

Министерство Здравоохранения и Социального развития РФ  
Амурская Государственная Медицинская Академия  
Студенческое научное общество  
Ministry of Public Health and Social Development of Russian  
Federation

Amur State Medical  
Academy  
Students Scientific Socie-



ty



## **СБОРНИК ТЕЗИСОВ**

**20<sup>Я</sup> НАУЧНАЯ СТУДЕНЧЕСКАЯ  
КОНФЕРЕНЦИЯ НА  
ИНОСТРАННЫХ ЯЗЫКАХ**

**ABSTRACTS  
20<sup>th</sup> SCIENTIFIC STUDENTS  
CONFERENCE IN FOREIGN  
LANGUAGES**

**20 ДЕКАБРЯ 2010г.**

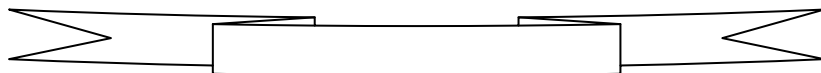


Gaudeamus igitur,  
Juvenes dum sumus!  
Post jucundam juventutem,  
Post molestam senectutem  
Nos habebit humus!

Ubi sunt, qui ante nos  
In mundo fuere!  
Vadite ad superos,  
Transite ad inferos,  
Hos si vis videre!

Vita nostra brevis est,  
Brevi finietur.  
Venit mors velociter,  
Rapit nos atrociter,  
Nemini parcetur!

Vivat Academia!  
Vivant professores!  
Vivat in em brum quodlibet!  
Vivant membra quaelibet!  
Semper sint in flore



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**Благовещенск 2010г.**

Сборник тезисов докладов 20<sup>й</sup> студенческой научной конференции на иностранных языках под редакцией председателя Совета НИРС АГМА проф. Е.А. Бородина.  
Благовещенск 2010г.

Сборник тезисов докладов 20<sup>й</sup> научной студенческой конференции на иностранных языках содержит тезисы 89 докладов, заслушанных на трёх секциях:

- Английского языка
- Немецкого языка
- Французского и латинского языков

**Редакционная коллегия:**

- **проф. В.А. Доровских**—ректор АГМА, заслуженный деятель науки Р.Ф;
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- **проф. Е.А. Бородин**—председатель Совета по НИИРС АГМА (ответственный редактор)
- **Л.И. Шпильчук**—зав.кафедрой. Иностранных Языков АГМА;
- **С.Н. Недид**—член Совета СНО АГМА (технический редактор)



# Section of the English Language

### **1. THE FESTIVAL OF KYOTO**

Sakai M. – the 5th-year student

Hello. I live in Kyoto for 23 years. Kyoto is a very beautiful city in Japan. And Kyoto has a lot of festivals and events having to do with the history of Kyoto. Today I will introduce about the festival of Kyoto city.

### **2. SAMURAI AND NINJA**

Inoue R. –the 5th-year student

In Japan, there are two typical characters that are very famous in the world, SAMURAI and NINJA.

This time, I will talk about them in detail.

### **3. THE DIFFERENCE OF TRANSPORTATION ETWEEN JAPAN AND RUSSIA**

Oya N. –the 5th-year student

There are many kinds of transportation, such as train, bus, airplane, car and ship. Each of them has some characteristics, both good and bad. And there are differences of which transportation is superior in every country and every area. I tell you about their characteristics, showing some examples in Japan and Russia.

### **4. JAPANESE FOOD CULTURE**

Hamahata Y. –the 5th-year student

Japanese food is very popular among foreigners, because it is healthy and tasty! I would like to introduce the traditional Japanese food as well as other Japanese food. In addition, I will talk a little bit about Russian food.

### **5. FRACTAL ANALYSIS OF POLARIZATION REVERSAL PROCESSES IN FERROELECTRIC CRYSTALS**

Barabash T.K. – the 2 year master's degree

Scientific leaders – Maslovskaya A.G. associate professor, doctorate of Science

Recently fractal methods were widely adopted in many areas of scientific knowledge, in particular in the physicist polar dielectric. Char-

acteristic signs fractal structures are: self-similarity, scale invariancy, hierarchy in structure, porosity presence, fractal dimension, fractal properties of characteristics. Many authors in the works show that solid-state structures in open systems, carry fractal character [1]. However not only geometrical forms of objects have fractal a structure, time characteristics of processes and the phenomena proceeding in environments with self-similar structure, also find out fractal behaviour. As process of switching of polarisation grows out of formation of self-similar structures the domain configuration as a whole shows fractal character and dynamic indicators ferroelectric crystals find out fractal behaviour in the course of polarisation switching [2-4]. This phenomenon is caused by difficult mechanisms of movement of domain walls, stochasticity of process, presence of effects of memory of system and properties of anisotropy of real crystals, etc. For the description of geometry of similar domain configurations and switching characteristics also appear concepts fractal theories are applicable.

The purpose of this work is research fractal and multifractal characteristics of time dependences of currents of switching of polarisation ferroelectric crystals.

In practice fractal theories of time numbers a wide number of analytical techniques is applied: Method of coverings, Hurst's method and its updatings, Kolmogorov's method, Richardson's method, Fure's method, etc. [5]. The basic quantitative characteristic of fractals is dimension  $D$  entered by Hausdorffom [5]. For the majority of natural time numbers, the analytical finding fractal is impossible for dimension, therefore  $D$  define numerically: or it is direct, or through the sizes connected with it by a simple parity, for example, through an indicator of Hurst  $H$ . The method of the R/S-analysis was used as a method of a numerical estimation fractal dimensions, which is a method of the analysis of long-term memory, fractal statistical structure and presence of cycles. In this method a time number breaks into the adjacent periods of one length and average value norm scope [6] is defined. Logarithm Hurst's equation and application of linear approximation by a method of the least squares gives Hurst's indicator  $H$  and fractal dimension  $D = 2 - H$ .

As a modelling example calculation for time dependence of a current of switching of polarisation ferroelectric a crystal TGS in a mode elektronno-stimulirovannyh polarising currents [7] has been carried out. The carried out calculation has yielded following results: Hurst's indicator  $H = 0.73$  and fractal dimension  $D = 1.27$ .

The estimation fractal in an injection mode can be received dimensions of a current of switching of polarisation on the basis of applica-

tion of a method of decomposition abreast Fure [4]. This method is considered in the fastest way (and less exact) definitions fractal dimensions of self-affine curves. Method procedure assumes decomposition abreast Fure of an investigated time number. It is as a result defined values of amplitude  $a$  and phases  $\varphi$  for some fixed number of frequencies  $\omega$ ; on which there is a decomposition. The analysis of a frequency spectrum of capacity  $a^2(\omega)$  allows to receive size fractal dimensions  $D$  for an analyzed time number. Linear approximation of the dependence  $a^2(\omega)$  presented in double logarithmic scale, gives the tangent of angle of an inclination  $k$  connected with fractal dimension by a parity  $D=(4+k)/2$ . The result of an estimation fractal gives to dimension of a current of switching size  $D = 1.25$ .

The received results confirm that the self-organised movement of domain borders carries persistent the character characterised by effects of long-term memory. Process of switching of polarisation of a ferroelectric material in an injection mode has not casual character, in the course of formation of the subsequent conditions of system the previous conditions are considered.

The technical analysis of the time number broken into sites in the form of a switching current gives various values fractal dimension for each analyzed period. Such result is caused by the mixed nature of a time number and allows to assume multifractal character of considered processes. Methods multifractal the analysis allow to receive additional characteristics of time dependences. So, the method multifractal random the analysis of time numbers [8, 9], used of this work, allows to receive a continuous spectrum fractal dimensions.

In this method at first from a number allocate a random profile counted from average size, and divide the received values on not crossed segments of one length. Then define the deformed dispersion received by erection of expressions for a dispersion of segments of the following in direct and return directions in degree  $q$  and the subsequent averaging on all segments.

Further is carried out transition from Hurst's indicator to a mass indicator  $\tau(q)$  and spectral function  $f(\alpha)$ , which are the basic characteristics of multifractals [10].

Spectral function  $f(\alpha)$  defines a set of monofractals with dimensions  $\alpha$  which form investigated set. Thus the width of a spectrum  $f(\alpha)$  will be that more than are more strongly expressed multifractal properties. The analysis of the form of the spectrum received for time dependence of a current of switching of polarisation ferroelectric crystal TGS, testifies that the measure carrier is the value corresponding to a maximum of a curve:  $f$



= 1 and a maximum absciss Hausdorfovoj dimension  $D = 1.24$ . The variation of values fractal dimensions in a range  $0.9 < D < 1.9$  confirms the assumption of the nature multifractal process of switching of polarisation in an injection mode. The method multifractal random the analysis represents expansion of a technique of Hurst for the purpose of revealing multifractal properties of time numbers. However it is necessary to notice that in practice for similar calculations use also others multifractal methods, in particular, additional possibilities are opened by a method of the vejvlet-analysis of the time fluctuations [11], allowing to localise time and scale properties of the dynamic data.

## **6. SUMMER HOLIDAYS WITH JAPANESE FRIENDS**

Moiseenko A., Nevedomskaya N., Galkina S.,  
Skolubovich A., Tarasyuk E., Zverev A.  
Scientific leaders – Prof. Borodin E.A., Parshina A.N.

We will tell you about 14 days which we spent with our Japanese friends this summer.

We will begin from the first day of our work. That day was very saturated, because for the majority of the group it was the first experience in a such work. So we met with our Japanese Friends at our railway station, they looked very tired but they were happy to see us. Their group consisted of 5 members (one teacher, one girl and three boys) all of them were 5<sup>th</sup> year students. After a hot meeting and after holding famous Russian tradition with bread and salt we went to the hotel. Because of many problems with plane and train after 30 minutes of rest in hotel we had to go to the recreation center of the “State Bank”. At that recreation center we spent all our time making barbeque, swimming in the swimming pool, trying to play different sport games and of course we spoke a lot. One of the biggest surprises for Japanese was when they saw in our group students who took part in the last journey to Japan. This day was a great success and all of us enjoyed it very much.

As you know, Japanese students came to Russia not only for rest, the main aim was getting knowledge. On the second day they began to study Obstetrics and Gynecology. For the next three days our Japanese friends studied therapy. The next course for our friends was Surgery. Every day was very useful for us, and for them, we spent a lot of time together, went shopping, went to the museum, art gallery, night club, horse club. After all courses of different scientists we went to another part of our beautiful nature. This travel was especially interesting for Japanese because we went to the “Kolosok” and if you know it is a reserve part of

nature. On our way they were looking through the window and they were shocked because they couldn't imagine that Russia was so huge. During the first days of our work we tried to introduce our Academy and made the acquaintance with the Rector of our Academy. After these 14 days we got accustomed to each other. Now we know that we have many friends in Japan, may be after our graduation we will ask each other questions of our work. At the end we just can say that we spent two weeks not only working with Japanese, we can say that meeting was very useful for us.

### **7. 13 FAR EASTERN ANNIVERSARY SCHOOL OF ACTUAL PROBLEMS OF CHEMISTRY AND BIOLOGY**

Dimova M. – the 5<sup>th</sup> year student, Polyakova Y. – the 6<sup>th</sup> year student  
Scientific leader – Prof. E.A. Borodin

Scientific life in our academy is very various and interesting. There are many medical conferences, conference on a foreign languages and a lot of clinical sections. But it is a great honour to take part in scientific life of our country. In September of 2010 we have participated in 13 anniversary school of actual problems of chemistry and biology, which was organized on the base of Pacific Institute of bioorganic chemistry, Vladivostok. Interesting lectures and meetings with professors from Moscow, Berlin, Novosibirsk, Vladivostok help us to understand a lot of different mechanisms of pathological processes on the molecular level. Information about last researches in such fundamental disciplines as biochemistry and molecular biology gives a great possibility to mastering in medicine. The most important theses were about immunity, membrane's biolipids and molecular mechanisms of cancer genesis. Besides, we had a wonderful rest after lectures. Every day we had a possibility to swim in the sea, to sunbathe, to enjoy unforgettable nature. This school was a great experience because all the last scientific news and developments were demonstrated to us. And we met our colleagues from different cities and share one's experience with each other.

### **8. MEDICAMENTOUS TREATMENT OF PITUITARY ADENOMAS**

Konikova D.- the 6<sup>th</sup> year student  
Scientific leaders: ass. prof. Karnaukh A.I., Bibik IA.

Today, because of impossibility of pituitary adenomas removal, particularly big and gigantic, the arsenal of remedies for their treatment

has greatly extended. The purpose of this treatment is hormones level normalization and reduction or disappearance of the adenoma. Primary medicamentous therapy with dopamine agonists is the main method of micro- and macroprolactinomas treatment. The effectiveness of prolactinomas medicamentous treatment is 80 per cent. In case of the ineffectiveness of the surgical method in the therapy of patients with somatotropinomas somatostatin prototypes (the medication of short-term effect - Sandostatin -(Octreotide), the medication of long-term effect- Somatulin (Lanreotide) and Sandostatin LAR) are used. Somatostatin prototypes are used during the preoperational period and as the original method of treatment in case of the contraindications to a surgical operation. Pharmacotherapy of corticotropinomas is an extra method of treatment including the use of steroids synthesis blockers. In high doses dopamine, somatostatin agonists or gonadoliberin antagonists are used for the medicamentous treatment of inactive pituitary adenomas during 6-12 months. Their effectiveness is 30 per cent. Somatostatin prototypes depress thyrotropin secretion in 90 per cent of patients with thyrotropinomas and normalize the thyroid hormones level in 75 per cent. Somatostatin prototypes primary therapy is used during preoperational period in patients with microthyrotropinomas and macrothyrotropinomas or invasive adenomas with the high risk of the lack of operation effect.

Thus, highly effective dopamine agonists therapy is a method of choice in treatment of patients with prolactinomas. Surgical method takes the main place in the treatment of patients with somatotropinomas, thyrotropinomas, inactive pituitary adenomas supplemented with the long-term somatostatin prototypes therapy.

#### **9. THE USE OF THE RADIOTHERMOMETRY-METHOD FOR DIAGNOSTICS OF THE MAMMARY GLAND CANCER**

Kolesova M., Khokhlova E. - the 5-th years students

Scientific leaders – Ass. Prof. Lysenko O.V., Yegorova V.D.

The augmentation of a number of diseases of the mammary gland cancer forces doctors and developers of diagnostic equipment to search for new agents for the early detection of this disease. Existing methods of the detection of the tumor (for example, palpation, mammography or ultrasonic diagnostic), unlike the radio thermometry demand that the tumor had the local mass and was contrast concerning surrounding tissues, the generated structural changes of tissues are fixed. The microwave radio ther-

ometry method (pressure RTM) represents passive non-invasive procedure of the definition of tissue thermal activity. As changes of the tissue temperature precedes the structure to changes, there is a basic possibility to the detection of diseases at early stages. In comparison with the applied infra-red rays in mammology thermography giving the information on the temperature of cutaneous integuments, RTM gives the information on the tissue temperature in depth of several centimeters and consequently possesses large information. The other important advantage of RTM is its absolute harmlessness that allows to carry repeated investigations, to observe dynamics of the disease and to choose treatment tactics correctly. Now more than 500 patients with various diseases of the mammary gland were examined and the certain experience of using of RTM-diagnostics was collected in the complete examination of patients. In the course of the work the method of diagnostics of the mammary gland cancer was improved. Thus the main attention was paid to the use of the personal computer and perfection of diagnostic programs. Also the work in the perfection of methods of display of the information in internal temperature has been done. The done work has shown that RTM-diagnostics with the application of computer methods of processing gives the high detect ability of the mammary gland cancer (90 %). In some cases RTM-methods give earlier diagnostics of the mammary gland cancer than traditional methods. Taking into account the high detect ability of the mammary gland cancer absolute harmlessness of RTM-diagnostics and rather low cost of diagnostic equipment in comparison with US and mammography devices, it is expedient to use RTM-diagnostics in out-patient departments for the purpose of revealing the patients of risk group for further complex diagnostics and for the treatments of patients in the special centers. Besides, the main possibility of the early diagnostics of the mammary gland cancer and control of the treatment process is of interest for RTM-diagnostics use in the complex examination of patients in mammologic dispensaries. Examining 539 patients with different diseases of the mammary gland it was shown that by means of radio thermometric researches with the application of the personal computer it was possible to reveal cancer of the mammary gland with the high degree of the detect ability (more than 90 %). Potential possibility of the early detection of the mammary gland cancer and revealing the patients with the rapid growth of the mammary gland cancer were marked.

