A basic therapy DPA we also include the low molecular heparin s/c injections in doses of 7500U anti-Xa per day, and aspirin in dose 60-100 mg/day.

Thus we consider that for treatment of APS with of polythrombotic syndrome and miscarriage LA is necessary to eliminate LA from blood using the method of DPA.

The combination of low molecular heparin with aspirin is mostly effective for preventing new increase of LA after their elimination ensures a normal course of pregnancy in women with APS with a normal delivery and normal development of their babies.

V.N. Sergeev

THE DISCOVERY IN MEDICAL SCIENCE OF MEANS FOR PREVENTING PRENATAL AILMENTS OF HERMAFRODITISM AND TRANSSEXUALISM OF HUMAN EMBRIO AND FETUS (PRIORITY FROM 23RD OF DECEMBER 1996, STATE REGISTER NR. 96123964 RUSSIA)

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The starting point for this discovery was the book of Peter Batmaev named "Basics of Tibetan medical science JUD-SHI", 1903. Let's consider how Tibetan medical science handles development of embryo's sex. According to JUD-SHI up to the first week of pregnancy outer sexual organs of human embryos have the prevailing appearance of females'. On the 3rd week of pregnancy the development of sex takes place. On the 4th week of pregnancy the final development of sex takes place. Also on the 4th week of pregnancy first assumptive signs of pregnancy appear, such as vomiting, swelling of nipples, heaviness of the uterus etc. On the 12th week of pregnancy the sex distinction of the fetus is finally established. On one hand, Tibetan medical science explains development of distinct sex of embryo by physical state of the woman at the day of conception i.e. good or bad health condition.

On the other hand, Tibetan medical science claims that development of male or female sex of the embryo happens according to outer factors affecting a woman on the 3rd week of pregnancy.

Tibetan medical science does not hold any of those two factors as major, because in certain conditions any of them can be determinant.

Considering birth of children with congenital ailment of hermaphroditism Tibetan medical science claims that it happens because of equal amount of sperm and menstruation blood which leads to equal development of male and female sex features, i.e. hermaphroditism.

I reckon that the true cause of emergence of congenital hermaphroditism ailment is in mistaken emotional setting of the pregnant woman towards the opposite sex of the fetus starting from the 4th week of pregnancy when the sex is already developed on the 3rd week according to natural factors.

When a woman on the 4th week of pregnancy develops first assumptive signs of pregnancy (vomiting, nipples swelling, heaviness of the uterus etc.) she comes to a conclusion that she is pregnant and creates emotional setting towards certain sex of the fetus.

But because the process of sex development already happened on the 3rd week and can be determined starting from the 4th week of the pregnancy, if emotional setting mismatch already developed according to natural factors sex then incompatibility of sexes will happen in the fetus which will lead to layering of different sexes and their parallel development. Because of this the woman will give birth to a child of neutral sex - HERMAPHRODITE.

Mismatch of emotional setting and developed sex after 12th week will not lead to that crucial impact of fetus development, because final development of distinguished sex happens on the 12th week.

But it will have a negative impact on the mind of fetus and after birth on the mind of a child and later on the mind of an adult. On the one hand a child will have naturally developed sex and on the other hand a child will have a dominating opposite emotional setting. In the childhood it will lead to inappropriate to this sex manifestations and aptitudes and in the adulthood it will lead to transsexuality.

Humans as well as all species of animal world goes through the evolution over the spiral, and in some point in time has passed through the lower stage of development when hermaphroditism and spontaneous change of sex for the creature prior to human was normal. Modern woman kept this ability to impact the sex of the fetus on the subconscious level and at certain conditions manifests it. When she thinks on the subconscious level of the sex of a future baby she triggers those hidden means of influencing the sex of the fetus without even knowing of it.

The result of emotional impact of the pregnant woman on the fetus will be:

1. Complete change of sex to the opposite with high emotional impact from the first and especially from the third week of pregnancy.

2. Hermaphrodite – when emotional impact of the pregnant woman on the fetus with developed according to natural factor sex does not match and when emotional impact is not strong enough from the 3rd to the 12th weeks of pregnancy.

3. Transsexual - when emotional impact of the pregnant woman on the fetus with developed according to natural factor sex does not match after 12th week of pregnancy. There is a risk of emotional influence on the development of sex of the fetus from the first and especially from the third to 12th weeks of pregnancy. And there is a risk of emotional influence on the mind of fetus from 12th week to the 9th month of pregnancy.

The task of public health care services is to correctly determine the sex of the fetus on early stages of pregnancy and correctly direct the pregnant woman to that sex and also to widely spread this information on sex development among public. The remarkable contribution of the JUD-SHI medical science is that it has discovered the fact of influence of emotional impact on the development of the sex in the human fetus long before official western science, more than thousand years before.

S.V. Shadlinskaya
N.T. Movsumov

CELLULAR STRUCTURE OF DIFFUSE LYMPHOID TISSUE AND FALLOPIAN TUBE LYMPHOID NODULES OF NEWBORN GIRLS IN CONDITION OF CONTRALATERAL APLASIA OF FALLOPIAN TUBE

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In this study we researched by histological method cellular structure of diffuse lymphoid tissue and fallopian tube lymphoid nodules of newborn girls in condition of contralateral aplasia of fallopian tube and compared the indices with those of the newborn girls with normal topographic anatomic shape of the organ. Comparing percentage of different types of lymphoid cells we found out that in condition of contralateral aplasia in comparison to control group there were 2 times fewer large lymphocytes ($p < 0,05$), while middle lymphocytes, on the contrary, 2 times more ($p < 0,05$), macrophages and mast cells – 1,4 times more ($p < 0,05$), cells with signs of destruction – 4,6 times more ($p < 0,05$). In condition of contralateral aplasia of fallopian tube in diffuse lymphoid tissue there were no cells with mitosis picture (in control group they make up 1%).

In fallopian tube lymphoid nodules of newborn girls in condition of contralateral aplasia of fallopian tube there are 1,92 times more small lymphocytes ($p < 0,05$) than in control group, 2 times more large lymphocytes ($p < 0,05$), 1,56 times more middle lymphocytes ($p < 0,05$), 1,7 times more macrophages ($p < 0,05$), while blasts and cells with signs of mitosis are 2 times fewer ($p < 0,05$) in comparison to control group. In condition of contralateral aplasia in fallopian tube lymphoid nodules there were 4 times more cells with signs of degeneration ($p < 0,05$) than in control group, 1,8 times more mast cells

($p < 0,05$), 2,5 times more eosinophils ($p < 0,05$). The 2 latter cell types were not found in fallopian tube lymphoid nodules of control group girls.

Minimal and maximal percentage of different types of lymphoid cells in fallopian tube lymphoid nodules in condition of contralateral aplasia of fallopian tube is as different in comparison to control group as in case of arithmetical mean indices.

We found out as well that newborn girls with contralateral aplasia of fallopian tube have fallopian tube wall in general 1,95 times thinner than normally it should be, $p < 0,05$, mucous membrane 2,58 times thinner ($p < 0,05$), muscle coat – 1,9 times thinner ($p < 0,05$) which altogether is the evidence of the contralateral organ congenital underdevelopment. Parallely, lymphoid nodule gets 1,46 times shorter and nodule area on the fallopian tube section 1,75 times smaller. Lymphoid nodule shape changes and in 24% cases becomes irregular. In control group, on the contrary, there are no irregularly shaped nodules at this age. According to M.R. Sapiga and D.B. Nikityuk (2000), lymphoid formation shape becoming irregular indicates that lymphoid tissue gets disintegrated.

Thus, we can conclude that fallopian tube lymphoid apparatus of newborn girls suffering from contralateral aplasia of fallopian tube is morphologically regressive: lymphoid nodules get thinner and smaller on fallopian tube section, quantity of lymphoid cells in lymphoid nodules and diffuse lymphoid tissue decreases, as well as quantity of small lymphocytes, young lymphoid cells, plasma cells; fallopian tube wall gets thinner in general and its mucous membrane and muscle coat in particular.

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**MORPHOLOGISCHE CHARAKTERISTIK DER
HARNBLASENDRÜSEN DES MENSCHEN**

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Vom morphologischen Standpunkt sind Harnblasendrüsen der Menschen, die als eine wichtigste Strukturkomponente Blasenwand gilt, tatsächlich bis heute nicht studiert worden. Wir haben mikro- und makroskopisch totale Harnblasenwandpräparate, die von 56 Leichen der aus Gelegenheitsursachen (Verletzung, Asphyxie und andere) umgekommenen Menschen im Alter von Neugeborenen- bis Greisenalter erhalten worden waren, untersucht, um die Varianten von Harnblasendrüsensform und Besonderheiten ihrer Veränderung in verschiedenen Blasenwandabschnitten (Proximal-, Mittel- und Distaldrittel) altergerecht zu studieren. Durch elective Färbung der Drüsen mit dem Methylenblau sehen die Drüsen wie dunkle (schwarze und blaue) anatomische Bildungen aus, die im Vergleich zur rosafarbenen Harnblasenwand gut unterscheidbar sind. Die Drüsen sind auf der ganzen Blasenwand verstreut. Allgemeiner Grundsatz der makro-mikroskopischen

Drüsenorganisation ist derjenige, der den kleinen Drüsen der Hohlorgane eigen ist. Die Drüse hat ein oder einige rund-, eier-, band- oder anderförmige Anfangsstücke. Prozentanzahl der Drüsen mit verschiedenen Mengen von Anfangsstücken ändert sich wesentlich während des Lebens. Die grösste Vielfalt der Drüsen von der kompliziertsten Form ist fuer die erste Periode des Erwachsenenalters, während derer Anzahl der Drüsen mit drei Anfangsstücken 17,1% ausmacht – und das ist mehr als in anderen Perioden des Lebens, typisch. Nach unseren Angaben macht der Anteil der Drüsen mit vier und mehr Anfangsstücken (das ist die komplizierteste Organisationsform der individuellen Drüsen) in diesem Alter 13,5% (von 8 bis 17% je nach dem) aus. Prozentanteil der Drüsen von verschiedenen Formen unabhängig von dem Alter ändert sich wesentlich der Blasenwand entlang in proximal-distaler Richtung.

Während postnataler Ontogenese reduziert sich Prozentanteil der Drüsen mit einem Anfangsstück in der Wand des Proximaldrittels des Organs im Vergleich zum Distaldrittel 1,1-1,5 mal ($p < 0,05$), Anteil der Drüsen mit zwei Anfangsstücken – 1,2-1,4 mal ($p > 0,05$). Im Gegenteil, in proximal-distaler Richtung steigt der Prozentanteil der Drüsen von komplizierterer Form.

Während makro-mikroskopischer Forschungen hat sich die Vielfalt der Aussensicht der Drüsen geoffenbart; die grösste Vielfalt der Drüsenformen im Alter von 22 bis 35 ist bewiesen worden; proximal-distaler Gradient der Drüsenformenunterschiede in verschiedenen Stücken der Harnblasen ist festgestellt worden.

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E.V. Donchenko
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**EFFECTIVENESS OF ECOLOGICAL HUMAN MEDICINE IN THE
TREATMENT OF DISEASES OF THE INTERNAL ORGANS**

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Ecological human medicine makes it its aim to preserve and strengthen the health with the help of natural means: phytotherapy, homeopathy, dietology, nutrociology, cleansing programs, hirudotherapy, osteopathy, etc. All these methods are aimed at the recovery of the adaptation and physiological mechanisms of man, who today often lives in the unfavorable environment (ecology, industrial contamination, bad habits, intake of large number of drugs, etc.).

The influence of a wide range of unfavorable factors on modern man most often results in lowered adaptation resources of the whole organism and, as a rule, this is manifested by not one disease but by the combined affection of many organs and systems of the organism, development of several diseases. For example, cholelithiasis is combined with chronic pancreatitis, irritable bowel syndrome, dysbacteriosis of the intestine, it is often complicated with stomach and duodenal ulcer, urolithiasis. Early such patients develop symptoms of deforming osteoarthritis, extensive osteochondrosis.

On the other hand, modern academic medicine has a pronounced tendency to particular specialization what makes it difficult to administer the high-quality treatment. The treatment of such patients often leads to overload with drugs, often different specialists underestimate side effects of drugs and peculiarities of their interactions, etc.

Technologies and means of ecological human medicine are aimed at recovery of the systems and function in the whole organism, activation of the own organism's forces, they do not load the organism with toxins and harmful products and, therefore, prove to be significantly more effective for treatment of difficult patients, in whom different combined diseases are diagnosed.

A cleansing program underlies the treatment of patients at our clinic; it includes hyperthermal intestinal dialysis (E.V. Donchenko, patent No. 2078555 of 13.06.93), visceral massage, intravenous injection of sodium thiosulfate. Besides that, taking into account the individual peculiarities of the disease course, homeopathic treatment, phytopreparations, physiotherapy, hirudotherapy, massage, osteopathic treatment, psychological sessions, therapeutic physical training, etc. are administered.

Thanks to the complex character of this approach, the technology of ecological human medicine includes methods for recovery of the whole organism, it is universal for any affections of the internal organs, it actively enables the adaptation resources, what results in leveling the inflammatory, degenerative and other pathological changes in the organism.

It should be noted that hyperthermal intestinal dialysis as per the author's method of E.V. Donchenko, which is widely used at our clinic, has a broad range of effects on the whole organism: mild physiological cleansing of the organism from harmful products of metabolism and toxins takes place, the dynamics of all internal secretions improves, what improves the function of the gastrointestinal tract, recovers the intestinal biocenosis, recovers all mucous membranes. Today it is well known that when digestive processes take place in the intestine, it is the largest immune and endocrine organ and improvement of this system has the widest therapeutic effect on the whole organism. It is also clearly established that homeopathic drugs and phytopreparations are more effective after cleansing, freeing of the organism from harmful products of metabolism and toxins.

The Table shows the data of our clinic for 2009 concerning the results of treatment of the patients suffering from diseases of the gastrointestinal tract and endocrine system:

Diseases of the gastrointestinal tract			
Main diagnosis	Number of patients	Effective treatment	
		Number of patients	%
Cholelithiasis	82	69	84.2%
Chronic acalculous cholecystitis	43	40	93%
Chronic pancreatitis	45	32	71.1%

Chronic gastritis	12	9	75%
Total:	182	150	82.4%
Endocrine diseases			
Autoimmune thyroiditis	118	103	87.3%
Nodular goiter	52	46	88.5%
Diffuse toxic goiter	16	12	75%
TOTAL:	196	161	82%

Thus, the complex treatment with the use of technologies and means of ecologic human medicine makes it possible to achieve significantly better results in the therapy of combined pathology of the internal organs that the treatment with allopathic medicines administered by different specialists.

Conclusions:

1. Ecological human medicine activates self-recovery resources of the whole organism.
2. The correct cleansing technologies used at our clinic result in activation of the immunity, improvement of the function of the digestive and endocrine systems.
3. During the complex treatment with ecological human medicine methods there is no risk of development of side effects caused by allopathic drugs due to polypragmasy, i.e. administration by different specialists of numerous drugs not going well together.
4. Modern homeopathic drugs in combination with methods for cleansing the organism favor the recovery of the disturbed organ functions, what gives a better effect in the treatment of complex combined affections of the internal organs.

L.Y. Slatinskaya

**ENERGIE- UND INFORMATIONSEIGENSCHAFTEN DER
LEBENSMITTEL UND IHRE ANWENDUNG FÜR INDIVIDUELLE
KORREKTUR DER HOMEOSTASISSTÖRUNGEN DES
MENSCHEN**

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Das Leben des Menschen ist ohne elektromagnetische Schwingungen nicht möglich. Es ist bekannt, dass ein Mensch zu 80-90% aus Wasser besteht und ein Festkristall ist, der aus Moleküle-elektrische Dipole bestehen. Elektromagnetische Schwingungen verbreiten sich in einem flüssigen Kristall und bringen in sich Wellenenergie (OH-) und die in der letzteren kodierte Information (H+).

Bei Geburt bekommt jeder Mensch seine/ihre spezifische Dualität, die nur ihm/ihr

eigen ist – (OH-) und (H+). Diese Dualität von elektromagnetischen Schwingungen muss man in sich lebenslang unterstützen, weil das der Zustand seiner/ihrer persönlichen Energiebilanz, d.h. persönlichen Homeostasis, ist.

Es gibt Diäten, die sich auf Zusammenstellung und Dosierung des Einweissstoffe/Fette/Kohlenhydrate/Kalorien/Vitamine/Mineralien-Verhältnis richten. Energie- und Informationseigenschaften der Lebensmittel, deren Fähigkeit freie Elektrone abzugeben und anzunehmen in dem Menschenorganismus kommen in wissenschaftlicher Literatur gar nicht vor.

Es gibt keine praktische Empfehlungen was betrifft die Regelung Homeostasisenergie störungen des Menschen durch Lebensmittel, unter Anrechnung des Geburtsdatums des Patienten.

Persönliche Homeostasis ist eine in dem Geburtsmoment bekommene dynamische Bilanz der Frequenzgänge von elektromagnetischen Schwingungen in dem Menschenorganismus. Je länger die von Natur gegebene Energetik sich erhält, desto länger bewährt man seine/ihre Gesundheit, physische soeben wie geistige.

Laut des breit in Homoeopathie verwandten Wellenähnlichkeitsprinzips ziehen sich aneinander Leute und Lebensmittel, die die gleiche Frequenz generieren.

In diesem Werk bieten wir an, naturelle Lebensmittel zu essen, deren Frequenzgänge der angeborenen Frequenz mitschwingen und auf diese Weise die letzteren unterstützen und sogar wiederbeschaffen. Als Ergebnis kann man lebenslang erfolgreich äussere Einwirkungen von körperfremden Wellen neutralisieren und Störungen eigener Homeostasis korrigieren. Wenn man Lebensmittel mit den Frequenzgängen, die sich von seinen/ihren eigenen unterscheiden, isst, disharmonisiert sich der Organismus und im Ergebnis wird Homeostasis gestört.

Es wurde festgestellt, dass das Essen einem nicht nur mit Vitaminen, Mengelementen, Spurenelementen und anderen Stoffen versorgt sondern auch elektromagnetische Schwingungen von verschiedenen Frequenzen in den Organismus hineinbringt. Diese Schwingungen können bei Wechselwirkung mit den eigenen Schwingungen eines Menschen entweder zur Verbesserung oder zur Verschlimmerung seiner/ihrer Homeostasis führen.

Zum erstenmal wurde es eingeschätzt, wie Menschenenergetik von dem Geburtsdatum abhängt.

Zum erstenmal wurden Lebensmittel ausführlich nach ihren Energie- und Informationseigenschaften analysiert.

Es wurde bewiesen, dass man die Homeostasis wirksam durch individuelle Zusammenstellung von Lebensmitteln korrigieren und stabilisieren kann.

Man hat eine Methode der Einschätzung, Störungenkorrektur und dynamischer Homeostasisstabilisierung ausgearbeitet und eingeführt, mit Rücksicht auf das Geburtsdatum und Energie- und Informationseigenschaften von Lebensmitteln.

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TREATMENT POLICY IN CLOSED ABDOMINAL INJURIES

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Introduction: Treatment of closed abdominal injuries in polytrauma presents a topical problem in urgent surgery.

Objective: To conduct analysis of diagnostics and treatment of patients with polytrauma.

Data: There was treatment policy analysis conducted on 147 patients with polytrauma after car accidents, taken into Novgorod Regional Clinical Hospital in December 2004-March 2007 period. On the pre-admission stage diagnosis included: closed craniocerebral injury, fractures of lower and upper extremities, closed abdominal injury was not excluded.

Methods: Patients were performed abdominal paracentesis and lavage, USI of the abdominal cavity, diagnostic laparoscopy, various types of operative treatments of laparotomy access.

Results: Abdominal paracentesis and lavage was performed in 56 patients in order to exclude intraperitoneal hemorrhage, under urgent indications (systolic BP lower than 100mm Hg). Shifting to laparotomy after acquiring the laparocentesis results – in 39 patients (28 of them – spleen injury, 10 – liver, spleen, or mesojejunum rupture, 1 patient – jejunum rupture). 17 patients had negative laparocentesis results. On admission, 91 patients with BP 110-140 mmHg had their USI performed straight away, 40 of them had free liquid in abdominal cavity. Out of them 20 patients with brain contusion received diagnostic laparoscopy: 200-400ml of blood were found in abdominal cavity, but no internal injuries, the bursting of abdominal peritoneum with no signs of continuing hemorrhage were revealed. Due to contraindications to laparoscopy, 20 patients with brain contusion received laparotomy under the USI data. In 6 cases liver ruptures were revealed, and spleen rupture in 14 patients. According to USI data on admission, 51 patients with stable BP 110-140 mmHg did not have free liquid in abdominal cavity. After 4-6 hours of dynamic observation (BP control, abdominal USI in 4-6-12 hrs, Hb, RBC, and blood WBC control, clinical examination) in second USI, 8 patients were diagnosed with 500-700ml of free liquid in the abdominal cavity. Due to contraindications to laparoscopy (craniocerebral injury) 6 patients were performed laparotomy: liver rupture was revealed in 2 cases, in 4 – spleen rupture. Laparoscopy was performed in 2 patients: up to 500ml of blood was found in abdominal cavity, with no damage to internal organs. With further dynamic observation, no data for internal organs' injury was acquired for 43 patients.

Conclusion: Treatment policy for patients entering with suspected closed abdominal injury, in order to exclude an injury of abdominal organs, so should consist of the following components: 1 – when in decompensated shock – urgently perform lapaocentesis; 2 – when in stable condition (BP 110-140 mmHg) to perform USI of abdominal cavity with diagnostic laparoscopy; 3 – if there are no clinical data in favor of abdominal organs'

injury at the time of admission, it is necessary to perform strict dynamic control (repetitive abdominal USI after 4-6-12 hours, clinical examination, BP control, HBC, WBC, HB control) for this category of patients. The combination of these methods allows to diagnose abdominal organs' injuries early in time.