## 10. ALIEN BODIES OF THE STOMACH

Bova E., Zasukhina A. – the 3<sup>rd</sup> year students  
Scientific leaders - Bulat E.P., Kostina V.V.

The problem of treatment of the swallowed alien bodies of a stomach remains actual as there are not enough publications of generalizing and recommendatory character in the periodic literature. The complications are arisen in patients with alien bodies of a stomach in 30-50 %, death rate reaches 5,1-32,7%. More often alien bodies are swallowed by persons with mentally disease, with the aim of mutilation or casually.

Clinical displays of alien bodies of a stomach are various: from asymptomatic passage of alien bodies up to complaints of a strong pain on a course of the digestive channel, vomiting, feeling of weight in epigastric region etc.

The dynamic radiological research has the great value in diagnostics of alien bodies along with carefully collected anamnesis. In a choice of method of treatment there are many disagreements and contradictions.

Being based on the given material it is possible to draw a conclusion: alien bodies of a stomach are rare clinical cases. The clinical picture is not expressed, what complicates the diagnostics. Operative interventions at alien bodies of a stomach are carried out only in the development of complications.

## 11. PARKINSON'S DISEASE

Karpanin V.I. - the 3<sup>nd</sup> year student  
Scientific leaders - prof. Gordienko E.N., Kostina V.V.

**Parkinson's disease** is a degenerative disorder of the central nervous system that often impairs the sufferer's motor skills, speech, and other functions. Parkinson's disease belongs to a group of conditions called movement disorders. It is characterized by muscle rigidity, tremor, a slowing of physical movement (bradykinesia) and, in extreme cases, a loss of physical movement (akinesia).

Parkinson's disease affects movement, producing motor symptoms. Four symptoms are considered cardinal in Parkinson's disease: tremor, rigidity, bradykinesia and postural instability. Other motor symptoms include: Gait and posture disturbances, speech and swallowing disturbances, fatigue, hypomimia, micrographia, impaired fine motor dexterity and motor coordination.

Parkinson's disease causes neuropsychiatric disturbances, which include mainly cognition, mood and behavior problems and can be as disa-

bling as motor symptoms.

At present, there is no cure for Parkinson's disease, but medications or surgery can provide relief from the symptoms.

## **12. THE DYNAMICS OF OCULAR REFRACTION CHANGE IN THE SECOND- YEAR STUDENTS OF THE AMUR STATE MEDICAL ACADEMY DURING A YEAR**

Gosteva A. A.-the 6<sup>th</sup> year student

Scientific leaders: Prof. A. L. Shtilerman, Cand.Med.Sc. E. A. Mikhalsky,  
IA. Bibik

The visual disturbance occupies a special place among all kinds of diseases the students are ill with.

Nowadays myopia is known to be one of the most common anomaly of ocular refraction in the world, and the number of patients with shortsightedness rises from year to year. There are about 15 million shortsighted people in Russia, 70% of them are people of working age. Complicated myopia takes the 2nd-3rd places in the structure of vision disability in Russia (Liebman E.S., 2000, 2005). The number of shortsighted people among students in Europe is 15%, while in Japan - 85%.

In practice there is visual impairment in students with myopia during the period of their study in the higher school. That's why this problem is actual and should be studied.

The aim of our research is to investigate the dynamics of ocular refraction change in the second-year students of the Amur State Medical Academy during a year.

We studied 34 second year students (68 eyes) of the Academy aged 18-20 with different pathology of ocular refraction. There were 6 students (11 eyes) with myopia (group 1) and 24 students (48 eyes) with emmetropia (group 2).

The students were examined in 2009. The examination included visometry and autorefractometry. Besides we analysed the data of visometry before their entering the Academy in 2008.

During examination a high level of pathology of ocular refraction was revealed. The disturbance of refraction was observed in 47% of cases. Predominant eye pathology was low myopia (29% of cases).

In group 1 with myopia the initial level of visual acuity without correction ranged from 0.2 to 0.6. On average it was  $0.4 \pm 0.04$ . Initial ocular refraction ranged from -0.5 dpt. up to -2.0 dpt. On average it was  $2.25 \pm 0.3$  dpt.

According to the analysis of the dynamics of ocular refraction

change in the students examined during a year (2008-2009) in the students with myopia visual acuity without correction decreased on average from  $0.4 \pm 0.04$  to  $0.25 \pm 0.03$  ( $P = 0.95$ ). In the students with emmetropia (group 2) visual acuity without correction also decreased from 1.0 to  $0.9 \pm 0.03$  ( $P = 0.9$ ).

In group 1 strengthening of ocular refraction was observed in 90% of cases (10 eyes). On average it was from  $-1.386 \pm 0.2$  to  $-2.25 \pm 0.3$  dpt. ( $P = 0.95$ ).

In a year in group 2 a transition of emmetropic refraction into myopic form in 27% of cases (13 eyes) was observed. On average it was  $-0.198 \pm 0.06$  dpt. ( $P = 0.99$ ).

The results of our research are the following. During the examination of the second-year students of the Amur State Medical Academy a high level of pathology of refraction was revealed. 47% of students had ametropia. Besides the significant increase of a number of students with myopia (13% of cases) was marked. And a number of students with normal refraction decreased during a year (19% of cases). In addition the progression of shortsightedness was observed. Thus the students with the second degree of myopia were revealed (6% of cases).

### **13. WHAT IS THE LETHARGICAL SLEEP**

Nuriev E – the 3<sup>rd</sup> year student

Scientific leaders: Ass. Prof. Kirichenko E.F., Kostina V.V.

There is something not clear, mysterious and even mystical about lethargical sleep. Legends are connected with it, novels are written about such sleep. Probably it's difficult to find any other phenomenon about which so much prejudices and superstitions are known. Correct representation of the lethargical sleep needs to have at least simply for outlook expansion.

The lethargical sleep or lethargy (oblivion, inactivity) is a condition of a pathological (painful) sleep with more or less expressed relaxation of all displays of life, including immobility considerable decrease of metabolism weakening or absence of reaction to sound or painful irritants and also by touches. There is lethargical sleep in hysteria, the general exhaustion, after strong excitements. The changes occurring in a human body in a human body during lethargical sleep are studied insufficiently.

Myths about alive buried in a lethargical sleep come from ancient times and have under itself certain basis. Once in crypts and underground there were found dead men with the broken off shrouds and drawn blood hands who tried to escape from coffins. Sometimes such people had luck

and they were saved by cemetrial thieves who dug out tombs to gather the dead man or simply people who passed by and heard noise from a tomb. In England during many years exists the law (it also exists nowadays) according to which there should be a bell with a rope in all mortuaries in order the revived can call for help.

In heavy, seldom seen displays of a lethargy there is a real picture of imaginary death: a skin is cold and pale, pupils almost don't react on light, breath and pulse are difficult to find out, arterial pressure is lowered, strong painful irritations don't cause any reaction. During several days patients don't drunk and eat, urinary excretion and excrement's excretion are stopped, there comes loss in weight and dehydration.

The treatment of lethargical sleep is a rest, pure air, vitamin – rich food. If there's no possibility to feed such patient, the food can be given in a liquid and semi-fluid kind through a probe. It's required a careful attention, otherwise there will be bedsores as a result of long staying in bed, the addition of infection, the health's state sharply will become complicated.

#### **14. ACUTE PURULENT OMENTITIS**

Byrdin Y.V. - the 3-d year student

Scientific leaders- Volkov L.A., Gritsenko S.N.

Inflammatory diseases of the big epiploon are met very seldom and described in the form of individual observation.

Authors connect inflammation development in an epiploon with acute infringement of blood circulation or hematogenous infection.

The clinical picture of acute omentitis is characterized by a painful syndrome, presence of tumor in the abdominal cavity, clinic of intestinal impassability, a peritonitis.

Before operation it is diagnosed extremely seldom, it is often an operational find.

The best informative method of diagnostics is the laparoscopy.

Treatment consists of a resection of the changed area of an epiploon within healthy tissues.

Over the last 15 years only one patient with purulent omentitis has been observed in a city hospital that makes 0,15 % among patients with acute surgical diseases of organs of the abdominal cavity.

The patient B.of 67 years has arrived in surgical department by ambulance complaining of pains in the right half of the abdominal cavity, amplifying at sharp movements and cough, increase in temperature of a body up to 38 C. At examination it was noted: the condition is satisfactory. The stomach has a correct form, at a palpation it is tense and painful in the right meso-



gastral area. Symptoms of irritation of a peritoneum are doubtful. In connection with an ambiguity of pathological process the diagnostic laparoscopy is executed, thus tumor in the big epiploon was found with the acute inflammation in mesogastral area on the right.

An operation — a laparotomy, an epiploon resection in a place with tumor is made. At histological research of a preparation the diagnosis of purulent omentitis is confirmed.

The postoperative period proceeded without complications.

#### **15. NATURAL FOODS AND COSMETIC GOODS, CONTAINING BIOLOGICALLY ACTIVE COMPOUNDS OF SOY BEANS.**

Lapin D. the 3-d year student

Scientific leader Prof. Borodin E.A.

The project of working out of natural foods and cosmetic goods, containing biologically active compounds (BAC) from soy beans is offered. The suggested technologies and goods will be unique and may be used in medicine and in particular in the medical nutrition and dermatology. Foods and cosmetic products will be enriched with antioxidants and phospholipids from soya. The possibility of commercialization of the produced products is based on the following grounds: the products will be innovative, for every day use by various strata of society of different categories. The produced goods do not demand obligatory certification. The prospective market will be capacious, accessible, perspective for development and growth, the profitable, protected by the property right and also effective due to the attraction of scientific experts, experts in marketing, etc. The realization plan is calculated for 2-3 years (release of the first samples. The first steps are estimated on working out of technologies of getting of different BAC from soy beans and elucidating of their biological effects. The subsequent steps will be directed on the research of the market and promotion of the developed technologies and products.

#### **16. BASIC KNOWLEDGE ABOUT MUCOVISCIDOSIS AND THE VARIANTS OF PHENOTYPE OF WELL-KNOWN PATIENTS**

Peschanskaya S. - the 2nd year student

Scientific leaders – Professor Gordienko E.N., Bibik I.A.

The research is dedicated to the actual questions of one of the most widely-spread lethal hereditary diseases in persons of the white race –

mucoviscidosis. Novelty of the research is a study of case records of real patients. Work includes virtual contacts with people ill with mucoviscidosis on Internet as well as the study and the analysis of the course of diseases of famous people: Frederic Chopen – a great Polish composer and a French singer Gregory Lemarshal. At the age of 20 the talented performer conquered the whole world and won the title of the winner of the fourth season of French “Factory of the Stars”. The problem of research is to destroy the myth of widely-spread error that ill children are backward (“diagnosis is not a verdict”).

## **17. ENDOSCOPIC TREATMENT OF VENOUS TROPHIC ULCERS**

Nevedomskaya N.- the 3<sup>rd</sup> year student  
Scientific leaders – Cand. Med. Sc. Zyuzko A.S.,  
Bibik I.A

According to contemporary statistics, chronic venous insufficiency of the lower extremities - an extremely common pathology. 20 - 25% of the population of industrialized countries suffer from chronic venous insufficiency, and 1 - 4% have trophic skin changes. In Russia, more than 35 million people suffer from various forms of CVI, and 15% of them already have trophic ulcers of the lower extremities.

A trophic ulcer - a defect of tissues with a low tendency to heal, which arose against the background of venous blood flow in the lower extremity.

The rapid development of endoscopic and minimally invasive surgery in the past 10-15 years has allowed to solve many problems existing in the surgical Phlebology. As a result, an endoscopic subfascial dissection of the penetrating veins (ESDPV) was designed and implemented.

Endoscopic subfascial dissection of the penetrating veins of the shank - an important stage of the combined operation, which eliminates horizontal pathological reflux. Immediately before the intervention the border zones of probable localization of the incompetent penetrating veins with valvular insufficiency, identified with physical or ultrasonic methods are marked on the skin with a solution of brilliant green or a special marker. Endoscopic dissection of the communicating veins is not only therapeutic but also a diagnostic procedure, so from that point of view there is no need for individual marking of the penetrating veins with valvular insufficiency.

After the skin, subcutaneous tissue incision and fascia of the

shank it to be peeled from the muscle with a swab, branches of scissors or a scalpel. Then, in the subfascial space the operating tube with an endoscope, connected to the lighting system, a video camera and to the monitor is introduced. The subsequent course of intervention is under constant video monitoring.

Conclusions:

1. Endoscopic subfascial dissection of the penetrating veins is pathogenetically justified, effective and less traumatic way to eliminate horizontal reflux in CVI on the background of the varicose veins and its complications such as venous ulcers.

2. Using specially designed tools and equipment is an important component of effective and safe endoscopic subfascial dissection of the penetrating veins.

3. Endoscopic dissection of the penetrating veins is the method of selection if there are "open" and long healing wounds.

### **18. ROLE OF OXYCODONE AND OXYCODONE/NALOXONE IN CANCER PAIN MANAGEMENT**

Nekrasova O. – the 3-rd year student

Scientific leader – Cand. Med. Sc. Simonova N.V.

The aim of research is to outline the pharmacodynamic and pharmacokinetic properties, drug interactions, dosing rules, adverse effects, equianalgesic dose with other opioids and clinical studies of oxycodone in patients with cancer pain. This aim predestined the possibility to show the potential role of oxycodone/naloxone in chronic pain management and its impact on the bowel function.

Oxycodone is a valued opioid analgesic, which may be administered either as the first strong opioid or when other strong opioids are ineffective. In case of insufficient analgesia and/or intense adverse effects such as sedation, hallucinations, nausea and vomiting caused another opioid, oxycodone might be beneficial.

Oxycodone is administered to patients with severe pain and to patients who were unsuccessfully treated with weak opioids, namely tramadol, codeine and dihydrocodeine. Oxycodone effective analgesia may be attributed to its affinity to  $\mu$  and possibly  $\kappa$  opioid receptors, rapid penetration through the blood-brain barrier and higher concentrations in brain than in plasma. Oxycodone displays high bioavailability after oral administration and may be drug of choice in patients with renal impairment due

to the decreased production of active metabolites. Recently an oral controlled-release oxycodone formulation was introduced in Poland. Another new product that was launched recently is a combination of prolonged-release oxycodone with prolonged-release naloxone (oxycodone/naloxone tablets).