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THE CHOICE OF SCALE EVALUATION FOR DEFINING THE SEVERITY LEVEL IN POLYTRAUMA

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The problem of polytrauma diagnostics and treatment stays one of the most topical in the surgery of injuries. The number and severity of polytraumas are both consistently increasing. The lethality in such patients reaches 35-47%. The objectification of trauma severity, that would be based both on severity of damage and condition, is necessary for building diagnostic and therapeutic algorithm in polytrauma. In USA and some European countries, AIS scale is used for isolated traumas and IIS index is used for concomitant injuries; in Germany Hanover's code for polytraumas PTS is successfully used for evaluating the trauma severity; in Russia - Tzibin's grade rating and BFS system: BFS(MT) for mechanical traumas and BS(BW) fro ballistic wounds.

Special place in the problem of polytrauma is held by objective severity rating of patients' condition, both when diagnosing and intensive care performing, as well as diagnosing polyorganic disfunction and complications.

Currently APACHE II scale and SAPS II, SOFA, MODS are of great popularity in USA and european countries. They are also applied in our country for monitoring, and diagnosing polyorganic disfunction, as well as sepsis. It is important to say, that APACHE II scale is very cumbersome, claims to be universal and is rarely used to the fullest extent, SOFA and MODS indexes solve small problems on revealing polyorganic disfunction in separate systems. We think that scale BFS is most sufficient scale for defining trauma severity in today condition of Russian healthcare. These scales were developed in the Department of Battle-Field surgery Military-Medical Academy. The grading is performed by giving severity level to every concrete injury. As the result, every scale point is actually converted severity index, acquired from adding products of lethality, permanent invalidization, and long loss of earning capacity numbers. Quantitative grading of condition severity is performed with using 2 BFS scales – one of them is used to evaluate the patient's condition at the moment of intake into medical unit, and the other one is used for evaluating the condition during the treatment process. These 2 scales include 12 and 16 symptoms respectively, and are graded with the universal method fro 1 to 9. These symptoms, while being highly informative, also very simple in analyzing, and are accessible to use in any medical institutions both of peace-

time and war-time. When evaluating condition severity, the symptoms listed in scales are observed, each of them is measured in points, after that points are summed - acquired index is quantitative characteristic of the condition at the moment of observation. According to BFS scale condition severity is divided on 3 levels – compensated, subcompensated, decompensated. For each severity level different types of operations are applied. Compensated condition is best for all types of operations. However in polytraumas the compensation of patient’s condition comes only in the 4th period of traumatic disease, at the same time basic surgical problems should be resolved in the 1st and 2nd period. - otherwise patients with polytrauma will not survive up to 4th period. That’s why all urgent and intermediary operations are performed against the background of subcompensated condition. When in decompensated condition, only immediate operations are performed, in order to eliminate the reasons of decompensation.

Thus, we think, that using the scales that were developed in the Department of Battle-Field surgery Military-Medical Academy is most rational in urgent surgery.

S.R. Sokolovsky

NEW PREVENTIVE METHOD FOR THERAPY OF METABOLIC SYNDROME AND OBESITY

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Introduction. The 4-modular theory of illnesses developed by us, explains fast growth of a metabolic syndrome in the world as set of biological, social, psychological both ecological factors, and the isolated therapeutic decisions appear inefficient. According to the theory of therapeutically symmetry, and equivalence, effective therapy - the combination of different therapeutically methods, including social, biochemical, psychological and ecological interventions, that is the 4-modular approach can serve only.

The Nobel Winner physiologist Pavlov has developed a method of a combination of a conditioned reflex with unconditional, that caused strong hormonal changes in an organism. The certain sound in an open-air cage for dogs, was accompanied by their feeding. After numerous recurrences, all physiological effects of feeding accompanied reproduction only one sound: allocation of gastric juice, strengthening of movements of intestines and emission of digestive hormones, change of glucose blood. Its follower, the behavioral therapist from Russia, Sergey Sokolovsky, has developed this principle in «CAM”- (Creative Applied Modification) for conversion transition to alternative forms of reaction and behavior. At this technique originally in the standardized conditions (more often, before a night sleep) the technique of deep rest is developed. Under the control of the therapist, the patient studies to connect it with a conditioned reflex: an internal word and the certain image. Subsequently, under the law of reflexes of Pavlov’s, mental

reproduction of internal word and image, reflex change and transition to new reaction or behavior, occurs much easier and more quickly on new emotional and mental background and absence of internal resistance. At performance of a technique, for braking an old reflex the patient studies in advance to displace a locus of the control over a situation. The technique has shown the efficiency at metabolic syndrome, obesity, anxiety, depression, PTSD and addictive disorders – see: http://en.wikipedia.org/wiki/Creative_Applied_Modification and <http://cam.alcohol-help.ru/>

Purpose. To define, how additional purpose metavanadatis sodium and chromium oxides (the patents of Russia Nr. 2136288, 1999 y, Nr. 2277918, 2002 y, Author-S.R. Sokolovsky), and technique of «Creative Applied Modification (CAM)», with concentration on positive clinical creative auto-imagery-S.R. Sokolovsky) influences of a metabolic syndrome in different groups of patients.

Material. We studied efficiency therapy on 51 patients with metabolic syndrome, with the compensated and sub compensated forms. 25 people with standard metabolic syndrome treatment under protocol made the control group.

Methods. Experimental groups - 26 people whom additionally was appointed sodium metavanadatis in a daily doze 0,0125-0,25 mg \kg, chromium oxides 0,35 mg/kg/daily and also trained 15 min in emotional self-checking and recognition various errors in illness, with the purpose re-structuring and self-correction throw technique «CAM».

Results. In group with metavanadatis sodium, chromium oxides and health behavior intervention «CAM», within 20 days -significant improvement of a subjective condition under tests psychometric, decrease accompanying neurotizmus, anxiety and depression (till 8-10 points), smaller number exacerbated is fixed (in 1,5 times), early normalization of glucose and triglycerides blood, PB, a normal level of HbA1c, successful lose weight. Adherence to healthy style of a life, and a health behavior was much more (on Questionnaires, in points).

Conclusions. The method «CAM©» is suitable for behavioral health interventions for GP and allied heals professionals, together with nutritional supplements salts of vanadium and chromium-gives preventive effect for metabolic syndrome. The method is included in Wikipedia, section «behavior therapy»- Creative Applied Modification - <http://creativeappliedmode.narod.ru/> ore http://en.wikipedia.org/wiki/Behaviour_therapy

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**SCHWIMMEN MIT DELFINEN BEI DER KOMPLEXEN
PSYCHOKORREKTION DER SCHWANGEREN**

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Im Laufe der psychologischen Untersuchungen der 130 praktisch gesunden Schwangeren wurde folgendes festgestellt. Viele von denen sind übermäßig angespannt, frustriert, haben

familiäre Konflikte. Viele von denen haben Probleme mit der Selbsteinschätzung, sind sehr nervös und sehr unsicher im Verhalten.

Nach der Teilnahme in unserem Training mit einem bestimmten Psychokorrektionsprogramm hat sich das Spannungsniveau gesenkt, die Selbsteinschätzung des eigenen Zustandes sowohl wie die Allgemein Stimmung hat sich gebessert, Aktivität und Selbstsicherheit auch.

Der Einschluss des Schwimmens mit den Delfinen in das Psychokorrektionsprogramm bei 40 Frauen hat den positiven Effekt deutlich vergrößert. Die dauerhafte positive emotionale Einstellung der Frauen vor der Geburt hat sich stabilisiert, die Auswertung des Allgemeinzustandes weist daraufhin, dass die Familienkrisen ruhiger überwunden werden, tritt das Gefühl der innerlichen Ruhe und absoluter Akzeptanz der künftigen Mutterschaft ein.

Es sind auch zu erwähnen die hohen Gesundheitswerte bei 40 Neugeborenen deren Mütter an dem Programm teilnahmen. Das Stillen bei diesen Frauen ist auch problemlos gelaufen.

Früher haben wir bemerkt den positiven Einfluss der Delfinotherapie auf die Kinder mit psychischen und neurologischen Störungen. Die vorläufigen Ergebnisse beweisen, dass das Baden mit den Delfinen der deutlichen Verbesserung des emotionalen Zustandes der Schwangeren dient, die Geburt vereinfacht, die Gesundheit der Neugeborenen positiv beeinflusst

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CHARACTERISTICS OF RATS' RESPIRATORY LUNG FIELD ALTERATIONS AFTER EXERCISE STRESS

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Despite the fact that morphological lung substrate in condition of pulmonary hypertension is well studied and classified, there is still no integrated information about aerohaematinic barrier submicroscopic structure and microcirculation in lungs in condition of the so called hypoxia of "stress" caused by physical activity of different modes. Taking into consideration the above-stated we set ourselves a task to study rats' respiratory lung field in condition of chronic stress.

The experiment was performed on 30 white outbred male rats of 150-180 grams who were subjected to chronic exercise stress, i.e. running in rotating treadmill 2 times a week in 2-hour sessions in the course of 2 months, speed of rotation - 19 revolutions per minute.

During the experiment histological and electron microscopic methods were applied.

Peculiar features of the rats' lung samples are as follows: dystonia of interalveolar capillaries and wider vessels located next to dilated air vesicles as well as distelectatic

parts, dilatation and plethora of capillaries and pulmonary artery branches of terminal bronchiole level.

In central and subpleural parts of lungs along with air vesicle atelectasis there were found overdilated air vesicles, dilatation and plethora of vessels of all gauges, plasmatic impregnation of small vessels walls, hemorrhage, especially subpleurally; nonuniform opening of acinus airspace took place.

It is worth noting that after exercise stress in aerohaematinic barrier occurred changes which indicate that hemodynamic adaptive mechanisms of lesser pulmonary circulation turned on in the form of uneven thickening of artery and lung vein walls; focal indurations in and around basement membranes of interalveolar capillaries. Besides changed capillaries vessels with normal wall structure were often found, mostly in central lung parts.

So, on the basis of acquired data we can conclude that deep derangements in lung aerohaematinic barrier occur as a result of chronic exercise stress as well as noncompensated respiratory acidosis, which altogether testify inadequacy of exercise stress of this mode. From the practical viewpoint it is undoubtedly very important to research lung aerohaematinic barrier morphological substrate lesions in conditions of alterations caused by exercise stress of different intensity including conditions of hypoxia. Thus, our work opens new prospects of integrated study of cardiopulmonary reactions which provide oxygen supply of organism in experimental conditions.

Y.A. Titarenko

**STRESS-ANALYSE ALS PSYCHOTHERAPIE DER
"PERSÖNLICHEN EFFEKTIVITÄT"**

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Am Ende des zwanzigsten Jahrhunderts und im ersten Jahrzehnt dieses Jahrhunderts ist eine überraschende Wendung in Entwicklung der modernen Psychotherapie passiert.