### **19. MALE TRICHOMONIASIS**

Storozhuk A. - the 2nd year student

Scientific leaders – Prof. Gordienko E.N., Bibik I.A.

Trichomoniasis is an infectious sexually transmitted disease. It is caused by a single-cell microorganism - Trichomonas. Every year in the world more than 180 million people fall ill with trichomoniasis once again. These are mainly people of sexually active age.

Symptoms of infection in males show themselves extremely seldom thanks to what males do not suspect about the illness and become a constant source of an infection. The research reflects interaction of Trichomonas with a male organism, its adaptation to male genital tract owing to what reproductive tract obstruction occurs.

The variant of the latent influence of Trichomonas at the expense of parallel affection of an organism by other microorganisms is considered. All these leads mainly to male sterility.

### **20. DIETARY SUPPLEMENTS. BENEFITS AND HARM.**

Ivanchenko A.–the 2-nd year student

Scientific leader– Prof. Borodin E.A.

Dietary supplement, also known as food supplements or nutritional supplements are a preparations intended to supplement the diet and provide nutrients, such as vitamins, minerals, fiber, fatty acids, or amino acids, that may be missing or may not be consumed in sufficient quantity in a person's diet. Some countries define dietary supplements as foods, while in others they are defined as drugs or natural health products. In the European Union the Food Supplements Directive of 2002 requires that supplements be demonstrated to be safe, both in quantity and quality. By definition, vitamins and minerals are essential, i.e. the body cannot make them, so they must be obtained exogenously or from the diet, but excessive intakes can be harmful, notably Vitamin A. Consequently, only those supplements that have been proven to be safe may be sold without prescription. As a category of food, food supplements cannot be labeled with drug claims in the bloc but can bear health claims and nutrition claims. Russian

legislation, Ministry of Health's order number 1898 dated as of 15 April 1997, under the title "Concerning the procedure for the examination and health certification of Active Dietary Supplements", provides the usage of the following terminology: As a rule, BADSs are foodstuffs with clinically proven effectiveness. BADSs are recommended not only for prophylactics, but can be included into a complex therapy for the prevention of pharmaceutical therapy's side effects and for the achievement of complete remission. The development of BADSs and their applications has been very fast moving. They were originally considered as dietary supplements for people who had heightened requirements for some normal dietary components (for example, sportsmen). Later, they were employed as preventive medicines against chronic diseases. One of the main problems with dietary supplements are the claims that they are affective in the treatment of disease. Dietary supplements are permitted to make structure/function claims. These are broad claims that the product can support the structure or function of the body (e.g., "glucosamine helps support healthy joints", "the hormone melatonin helps establish normal sleep patterns"). The FDA must be notified of these claims within 30 days of their first use, and there is a requirement that these claims be substantiated. In reality, misleading claims about supplements are common, particularly on poorly regulated commercial websites. For example, the compound hydrazine sulfate is sold as a dietary supplement in the USA and promoted as a treatment for cancer, despite little evidence that it is either safe or effective. Other claims that required approval from FDA include health claims and qualified health claims. Health claims are permitted to be made if they meet the requirements for the claims found in the applicable regulations. Qualified health claims can be made through a petition process, including scientific information, if FDA has not approved a prior petition. The chief sanitary inspector of Russia Gennady Onishchenko points to the fact that many people overestimated the benefits from the use of BADs due to the strong propaganda BADs in mass media.

## **21. PATHOGENESIS OF HEPARIN-INDUCED THROMBOCYTOPENIA**

Schekochihina O. - the 1<sup>st</sup> year student  
Scientific leader - Cand. Med. Sc. Brash A.A.

Heparin-induced thrombocytopenia (HIT) - a complication of heparin therapy, leading to the development of arterial or venous thrombosis, increased bleeding and DIC syndrome. It develops in 1-5% of patients during treatment with heparin and in 0.5-1% of cases during its

prophylactic application. Today HIT is considered to be a group of immune thrombosis. It's classified as a separate clinicopathologic syndrome. However, it is not quite so. According to the mechanism of development there are two types of HIT: HIT I - non-immune and HIT II - immune. HIT I occurs during the first days after using heparin and is characterized by a moderate decrease of platelet count. The mechanism of cytopenia in the HIT I is explained by the ability of heparin to activate platelets and cause non-immune heparin-induced platelet aggregation. HIT- I is transient and in the continuation of heparin therapy may disappear on their own. HIT II is immunodependent. It develops in 3-15 days of heparin therapy. The platelet count is greatly reduced, and is about 15-25% of norm. Besides bleeding occurs. Paradoxical thrombosis is a severe clinical complication of HIT II during treatment with an anticoagulant. It occurs in 35-70% of cases, of which 30% - with fatal consequences. Most frequently thrombosis of the deep vein of the shank, thromboembolism of the pulmonary artery, thrombosis of the coronary vessels. As for general systemic reactions the rise of temperature, tachycardia, the increased blood pressure, tachypnea, dyspnea, headache, short-term complete amnesia occur. Bilateral adrenal infarction, leading to necrosis of the adrenal glands, in which extremely high risk of death is the most terrible manifestation.

## **22. BRAIN TUMORS ARE FOUND AT ALMOST ANY AGE**

Yegorova I. – the 2 -<sup>nd</sup> year student

Scientific leaders – Pavlova A.E., Kostina V.V.

The clinical picture of brain tumors is expressed in the progressive development of the disease and the steady increase in focal, cerebral and somatic symptoms.

Headache – one of the cardinal, frequent and early symptoms of developing brain tumors. The nature of headache may depend on the tumor localization and its histostucture.

Other symptoms of brain tumors are vomiting, dizziness, meningeal symptoms, epileptic syndrome. Congestive optic disks is a very valuable objective symptom of venous congestion and increased intracranial pressure. Significant reduction in visual acuity (up to 0.1 and below) at the atrophy stage is unfavorable in terms of prognosis.

Non-invasive methods to define brain tumors are neurological examination;

- Pathopsychological examination; - Neuro-ophthalmic examination;

- Otoneurological examination; Scintigraphy - Computed Tomography (CT). A more accurate method of CT is with intravenous CT contrast.

EEG is not a nosologically specific method of examination. In general, malignant glioma and metastatic cancer are mostly significantly determined, since they give the most pronounced changes in the EEG, as well as an indirect sign of a tumor - an epileptic focus.

Angiography makes it possible to determine so-called arteriovenous malformations, especially frequent in gliomas near the venous flows.

Puncture biopsy is taken immediately before surgery for final diagnosis.

Treatment of malignant brain gliomas is one of the most difficult tasks in neurooncology. At the present stage the integrated approach to the treatment of malignant gliomas is the most effective. There is no doubt surgical interference, aiming at the complete removal of the tumor, is of great importance. Chemotherapy may precede an operation to reduce the number of tumor cells.

### **23. THE SIGNIFICANCE OF OCCUPATIONAL DISEASES AND SIGNS OF MEN'S BELONGING IN PERSON'S IDENTIFICATION**

Kostin I. – the 3<sup>rd</sup> year student

Scientific leaders: Ass. Prof. Gigolyan M. O., Kostina V.V.

On medicolegal establishment of unknown person's profession one should distinguish two groups of signs: occupational diseases and the signs which are connected with the process of production.

The literary data and materials of unidentified corpses were studied.

On medicolegal research of corpse of unknown person it appears the necessity of the establishment of men's profession.

A. Grigorjeva (1967) has given the detailed classification of occupational diseases, which were caused by the action of different chemical substances, physical and biological factors and by inhalation of dust, functional overstrain of organs and also has pointed out on the specific methods of research of occupational intoxications which can be used in expert practice. M. I. Serebrennikov described morphological picture of cicatricial tissue and recommended the medicolegal researches of skins cicatrix, he also noted that burns which appeared from the action of hot fluids and different chemical substances, has kept rather, strong-willed, cicatrices, the origin of which wasn't difficult to establish.

It's necessary to pay great attention to the study of tattooing on the corpses, which can point out on the occupational belonging (tattooing

of miners, serviceman, convicted person, belonging to the criminals and others).

For revealing of metal's presence on the hands one can use the contactly-diffuse method.

By characteristic peculiarities of one can distinguish people which are occupied with physical and mental activities.

So the given data have the reason to suppose that the registration of occupational diseases and signs and also may be used for establishment of men's occupational activities. It's especially important in medicolegal research of the unknown person.

#### **24. ORGANIZATION OF STUDENTS HEALTHY LIVING – STYLE DURING STUDY**

Kushnarev V. – the 2-nd year student

Scientific leaders – Gordeeva N.V.

Subacheva N.A.

Organization of students healthy living – style during study.

Modern time of a life shows increased requirements to intelligence and health of the person, especially the young men entering productive age. The future experts should have not only high professional qualification, but also health physical endurance, working capacity and high morally-ethical qualities.

Health is one of the sources of ours happiness and pleasures, good health state and high working capacity. But we understand it when we have lost it. The majority of people do not appreciate the force and health-giving factors such as physical culture and sports, healthy household and industrial conditions, fresh air and a normal dream, a balanced diet and activity and so on).

Health depends on many factors, the main things among them - are condition of the ecological environment, heredity, the level of public health services development, observance of a healthy life-style and many other things. All these elements are put at school, family, and high school. The student receives necessary theoretical knowledge and practical skills in volume of theoretical disciplines. But nevertheless introduction and observance of a healthy life-style is carried out slowly and insufficiently. For example, the basic components of a day regimen (a dream, nutrition, study, activity, physical training), a defining state of health and working capacity of students, both on younger, and on the senior years are not regulated, and broken. Wide introduction of elements of healthy life-style in a life and study of students – are powerful means of health strengthening,



preventive maintenance of diseases and increases of working capacity.

## **25. FEATURES OF COMMUNITY-ACQUIRED PNEUMONIA TREATMENT IN EPIDEMIC OF INFLUENZA VIRUS A(H1N1) 2009**

Arsenova T., the 4<sup>th</sup> year student

Scientific leader: ass. Vdovina O.B., Yegorova V.D.

Pneumonia is wide spread and potentially dangerous infectious diseases of respiratory system. One of many reasons of community-acquired pneumonias is a viral infection, especially influenza virus. Flu epidemics arise almost annually, mainly during winter time. There was some pandemic flu in history. In spite of all efforts of general practitioners and microbiologists, morbidity and mortality are high.

2009 is known for pandemic flu A (H1N1) which also called “swine” or “mexican” flu. This flu was caused by a new strain of virus and appeared in March – April of 2009. It immediately spread throughout the world. Since October of 2009 the rate of swine flu morbidity has increased sharply in Blagoveshchensk.

We did a retrospective analysis of 32 medical histories of patients with diagnosis “community-acquired pneumonia”. Clinical features, disease severity, localization, complications, treatment and outcome of the disease have been studied.

### Materials and methods of research

The diagnosis “community-acquired pneumonia” has been established in all cases on the basis of complaints, objective data and results of clinical, roentgenological and laboratory researches. There were used researching methods of glucose, protein, Urea, fibrinogen, urine, the test for acid-resistant mycobacteria, sensitivity to antibiotics, a thorax X-ray in two projections.

### Results of research and their discussion

It was established that the majority of patients with this diagnosis were males (56.3 %) at the age from 17 to 70 years old. 43.7% were females at the age from 19 to 67 years old. 68.8% of patients were young men and women. 53.2 % of patients were with the left sided form pneumonia.

To all patients was prescribed an antibacterial therapy from the first day of treatment. The most effective combination of antibiotics were Cefotaxim, Ceftriaxone (cephalosporin III and IV generation) and clarithromycin because this combination has influence to well-known spectrum of typical and atypical originators of a pneumonia. At inefficiency

change of preparations on Ftorchinolone was made. As antiviral preparations Ingaverin, Arbidol with known ability to amaze a flu virus have been prescribed.

As the result, 90.6% of patients had an absolute recovery of pneumonia.

Thus, during the pandemic flu was registered a flash of a case rate by an community-acquired pneumonia. Among the diseased persons were a lot of young people. With the help of well-timed antibioticotherapy in a combination to antiviral preparations has rendered high therapeutic effect at treatment of the community-acquired pneumonia during a flu epidemic.

## **26. TYPES OF SOMATIC CONSTITUTION IN FIRST-YEAR STUDENTS**

Krivopusk S., Prilepko K. –the 2 –year students

Scientific leaders: assistant-professor Shakalo Yu. A.,

Posokhova A.A.

Research of anthropometrical data causing constitutional signs of structure of a person's body has a very important theoretical and applied value and is one of the elements of practical skills' perfection at first-year students. Indicated signs of students' somatic types are revealed in different directions. First, students join to study the parameters of anthropometry on models (classmates acted in this role) that has a clinical continuity with the physical examination of patients. Secondly, students study the individuality of structure and variability of forms of peoples' somatic types, using the data of anthropometry.

Thirdly, the importance of research of anthropometrical signs and peoples' somatic signs consists in the structure of topical localization. We can carry out rather exact diagnostic measures thanks to correlation between external and internal structure taking into consideration the type of a person's build.

The aim of our investigation was studying the students' somatic types by different groups and carrying out the comparative analysis with the previous research.

50 students of the first course of the Amur State Medical Academy (8 boys and 42 girls) were the object of the investigation. The following signs were investigated: height, weight, articular circumference of the chest and Pinye's index were investigated. The latter parameter was determined by M.V. Chernorutskiy's formula:  $L - (R+T)$ , where L is the height, R is the weight, T is the articular circumference of the chest. The description of Pinye's index: more than 30 is an asthenic type, less than 10 is hy-

persthenic one from 10 to 30 is normosthenic.

The following results were received. The asthenic type of constitution is prevailed in the parameters in first-year- boys, it was revealed in 62,5 %. The hypersthenic types of constitution - 12.5 % made up the least part. Pinye's index corresponded to normosthenic type in 25% of cases. In the structure of the received data the greatest part in first-year girls as well as in boys corresponds to the asthenic type of constitution-55%. The rest types of constitution were distributed as follows: 28,5 % of the investigated persons have a hypersthenic type and in 16,5 % -a normosthenic one.

In comparison with the investigation in 2009 the number of normostenics among boys decreased more than two times from 58 % to 25 %. The number of asthenics increased from 33 % to 62,5 %, also the number of hypersthenics increased from 9% to 12,5%. Among girls the number of asthenics increased three times from 18 % to 55 %. The number of normostenics decreased from 37 % to 28,5 % ,also the number of normostenics decreased from 45% to 16,5%.

Thus, we see that the increase of the number of asthenics is observed among boys and girls and the number of normostenics decreased.

## **27. FEATURES OF VENOUS SYSTEM OF A HEAD'S CEREBRAL PART**

Philippov A. – the 2<sup>nd</sup>-year student

Scientific leaders – ass. Zherepa L.G., Posokhova. A.A.