Im Gegensatz zu den Trends des 20sten Jahrhunderts, die sich nach Forschung der latenten Ursachen von verschiedenen Psychopathologien richteten, orientieren sich die modernen Trends nach dem so genannten "humanistischen Herangehen".

Das humanistische Herangehen beruht auf Prinzipien der humanistischen Psychologie und unterscheidet sich dadurch, dass es Wert auf Bildung der "positiven Weltanschauung" bei einem Kunden legt.

Psychotherapieentwicklungserfahrung der letzten Jahrzehnte hat gezeigt, dass Konzentration auf frühere Erlebnisse des Kunden (Verluste, Seelenschmerzen, Enttäuschungen, seelische Erschütterungen usw) die Therapie lange dauern lässt und kein Dauerergebnis gibt. Das humanistische Herangehen, in dem man das grosse Instrumentarium für die Bildung der positiven Weltanschauung verwendet, dagegen, gibt einem Kunden den so genannten "positiven Vektor".

“Der positive Vektor” ist ein für einen Kunden neue System der persönlichen und sozialen Werte. Im Rahmen dieses Systems wird Kundenaufmerksamkeit von “negativen Erlebnissen” aus der Vergangenheit auf die in positiven Erwartungen verkörperte Zukunft umgeschaltet. In dieser Entwicklungsstufe der modernen Psychotherapie bemerkt man, dass humanistische Psychotherapie und das so genannte Coaching sich aneinanderfügen. Das Coaching hat sich erweitert und transformiert und auf diese Weise ein grosses Spektrum der psychotherapeutischen Grundverfahren aufgenommen. Obwohl diese Verwirrung eine begründete Besorgnis mancher Spezialisten hervorruft, muss man zugeben, dass Kombination der wirksamen Verfahren des Coachings und der modernen psychotherapeutischen Verfahren erstaunlich hohe Ergebnisse gibt in der Arbeit mit Kunden, die an verschiedenen Psychopathologien leiden.

Teilweise liegt Erfolgsgrund der integrierten Methodiken in der Bildung der “dauerhaften positiven Erwartung vom Leben” bei einem Kunden. Ein Kunde stellt sich darauf ein, dass er/sie “alles wovon er heimlich träumt erreichen kann” (“hohe soziale Stellung”, “Anerkennung”, “Liebe”, “Aufmerksamkeit” usw). Trainingsprogramme (Kommunikationsprogramme, IQ-Entwicklungsprogramme usw) machen diese psychologische Einstellung fest und die Psychotherapie – schnell und wirksam. In diesem Fall besteht das Ergebnis in “Verbesserung der Lebensqualitaet” eines Kunden. IQ steigt dramatisch und das Denken wird kreativer, erhöhen sich die Stresstoleranz, die Spannkraft, die Arbeitsfähigkeit und die soziale Kompetenz, verschwindet chronische Psychosomatik und noch viele anderen positiven Persönlichkeitsveränderungen passieren. In Vordergrund rückt der Begriff der “PERSÖNLICHEN EFFEKTIVITÄT”. Es ist bemerkenswert, dass solche Integrationsmethodiken meistens auf finanzkräftige Kunden orientiert sind. Es ist kein Zufall, da diese Kunden sich sehr in Lebensqualitaetverbesserung interessiert zeigen, ausserdem, gibt es sehr wenige Spezialisten, die solche komplexe Dienstleistungen anbieten können.

Heute existiert die Integrationsmethodik – “STRESS-ANALYSE”. Während dauernde Anwendung dieser Methodik wurde ihre hohe Effektivität und Anwendungsbreite bewiesen. Die Methodik ist besonders wirksam bei Korrektion von vielen psychosomatischen Erkrankungen.

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AGGREGATIVE STATE OF BLOOD IN HEMORRHAGES OF PORTAL GENESIS

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It is common that when applying traditional hemostatic therapy in hemorrhages of portal genesis, blood's aggregative state disorders are not taken into

account, as well as the necessity of their correction.

We observed 144 patients. They were separated in the following order: 1st control group – patients with portal hypertension with no hemorrhage, 2nd control group – patients with gastro-duodenal hemorrhage of ulcerative etiology– 25.

Results and discussion. The most manifesting differences with etiologically different hemorrhages are connected with erythrocyte aggregation coefficient. It has been revealed that in hemorrhages induced by portal hypertension the stable increasing of this number takes place ($p < 0,01$). The same time the tendency towards decreasing of erythrocyte deformability was also marked. In hemostasis system of group Child A normocoagulation prevails, in group B, due to anticoagulative system activation, the fact of hypocoagulation is marked, while keeping sufficient fibrinase activity and relatively decrease hematocrit. Decrease in numbers for factors of coagulation (protrombin, fibrinogen, fibrinase), as well as the activity anticoagulative system (plasma tolerance to heparin, euglobulin fibrinolisis), provides the evidence for hemostasis system disorder and large decrease of liver functional activity, which is most common for Child C group.

The progression of this condition together with the increase of erythrocytes' aggregative capability, decrease of their deformability and hematocrit, is recognized as negative diagnostic sign. When analyzing the activity of lipid peroxidation process (LPO), the increase of MDA level in both plasma and erythrocytes, as well as decrease of catalase activity were revealed in the group of patients with hemorrhage of portal etiology. And if the level of erythrocyte MDA in hemorrhages of this etiology was higher than in group with ulcerative hemorrhage on 8,6% (group A) – 27,2% (group C) - $p < 0,05$, the differences for plasma MDA are in Child groups, relatively: 15,7 ($p > 0,05$); 33,6 ($p < 0,05$) and 68,9 % ($p < 0,01$). According to levels of average mass molecules, the proved increase of this factor in group of patients with hemorrhages of portal etiology - Child B and C was revealed, - this marks an increase in level of endogenous intoxication in this patients' category? While having normal numbers in patients with ulcerative hemorrhage and Child A group. It means that for patients with hemorrhages of portal genesis it is common to have severe disorders of blood rheology which are expressed with the relation to severity of functional liver disorder. In group Child B, especially in C, LPO system was activated, anti-oxidant protection was decreased, and the content of MSM (as factor of endogenous intoxication), which is not taken into prognostic criteria Child. At this point, the defining of condition severity only on the base of criteria for functional Child groups, and, following this, treatment tactics, should be done not only on common biochemical indexes, but also with the appliance of revealed physicochemical and homeostatic defects. If group C patients can be defined basing on 9 indexes, defining of group A is possible on the base erythrocyte aggregation coefficient (not less than $4,5 \text{ n/m } 10^{-5}$), the molecule of average blood mass (less than 300,0 U), total bilirubin presence in blood (less than 20,5 mcmol/l) and catalase activity (more than 270,0 U).

Conclusion. Conducted analysis demonstrated the necessity of implementing such blood rheology indexes, as viscosity and erythrocyte aggregation coefficient, LPO indexes

(MDA), and endogenous intoxication (MCM), which let to modify and make the therapy in hemorrhages of portal etiology pathogenetically better grounded and effective.

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VENA CAVA INFERIOR DYNAMICS IN PORTAL HYPERTENSIA

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Research objective: to define the importance of caval hypertension and intracaval crossflows in the progress of portal hypertension.

The research conducted includes gradually performed experiments on cadavers, animals, and clinical observations: cavagraphy, and osteoiliacography, - for studying the importance of caval hypertension and intracaval crossflows in the progress of portal hypertension.

Osteoiliacovenography is performed with the compliance of aseptics, under local anesthesia. The puncture of crista iliaca, left or right to spina iliaca posterior superior is performed with the Kassirskiy needle. In order to do this, the patient is laid on his/her side, and after the needle is administered, is moved on the back. After that 40-60ml of contrast agent solution was administered during 5-7 seconds; serial angiography was being conducted when administration of contrast agent started.

After the end of the research the needle was taken out (RF License #2194447). Osteoiliacography was performed on 35 patients – 18 of them were from the main group: 2 with ascites and no gradient between vena cava superior and vena cava inferior (VCS, VCI), 2 with Budd-Chiari syndrome, 14 with VCI dilatation; and 17 patients of control group. In 18 patients with VCI circulation disorder (out of main group: 2 with Budd-Chiari syndrome; in control group: in 2 patients with tumor obstruction of VCI suprarenal section) cava-caval crossflow through dilated pelvic, lumbar, paravertebral vein and further into VCS was marked. In the rest 17.

17 patients (2 with ascites and no gradient between VCS, VCI, 7 with liver cirrhosis without ascites, with also no gradient, and 8 patients with Leriche's syndrome) contrast agent went right to iliac veins and VCI, cava-caval crossflows were not revealed in these patients.

Conclusion. In this morphologic experiment, the model of caval hypertension with cava-portal and cavocaval crossflows had shown, that in liver cirrhosis the number of collateral anastomoses between azygous and VCI increase in iliac, lumbar, and paravertebral area. This requires more fluid for filling vasculature, but at the same time less time required for moving the fluid up to the mouth of azygous vein. The data of this research allows to claim

that the development of porto-caval circulation through retroperitoneal, mesenterico-hemorrhoidal, umbilical and paraumbilical collaterals taking the blood of portal vein into VCI, leads to caval hypertension, stimulates blood crossflow through pelvic and lumbar veins to azygous vein. On the one hand, it unloads VCI, since the vast portion of blood from lower extremities go to VCS system, but this might be the cause of pressure increase in it, as well as the degradation of collateral outflow through gastro-oesophageal pathway, which can lead to oesophageal and cardiac veins' rupture and hemorrhage. The modeling of portal hypertension in experiment with animal had shown that the pressure in caudal vena cava increases together with the portal pressure increase, as the result of developing porto-caval shunts, thus retrohepatic postsinusoidal block, - it leads to the termination of transhepatic bloodflow in 19.3% of cases.

Cavocaval crossflows in portal hypertension are revealed when performing cavagraphy and osteoiliacography in patients with liver cirrhosis, subcompensated ascitis, VCI dilatation, and Budd-Chiari syndrome.

G.V. Tyminskiy

BEDEUTUNG DER HAFERKLEIE IM RAHMEN DER VOLLWERTERNÄHRUNG

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Vollwertige Ernährung kann das Risiko für ernährungsmitbedingte Krankheiten deutlich senken. Bei der Verringerung der Sterblichkeit an ernährungsmitbedingten Erkrankungen kommt der Prävention durch eine vollwertige Ernährung und dem Weg zu einer gesundheitsorientierten Lebensweise eine große Bedeutung zu. Mehr Gemüse, Obst und Vollkornprodukte, fettarme Varianten von Milch- und Milchprodukten, weniger Fleisch und Fleischwaren und die Integration von regelmäßigem Sport und Bewegung in den Tagesablauf sind richtige Ansätze.

Für Personen mit geringem Verzehr von Gemüse, Obst und Vollkornprodukte verdoppelt sich das Erkrankungsrisiko für viele Krebserkrankungen. Der Anteil der Krebserkrankungen, die auf die Ernährung zurückzuführen sind, wird mit etwa 35 % angegeben.

Kleie ist ein Sammelbegriff für die bei der Getreideverarbeitung nach Absieben des Mehles zurückbleibenden Rückstände aus Schalen (Samenschale, Fruchtschale), der Aleuronschicht und Keimling. Kleie ist ein Mühlennachprodukt und nicht zu verwechseln mit den Spelzen.

Kleie ist der Schalenrückstand aus der Getreideverarbeitung und wird beim Mahlen der Haferkörner zum Auszugsmehl vom Mehl abgetrennt. Die Kleie besteht aus dem Keimling und den Randschichten des Haferkorns (Fruchthaut, Samenschale und Aleuronschicht = Silberhäutchen oder Wabenschicht, sie umschließt den Mehlkern des Getreidekorns und

den Keim) und daher zu fast 50 Prozent aus unverdaulichen Fasern (Ballaststoffe). Sie besteht hauptsächlich aus den Nichtstärke-Kohlenhydraten Cellulose, Hemicellulose und Lignin. Diese Randschichten des Kornes sind reich an Vitaminen, Eiweißen (Proteinen) und Mineralstoffen.

Die unverdaulichen Pflanzenfasern der Kleie quellen im Darm auf. Dadurch wird der Stuhl lockerer und die Passagezeit verkürzt. Außerdem vermag die Rohfaser Gallensäuren und Cholesterin sowie auch giftige Elemente im Darm zu binden. Durch die Einnahme von etwa 35g Ballaststoffen am Tag kann die Verdauung günstig beeinflusst werden und die voluminöse Kost gibt bereits vom Magen her ein längeres Sättigungsgefühl, der gesamte Magen-Darm-Trakt wird zu vermehrter Arbeit angeregt. Durch die Fähigkeit, organische Stoffe an sich zu binden, werden auch krebserregende Stoffe aus dem Darm entfernt und das Krebsrisiko gesenkt.

Die quellfähigen und schleimbildenden Bestandteile der Kleie (β -D-Glucan, Arabinoxylane) sorgen dafür, dass der Blutzuckeranstieg nach Stärkeaufnahme verzögert wird, was bei Diabetes Typ 2 erwünscht ist. Neben Vitaminen und Mineralstoffen sind in den Randschichten des Getreides auch unerwünschte Inhaltsstoffe wie Abwehrstoffe gegen Fraßfeinde (etwa Phytin) und Verunreinigungen (etwa Pestizide, Schwermetalle und Schimmelpilzgifte) konzentriert. Phytin bindet im Darm Mineralstoffe und Vitamine und verhindert dadurch die Verwertung dieser Stoffe für die Ernährung.

Regelmäßiger Verzehr von Haferkleie kann den Cholesterinspiegel des Körpers nur geringfügig senken, wie eine amerikanische Meta-Analyse auf der Basis von 162 klinischen Einzelstudien herausfand.

Ein Zuviel an Kleie kann die Aufnahme und Verarbeitung von bestimmten Mineralien wie Kalzium und Zink durch den Körper behindern.

Um den Gesundheitsnutzen der Haferkleie auszuschöpfen, muss gleichzeitig mit der Kleie dem Körper viel Flüssigkeit zugeführt werden. Nur so kann die positive Wirkung auf den Darm erreicht werden. Kleie ohne Flüssigkeit gegessen, kann zu schweren Darmstörungen führen! Völlegefühl, Blähungen und Verstopfung kann man vermeiden, wenn man die Mengen an Kleie langsam erhöht und dazu viel Flüssigkeit zu sich nimmt.

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**DER STATUS DER MIKROELEMENTE IN DER ONTOGENESE
UNTER HYPODYNAMIE UND DIÄTKORREKTUR**

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Hypodynamie nennt man heute die Krankheit des Jahrhunderts. Hypodynamie führt zu Störungen der Homöostase. Hypodynamie stört das Nervensystem und das

Herz-Kreislauf-Systeme. Hypodynamie führt zu Fettleibigkeit. Hypodynamie und die damit verbundenen pathologischen Bedingungen stören das Gleichgewicht von Spurenelementen. Dies gilt für Erwachsene, Kinder und Jugendliche. Eine ausreichende körperliche Aktivität und eine kalorienarme und vollwertige Ernährung als Quelle von essentiellen Nährstoffen verhindert die Entwicklung von Hypodynamie.

Ziel der Arbeit: Untersuchung von Veränderungen in der Balance des Mikroelementsgehalts im Blutserum, in Zentrallymph und im Muskelgewebe von Wistarratten im Kleinkindalter (2-4 Monate) unter Hypodynamiebedingungen, sowie die Möglichkeit der Verwendung von Nahrungsergänzungen "Harmonie Vita G" zur Korrektur von Veränderungen.

Materialien und Methoden: Die Studie wurde an Wistarratten im Kindesalter mit simulierter Hypodynamie durchgeführt. Sie wurden in Zellen der Größe 17x17 cm für die Zeit von zwei Monaten gehalten. Sie wurden folgendermaßen in 3 Gruppen aufgeteilt: Gruppe 1 - in vivo (Kontrollgruppe), Gruppe 2 - in Hypodynamie, Gruppe 3 - unter Hypodynamiebedingungen mit Gabe des Nahrungsergänzungsmittels "Harmonie Vita G" 1 mal pro Tag innerhalb von 2 Monaten. Wir untersuchten 8 Mikronährstoffe (Ca, Cu, Fe, Mg, Mn, P, Pb, Zn) mit Hilfe der Atomemissionsspektrometrie (DPT NPP). Das in der Studie verwendete Nahrungsergänzungsmittel "Harmonie Vita G" enthält Nahrungsfasern und Polyprenole und sorgt für eine angemessene tägliche Zufuhr von Spurenelementen: Mn, Fe, P, Cu, Co, Ca, Mg, Zn, K.

Ergebnis: Nach 2 Monaten des Experiments ergaben sich folgende zuverlässige Daten: In der Gruppe unter Hypodynamiebedingungen stellten wir eine Steigerung untersuchter Spurenelemente in der zentralen Lymphe fest. Das Niveau von Mn erhöht sich mit Faktor 6.

Unter Hypodynamiebedingungen nahm der Gehalt von Ca, Mg, Mn, Pb im Serum zu. Fe wird im Serum 6-fach reduziert, Zn ging um 14,3% zurück.

Unter hypodynamischen Bedingungen wird im Myokard festgestellt, dass die Konzentrationen der untersuchten Spurenelemente zurückgegangen sind, Schwermetalle (Pb) aber 3-fach anstieg.

In hypodynamischen Bedingungen sank in den Beinmuskeln Cu und Mn, außerdem einen Abwärtstrend in Ca, Fe, Mg, P, Zn, Pb. Man stellt auch hier wieder die Akkumulation von Schwermetallen Pb 1,5-fach fest.

Nach der Einnahme von Nahrungsergänzungsmittel "Harmonie Vita G" über 2 Monate bei den wistarratten stellte man fest, dass das Niveau der Spurenelemente in Myokard und Beinmuskeln der Wisterratten in Gruppe 3 höher war als in der Kontrollgruppe. In Myokard normalisieren sich Ca und Cu. Das Niveau von Fe steigt um 30%, das Niveau von Pb wird 4-fach reduziert und ist niedriger als in der Kontrollgruppe. In den Beinmuskeln erreicht das Niveau von Fe und Mn fast den Wert der Kontrollgruppe. Ca ist 1,6-fach erhöht. Das Niveau von Mg wird 5-fach erhöht. Das Niveau von Pb sank um das 1,3-fache und erreicht fast den Wert der Kontrollgruppe.

Schlussfolgerung. Bei Wistarratten unter hypodynamischen Bedingungen stellt man

die Akkumulation von Schwermetallen (Pb) in Blut und Lymphe fest, Spurenelemente reichern sich. Spurenelemente erreichen schlechter die Muskel (Herzmuskel und Beinmuskeln). Die Verwendung von Nahrungsergänzungsmittel "Harmonie Vita G" verbessert die Aufnahme von Spurenelementen im Gewebe und trägt zur Entfernung von Schwermetallen (Pb) aus dem Körper bei.

M.A. Vesperishvili

VASCULAR PROTECTION BY POLYPHENOLS

Company Parafarm, Moscow, Russia

Polyphenol compounds are among the most demanded bioactive food supplements.

Increase of vessel disorders is a world-wide tendency. Unhealthy vessels cause many diseases including one of the most dangerous illnesses of our time - atherosclerosis.

Lesion of vessels, which results in formation of cholesterol plaques, plays the leading role in originating of atherosclerosis.

The large scale of vessel diseases dictates high demand on the remedies which protect vessels. Moreover, the researches on natural remedies are of great interest to scientists around the world.

The task of strengthening prophylactic potential of nutrition is important nowadays like never before. And this is the reason for rising popularity of bioactive food supplements.

It is proved that activity of many natural foods is connected with phenol compounds. That is why extraction phytochemical compounds and using them for health protection is reasonable.

Scientific team of "Parapharm" has been working with extracts of green tea, red wine, and conifers timber for many years, and has been producing bioactive food supplements for health of vessels and capillaries from this extracts. The two former extracts have been registered in Russia first time by "Parapharm". On the basis of these extract the following bioactive food supplements (BFS) were produced:

BFS "Red Wine Extract - Parapharm" contains the most important class of polyphenols - set of oligomeric proanthocyanidins;

BFS "Greenton" - among the composition of chemical elements, which is indeed rich, flavonoids with pronounced P-vitamin activity should be marked out;

BFS "Digidrokvartsetin" - products based on dihydroquercetin are the most demanded bioactive food supplements for cardiovascular system. It is primarily caused by mass clinical studies which showed effectivity and safety of the product.

All three bioactive food supplements have wide activity spectrum. But the most important and proved characteristics are protection of vessel endothelium from damaging factors, decrease of capillary penetrability, antiaggregatory effect and antiradical protection.

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DYNAMIC ELECTRONEUROSTIMULATION IS A NEW CORRECTION TECHNOLOGY OF AGE AND PATHOLOGICAL PROCESSES IN SKIN

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Background. Morpho-functional disorders of skin structure underlie the pathogenesis of age changes of skin. Alongside with invasive techniques of age changes correction the new superficial methods which are slowing down the skin ageing processes are actively developed. DiaDENS-Cosmo is a new device for non-invasive influence on the face skin for improvement of skin quality based on dynamic electroneurostimulation (DENS).

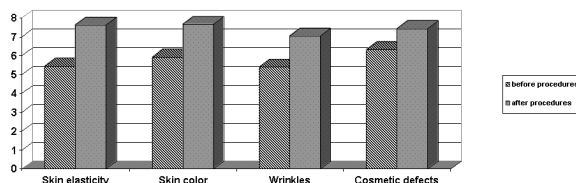


Fig.1. Test of visual skin assessment made by patient herself.

The aim of this study was to estimate the opportunities of DENS carried out by DiaDENS-Cosmo device in correction of skin age changes.

Patients and methods.