The venous system of a head's cerebral parts has its features. First, presence of several venous systems or layers of veins on a head. Second, connections between these venous systems. Extracranial, cranial and intracranial venous systems are differed on a head. An extracranial the venous system is presented by veins of soft tissues. They accompany the arteries with the same name and take away blood into internal jugular vein through retromandibular vein from the vault of a skull and through the facial vein from the face. A cranial venous system is bony, the so-called diploic veins, put in a spongy layer of bones of a skull's vault. Four diploic veins pass from each side in the thickness of a bone: frontal, anterior and posterior temporal and occipital. They are communicated both with the veins of a skull's vault and with the sinuses of a firm brain meninx. Intracranial venous system is made by sinuses of a firm meninx and cerebral veins (surface and deep). The connection between intracranial and extracranial venous systems is carried out by means of special venous vessels – venous emissaries. They connect the veins of integuments of a skull's vault and veins of a spongy layer of its bones with the sinuses of a

firm meninx. The presence of connection between intracranial and extracranial venous systems can play both positive, and a negative role. On the one hand, it provides an additional reserve way of blood's outflow in the disturbance of the main way of outflow along internal jugular vein and on the other hand, transition of infection from integuments of a skull to meninges become possible due to this connection (for example, in furuncles and carbuncles of a back of a head) with the further development of meningitides, sinus thromboses and other severe complications.

## **28. TRICHOMONAS VAGINALIS**

Bondarovich K. – the 2<sup>nd</sup>-year student

Scientific leaders – prof. Gordiyenko Ye.N., Posokhova A.A.

Trichomoniasis is a very common sexually transmitted infection caused by a peculiar, highly efficient parasite – *Trichomonas vaginalis*. The symptoms of *trichomonas vaginalis* are vaginal discharge, yellow or green colored which may smell unpleasant and look frothy, painfulness, itching and inflammation in and around the vagina, frequent necessity to urinate and/or pain in urinating, pain when having sex. *Trichomonas* grows and multiplies in a moist environment in 35-37°, in very different pH of 4,9-7,51. *Trichomonas vaginalis* possesses the ability to phagocytosis.

## **29. STEM CELLS: VICTORIES AND DOUBTS**

Loskutnikova M. – the 1<sup>st</sup>-year student

Scientific leaders – dms. Gordiyenko Ye.N., Posokhova A.A.

Stem cells attract scientists' and doctors' attention for a long time. It is connected with their unique ability to multiply quickly and to turn into various tissues and organs. The use of stem cells in medicine gives the possibility to cure many severe diseases. Stem cells are the member of umbilical cord blood collected during the delivery from a newborn. They are kept in cryogenic repositories for decades. If necessary, they are unfrozen and used by prescription. In an adult stem cells are mainly found in a marrow, but in very small quantities.

In the 60<sup>th</sup> years of the 20<sup>th</sup> century the outstanding Soviet and Russian scientist Fridenshtein and his colleagues were convinced during experiments on animals that stem cells were able to change into cartilaginous, fatty and bony cells. Nowadays different human tissues are grown out of stem cells in Moscow, St. Petersburg, Novosibirsk laboratories. They are used in transplantation of skin tissue in burns, nervous cells in Alzheimer's disease, cells of liver, Langerhans' islets in diabetes and other dis-

eases.

The national project in the field of Public Health Service by prophylaxis and treatment of cardiovascular diseases was developed by the Russian Government because they are one of the main reason of high mortality in Russia and abroad. Japanese researchers under the guidance of Hiroshi Kamikhata implanted stem cells to people suffering from myocardial ischemia and got excellent results in the improvement of heart's work. Similar operations are performed at the Meshalkin Research Institute of blood circulation pathology in Novosibirsk. In cardiosurgery stem cells are used to create the artificial heart valve.

Despite great success and achievements in the use of stem cells the researchers have doubts. First, the methods of getting stem cells for a particular person has not been developed yet. Besides, the clinical experience of stem cells application is extremely little. The consequences of treatment by stem cells are unknown. There is the risk of development of cancerous diseases. Moreover, there is a danger of infection in stem cells therapy, as very often it is unknown where, how and what were these stem cells derived of.

In conclusion we want to note that there were always periods of victories and great doubts in correctness and efficiency of the use this or that method of treatment and prophylaxis of diseases. I hope that in the nearest future modern cellular technologies will be used in our Blagoveshchensk Cardiosurgical Centre. Stem cells are sure to revive heart work of many Amur patients.

Thus, in medicine of the 21<sup>st</sup> century stem cells therapy are the PERSPECTIVE of future.

### **30. ADAPTOGENS IN THE CORRECTION OF LIPID PEROXIDATION PROCESSES INDUCED BY THE INFLUENCE OF COLD AND ULTRA-VIOLET RAYS**

Tarasov A., Shevchenko E., Sharifova Z. – he 3<sup>rd</sup> year students  
Scientific leaders – cms. – Simonova N.V., Posokhova A.A.

The exhaustion of reserve possibilities of an organism that is reached by considerable morphological and functional shifts occurs in the long influence of inadequate conditions of environment on a warm-blooded organism. Strengthening of free radical oxidation caused by the action of unfavorable factors on an organism leads to the response of anti-oxidant system. Numerous experimental and clinical observations testify that the increase of antioxidants' level by their additional introduction always gives the expressed increase of an organism's stability to various

influences stimulating processes of peroxide oxidation in biomembranes. Therefore, researches on application of vegetable adaptogens were carried out for the purpose of stabilization of processes of freely radical oxidation of lipids and correction of exchange processes in adaptation to stressful influence of a long irradiation and cold load.

### **31. MODERN METHODS OF TREATMENT OF CHRONIC AUTOIMMUNE THROMBOCYTOPENIC PURPURA**

Somova A.A. – the 6<sup>th</sup>-year student

Scientific leaders: dms Voitsekhovskiy V.V., Posokhova A.A.

Thrombocytopenia is a state in which the amount of thrombocytes in peripheral blood decreases less than  $150 \times 10^9/l$ . The autoimmune (idiopathic) thrombocytopenic purpura (the outdated name is Verlgofae's disease) is the disease characterized by thrombocytes' destruction in peripheral blood under the influence of antibodies. Acute forms lasting from 3 to 6 months and met in children more often and chronic forms of autoimmune (idiopathic) thrombocytopenic purpura observed in adults more often are singled out. Hemorrhages are the main clinical symptom. A spontaneous hemorrhagic syndrome in these patients is developed when the amount of thrombocytes is less than  $50 \times 10^9/l$  that is the indication for therapy's prescription. The treatment of autoimmune (idiopathic) thrombocytopenic purpura includes four stages. The first stage is prescription of glucocorticosteroids. The second stage is intravenous immunoglobulins (Ig). Splenectomy (the third stage) is performed if there is no effect from prednisolone's treatment. The fourth stage is prescription of cytostatics if there is no effect from splenectomy. A chimeric antibody of a directed specific action against antigen CD20 – rituksimab (mabtera) is used for the treatment of recurring forms of autoimmune thrombocytopenic purpura after splenectomy lately. Supporting therapy is indicated during two years in case of attaining remission.

### **32. FALSITY OF RACISM'S "THEORY" IN STUDIES ABOUT BRAIN**

Shlyaga S., Pakulov M. – the 2<sup>nd</sup>-year students

Scientific leaders – ass. Zhrepa L.G., Posokhova A.A.

Various socially-economic conditions of development of the world's peoples caused in some anthropologists the notion about them as of advanced or retrograde and also about the possibility of division of human races into the highest and the lowest. In racists' opinion the highest races have the right to conquest the lowest not only due to economical and

political backwardness but also owing to their lower biological organization.

Several signs of brain's structure and namely comparatively small mass and volume, the less number of fissures and convolutions, their rare variations, the presence of fissures more expressed in primates, e.g. a simian fissure in a occipital lobe and also a number of other signs are referred to a lower organization.

However, all these features of a brain's structure cannot be the signs of the lowest development. In fact, if we take the absolute mass of a brain, it cannot be the index of mental development of a person as one can meet the brain of various mass in people of genius. The mass of a brain varies from 1100 to 2000 grams.

As L.Ya.Pinece's researches showed, a simian fissure is equally met on the internal surface of a occipital lobe of a brain in representatives of different races and in people with various intellect. The development of other fissures and convolutions is also subjected to different variations equally met in different peoples. A number of researchers say that one cannot make a conclusion about mental activity on the basis of the presence of different fissures.

As far as modern people are concerned, variations of a mass and volume of the brain do not reflect the degree of a mental development in them. Cultural and political backwardness of peoples is conditioned not by a biological organization (the structure of a brain and the whole human body) but by social conditions of a society's life. We see a striking example of it in India and other former colonial countries. Ancient and rather high culture which created remarkable monuments of art, architecture, literature and treatment appeared there earlier than in Europe.

### **33. WHAT ARE STEM CELLS, AND WHY ARE THEY IMPORTANT?**

Zotova G. – the 2 year student  
Scientific leaders- ass. prof. Semyonov D.A.,  
Posokhova A.A.

Stem cells have the remarkable potential to develop into many different cell types in the body during early life and growth. In addition, in many tissues they serve as a sort of internal repair system, dividing essentially without limit to replenish other cells as long as the person or animal is still alive. When a stem cell divides, each new cell has the potential either to remain a stem cell or become another type of cell with a more specialized function, such as a muscle cell, a red

blood cell, or a brain cell. Stem cells are distinguished from other cell types by two important characteristics. First, they are unspecialized cells capable of renewing themselves through cell division, sometimes after long periods of inactivity. Second, under certain physiologic or experimental conditions, they can be induced to become tissue- or organ-specific cells with special functions. In some organs, such as the gut and bone marrow, stem cells regularly divide to repair and replace worn out or damaged tissues. In other organs, however, such as the pancreas and the heart, stem cells only divide under special conditions. Until recently, scientists primarily worked with two kinds of stem cells from animals and humans: embryonic stem cells and non-embryonic “somatic” or “adult” stem cells. Scientists discovered ways to derive embryonic stem cells from early mouse embryos nearly 30 years ago, in 1981. The detailed study of the biology of mouse stem cells led to the discovery, in 1998, of a method to derive stem cells from human embryos and grow the cells in the laboratory. These cells are called human embryonic stem cells. The embryos used in these studies were created for reproductive purposes through in vitro fertilization procedures. When they were no longer needed for that purpose, they were donated for research with the informed consent of the donor. In 2006, researchers made another breakthrough by identifying conditions that would allow some specialized adult cells to be “reprogrammed” genetically to assume a stem cell-like state. Stem cells are important for living organisms for many reasons. In the 3- to 5-day-old embryo, called a blastocyst, the inner cells give rise to the entire body of the organism, including all of the many specialized cell types and organs such as the heart, lung, skin, sperm, eggs and other tissues. In some adult tissues, such as bone marrow, muscle, and brain, discrete populations of adult stem cells generate replacements for cells that are lost through normal wear and tear, injury, or disease. Given their unique regenerative abilities, stem cells offer new potentials for treating diseases such as diabetes, and heart disease. However, much work remains to be done in the laboratory and the clinic to understand how to use these cells for cell-based therapies to treat disease, which is also referred to as regenerative or reparative medicine. Laboratory studies of stem cells enable scientists to learn about the cells’ essential properties and what makes them different from specialized cell types. Scientists are already using stem cells in the laboratory to screen new drugs and to develop model systems to study normal growth and identify the causes of birth defects. Research on stem cells continues to advance knowledge about how an organism develops from a single cell and how healthy cells



replace damaged cells in adult organisms. Stem cell research is one of the most fascinating areas of contemporary biology, but, as with many expanding fields of scientific inquiry, research on stem cells raises scientific questions as rapidly as it generates new discoveries.

### **34. UVEITIS**

Darchieva A. – the 2-nd year student  
Scientific leaders - C.M.Sc. Semenov D.A.,  
ass. Volosenkova Ye. A.

Uveitis is inflammation of the vascular membrane of an eyeball. Plasmatic cells, monocytes, T-lymphocytes and B-lymphocytes infiltrate a vascular membrane under inflammation. Part of these cells penetrate into an aqueous humor. Front uveitis. There are albumens, erythrocytes, pus and coloring agents in aqueous humor in case of hemorrhagic character of inflammation. Also synechiae (fibrous adhesion of iris and lens) can be found. Iris is hydropic and infiltrated. Vitreous body is turbid because of the formation of connective tissue. Sometimes heterochromia of iridis is determined.

80% of patient with uveitis suffer from this form of uveitis. Clinical signs of this disease are lowering of visual acuity, pain in the eye, which becomes stronger under pressure, change of color of an iris (greenish or orange color), change of the form of pupil and others.

Back uveitis. Edema of disk of optic nerve, vasculitis of vessels of retina, edema of macula retinae are observed. The symptoms of this disease are lowering of visual acuity, appearance of photopsias (flare forward eyes), appearance of metamorphopsias and hemeralopias.

### **35. MYCOTIC INFECTIONS – THE PROBLEM OF CONTEMPORANEITY**

Sadykova K. , Saidova O., Davydova Ye.– the 4-th year students  
Scientific leaders – Ass.Professor – Melnichenko N.Ye., Yegorova V.D.

The actual problem of the clinical dermatology is mycotic lesions of the skin and lesions of the nail – bed and nails – onychomycosis take the first place.

We carried out clinic – epidemiological analysis of patients with mycosis and onychomycosis during 10 years according to the given forms of the state statistic observation №9 “Information on mainly sexually transmitted infections, fungous diseases of the skin and scabies” within 2006 – 2008; and according to the clinical picture of the disease to, the obtained result

of questionnaire and also according to the analyses of reports of patients with dermatomycosis. Before 2006 there were more men among patients, but in recent years women were 1,3 times higher. During questionnaires, doctor's examinations of patients with lesions of the skin in feet, nails, hands it was marked that among causes of the development of the disease 24,4 % of patients showed the occurrence of the clinical manifestation after prolonged walking in rubber boots; constant contact with washing means; work at the confectionary factory showed the disease in 19,3 % of cases; the absence of daily hygienic care of the body including feet showed the disease in 7,3 % of patients. 26,8 % of patients were infected wearing another's shoes (serving in the Army); 4,9 % were infected during going for sports, 32,3 % - in saunas and swimming pools. 27 % of patients received self – treatment and they used advertisements of the central TV, newspapers and journals as a source of information about the clinical picture of the disease and its treatment; only 11,7% of respondents addressed to the dermatologist after their examinations by different specialists. Changes in the skin of feet, hands, nails in the family (parents, children) were marked in 26,8 % of respondents. Analysing the patients case reports with chronic dermatosis it is necessary to note that onychomycosis rather often occurs in patients with psoriasis, atopic dermatitis, eczema etc. Fungous lesions of nails in patients with chronic dermatosis remain for a long time. Analysing case reports of patients with microbic exema and psoriasis, microscopic confirmation of onychomycosis was revealed in 32 % of cases. 48 % of patients were treated earlier by dermatologist on the account of fungous diseases, 7,3 % of patients received treatment in the in – patient department. However after the discharge from the in – patient department only about 30 % of patients continued to follow the doctors recommendations, but 27 % of patients received self –treatment.

### **36. THE ANALYSIS OF MORBIDITY AND THE EFFICIENCY OF THE TREATMENT OF CANDIDIASIS ACCORDING TO THE DATA OF THE REGIONAL SKIN AND VENERAL CLINIC**

Sadykova K. Saidova O. Davydova Ye.–the 4-th year student.  
Scientific leaders – Ass. Prof. Melnichenko N.Ye., Yegorova V.D.

40 case reports of patient with candidiasis treated in the Amur Skin and Venereal Clinic in 2002-2003 were analyzed. There were 27 females and 13 males. The patients were divided unto groups according to their age: 9 persons aged 30, 9 persons aged 40, 5 persons aged 50, 6 persons aged 60, 5 persons aged 70, 6 persons aged over 70.

The duration of the disease up to 5 years was in 24 patients, up to 5 years was in 7 patients. Patients with the duration of the diseases up to 5 years received the ambulatory and hospital treatment for a long time; 11 patients were treated with antimycotics systematically, which testify to the chronic course of the disease. The accompanying pathology: diabetes mellitus (type 2), chronic gastritis, pancreatitis, ischemia heart disease, arterial hypertension were revealed in 31 patients. The accompanying skin diseases: seborrhic dermatitis (1 case), candidiasis (1 case), allergic urticaria, pyoderma (2 cases) were marked. The diagnosis was made due to the clinical manifestation of the disease and microscopic investigation of materials.

They were revealed the following forms of candidiasis: candidiasis onychia and paronychia (12 cases); candidiasis of interdigital folds (9 cases); candidiasis of extra – folded skin with the localization in wrists and feet (5 cases); candidiasis in the angles of the mouth (4 cases);

balanoposthitis (1 case). The combination of candidiasis of different localization were marked in 6 cases. All patients were treated with systemic antimycotics: fluconazole, ketoconazole, itraconazole. Fluconazole was used in the majority of cases. The treatment was administered in regard to the candidiasis forms, their clinical manifestations and efficiency of the previous treatment.

### **37. APPLICATION OF LASER LIGHT AND POLYOXIDONIUM IN PATIENTS WITH FURUNCULOSIS**

Dukhovny E. A. – the 4th year student

Scientific leaders – CMS Reshetnikova L. K., Yegorova V. D.

The object of this investigation was to determine the indices of the immunologic system in patients with furunculosis and to study the effect of laser light and the polyoxidonium on these indications and on the course of the disease as a whole.

Polyoxidonium is a modern synthetic immunomodulator. It is proved that it has immunomodulatory, antioxidant, detoxic effects, and membrane stabilizing activity. Polyoxidonium displays immunomodulatory activity, increases the resistance of organism both to local and general infections. The application has demonstrated the considerable clinical effectiveness in therapy of chronic, recurrent, indolent infectious-inflammatory disorders of the skin, bronchopulmonary apparatus, gastrointestinal and urogenital tracts, as well as in the treatment of severe bacterial and viral

infections.

The collection of the monoclonal antibodies is presented by CD3, CD4, CD8, CD16 and CD72. Immunoglobulins were determined according to Mancini.

The immunologic status was investigated in 30 patients with furunculosis before and after the treatment, the findings were compared with the indices of healthy people. The patients with furunculosis were divided into two groups. The first group (15 patients) underwent the traditional complex treatment. The second group (15 patients) underwent the laser light and polyoxidonium treatment in addition to the traditional complex treatment. On admission to the hospital differences in comparison with the normal indices were revealed. After the treatment the amount of leucocytes decreased to the norm in both groups. The amount of lymphocytes increased. The indices of T-lymphocytes, B-lymphocytes and subpopulations CD4, CD8 were less than the norm in the first group and were normal in the second group. As a result of the treatment the amount of NK-lymphocytes became normal in both groups. Immunoglobulins exhibited a tendency to normalization in the first group and normalized in the second group, the patient's condition in this group considerably improved. Thus, the findings of the investigation testify to the more expressed positive changes in the course of the complex treatment including the application of laser light and polyoxidonium.

### **38. MODERN DIAGNOSTICS OF MYOCARDIAL INFARCTION**

Litovchenko Ye. A. – the 4-th year student

Scientific leaders – Professor Menshikova I. G., Yegorova V. D.

Myocardial infarction is necrosis of heart muscle resulting from lesions of coronary arteries. In the typical course myocardial infarction is characterized by the certain clinical picture. The main symptom is a painful attack. There are substernal severe pains irradiating to the left arm and to the neck. The pain is intensive and prolonged. It is stopped by injecting the narcotic drugs.

If the patient is admitted to the medical establishment with prolonged heart attack the list of urgent examination should include:

Electrocardiogram. This method allows not only to reveal myocardial infarction, but to determine its localization, depth of the damage in the walls of the myocardium.

The study of blood serum for the presence in it the higher content of specific substances which are released in the case of lesion and myocardial necrosis:

1. Troponin T and I;
2. Myoglobin;
3. MB-fraction of creatine phosphokinase;
4. Aspartate aminotransferase;
5. Lactate dehydrogenase.

All other examinations as well as monitoring of myocardial infarction should be done in the case of stabilization of the patients' conditions when the danger of his life decreases other investigations which can be carried out in the second turn include:

Ultrasound investigation of the heart

Scintigraphy of the heart with technetium pyrophosphate and radioactive gallium

Multispiral computer coronary angiography

Transesophageal echocardiography.

Thus, at present the diagnostics of myocardial infarction is not confined by the registration of electrocardiogram and data of the objective examination. The presented methods of the examination are highly informative, they give the necessary information about the heart muscle and are of great value for the adjustment of the adequate therapy.

### **39. INTERACTION OF HEMOCAPILLARIES WITH VEINS OF THE MUCOUS MEMBRANE OF ESOPHAGIAL AND GASTRIC PASSAGE**

Paliy A. - the 2<sup>nd</sup> year student

Scientific leaders - ass. Prof. Selivyorstov S.S., ass. Volosenkova Ye. A.

Longitudinal venules of the mucous tunic of the esophageal epicardiac area occupy 65-75% of the surface of the mucous plateau. The structure of the blood stream of mucous membrane of the esophageal and gastric passage is unique in comparison with animals. It is marked in double transference of veins from submucous layer to mucous membrane.

### **40. STONE HEART**

Paliy A. - the 2<sup>nd</sup> year student.

Scientific leaders- ass. Ogorodnikova T. L., ass. Volosenkova Ye. A.

Stone heart is a variant of compressive (constrictive) pericarditis. It is characterized by calcification of pericardium, which turns into firm, not movable sack (testa) surrounding the heart. This kind of disease is very rare, and there is a lack of information about it. But nevertheless it is possible to imagine the changes which take place in the pericardium in case of this disease.

#### **41. THE NEW CLASS OF DRUGS**

Butelina Ye. Kucher Y.-the 3<sup>rd</sup> years students

Scientific leaders – C.M.Sc. Bitiutskaya L. G., ass.-Volosenkova Ye. A.

In the basis of a traditional approach to the creation of drugs is the search of substances imitating the action of signal molecules of an organism, for example hormones and neuromediators. However the fact is that these drugs act according to the principle «all or nothing» and are connected with the same active center, as endogenous molecules or blockade signal sent to the cell or imitate the action of endogenous molecules. Such action of drugs does not promote the normal changes of activity.

Modern task for pharmaceutical companies is the creation of allosteric drugs connected with the definite parts of receptor that will help to decrease the frequency and the expressiveness of side effects. Allosteric substances are connected not with the active center of the receptor but with another part of it, changing the receptor conformation so that a signal becomes either weak or intensive. Allosteric drugs are less dangerous than traditional ones because are applied in low concentrations and influence on the receptor only in the present of its natural ligands (mediators). Due to these advantages allosterism became the most discussing theme among pharmacologists. In 2004 a new drug as cinacalcin (sensipar) – the activator of calcium canals appeared. It is appointed to the treatment of patients suffering from chronic renal insufficiency. In 2007 it was allowed to apply maraviroc preventing the penetration of viral particles into the cell. It is applied for the treatment of AIDS. Some other drugs are clinically tested for the effectiveness and safety.

Despite the advantages of allosteric drugs in comparison with traditional ones there are some problems. One of them is indeterminism of action. A difficult task faces the pharmacologists. It is necessary to test allosteric drugs on different tissues in order to be confident in their action and effect.

Despite all that, pharmacologists are common in the opinion that allosteric drugs have a lot of properties for the creation of new pharmaceuticals. Such approach can change the situation in pharmacology.

#### **42. EFFECT OF CHANGES IN BODY TEMPERATURE ON THE FUNCTIONAL ACTIVITY OF ORGANS AND SYSTEMS**

Skolubovich A.A.-the 4<sup>th</sup> year student

Scientific leaders — prof. Korshunova N.V., Yegorova V. D.

Effective temperature is called the temperature above the minimum value at which the development processes at all possible. This quantity is called biologic zero development. Lowering the temperature of the environment reflexively causes an increase in metabolism of the body to balance the body's heat balance in the new environment. Increasing the environmental temperature outside the neutral temperature zone also causes an increase in the level of metabolism that is caused by the inclusion of mechanisms for enhancing heat transfer. Regulatory reaction aimed at maintaining a constant body temperature in case of overheating, are represented by different mechanisms of heat gain into the environment. Among them is widespread and has a high efficiency heat through evaporation of moisture from the skin. The reaction is activated when symptoms begin to overheat the body. Normal thermal-being occurs when a person is fully heat perceived environment, ie when there is a thermal balance. In this case, the temperature of the internal organs remains constant. The work area of industrial premises, according to state standards, may be the optimal and permissible microclimate conditions.

#### **43. SU JOK THERAPY IN EMERGENCY CASES OF IMPAIRED CONSCIOUSNESS**

Shamina O. S. – 5<sup>th</sup> year student

Scientific leaders – Ass. prof. Molchanova Ye.Ye., Yegorova V. D.

Loss of consciousness is one of the symptoms of pathologic conditions that require intensive care. There are two types of loss of consciousness: a transitory loss of consciousness and prolonged one (comatose condition). The diagnostics of and treatment of patients in such cases are difficult. As coma always testifies to the severity of the disease the correct diagnosis energetic and rational therapy will be of great importance. The patient's life and the positive outcome of the disease will depend on the timely treatment and necessary measures.

Among the pathologic conditions manifestating by transitory states of insensibility there could be mentioned simple syncope, orthostatic collapse, concussion of the brain, minor epilepsy, convulsion fit, and temporary asystolia. The treatment of unconsciousness is essentially that of the underlying disease. Su Jok therapy, however, is capable of providing highly efficient methods of rendering emergency medical assistance without the use of medicinal agents. Those methods are effective to help the sick independent of causes leading to the loss of consciousness.

In cases when the loss of consciousness is associated with the reduced blood supply in the brain, the patient should be placed in a hori-

zontal position, and the massaging of the heart and ungual phalanges (the brain correspondence area) points should be immediately started both in the hands and feet. The patient's finger tips are recommended to be dipped in the hot water. The metaphysical – oriented treatment consists of tonifying the Ah-Hotness energy within the brain pattern, using meridians and byol-meridians for the purpose. The therapist may also stimulate the Hotness chakra (Ajna) with needles or a ring magnet, or to impart orange color to the Hotness meridians, or to tonify the Brightness energy or sedate the Darkness energy through the brain and spinal cord meridians.

In the case when the loss of consciousness is associated with the rise in blood pressure, it is useful to use the blood letting from the head corresponded points.

After the restoring the consciousness we should treat the main disease that caused pathologic unconsciousness.

#### **44. THE ENDORLNE FUNCTION OF ADIPOSE TISSUE**

Karatsuba S., Melnikova M. - the 2<sup>nd</sup> year students

Scientific leaders - Ass. Prof. Doroshenko G. K., Gritsenko S. N.

Adipose tissue is not only a reservoir of reserved energy but an active endocrine organ. It has receptors of many hormones. White adipose tissue produces peptide hormones - adipokines. Adipokines have got different biological effects and co-operate with hormones of hypophysis. Besides, white adipose tissue has ferments which take part in metabolism of steroid hormones. Disfunction of endocrine function causes different diseases such as: diabetes mellitus, adiposity, atherosclerosis.

#### **45. INVOLVEMENT OF 5-HYDROXYTRYPTAMINE TYPE 3 RECEPTORS IN SEVOFLURANE-INDUCED HYPNOTIC AND ANALGETIC EFFECTS IN MICE**

Ivanova K. – 3<sup>rd</sup> year student

Scientific Leader – C.M.Sc, Simonova N.V.

The aim of work is to study the experience of using emulsified sevoflurane and the role of 5-HT<sub>3</sub> receptors in hypnotic and analgetic effects induced by emulcified sevoflurane.

One hundred and sixty years after inhalation anesthetics were adopted into clinical practice, the underlying mechanism of action remains unknown. 5-Hydroxytryptamine is a biogenic amine that mediates a variety of physiological actions. One of its subtypes is 5-HT<sub>3</sub> receptor. These receptors are widely distributed in both the central and peripheral nervous



system. Sevoflurane is a halogenated inhalation anesthetic. Li-Hua Hang, Dong –Hua Shao, Hong Wang and Jian-Ping Yang – the scientists of Soochow and Jiangsu Universities of China investigated the role of 5-hydroxytryptamine type 3 (5-HT) receptors in hypnosis and analgesia induced by emulsified sevoflurane. A mouse model of hypnosis and analgesia was established by an intraperitoneal or subcutaneous injection of emulsified sevoflurane. They administered YM-31636, a 5-HT receptor agonist, to mice and observed sleep time during hypnosis. In addition, the tail withdrawal latency was measured using the tail withdrawal test, and the writhing time was determined using the acetic acid writhing test. In the hypnosis test, YM-31636 treatment significantly decreased emulsified sevoflurane-induced mouse sleep time. YM-31636 treatment significantly and dose-dependently decreased the tail withdrawal latency and increased the writhing time of mice treated with emulsified sevoflurane. These results suggest that 5-HT receptors may modulate the hypnotic and analgesic effects induced by emulsified sevoflurane.

#### **46. THE USE OF GLIMEPIRIDE (AMARYL) IN WORKING PATIENTS WITH DIABETES OF MELLITUS TYPE 2 AND OBESITY**

Moiseenko A. – the 4<sup>th</sup> year student  
Scientific leaders – Strunina J.Z., Parshina A.N

In patients with diabetes of mellitus type 2 (DM 2) adequate therapy is the greatest medical problem. They are often diagnosed with related or unrelated to diabetes, numerous conditions, which should be monitored. Possible progression of these conditions requires a constant amendment therapy, and may be even more difficult if a patient works and is forced to follow a particular regimen, diet and daily routine.

Earlier existing kinds of therapy were unsatisfactory and rather inefficient if to estimate their ability to lead to the achievement of the aims of treatment and increase in life expectancy with its comprehensible quality. In addition to all of the above, in this case there is another challenge of effective treatment: to cope with learning difficulties motivated to work of the patient, whose disease most of the time is asymptomatic.

The aim of our study was to compare the efficacy and compliance in the application of glimepiride and glibenclamide in patients of working age with diabetes mellitus type 2 and obesity-1-2-th degree.

Glimepiride was applied once in the morning before breakfast at a dose of 1-4 mg/day glibenclamide 7-14 mg/day (twice)

Results. Patients in group 2 achieved compensation MD (HbA1c <7%) without increasing hypoglycemia. In the contrast to patients in Group 1 treated with glibenclamide, marked increase in frequency of hypoglycaemia, mostly in the morning and in the afternoons. This has contributed an increase in body mass: body mass index (BMI) increased by 8%. Patients in group 2 did not increase in BMI was noted, moreover, a group of men registered a decline BMI by 2%, thus improving the general well-being and treatment satisfaction. All patients in group 2 noted the convenience receiving glimepiride and the stability of postprandial hyperglycemia, although there have been changes in the daily routine and nutrition, respectively.

#### **47. ADDICTION OF NONCHEMICAL ETIOLOGY**

Sharifova Z. – the 4-th year student

Scientific leaders – CMSc Maksimenko V. A., ass. Parshina A.N.