This research was spent at two stages. At the first stage the trial was lead on 20 Vistar breed rats. Animals within 7 days were influenced by ultra-violet irradiation daily for 15 minutes on abdomen skin. So the artificial photo-aging process has been simulated. Since the second day one group of 10 animals was treated by DiaDENS-Cosmo device at “trophy” mode with 100 Hz frequency and low power level during 15 minutes. The second group of animals (control) was influenced by disconnected device.

This research was spent at

In a day after last procedure the animals were deduced from experiment. Skin samples from damaged area were fixed in 10 % neutral formalin, microtomed and stained with hematoxylin-eosin and fuchsine.

At the second stage 315 female volunteers aged from 20 till 60 years received influence by the DiaDENS-Cosmo device with moistening mask during 10 days. Efficiency of influence was estimated by patient herself and by the doctor independently and by means of “Multi Skin Center MC 900” device.

Results and discussion.

Morphologically thickening of the epidermis was noted in the skin mainly due to increase in the horny layer. In some areas there

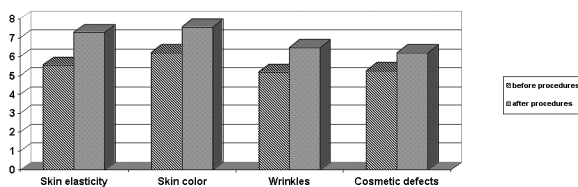


Fig.2. Test of visual skin assessment made by physician.

were parakeratosis and focal flattening of the epidermis (the loss of folding and parts of the “rectification”). The slight increasing in epithelial thickness also occurred due to proliferation of keratinocytes. In some keratinocytes the destructive changes in the form of cytoplasm vacuolization were revealed (in the basal parts of up to 12% of keratinocytes had destructive changes). In the group of animals treated with DiaDENS-Cosmo the changes associated with the process of photo-aging were expressed significantly less.

In addition under the ultra-violet action the elastosis phenomenon was developed consisting in the fragmentation of some elastin fibers. These phenomena were also significantly less pronounced in the main group.

Visual skin assessment test made both by the patient (fig.1) and by the doctor (fig.2) showed the improvement of the most of skin characteristics. The increasing of common item of skin quality assessed by patient was 1.62 points and by physician – 1.16 points.

Conclusion. DiaDENS-Cosmo device improves the skin quality by reduction of keratinocytes damage and elastosis phenomena. DENS is non-invasive and well tolerated procedure.

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**INVESTIGATION OF THE AXILLARY AND MESENTERY LYMPH
NODES UNDER EXPERIMENTAL CANCEROGENESIS OF THE
BREAST CANCER IN THE CONDITION OF CHEMOTHERAPY**

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Structural and cellular investigation of the mammary gland, axillary and mesentery lymph nodes is carried out under conditions of chemotherapy of induced cancerogenesis of the mammary gland.

Experiment was conducted on 60 Wistar rats-females, 3 months of age, with initial weight 220-250 g. N-metil-N-nitrozourea (MNU) was used as a cancerogenic agent. A mammary gland tumor was induced (under ether narcosis) by the described technique (according to Dzhioev F.K., 1989) by means of hypodermic injections of MHU in the area 2 of the mammary glands in the basis of the right forward finiteness in a dose of 2,5 mg on a rat in 0,2 ml of water for injections, once a week within 5 weeks. 3 experimental groups were formed: 1. Intact animals; 2. Induced cancerogenesis of the mammary gland; 3. Induced cancerogenesis of the mammary gland under condition of chemotherapy. CMF scheme (Cyclophosphan/Methotrexate/5-Fluorouracil) was applied as chemotherapy treatment of the animals with breast cancer. Euthanasia of the animals was carried out under ether narcosis. Axillary and mesentery lymph nodes were taken for

histologic research.

In regional (axillary) lymph nodes under condition of chemotherapy of experimental tumor the following changes were revealed in comparison with non-treatment group: reduction of quantity of metastatic tumoral cells in structural components of lymph nodes on more than 80 %, structural signs of activation of a cellular link of immunity (the area paracortical zone is increased), blast transformation processes of lymphoid line cells (the number of the small lymphocytes in germinative centres is increased) and proliferation of plasmatic line cells (the number of plasmoblasts in brain substance is increased), decrease of macrophage reaction and reduction of the area of sinus system.

In mesentery lymph nodes under condition of chemotherapy, unlike group without chemotherapy, metastatic tumoral cells are revealed only in brain substance where their quantity is considerably reduced. Structural signs of activation of a cellular link of immunity (the area of thymus-dependant zone is increased) are marked, activation of blast transformation processes of lymphoid line cells and proliferation processes of plasmatic line cells is revealed, reduction of quantity of macrophages and increase – of neutrophils is marked.

Thus, the received experimental results testify that breast tumor recourse under condition of specific chemotherapy leads to decrease in quantity of metastatic atypical cells in the sine of lymph nodes. Structural-cellular transformations in regional (axillary) and peripheral (mesentery) lymph nodes under condition of chemotherapy of breast tumor testify to activation of their barrier-detoxication function, to stimulation of cellular and humoral immunity links.

N.V. Voskresenskaya

EINIGE ASPEKTE IN LEHRE DER PSYCHOLOGIE AN UNIVERSITÄTEN

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Das Unterrichten der Psychologie in der modernen Etappe ist gerufen, den Anforderungen der Gesellschaft zum hohen Niveau der Vorbereitung der Fachkräfte des Verwaltungsprofils der Tätigkeit zu entsprechen. Das Problem der Persönlichkeit ist das wichtigste Problem der Psychologie, da sich die Zeiten und die Moden ändern, die Formen und die Methoden der Ausbildung, den Inhalt der Studiendisziplinen und ihre Zahl, aber immer kostet die Aufgabe des Eintrittes der Fachkraft in die planmäßige Umgebung.

Und mit jedem Jahr nimmt der Umfang der Forderungen zu den jungen Fachkräften zu, die das höchste Niveau der psychologischen Kompetenz, das heißt zu jenen professionellen Fertigkeiten brauchen, die sie im Laufe des Erhaltens der Bildung ergreifen sollen.

Das alles ruft die Notwendigkeit der Auswahl der neuen Bahnen der Bildung, einschließlich der Vervollkommnung der Methodik des Unterrichtens, der neuen Richtungen des Studiums der Psychologie in den Hochschulen, der Entwicklung des psychologischen Wissens der Studenten herbei.

Noch zwei Jahrhunderte rückwärts hat großschweizerische Pädagoge Johann Heinrich Pestalozzi "Ich gesagt ich will die ganze Ausbildung auf den psychologischen Boden" zurückführen. Und heute beobachten wir die Erhöhung der Rolle des psychologischen Wissens und die Einführung der Psychologie in alle Sphären des Menschenlebens.

In der Sosnowoborski Filiale der St.-Petersburger staatlichen Universität des Services und werden die Wirtschaften die Studenten nach den Berufen "Management" und «die Kommunal- und staatliche Verwaltung» ausgebildet. Diese Berufe vermuten das Studium solcher Disziplinen wie "die Psychologie und die Pädagogik", «die Soziale Psychologie», «die Verwaltung vom Personal», «das Planmäßige Verhalten» und andere.

Eben es ist die Anwendung zwei Grundkonzeptionen des Unterrichtens – grundlegend (gegenständlich-ausgerichtet) und persönlich hier passend. Doch ist die Psychologie — die besondere Wissenschaft, sie nicht nur ein selbständiges gegenständliches Wissensgebiet, sondern auch auf gleichem Fuß mit der Philologie, der Philosophie und anderen Geistesdisziplinen, ist ein Teil der Kultur. Gerade solches Herangehen spiegeln das Wesen der klassischen Universität, die die denkende Persönlichkeit großziehen soll, fähig am meisten wider, die realen Probleme der modernen Welt zu entscheiden. Wie er sich in der Praxis verwirklicht?

Das Gelingen der Ausbildung an der Universität, die Qualität und die Zufriedenheit von der nachfolgenden Arbeit sind mit den Neigungen, den inneren Motiven und den am meisten geäußerten Fähigkeiten der Studenten eng verbunden. Deshalb eine wichtige Richtung der Tätigkeit der Lehrer ist die Bildung es ist der inneren wissenswerten Motivation bei den Studenten lang. Und es ist durch den sachkundig aufgebauten Inhalt der Ausbildung — möglich das die modernen Psychologen umweltfreundlich nennen, d.h. es ist berücksichtigend die Besonderheiten der Aneignung nicht leistend des bremsenden Einflusses auf den Lauf der professionellen Entwicklung der zukünftigen Fachkraft maximal voll.

Das Problem des Inhalts der Bildung ist mit dem Problem der Diagnostik der Besonderheiten der wissenswerten und emotionalen-persönlichen Sphären der Studenten direkt verbunden. Deshalb beim Eingang in die Universität gehen die Studenten die Psychodiagnostik und bekommen die qualifizierte psychologische Konsultation die Berufsorientierung.

Die Analyse des Gelingens der Ausbildung der Studenten nach den Berufen, die mit der Verwaltung verbunden sind, zeigt, dass die Aneignung des Wissens in Form von der Lösung der konkreten praktischen Aufgaben geschehen soll, es gewährleistet die Ausbildung ohne Lernen, das Behalten ist ein gesetzmäßiges Ergebnis, und nicht vom selbständigen Ziel. Die modernen Studenten sind auf empirisch wenn auch die

Aneignungen des Wissens überhaupt gezielt.

Deshalb gehen die Vorlesungen in der interaktiven Form häufig, den Studenten ist es nicht verboten, zu diskutieren, die Meinung zu äußern. Es erlaubt wirksam, die lehr-wissenswerte Tätigkeit ausgebildet zu verwalten und trägt zur Entwicklung des intellektuellen Denkens und der Bildung der vollwertigen Gestalten der studierten Begriffe bei, was eine Grundlage der Didaktik ist.

Auf den praktischen Beschäftigungen nach den professionellen Disziplinen bekommen die Studenten die konkreten professionellen Fertigkeiten der Verwaltung in der Organisation: nehmen an den Trainings nach der Entwicklung von Verwaltungskompetenzen teil, in den geschäftlichen und Rollenspielen werden die Stile der Führung, die Weisen der Lösung dieser oder jener Problemsituationen in der Organisation durchgearbeitet. Sie lernen, die Beratungen durchzuführen, auf die Beschäftigungen werden die wissenschaftlichen Dispute und die Diskussionen durchgeführt.

Zu dieser Zeit geschieht nicht nur die Bildung ihres Wissens, der Fähigkeiten und der Fertigkeiten wie der Fachkräfte, sondern auch die Bildung auf dieser Grundlage der Persönlichkeit der Fachkraft, die Bildung der Bereitschaft zur professionellen Reflexion des Studenten, zum Begreifen der ethischen Vollkommenheit (oder der Unvollkommenheit), dass auch ein Wesen der Berufsausbildung ist.

Betreffs der Kontrolle des Wissens der Studenten, das ist die Prüfung eine Möglichkeit für den Studenten für die kurze Zeit, das Wesen der aktuellen Frage zu demonstrieren. Wenn sich der Lehrer nur mit den Studenten formell umgeht, nicht versuchend, in ihre Probleme, in ihre Innenwelt einzudringen, versucht etwas nicht, bei ihnen zu lernen, wird das das Unterrichten der Psychologie stark primitivisiert.