Addiction (dependent behavior) is one of the most common types of deviant behavior and is expressed in an effort to escape from reality by changing your mental state by taking certain substances or permanent fixation of attention on a certain subject or activity (activities), accompanied by the development of intense emotions. The essence of the addictive behavior is that one tries to escape from reality, people try artificially to change their mental state, which gives them the illusion of security, restoration of balance. Nowadays, we describe of lot of addictive disorders, defined by a variety of objects of behavioral dependence: gambling, sexual addiction, workholism, sports addiction or exercise addiction of relations, spending money, religious addiction, internet, gadget-addiction. This list is updated with all new types of addictive behavior. According to many authors, opinion the main biological reason for the formation of not only alcoholism, but also non-chemical addiction is a genetic susceptibility. Pathogenesis and formation of dependent behavior of non-chemical etiology still remains unclear. The data available on this subject are controversial, fragmented, that's why it is impossible logically consistently to build a chain of pathogenesis of any addiction. According to the most scholars the problem is , mechanisms of addictive behavior are now considered to be a multi- factor model in which each of the factors or a combination thereof is involved in the formation of the disease. As a foundation we can already offer a theory of pathological integrations in the central nervous system, created by local pathophysiologists Georgy Nikolaevich Kryzhanovsky. On the basis of the theory of generator, determinant

and systemic mechanisms, the author has created more than 20 experimental models of neuropathological syndromes, including several models of aggressive behavior related to addiction. Ability to create this syndrome on the basis of a unified concept of the pathogenetic role of pathological integrations suggests the fruitfulness of this theory and that it reflects the pathogenesis of neuropathological syndromes that occur during addiction.

#### **48. PECULIARITIES OF DIAGNOSTICS OF METABOLIC SYNDROME.**

Koptsev A. - the 4-th year student  
Scientific leader: Tanchenko O.A.

Spread of metabolic syndrome in all population changes from 16 to 35%. Frequency of metabolic syndrome increases with the age: people from 20 to 29 years old have this disease in 67% cases, from 60 to 69 years old –in 43%. In medical literature there are some synonyms of metabolic syndrome: metabolic vascular syndrome, syndrome of abundance, X - syndrome, quartet of death. It is known, that the risk of developing diabetes in people with metabolic syndrome is 5-9 times higher than without it. Obesity and diabetes (second type) are the main components of metabolic syndrome. World health organization recognizes these components, as the reason of invalidization and early death. 30% of people in the world suffer from obesity. It is precondition to develop cardio-vascular diseases, metabolic syndrome and diabetes (about 18,8% men and 14,9% women). Arterial hypertension is developed on 50% higher than those people without obesity. It is known, that for every 4,5kg of weight systolic blood pressure raised to 4,4mm Hg. High level of mortality is associated with obesity and cardio-vascular pathology in most cases. The main diagnostic sign of metabolic syndrome is an abdominal type of obesity (circle of waist is more than 94 in men and 80 in women). During the last 10 years obesity has grown on 75%.

Nowadays metabolic syndrome is a very important problem in medicine, because many people suffer from this disease.

#### **49. HARDNESS OF ARTERIES AND VASCULAR RESISTANCE**

Idrisova S. - 4-th year student, Demina K. - 4-th year student  
Scientific leader – ass., c.m.s. Pavlenko V., ass. Parshina A.

The problem of hardness of main arteries always plays a great role in genetic cardiology.

Facts about arterial hardness have special meaning, especially ersatz markers such as isolated systolic hypertension and pulse arterial pressure. They are risk-factors which provoke cardio-vascular attacks and death. Parameters which characterize hardness of arteries are aortal hardness and the thickness of intima-media complex.

Age-related changes in architectonics of main elastic arteries are expressed in thickening induration of intima and medial layer, with prevalence of collagen and less of elastic fibers, also prevalence of extracellular matrix and plain muscular cells.

The main characteristic of functional changes in main vessels in aging is decrease of elasticity, but increase of rigidity.

Factors which have influence of vascular aging:

genetic factors

Female sex

Atherosclerosis

Arterial hypertension

Metabolic syndrome and insular diabetes

Lifestyle with a lack of physical activity

Smoking

Diet with a lack of unsaturated fat acids

Age

Aging of vessels can play a great role in the development of cardio-vascular diseases.

Research of hardness of arteries and vascular resistance can help medicine to get new data about etiology of cardio-vascular disease and create new methods of prophylaxis and medical treatment.

## **50. CHEKHOV AS A DOCTOR**

Kuzuytina N.G. – the 2-th year student

Scientific leaders – Ambrosyeva N.P., ass. Volosenkova Ye.A

Anton Pavlovich Chekhov was a Great writer, who had an artistic talent. But he wouldn't be such a good writer without «medical aid». In his autobiography he wrote: «Medical sciences made a great influence on my literary activity, they broadened my outlook, gave me necessary knowledge which was important for me as a writer. Only a doctor can understand it...»

Chekhov was kind, responsible, affectionate and he was a person of ready sympathy. Chekhov may be an example for all doctors. Hippocrates dreamed of such doctors...

## **51. THE CASE OF LONG – TERM FOLLOW – UP OF THE PATIENT WITH DISSECTING THORACOABDOMINAL AORTIC ANEURYSM**

Vitukhina Z.-the 6-th year student

Scientific leader- Sivyakova O. N.

The dissecting thoracoabdominal aortic aneurysm is one of the most complicated and poorly studied problems of contemporary medicine. According to the number of authors dissecting aneurysms make up 0,30–1,06% of all autopsies. According to the data of M.W. Wheat incidence rate of aneurysm makes up 5-10 cases per 1 million persons a year. There are three forms of course of dissecting aneurysm: acute followed by death during several hours, subacute, when disease develops during a few days or 2-4 weeks, and chronic, when the process lasts few months. According to the data of F. Hirst, among 425 persons with dissecting aneurysm 21% of patients died during the first 24 – hour period, i. e. they showed acute form of disease. Only 26% of patients suffered from chronic form of disease and they lived above 2 weeks. About 45% of patients die during the first 2 days. According to other data about 75% of patients die from acute dissecting aneurysm during the first 2 hours, 83% - during month.

Therefore the case history of patient K. (1941 y.b.) is of great interest. Noted patient has been being followed up at Amur Regional Clinical Hospital since December 2000. His complaints were: pressing aches beyond the chest while moderate physical activity, arterial pressure elevation up to 220/120 mm Hg, palpitation, irregularity, fatigue, temperature rise up to 38 degrees. Medical history shows that during 15 years he had been suffering from high arterial pressure up to 160/100 mm Hg, but he hadn't been treated and examined. In 1996 irregularity and pressing aches beyond the chest connected with moderate physical activity have appeared. Since 2000 he began to mark episodes of high arterial pressure about 2–3 times a month at constant arterial pressure 160-170/100 mm Hg. 15.11.2000 along with arterial pressure rising up to 220/120 mm Hg he marked aches beyond the chest and in interscapular space with irradiation to the neck, and then to the epigastrium. Pain syndrome was intensive, smart. The patient refused from hospitalization, he treated outpatiently. He got enalapril in a daily dose of 40 mg, aspirin, isosorbide dinitrates. Improvement wasn't noted. In December 2000 he began to suffer from irregularity, palpitation, dyspnea during moderate physical activity, temperature rise up to 38°C, weakness, headache. The patient was hospitalized to the cardiological department of the Amur Regional Clinical Hospital with the aim of diagnosis adjustment.

At hospitalization the patient's condition was severe. He was characterised by hypersthenic type, full habit, face hyperemia. At percussion over lungs was pulmonic sound, by vesicular respiration single diffuse dry rales were auscultated. The rate of respiration made up 20 per minute. The heart area wasn't changed. Visible pulsation was defined: epigastric pulsation and pulsation of neck vessels. Cardiac borders: the right - 1 sm dermad from right chest edge, the upper - 3 rib; the left coincided with apex beat (1 sm dermad from midclavicular line in the 6<sup>th</sup> intercostal space). Heart sounds were arrhythmic, extrasystole is about 10 per minute. Systolodiastolic murmur with epicentrum at Botkin point and above aorta. Arterial pressure was 200/100 mm Hg. Femoral arteries were characterized by Vinogradov - Durozje murmur. Belly was enhanced because of adipose tissue, boggy, painless in all regions at palpation. Liver does not exceed from under right costal arch.

This case history is of great interest as the case of long - term follow - up of the patient with dissecting thoracoabdominal aortic aneurysm (7,5 years). According to the literature data longevity in such patients without surgical treatment is no more than 2 years. This situation has become possible, most probably, due to the constant outpatient observation and thorough following the doctors' orders. Monitoring of arterial pressure and detached intima over all extent of aorta promoted survival of that patient.

## **52. PLANNING OF PREGNANCY IN WOMEN WITH PYELONEPHRITIS. PREVENTION OF GESTATIONAL PREGNANCY**

Maslenikova K. - the 4<sup>th</sup> year student

Scientific leaders - C.M.Sc. Gavrilov A.S., Yegorova V.D.

Women with the normal proceeding pregnancies are at risk of developing pyelonephritis, especially in the second trimester which can be explained by the influence of progesterone. In late stages the effect of progesterone decreases, the content of estriol increases, which is actively synthesized in the fetoplacental system reducing the risk of pyelonephritis associated with exposure to hormones and increasing the role of the mechanical component in the pathogenesis of this disease.

There are anatomical changes in normal pregnancy: Increasing the size of the kidneys of more than 1 cm in length, displacement of the uterus to the right and posteriorly, deformation of the bladder, urethra shortening, formation of vesicoureteral reflux, compression of the uterus more than the right ureter (II-III trimester), expansion of the pyelocaliceal

system of kidney and ureter, reducing the tone of the ligamentous apparatus of the kidneys.

Violation of urodynamics during pregnancy: A. The dynamic component: the increase of progesterone and estradiol and their effects on adrenergic receptors, reducing the tone of the sympathetic nervous system, reduction of Ca in blood plasma and a violation of the ratio of Ca / K in the blood, violation of colloidal ratio of Na and K in the blood, the reduce of tension and weakness calyx - pelvis system, ureters and bladder, vesico - ureteric reflux. B. Mechanical component: the compression of the ureter and ovarian vein of the growing uterus, more to the right, expansion pyelocaliceal system kidneys, ureters. Risk factors of gestational pyelonephritis: previous urinary tract infection, congenital malformations of the kidneys and urinary tract, urolithiasis, inflammatory diseases of female genital mutilation, low socio - economic status, diabetes, violations of urodynamics, pregnancy induced by (dilation and hypokinesia intracavitary system kidneys, ureters on the background of metabolic changes), pockets of persistent infection (caries, chronic tonsillitis), constipation, anatomically narrow pelvis, immunosuppressive state, nephroptosis, gestosis and gestational pyelonephritis in history, disordered sexual activity with frequent change of sexual partners.

Predgravidal training is of great importance in the prevention of gestational pyelonephritis. Gestational pyelonephritis is more severe on the background of already existing prior to pregnancy, renal disease. Basic principles of predgravidarney training for women with chronic pyelonephritis: nephrologist's, urologist's consultations, study of renal function and the diagnosis, rehabilitation of the urinary tract, rehabilitation of gynecological diseases, screening for sexual infections and their treatment in conjunction with sexual partner, normalization of bowel, refusal of bad habits: nicotine, alcohol, increase of the body's defenses: tempering, physiotherapy, taking herbal adaptogens with immunosuppressive conditions - treatment by an immunologist, the exclusion of work at hazardous industries, including related to forced body position, hypothermia, heavy lifting, rehabilitation of chronic infection foci.

### **53. CHESS AND MEDICINE.**

Razdobudko M. – the 3-year student, Yuriev E. – the 4-year student  
Scientific leaders – C.M.Sc. Mironov F.S., Gritsenko S.N.

At first sight there is nothing in common. However, a great number of statements about healing effects of chess are ascribed to the great ancient physicians Hippocrates and Galen, it is even asserted that Hippocra-

tes once prescribed a game of chess to a patient suffering from stomach ache. It is known that chess strengthens the heart and improves circulation, but even burns calories.

MD NS Zanozdrav offered a game of chess as a prescription for children hypertension. Hypochondria, hesitancy, weakened memory weakens the human heart. One of the conditions to prolong a healthy life is peace of mind.

Chess can develop in a person self-restraint, self-control, perseverance and a lot of character traits, which in turn will prevent the stress, which affects the work of not only the heart but of the whole organism.

One can not say that the game of chess can directly affect the motivation of the child to lead healthy lifestyles, but the qualities that are formed in the process of learning and playing chess will make him realize the value of self-development and will encourage to self-improvement and identification of the ways of solving a problem.

It is a table game that can transmit information to the brain through almost all of the analyzers. "Chess therapy" practitioners in the treatment of people with maturity disorders noted that patients become more sociable, coherent speech appears and they can ask correctly constructed questions. This can be justified by the fact that the development of hand and speech are interrelated. The fingers are endowed with a huge number of receptors that send impulses to the central nervous system. Even slight hand exercises greatly affect human health.

Thus, we can conclude that chess has a positive influence not only on mental but also on physical development though it is quite paradoxical. Chess develops the intellect of healthy humans. Chess techniques are used for rehabilitation: strengthening the patient's own sense of intellectual usefulness and contribute to the restoration of contacts with others. Due to this game, children learn to be patient, diligent, persistent in achieving a goal, develop a capacity for work, ability to solve logic puzzles with a lack of time, train the memory. As they say, losing the king of pawns do not cry. A chess player must be extremely careful, keep in mind hundreds of parties. And most importantly what chess yields is a creative process that makes us develop!

#### **54. IRIDODIAGNOSIS**

Karatsuba S. - the 2<sup>nd</sup> year student

Scientific leaders - C.M.Sc. Labzin V.I., Gritsenko S. N.

Iridodiagnosis is a diagnosis of diseases by changes in form, structure, color or mobility of iris (from Greek "iris" - iris). Iridodiagnosis is a



relatively new branch of medicine but it has an ancient background. Ancient doctors' experience was not completely lost but partly used in Eastern and European Medicine for ages. Today many specialists use different ocular symptoms in diagnosing a number of diseases.

### **55. THE CHALONES AND REGULATION OF PROLIFERATION OF THE CELLS**

Kushnaryov V. – the 2-nd year student

Scientific leaders – C.M.Sc. Semyonov D.A,  
ass.Volosenkova Ye.A.

Proliferation is the important part of the vital activity and development of organisms and its destruction has correlation with many pathological processes. Management of cellular reproduction is realized with participation of stimulators, and mitotic inhibitors. The inhibitors of cellular division are chalone acting on the tissue, where they are produced. Growth-inhibitory substances have recently been found in the epidermis and in some other tissues. The chalone are proteins and glycoproteins, polypeptides which are produced by a body tissue and the cause the reversible inhibition of mitosis in the cells of tissue and chalone are the most important link of control of cellular reproduction through which on tissue level regulating factors are realized, both from an organism, and from the environment. The main functional property of chalone is tissue specificity their acting on processes of proliferation. The system of chalone is universal and it influences on the processes of cell and tissue differentiation, regeneration, suppression of tumorous cells.

### **56. THE DOCTRINE ABOUT CONSTITUTION**

Melnikova M. - the 2-d year student

Scientific leaders - C.M.Sc. Labzin V.I., Gritsenko S.N.

The constitution (from lat. Constitutio- the establishment, the organization) is a complex of individual comparatively steady morphological, physiological and mental properties of an organism caused by heredity, as well as the long and intensive influences of the environment in its reaction to various impact (including social and pathogenic). Generally it is described in more than 110 constitutional schemes of various authors which are based on the diversified attributes. The methodological approaches used by authors at classification of somatotypes are various. Morpho-functional features of each classification. Value of the constitution in adaptation of the person to the environment.

## 57. GENETICS OF MUCOVISCIDOSIS

Gerasimets E. – the 6-th year student

Scientific leader – Professor Savinova T.A.

Mucoviscidosis is an autonomic recessive genetic disorder. Individuals with mucoviscidosis have mutations in the gene encoding cystic fibrosis of transmembrane regulator (CFTR) a protein on both alleles of chromosome no. 7. Although >1,000 mutations on the CFTR gene have been identified, a single common mutation,  $\Delta F508$ , accounts for two thirds of all cystic fibrosis alleles worldwide. This mutation is particularly frequent in persons of northern European ancestry, who also have the highest rates of cystic fibrosis, and is less common among persons of other ancestries. Because different populations have different mutation frequencies, the sensitivity of a given DNA mutation panel for detecting persons with cystic fibrosis varies by race and ethnicity, and including mutations specific to racial and ethnic minority populations can improve detection of cystic fibrosis among those populations.

Mutations in the CFTR gene can alter the structure, function, or production of a cyclic adenosine-5'-monophosphate (AMP)-dependent trans-membrane chloride channel protein that is critical for normal functioning of multiple organs. The organs and systems that are affected in cystic fibrosis include the lungs and upper respiratory tract, gastrointestinal tract, pancreas, liver, sweat glands, and genitourinary tract. For example, defective salt re-absorption in sweat glands leads to overly salty sweat and, in certain cases, to electrolyte imbalance, dehydration, and death. Deficient chloride transport in the lungs is thought to result in the production of abnormally thick mucus, which in turn is believed to lead to airway obstruction, neutrophil-dominated inflammation, and recurrent and progressive pulmonary infections. The combination of inflammation and infection accounts for the pulmonary symptoms related to cystic fibrosis. Acute viral respiratory infections, common to all children, are much more likely to develop into lower respiratory tract infections among children with cystic fibrosis, resulting in hospitalization and acquisition of chronic bacterial infections.

## 58. PULMONARY COMPLICATIONS IN DIABETES MELLITUS

Martynenko A. – the 2-nd year student

Scientific leader – D.M.Sc. Krasavina N.P.

Clear decrements in lung function have been reported in patients

with diabetes over the past two decades, and many reports have suggested plausible pathophysiological mechanisms. However, there are no reports of functional limitations of activities of daily living ascribable to pulmonary disease in patients with diabetes. This review attempts to summarize the available information from the present literature, to describe the nature of the lung dysfunction in diabetes and the emerging clinical implications of such dysfunction. The clinical impact of measured decrements in lung function is still unproven, and it will be defined only with long-term monitoring of pulmonary function changes in association with the presence or absence of overt lung disease or with the non-invasive evaluation of inflammatory mediators. First of all, the patient with diabetes is susceptible to a series of chronic complications and is at risk of premature death. This present review will focus on results of various studies concerning the effect of diabetes and glycemic control on the respiratory apparatus (lung volumes, diffusing capacity, autonomic regulation of respiration) and on the emerging potential clinical implications of such dysfunction.

#### **59. NEW TECHNOLOGIES IN ESTIMATION OF THE STATE OF GIRLS' HEALTH OF BLAGOVESHCHENSK**

Vasilyeva Ye.V., Arutyunyan KA. - ass.

The state of schoolchildren's health arouses alarm lately. School study aimed at getting much information and vast theoretical knowledge leads to intensification of school process that does not promote health's preservation and strengthening. A lack of systemic sports and sanitary measures, low level of knowledge of a healthy way of life and culture. Unfavorable ecological situation favor the lowering of the level of children's health. Besides, children constantly feel psychological effort, school stresses in studying that also does not favor the preservation of their health.

The aim: to study the state of children's health using new technologies in prophylactic examinations.

Materials and methods: The health in 284 girls aged 11-12 years was studied in Blagoveshchensk with the use of computer system AKDE (automated complex of dispensary examination). The received data were processed according to STATISTICA 6,0.

Results: It was revealed that the indices of physical development being an integral sign of estimation of the state of children's health do not differ in Blagoveshchensk's schoolchildren aged 11-12 years from the given estimative tables of physical tables of physical development of children (V.G.Dyachenko, A.Yu.Moshchinetskiy, N.V.Romanova, M.F.Rzyankina,

2000). Thus, the indices of average girls<sup>1</sup> body weight made up 42,8 I 9,1 kg., height - 153,7±7,2 cm., breast's circumference - 70,41 7,3 cm. Mesosomatic type was determined in 57% of girls, macrosomatic type in 27%, microsomatic type in 16% that testify about disharmonic development nearly in half of the examined children. Moderately disharmonic development was marked in 6% of children. It was combined with the lack of body weight in 11 % in the group of girls with the expressed disharmonic development, with relatively narrow chest in 10%, with the lack of height and excess of weight in 6%, with the excess of height in 6% and with the excess of height and the lack of body weight in 4%. Analyzing the reproductive health of girls it was marked that sexual development corresponded the calendar age in 70%, lagging behind was observed in 27% and outstripping of calendar dates in 3%. On the whole, physical and sexual development of girls aged 11-12 years corresponds their age according to the adopted standards (in 57% and 70% of girls respectively) that is explained by the puberty period of development.

That or this pathology was revealed in 274 girls (96%) from 284. 6 girls (2,5%) were, in the risk group by the development of cardiovascular diseases and the disease was not established only in 4 girls (1,5%). 66 girls (66%) had pathology for 1 disease, 82 (29%) - for 2 diseases, 126 (45%) - for 3 and more, i.e. nearly half of the examined girls has the expressed multiple organ pathology. According to the structure of pathology diseases of locomotive apparatus are in the first place, cardiovascular diseases - in the second, diseases of digestive organs - in the fourth, diseases of nervous and endocrine systems in the fifth one.

According to the point system of the estimation of a child's health rank places are almost the same according to the results of AKDE diseases of locomotive apparatus are in the first placje

(389,8), cardiovascular pathology in the second (217,2), diseases of digestive organs - in the

third (184,1), diseases of organs of sight - are in the fourth (179,9), diseases of the nervous system in the fifth (166,1).

Conclusion: Thus, the use of the computer system AKDO in prophylactic examinations allows to give a complex estimation of children's health choosing the most important pathology that can be used for the development of individual and group rehabilitation measures.

## **60. TRANSPLANTATION OF HEART**

Radchenko Y.-the 3th year student

Scientific leaders: Professor Volodchenko N.P., Gritsenko S.N.

Transplantation of heart is treatment of choice at individual patients with terminal cardiac insufficiency. The first successful change of donor heart was executed by Christian Barnard in 1967. As a push to development of this method was the introduction of new immunosuppressive cyclosporine in practice in 1980 that enabled to reduce considerably the frequency of reactions of repulse and to increase recovery of patients. According to the data of the International Society of Heart Transplantation more than 12000 of such operations had been executed in 128 centers all over the world by 1990. Nowadays annually more than 1500 transplantations are made and the further growth of their quantity is limited only by shortage of donor hearts. So, according to experts, in the USA annually there are only 2000 potential donors for more than 20000 potential recipients. Obligatory conditions for transplantation of heart a patient should be: younger than 60, a late stage of disease of heart (functional class III-IV by New York cardiology association), an inefficiency of all other methods of treatment and absence of other heavy diseases able to interfere with post-operative recovery of a patient or cause post transplantation complications. Recovery after transplantation has increased up to 90 % in the first year and up to 70 % in 5 years with the use of cyclosporine. As a rule, the functionalities after transplantation improve considerably. More than 75 % of the recipients come back to former professional activity. Most frequently orthotopical transplantations of heart are performed at cardiomyopathy (55 %) and ischemic heart disease (42 %). Only in 3 % of cases indicators to operation may be rheumatic defects of heart and other pathology. The indications to heart transplant are the following: stagnant cardiac insufficiency, a fraction of exile of the left ventricle less than 25 %, certainly - diastolic pressure in left ventricle more than 20 mm. The technique of orthotopical transplantation provides excision of both ventricles and a part of auricle of the recipient with preservation of their areas in places of flow of vein, to which in conditions of artificial circulation of blood donor heart is fixed. Implantation finishes by imposing anastomosis on aorta and pulmonary artery. The most widespread complications in early postoperative period are acute rejection and infection, in late period coronary artery stenosis graft and malignant tumor, especially of lymphoma. Rejection in the beginning is asymptomatic and only in the latest stage is shown by a rhythm gallop, sharp weakness, keeping of a liquid and auricle arrhythmia. Therefore its early diagnostics for duly correction immunosuppressive

therapy is possible only with the help of histological research of endomyocardial biopsy taking of which is performed by transvenous method from the left ventricle. To prevent rejection patients continuously receive immunosuppressive therapy by three preparations - cyclosporine, azathioprine and glucocorticosteroids. Treatment of acute rejection is carried out depending on its extent with the help of great doses of glucocorticosteroids with their subsequent decrease and globulins. Now hospital mortality makes up about 10 % and recovery by the end of the first year - 80-90 % and in 5 years - 60-70 %. The greatest life expectancy, registered by the present time, after transplantation of heart reaches 19 years. It is necessary to note good functional results of operation. So, 90 % of survived refer to I functional class of NYHA, and 70 % come back to work or study. Thus, in the efficiency at heavy cardiac insufficiency transplantation of heart considerably surpasses therapy.

#### **61. ADAPTOGENS EFFICIENCY IN THE PRECAUTION OF NURSERY AGED CHILDREN'S DISEASES OF RESPIRATORY ORGANS**

Chubarova D. – the 3-rd year student

Scientific leader: C.M.Sc. Simonova N.V.

Goal of research: the study of vegetable based adaptogens influence on the efficiency of precaution of respiratory organs diseases among nursery aged children in the conditions of child educational institution (CEI).

Materials and methods of research: in the conditions of CEI 4 groups of nursery aged children (2-3 years old) were examined. In each group there were 20 children. In the first group the precaution was held with the injection of Eleuterococcus extract. In the second group the precaution was held with Rhodiola Rosea extract. In the third group the children were given hypericum tincture on the basis of 15 ml on one life year during 28 days. The fourth group was the control one. The therapy regime was held in the autumn-winter period (November, January) during 28 days. At the end of the following data was monitored: 1) the attendance of children in each group which was compared with the similar index in the control group; 2) content of products of peroxide lipids acidification and main components of antioxidant system in the children blood plasma.

Research results: The research results showed that during the period of adaptogens injection (November, January) the percentage of children with low attendance was lower than in other months (December, February). The number of children with 100 percent attendance was higher

than similar index in December and February. The index of 100 percent attendance was the highest in the group, where the recovery was held with the injection of herba Hyperici. The analysis of peroxidation products in the blood plasma among children showed that the injection of vegetable based adaptogens helped to decrease the level of malondialdehyde in the group of children who got Eleuterococcus on 7,6%, Rhodiola Rosea – on 18,7% ( $p < 0,05$ ), hypericum tincture – on 10,4% ( $p < 0,05$ ). The content of diene conjugates in the groups of children who got Eleuterococcus – on 12%, Rhodiola Rosea – on 41, 8%, hypericum tincture– 15,6% ( $p < 0,05$ ) was lower than the same index in the control group. The activity of the main components of antioxidant system in the blood plasma among children who got vegetable based adaptogens was higher in all groups compared with the control one. However the differences were not reliable, excepting the level of ceruleoplasmin in the blood plasma among children who got hypericum tincture (on 15,1%). Thus, one of the reserves of morbidity decrease in CEI is a targeted recovery of nursery aged children with the injection vegetable based adaptogens.

## **62. INFLUENCE OF B-CYCLODEXTRIN COMPLEX COMPOUNDS WITH PARAAMINOBENZOIC ACID**

Yanushevskiy K. – the 2-nd year student

Scientific leaders – C.M.Sc. Sergievich A.A., Kostina V.V.

To the question of influence of b-cyclodextrin complex compounds with paraaminobenzoic acid on the bioelectric activities of cerebral hemispheres cortex, capacity for work and instrumental behaviour in the experiment. b-Cyclodextrin and some its derivatives, due to their unique ability for the encapsulation of various drugs, found a wide use in physiology and pharmacology. In the presented investigation the clathrate and conjugate of b-cyclodextrin with paraaminobenzoic acid (PABA) were used. It is known an ability of paraaminobenzoic acid for the stimulation of physical endurance due to positive influence at the central nervous system. To prove that physiological activity is due to conjugation or inclusion of PABA in an experiment there were also used compounds which are precursors in organic synthesis. Mexidol, which possesses a wide spectrum of pharmacological activity, is taken as a standard. The obtained results allow us to make a conclusion that compounds studied by us possess neurotropic activity and create the preconditions for the more profound investigation of biological activity of these and similar compounds.

### **63. OPTIMIZATION OF TREATMENT OF PATIENTS WITH CRITICAL ISHEMIA OF LOWER EXTREMITIES.**

Bairam-zade N., Golova A. – the 4th year students

Scientific leaders – Prof. Shimko V.V., Yegorova V.D.

The high percentage of unsatisfactory results of surgical treatment, the wide spread of obliterating diseases of arteries of lower extremities contributed to the spread of using the later technology in combination with hyperbolic oxygenation.

The aim of this investigation became the improvement of results of surgical treatment of chronic ischemia of lower extremities in patients with arteriosclerosis obliterans with the help of laser radiation of lower intensity.

The critical ischemia of lower extremities leads to the development of decompensation of microcirculation accompanied by the regular reduction of the skin temperature in lower extremities.

After using hyperbaric oxygenation in the combination with intravenous low intensive laser radiation of blood with the help of helium-neon laser LA-2 (produced by DalYUS, Vladivostok) there were marked significant positive shifts manifesting in the increase of thrombin time, in normalization of indices of blood plasma.

Side effects of laser treatment were not marked.

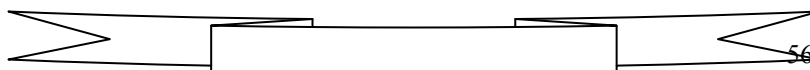
Thus the use of low intensive laser radiation is the effective method of treatment of patients with chronic ischemia of lower extremities.

### **64. P.F.LESGAFT'S CONTRIBUTION TO THE DEVELOPMENT OF ANATOMY AS A SCIENCE**

Che G.S.(Alisa) – the 1-st year student

Scientific leaders-ass. Pavlova A.E., ass.Volosenkova Ye.A.

Peter Franzevich Lesgaft(1837-1909), was an outstanding anatomist and teacher. He developed functional fields of anatomy, paid great attention to the environment and exercises in the development of organs. His works are devoted to the structure of bones, the structure and functions of joints and muscles and to the anatomy of the intestine and perineum. Lesgaft formulated general appropriatenesses of the blood vessels' work. The results of his research he presented in the book " The bases of theoretical anatomy". His great merit was the development of progressive system of physical training. The Institute of Culture in St. Peterburg and scientific center of the Academy of Pedagogical Sciences of Russia were named after P.F.Lesgaft.