Die Praxis, die die Studenten in den Organisationen der Stadt gehen, ermöglicht den Studenten, die professionellen Qualitäten auf den realen Arbeitsplätzen und im Folgenden zu zeigen, auf das Erhalten des Arbeitsplatzes zu rechnen.

Während der ganzen Ausbildung an der Universität verwirklicht sich die psychologische Arbeit mit den Studenten, deren Richtungen sich von den Besonderheiten der konkreten Lehrgruppe der Studenten klären.

Der organisierte so Prozess der Ausbildung gewährleistet die Bestrebung zur Annäherung wissenschaftlich theoretisch und es ist der ausgerichteten Psychologie praktisch.

Im Schluss will man bemerken, dass heute in Russland die Größe der psychologischen Bildung, die den Bedürfnissen nach der psychologischen Kultur der Werke antwortet, des Verkehrs, der Lebenstätigkeit der Menschen und der Organisationen bemerkt wird. Und im Laufe der Suche der Wege der Verbesserung der Vorbereitung der Fachkräfte zum Verwaltungswerk, es ist groß und mit jedem Jahr wächst die Bedeutung der Psychologie, die eine theoretische Grundlage für das Studium und die Nutzung des menschlichen Faktors im Management ist.

E.G. Yurova

**REHABILITATION VON KINDER MIT CHRONISCHEN
ERKRANKUNGEN IM KINDERSANATORIUM
„BELOKURIKHA“**

*Das Föderale staatliche Anstalt, Das Kindersanatorium
„Belokurikha“ des Ministeriums für Gesundheitswesen, Belokurikha,
Russland*

Über uns

Der Kindersanatorium „Belokurikha“ des Ministeriums für Gesundheitswissen hat sich in den malerischen Umgebungen des Kurortes Belokurikha, in der ökologisch reinen Zone gemütlich eingerichtet. Der liegt in der Schlucht des Baches „Bären“, nach dem Süden vom Hauptkurkomplex. Die Anstalt spezialisiert sich auf der Rehabilitations-Wiederaufbaubehandlung und die Erweisung der beratenden-diagnostischen Hilfe den Kindern im Alter von 7 bis zu 14 Jahren. Das Sanatorium ist auf 205 Patienten berechnet. Das Ansiedeln der Kinder ist nach den Altersprinzipien, in den isolierten Abteilungen auf 6 Zimmer nach 4-6 Menschen im Zimmer durchgeführt. In jeder Abteilung gibt es das allgemeine Spielzimmer, die sanitären Anlagen, den Zimmer des medizinischen Personals, das 24-stundenweise arbeitet

Die Behandlung

Die Heilverfahren sind in 30 modernen diagnostischen Behandlungszimmer durchgeführt. Die Hauptheilfaktoren des Sanatoriums sind stickstoff-kiesel Thermalwasser mit dem kleinen Inhalt des Radons und schwefelhaltiger Schlamm. Für die Aufnahme des Mineralwassers „Belokurikhinskaja Östlich 2“ arbeitet die Trinkhalle, die auf die 300 Besuche im Tag berechnet ist. Die Konsultationen und die spezifische Behandlung von Kindern führen die Fachärzte des Sanatoriums: ein Hals-Nasen-Ohrenarzt, ein Neurologe, ein Zahnarzt, ein Kindergynäkologe und andere. Die Überprüfung ist im kliniko-biochemischen Labor und Behandlungsraum der funktionalen Diagnostik durchgeführt. Die riesige Aufmerksamkeit wird dem psychologischen Zustand der kranken Kinder zugeteilt. Die Pädagogen-Psychologen haben die Möglichkeit, die Patienten auf dem Apparat „die Psycho-Prüfung“ nachzuprüfen und, die Rehabilitierung im speziell ausgestatteten Sensorzimmer und dem Kabinett der Märchentherapie durchzuführen.

Die Schule

Im Kindersanatorium arbeitet die allgemeinbildende Schule. Die Ausbildungsprozess ist nach Blocksysteem organisiert, das die Elemente aller in die Russischen Föderation erlaubten Lehrprogramme aufnimmt.

Die Freizeit

Die Freizeit der Kinder ist die schöpferische Arbeit-Organisation der Tanzen, Vorstellungen, der militär-patriotischen Inszenierung. Die Rehabilitationsveranstaltungen sind auch die Spaziergänge, das Baden im offenen Schwimmbad und die Erholung im

Luftsolarium, der Beschäftigung im Saal der Krankengymnastik, im Trainingssaal und auf den offenen Sportfeldern für Fußball, Basketball, Volleyball und Tennis, Reitspaziergang und die Bekanntschaft mit den exotischen Straußen.

M.A. Yurov
V.V. Astashov
O.V. Kazakov
T.A. Astashova
Yu.A. Antsyreva

MORPHOLOGICAL INVESTIGATION OF PROSTATE AND REGIONAL LYMPH NODES IN THE CONDITION OF VENOUS STAGNATION IN THE SMALL PELVIS UNDER EXPERIMENTAL CHRONIC ALCOHOLIC INTOXICATION AND A MODEL OF PHYTO-CORRECTION WITH PREPARATION "MAXI-SIL"

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Structural investigation of the prostate, pelvic lymph nodes (lymph nodes of I order for a prostate) was carried out under conditions of chronic alcoholic intoxication, venous stagnation (21 days) in the small pelvis and correction by means of phyto-preparation "Maxi-sil".

Experiment is conducted on 80 rats of Wistar line with age of 3 months and initial weight 220-260g. 4 experimental groups were formed: 1) intact animals; 2) animals with chronic alcoholic intoxication (CAI); 3) animals in 21 days of venous stagnation under conditions CAI; 4) animals for 21 days of venous stagnation with phytocorrection in conditions of CAI. Experimental CAI was created by means of free drinking by the animals of 15% ethyl spirit in water solution within 2,5 months. Venous stagnation was created (21 day prior to the termination of drinking of 15% ethyl spirit water solution) by bilateral ligating of internal iliac veins under Nembutal narcosis (40 mg/kg, intraperitoneal introduction). In the group with correction the animals were given phyto-preparation (a daily dose 2,5 mg on 100 g of weight of an animal) "Maxi-sil" with vivarium ration, since 8 days of venous stagnation, within two weeks. Eutanasia of the animals was carried out under Nembutal narcosis. The prostate and pelvic (tail) lymph nodes were taken for histologic research. The revealed changes under the chronic alcoholic intoxication show: in the prostate - structural desorganisation of own glands, increase in density of microvessels in stroma; in the regional (pelvic) lymph nodes - endogenous intoxication (the T-zone area, the area of structural components responsible for humoral immunity is increased, transport function, macrophage reaction is reduced).

Under condition of venous stagnation (21 days) in a small pelvis and chronic alcoholic intoxication, structural functional transformations in the prostate testify to circulatory (stagnant) damage: parenchyma-stroma index is reduced (the area parenchymas is reduced), arterio-venular ratio is increased (dilation of arterioles and venules), parenchyma

hypostasis, gleams trailer of secretory departments of own glands are reduced with stagnation of a secret. In the pelvic lymph nodes the structural transformations testify to oppression of a cellular link of immunity (the area of T-dependent zone is reduced), activation of humoral immunity (the areas of the B-dependent zone, number of mature plasmatic cells are increased) and strengthening of the lymph drainage through a lymph node (the area of sinus system is increased).

Application of a phyto-complex “Maxi-sil” as a means of correction of experimental venous stagnation (21 days) in a small pelvis promotes restoration of parenchyma-stroma ratio and haemocirculation improvement (the area of arterioles is reduced), in comparison with group without correction. In the pelvic lymph nodes structural signs of oppression of the cellular and activation of the humoral immunity (the area of brain substance is increased, the number of unripe forms of lymphoid and plasmatic cells increases) are observed and more expressed, in comparison with group without correction.

Thus, researches have shown that specific herbal treatment by phyto-complex “Maxi-sil” of the venous stagnation in a small pelvis possesses prostate-tropic and lymph-improving action, activating processes of hemomicrocirculation in the walls of a small pelvis and lymphopoiesis in the regional lymph nodes of the prostate.

G.A.Yusupov

THE SCOPE OF COMPLEX “UPRANA-PRO” IN THE DIACRISIS AND TREATMENT OF HEPATITIS C

OAo Holding “EDAS”, Moscow, Russia
www.uprana.com

The main peculiarity of hepatitis C is its genetic variability, frank ability to idiovariation. Six basic idiotypes of hepatitis C virus are known. However, owing to mutational activity of the virus, there may exist about forty subspecies of HCV in the human body. Man's immune system is not able to regulate the output of necessary antisubstances – while there generated antisubstances for certain viruses – at the same time their descendants with different antigenic features are produced. Prevalence of hepatitis C in developed countries amounts to 2%. The number of people infected by hepatitis C all over the world may come up to 500 million.

The first estimation, which is usually advised to make for diacrisis of hepatitis C – is identification of antisubstances for hepatitis C (anti-HCV). This estimation diagnoses only the fact of contamination at the moment or in the past. This estimation can give false-positive (estimation is assertive, but there is no contamination) and false-negative results (estimation is negative, but there is actually an infection), for a variety of reasons. PCR-diacrisis permits to identify RNK of hepatitis C virus in blood. Results of PCR-diacrisis can be also false in many cases.

International researches and clinical practice have witnessed that nowadays the most

active combination is the one of two mounts – interferon-alfa and ribavirin. Unfortunately, the strength of treatment is 40-80%. This treatment is expensive (6600-30000\$ a year), time duration of the curing is 12 months. Treatment is badly endured by patients, complications may occur and it has contraindications. Inveterate hepatitis C forges ahead among reasons indicated the liver transplantation and mortality is still high because of after-effects.

There are 43 patients with hepatitis C under our supervision, they passed diacrisis and treatment in author's modification of survey method of electric conductivity dynamics (EC) in biologically active sites (BAS) and treatment with a power-informative remedy with particularly selected power-informative features (1999-2010). Mainly there applied the sick that had been treated ineffectively in in-patient clinic (27) with negative dynamics. Coincidence of clinic diagnostic and testing results is equal to 86,2%, positive dynamics in liver - 11,5%, without dynamics - 2,3%, breakdown - 0%, side effects are 0%.

Author's modification of survey method of dynamics of EC BAS, involving complex "UPRANA-Pro is basically advanced means of detection of hepatitis C, estimation of its various idiotypes and subtypes, and also for individual selection of power-informative (quantum-undular) properties, which are used in the course of compounding of a remedy. Exactness of diacrisis and effectiveness of treatment is higher than modern methods, used in academic medicine have. Side effects aren't registered.

May be it is hard to believe in, but easy to check and make sure.

The report will include the scheme display of author's modification of power-informative diacrisis and therapy of hepatitis C various idiotypes and selection of curative characteristics for curing involving hardware-software complex "UPRANA-Pro".

We hope for collaboration with European institutes, interested in solving problems related to hepatitis C.

A. Zhaksilikova
A. Idrisov
B. Nurmuhambetova

**FUNCTIONAL CHANGES OF RATS LIVER AFTER CHRONIC
CADMIUM CHLORIDE EXOTOXICOSIS IN DOSAGE OF 1,5
AND 3 MG**

Kazakh National Medical University, Almaty, Kazakhstan

Cadmium, as one of the toxicant of the exogenous genesis, causes a big range of functional afflictions in the liver by decreasing protein and some enzymes synthesis, which participate in toxicant metabolism. One of the crucial tests is an assessment of the level of ALT and AST as the indicators of tissues' damage and which efflux to the blood flow under the massive cells' distraction.

This investigation was taken on the white rats over 1, 7, 14, 21 days after exposure. The level of ALT of the control group was $0,14 \pm 0,02$ mkkat/l and AST - $0,15 \pm 0,02$ mmkat/l as well. After the chronic intoxication with $CdCl_2$ in dosage of 1,5 mg/kg the level of ALT increased by 39% during the 1st day comparing with the control data. On the 7th day

ALT decreased by 4% relatively the 1st day results. By the 14th day, its level declined by 4,5% again relatively the 7th day data. By the 21st day ALT failed by 9.5% comparing with the 14th day results and was equal 0,19 mkkat/l. This latter indicator was higher than the control data by 36%. In the same time the indicator of AST over 1 day was twice higher than the control results. By the 7th day AST's level decreased by 3% comparing with the 1st day data. By the 14th day the falling was additionally by 6%. By the 21st days the level of AST decreased by 11% again and equal 0,24 mmkat/l. And this latter result was superior the control data by 60%.

Exposure by Cadmium Chloride as 3 mg (double dose) caused more significant changes in liver transaminases in the blood. At the 1st day the level of ALT increased in 3,3-fold relatively to the control data. By the 7th day, The was decreasing of that level comparing with the data of the 1st day by 17%. By the 14th day, The investigating indicator diminished by 13% relatively to the 7th day data. By the 21st day, The level of ALT decreased additionally by 15% and equal 0,29 mmkat/l. This latter value was twice higher than the control data. At the higher dose of Cadmium AST level was more sensitive. At the 1st day, AST data were upper in 4-fold relatively to the control ones. By the 7th day, These figures decreased just by 2%. By the 14th day, AST failed additionally by the 18%. By the 21st day, these data declined by 12% relatively the results of 14th day and were equal 0,44 mkkat/l. The latter figure was 2,9 - fold higher the control data. So, The aminotranferases' content in the blood flow are cadmium chloride dose dependent and the compensating decrease of their levels goes gradually. But even on the 21st day the point of the transaminases was much higher than the control data. The statistic analysis of the records showed that the Ratio of Dependency (r) of ALT from the dose was 0,97 with $P=0.008$, for AST this ratio (r) was 0,94 with $P=0,016$. Therefore, More cadmium amount is given, more aminotranferases' content is increased. During the time, when animals were not fed by the toxicant there was slow decreasing of the transaminases' level, but even by the 21st day these data were much higher than the control ones. So, the rising of aminotranferases' content in blood flow of rats who were exposed to cadmium chloride is reliable indicator of Cadmium deteriorating effect.

V.N. Efimenko

TACTIC OF INVESTIGATION AND PROBLEMS OF MEDICAL AND SOCIAL REHABILITATION IN CHILDREN WITH MULTIPLE SCLEROSIS

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At present much attention is paid to multiple sclerosis (MS) in children (M. Sevon et al., 2000). Young people and even children suffer from this disease more frequently. We investigated such people for a long time and our experience can help a great number of practical doctors. We presented here the analysis of clinical results and actual problems of

rehabilitation.

Material and methods of investigation. We studied 31 children (19 girls and 12 boys) and 25 adult patients of young age with the debut in their childhood and who have the reliable diagnosis of MS according to the criteria of C. Poser and his co-author (1983) and W. Mc Donald and his co-author (2001). They used clinical and laboratory methods of investigation of blood, liquor, magnetic resonance imaging (MRI) of brain and spinal cord, as well as visual evoked potentials (VEP) to the presentation of “chess pattern”. We studied children at the age of 4 – 15 years old and the adults at the age of 18 – 36 years old. The period of dynamic monitoring is 3 – 15 years.

Received results and discussion. Long-term investigations and the work with such patients revealed a lot of problems considering the peculiarities of diagnostics, tactic of investigation and rehabilitation of MS patients. For adequate rehabilitation the following conditions are necessary: 1) the timely and precise diagnostics of disease; 2) elaboration of the stage and degree of the process activity and the type of disease flow; 3) the knowledge of individual child’s reaction on the different kinds of therapy; 4) the definition of the disease forecast. The timely diagnostics of this disease is great importance. At is created on the knowledge of clinical picture of this disease with the use of additional methods of investigation, including VEP, MRI and MRI with contrast for confirmation of the spreading of the process “in time and space” according to Mc Donald and co-author (2001). Clinical picture manifestation of MS in children and algorithm of diagnostics were presented in details in the early works (Yefimenko V. N., 2000).

Breaking of aggravation (relapse) of MS in children as well as in adults should be conducted with the use of pulse-therapy by corticosteroids. As our experience shows, the alternative to such therapy does not exit. We have no single opinion about the effectiveness of use of the different types of therapy during the period of remission especially from the point of evident medicine.

Besides the problems of the treatment and the investigation of MS patients during the period of remission, a neurologist or sometimes a pediatrician should solve a lot of problems concerning the peculiarities of nutrition, regime, possibility of school education, therapeutic physical training, and sometimes even different sports, the use of alternative therapeutic methods such as rephlexotherapy, pharmacopuncture, homoeopathy, phytotherapy, the use of food supplements including those which influence the immunity.

We consider the question of the individual use of preventative immunity therapy (glathiramer acetate or interferon – β). Such children reaching the definite age face the problems of the choice of their profession depending on the stage of their disease, neurological deficit and the character of flow of their disease.

In general our conclusions are similar to the opinion of the main foreign clinics: we consider that in the process of rehabilitation of the children who supper MS not only neurologist should participate but also other specialists trained on special programs: dieticians, the doctor of therapeutic physical training, physiotherapists, reflexotherapists, homoeopaths, neuropsychologists, psychotherapists and others.

We need an active participation of both a patient and his parents. The families which have a child with MS as a rule need a social support from the state, especially they need free of charge expensive medicines for the treatment and prevention of the progress of this devious disease.

We can solve the problems of the children with MS only thanks to joint efforts of all the participants.

T.A. Gorbunova

ZWEI MEDIZIN ODER ZWEI SICHTWEISEN

Private Praxis, Tallin, Estland

Bis zum Anfang des 19. Jahrhunderts war Fitotherapie eine der wichtigsten Behandlungsmethoden. Aber mit der Entwicklung der Chemie und Pharmakologie ist sie zurückgetreten. Da man angeblich die Krankheiten mit den „wirksamen“, reinen Mitteln besiegen könnte. Doch diese chemische Attacke auf die Krankheiten hat eine Reihe der Nebenwirkungskrankheiten mit sich gezogen. Diese Niederlage wurde klar in der Mitte des 20. Jahrhunderts, wenn die Pharmakologie eine ernste Wissenschaft geworden ist und die pharmazeutische Industrie begonnen hat tonnenweise Präparate gegen alle Krankheiten herzustellen. Aber bevor man die Krankheiten mit der ganzen chemischen Ausrüstung attackiert, muss man sich im klaren werden, dass die Krankheiten nicht nur eine Symbiose der Symptomen und Syndromen ist, sondern eine Störung der komplizierten biochemischen Prozesse.

Das zur Zeit existierende systematische Modell des Organismus orientiert den Arzt auf ein Symptom bei der Diagnosestellung. Aber ein Symptom ist immer eine Folge und nicht ein Grund der Krankheit.

Mit anderen Worten, wir wissen nicht, was „Krankheit“ an sich ist und darum können wir sie nicht sicher behandeln. Diesen Begriff können wir auch nicht formulieren ohne das adäquate Modell des Organismus. Aber um so ein Modell aufzubauen haben wir genug Stoff da.

Unser Organismus in seiner Evolution hat Schutzmechanismen entwickelt, die uns nicht sterben lassen und eine koordinierte Zusammenarbeit aller Gewebe und Organe unterstützt. Wenn unser Organismus diese Systemen anschaltet bezeichnen wir das als Krankheit. Öfters stirbt ein Kranker nicht an der Krankheit selbst, sondern weil seine Schutzmechanismen diese gestörte Homeostase nicht kompensieren könnten.

Fast immer haben den Arzt bei seiner Arbeit solche Aspekte interessiert.

1. Behandlung der akuten Krankheiten.
2. Behandlung der Verschärfung der chronischen Krankheiten.
3. Behandlung der chronischen Krankheiten in der Remission.
4. Prophylaxe der Krankheiten.

Bei akuten Zuständen, wenn eine eilige Korrektur gebraucht wird, muss man die Mittel

der adaptothronen Therapie benutzen. Bei chronischen Prozessen ist die adaptothrophe Therapie nutzlos und kann sogar selbst zum Grund einer Krankheit werden. Die Frequenz und die Härte der Medikamenten-Nebenwirkungen haben von Jahr zu Jahr zugenommen. Das führte zur Notwendigkeit der anderen Ansichtsweisen in der Therapie. Die Rehabilitierung und Erprobung der alten Erfahrung der Volksmedizin hat begonnen. Genau solche Zusammenarbeit wird die Medizin der Zukunft bestimmen.

European Academy of Natural Sciences (Hanover)
European Scientific Society (Hanover)
Russian Academy of Natural Sciences, Moscow

International Forum “Euro-ECO - Hanover 2010”:
Environmental and Engineering Aspects for Sustainable Living

3 - 4 December 2010
ANDOR Hotel Plaza, Hanover, Germany

Objective: consolidation of efforts of state and non-governmental organizations of European countries in order to preserve natural resources, to share the international experience and to set up a module of joint work in the sphere of environmental policy under the conditions of the modern industrial society.

Closely connected economic and legal aspects will be also discussed. Special attention is to be paid to developing environmental mentality in students alongside with drawing educational environmental programs for the countries of Eastern Europe.

Scientists, experts and specialists in environment, ecology and economics, law and public health, as well as representatives of politics and business are cordially welcome to attend.

Deadlines:

Deadline for submission of abstracts: October 10, 2010

On-line Submission: info@eu-eco.eu

Application Deadline (specifying a form of participation: abstract, oral presentation, poster, no presentation etc): October 10, 2010.

The best accomplishments in the field of ecology and their authors are to be rewarded with diplomas and medals of the European Academy of Natural Sciences.

Venue: ANDOR Hotel Plaza located in Hanover downtown, 100 m from the Railway Station.

Languages: German, English, Russian: simultaneous translation

During the Forum a number of professional excursions and a tour of Hanover as well and social events and will be offered.

With questions or enquiries please contact:

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