**DEUTSCHE  
ABTEILUNG**

## **1. DIE AKTINOMYKOSE DER BRUSTDRUSE, DIE LOBULARER KREBS BEI SEKTORALE RESEKTION SIMULIERT**

Wissenschaftliche Leiter: Prof. I.Ju. Makarow, N.A. Tkatschjowa  
Der Student des Studienjahres W. Tschurin

Die einige Formen der Mastitis können differential – diagnostische Schwierigkeiten beim Mammakarzinom hervorrufen, dass manchmal zu groben Fehlern in der Diagnostik führt.

Die kasuistische Beobachtungen der primären Aktinomykose werden in der Literatur nicht oft getroffen. Man beobachtet den chronischen intermittierenden wellenförmigen Charakter der Krankheit und den engen Zusammenhang mit der Laktation. Unter den objektiven Ursachen der falschen Diagnostik der Krankheit kann man die Schwierigkeit der Differenzierung der entzündeten reaktiven Veränderungen beim Mammakarzinom mit primären Entzündungen während dringenden intraoperativen Untersuchungen nennen.

Wahrscheinlich ist der diagnostische Fehler der klinischen Untersuchung mit unvollständigen Besonderheiten der Krankheit und unvollständigen Laboruntersuchungen verbunden. Solcher Fehler führte zum Gesundheitsschaden.

Die Beobachtung zeigt die Notwendigkeit der Berücksichtigung als bei klinischen, auch bei morphologischen Untersuchungen der Brustdrüsetumoren.

## **2. CLONORCHIASIS**

Die Wissenschaftliche Leiter: Prof. A. D. Tschertow  
N. A. Tkatschjowa  
Die Studentin des 1. Studienjahres A. Gunbina

Der Erreger der Clonorchiasis ist *Spororchis sipepsis*, die zu einer Klasse von Trematoden Plattwürmer gehört. Die Körperlänge des Parasiten ist innerhalb von 10 -20 mm und einer Breite von 2 bis 4 mm. Vorderes Ende des Körpers ist verdickt, und die hintere - stumpf abgerundet. Auf der Bauchseite des Körpers gibt es 2 Saugmunde. Am vorderen Ende des Körpers ist der orale Saugmund und sein Durchmesser beträgt 0,45 - 0,60 mm.

Die vorderen Viertel der Länge des Körpers auf der Bauchseite ist Bauchsaugmund mit einem Durchmesser von 0,40 bis 0,47 mm. Das Verdauungssystem besteht aus dem Mund, tief in den Mundsaugnapf, Rachen, Speiseröhre und zwei Darm-Filialen Ende die sich blind am hinteren Ende

des Körpers Fluke befindet. Männliche Fortpflanzungssystem durch Hoden und Schlupf Sex Kanalen vorgestellt. Hoden sind im hinteren Drittel des Körpers, einer sich hinter dem anderen befindet. Vorderen Hoden ist mit einem Vier lappen, hinteren mit fünf. Das ist ein gutes diagnostisches Merkmal, das ungleich mit Opisthorchis ist, aus denen sie abgerundet war. Vor dem Hoden liegen Eierstöcke und Hoden. Uterus nimmt den mittleren Teil des Körpers ein und enthält eine große Anzahl von Eiern und bildet eine kleine Anzahl von Schleifen. Austrittsöffnung des Uterus wird an der vorderen Kante der Bauchsaugmund eröffnet. Vitellaria, die sich auf den Seiten des Körpers befinden, werden in der Nahe der Ebene angefangen und strecken sich bis Brustwarzen und Bauch, um das Niveau des Eierstocks. Eier sind gelblich-braune Farbe mit einem Deckel an einem Ende und eine Verdickung der Schale am entgegengesetzten Ende. Ihre Größe variiert zwischen 0,026 bis 0,036 x 0,036 - 0,0195 mm.

### **3. DIE VERWUNDETESORTIERUNG**

Die Wissenschaftliche Leiter: N.P. Ambrosjewa, N.A. Tkatschjowa.

Die Studentin des I. Studierjahres: T.Sjomina.

I.N.Pirogow war der erste, der die Verwundetesorrtierung schlug vor, organisierte, und verwendete. Aus dieser Sortierung wuchs die therapeutische Evakuationsbetreuung der Verwundeten. Pirogows System besteht darin, dass sich die Verletzten in 5 Hauptkategorien teilen. Das sind: 1) hoffnungslose und todlich Verwundeten; 2) schwer und gefährlich Verwundeten, die dringende Hilfe brauchen; 3) die Schwerverwundete, die dringende aber vorbeugende Betreuung brauchen; 4) die Verwundeten, die direkte chirurgische Betreuung brauchen, um die mögliche Beförderung zu bekommen. 5) die Leichtverwundeten oder solche, die nur leichtes Anlegen eines Verbandes oder Entfernung des oberflachen sitzenden Geschoss brauchen. Dieser einfachen und vernünftigen Sortierung nach wird die Arbeitskraft nicht um hergeworfen und die Hilfe für Verwundeten war schnell und rationell geleistet. Von der Verwaltung und nicht von der Medizin hängt das ab, dass alle Bedürftige dringende Hilfe bekommen. Aber dieses Hauptziel wird nicht immer verwirklicht. Hat der Arzt in Kriegsbedingungen als Hauptziel nicht verwaltungsmassige Handlung und nur dann medizinische Behandlung, geritt er in Verwirrung und Leisten seine "Kopf und Hände" keine Hilfe. Schaden von schlechter Anordnung in Verbandspunkte ist offenbar. Die Verwundetesorrtierung nach Pirogow verwenden nicht nur in russischen Armee, sondern auch in der Feindarmee.

#### **4. PIROGOWS OPERATIONEN UNTER DER VOLLEN ATHERNARKOSE**

Wissenschaftliche Leiter: N.P.Ambrosjewa, N.A.Tkatschjowa  
Die Studentin des I.Studienjahres W.Michajlowa

Am 16. Oktober 1846 wurde die erste in der Geschichte der Menschheit umfangreiche Operation unter voller Athernarkose durchgeführt. Es war volle Betaubung, Muskelabspannung, Reflexlosigkeit erreicht. Der Kranke wird in tiefen Schlaf mit dem Fühlbarkeitverlieren versunken. Pirogow hat die Athereigenschaften an Hunden, Kalben, an seinen Assistenten und Verletzten in der Kaukasen Front, auch an sich selbst geprüft. Er hat die Athernarkose unter Kriegsverhältnissen zum ersten Mal verwendet. Pirogow probierte die Atheresierung an gesunden Menschen, an sich selbst. Er beschloss diese Methode in der Feldchirurgie, z.h. auf dem Schlachtfeld zu verwenden. Die Operationen wurden beim Beisein anderen Verwundeten durchgeführt, um in schmerzstillender Wirkung des Atherdampfes zu überzeugen. Er hat auch Rektalverfahren der Athernarkose entworfen. Pirogow schuf das Spezialgerät und verbesserte die Inhalationengeräte. Er hat auch Schlussfolgerungen gemacht: «Ather, der als Flüssigkeit in zentralen Veneende eingespritzt wird, führt zum Momenttode». Die Methode der intravenösen Narkose mit reinem Ather bekam keine Verbreitung.

#### **5. VERÄNDERUNGEN DES ERHALTENS UND DES EMOTIONALEN ZUSTANDES BEI DEN RATTEN IM HOBENEN KREUZFORMIGEN LABYRINTH NACH DER DEPRIVATION DER PHASE DES RACHEN SCHLAFES**

Pendjurowa E. Rsaewa S. – Studentinnen des 5. Studienjahres  
Wissenschaftliche Leiter – Doz. Tscherbikowa G.E. Prof. Grigorjew N.P.  
Kornewa O.A.

Methodik des hobenen kreuzformigen Labyrinths (elevated plus – maze) wurde von Pellow S., File S. E. (1986) für die experimentelle Untersuchung der Analeptika und Antidepressanten auf Tiere im pharmakologischen Verhalten gebildet. Nach der erfolgreichen Anwendung für die Diagnostik der Präparate wurde sie auch in der fundamentalen Wissenschaft – Physiologie des Verhaltens für die Untersuchung des Erforschungsverhaltens und der Emotionalität und unter anderem des Beunruhigungsniveaus weit verwendet. Die Verwendung dieser Methode in der Somnologie für die Untersuchung dieser funktionellen Zustände haben wir in der Literatur nicht getroffen. Das Ziel unserer Arbeit ist die Unter-

suchung der Veränderungen des Erforschungsverhaltens und des emotionalen Zustandes bei den Ratten nach der Deprivation der Phase des paradoxen Schlafes im hobenen kreuzförmigen Labyrinth.

Untersuchungsmethodik.

Die Versuche wurden auf 10 gattungslosen erwachsenen Ratten beides Geschlechts angestellt. Testierungseinrichtung ist ein klassisches kreuzförmiges Labyrinth mit den geöffneten und geschlossenen Armen standardisierter Hebungshöhe. Testierung in Kontroll- und Versuchsgruppen wurde einmalig. Die Zeit des Aufenthaltes des Tieres im Labyrinth ist 3 Minuten. Deprivation der Phase des raschen Schlafes wurde durch das Stellen der Ratten auf die mit dem Wasser umgespulten Inselchen nach der Methodik von M. Jouvet in der isolierten Kammer für jedes Tier verwirklicht. Deprivationsdauer ist 24 Stunden. In der Bearbeitungsstatistik wurde das Paar-t-Kriterium vom Student, das Programm "Biostat" benutzt.

Die Zeit der Bewegungsaktivität in der Versuchsgruppe der Tiere nach der Deprivation des raschen Schlafes war minder als bei den Kontrolltieren und betrug  $39,8 \pm 10,9$  S., in der Kontrollgruppe  $114,6 \pm 21,7$ , Unterschied  $-74,8$  S ( $p=0,015$ )

Die Zeit des Befindes in den geöffneten Armen in der Versuchsgruppe war im Gegenteil grösser und betrug  $102,2 \pm 18,9$  im Vergleich zur Kontrollgruppe  $59,6 \pm 15,0$  S, Unterschied  $-42,6$  S ( $p=0,112$ )  
Senkrechte Haltungen in der Versuchsgruppe betragen  $1 \pm 0,45$ , in der Kontrolle  $4,4 \pm 1,29$ , Unterschied  $-3,4$  ( $p=0,037$ )

Die Zahl der Herunterhängen in der Versuchsgruppe war weniger im Vergleich zur Kontrolle und betrug  $3,6 \pm 0,93$ , Kontrollgruppe  $9,6 \pm 1,08$ , Unterschied  $-6$  ( $p=0,003$ )

Extremite in der Versuchsgruppe  $2,2 \pm 1,36$ , in der Kontrolle  $3,0 \pm 1,05$ , Unterschied  $-0,8$  ( $p=0,653$ )

Schlussfolgerung. Deprivation der Phase des raschen Schlafes sinkt horizontale Forschungsaktivität (davon zeugt die Bewegungszeit) und unterdrückt gleichzeitig vertikale Forschungsaktivität (davon zeugt die Senkung der Zahl von den senkrechten Haltungen). Nach dem Beunruhigungsniveau sind widersprüchliche Angaben bekommen: es neigte sowohl zur Senkung als auch zur Erhöhung.

## **6. MODERNE BEHANDLUNGSPRINZIPIEN DER AKUTEN PROMYELOZYTENLEUKOSE**

Nikischina E. – Studentin des 5. Studienjahres

Wissenschaftliche Leiter – D. M. W. W. Wojzechowski., O. A. Kornewa

Akute Promyelozytenleukose ist eine seltene Erkrankung, sie beträgt 5 – 10% von allen akuten Myeloleukosen und tritt häufig bei den jungen Menschen auf. Akute Promyelozytenleukose stellt eine deutlich ausgeprägte Krankheitsform mit den charakteristischen klinischen Labormerkmalen dar. In erster Linie ist das eine typische Morphologie der Blastzellen: grosse Blastzellen unregelmässiger Form, mit dem groben Kern; in Zytoplasma – reihe grobe Kornigkeit und Auer – Stabchen, solche Blastzellen sind nach der Form den Promyelozyten ähnlich, daraus stammt der Name der Erkrankung; die Reaktion auf Myeloperoydase, Lipide und Granulozytenastherase ist positiv in grosser Anzahl von Blastzellen, die Reaktion auf Glukogen ist positiv in der Diffusionsform. Die führende klinische Erscheinung dieser Leukose ist das schwere hamorrhagische Syndrom, dessen Ursache ausser Thrombozytopenie das disseminierte intravasale Gerinnungssyndrom ist.

Fruher war die Behandlung akuter Promyelozytenleukose negativ. (Vor Retinol) Die Mortalität betrug 100%. Chemotherapiedurchführung verstärkte das disseminierte intravasale Gerinnungssyndrom, weil die Zerstörung der Blastzellen im peripheren Blut die Ausscheidung von Gewebethromboplastin in mehrer Anzahl ins Blut beitrug. In der Regel starben die Kranken an der Hirnblutung oder an der profusen Hohlblutungen. Aber dank der Promyelozytenleukose wurde der Differenzeffekt von Blastzellen der Promyelozytenleukose unter der Wirkung von Derivaten der Retinolsäure (ATRA) entdeckt. Bei der ATRA Anwendung wird die Vollremission von der akuten Promyelozytenleukose rasch erreicht; hamorrhagisches Syndrom und das Syndrom des disseminierten intravasalen Gerinnung wurden kúpiert. Heutzutage wird häufig die Kombination von ATRA (Kommerbezeichnung – Wesanoid) und dem Protokoll "7+3" (mit Zytosar und Rubomyzin) angewendet. Langwieriges Überleben solcher Kranken berücksichtigend, wurde es notwendig die Neuroleukämieprophylaxe durchzuführen. Nach den modernen Protokollen wird die Behandlung der akuten Promyelozytenleukose (Induktion der Remission, Konsolidierung der Remission, unterstützende Therapie während der Remission, Behandlung oder Prophylaxe der Neuroleukämie) im Laufe von 2 Jahren durchgeführt. Zytostatische Therapie wird im Falle des Vorhandenseins der ersten Remission eingestellt. Die Kranken bleiben aber lebenslanglich unter Dispensaire – Kontrolle.

## **7. BEHANDLUNG DER KRANKEN MIT DER CHRONISCHEN MYELOISCHEN LEUKAMIE MIT DEM GLIWECK – PRAPARAT**

Suworowa I. – Studentin des 5. Studienjahres

Wissenschaftliche Leiter – D. M. W. W. Wojzechowski, O. A. Kornewa

Chronischen myeloische Leukämie ist eine häufige. Myeloproliferationserkrankung. Jährliche Morbidität von der chronischen myeloischen Leukämie beträgt in der Welt 1 – 1,5 von 100 000 der Bevölkerung. Im Amurer Gebiet beträgt die Jahresdurchschnittsmorbidität von dieser Hamoblastose 1 von 100 000 der Bevölkerung. 1973 zeigte J. Rowley, dass bei allen untersuchten Kranken die Translokation zwischen den Chromosomen 9 und 22 gezeigt wurde. Als Resultat dieser Translokation ist das Ph – Chromosom – Chromosom 22 mit dem verkürzten langen Chromosomenarm. Auf dem langen Chromosomenarm 9 befindet sich das ABL – Gen. Bei t (9;22) wird ein Teil dieses Gens von Chromosom 9, auf dem langen Arm des Chromosoms 22 in den Lokus des Gens BCR umgestellt. Als Ergebnis wird verbundenes Gen BCR/ABL gebildet. Der Vorzug in der proliferativen Aktivität, die in dieser Situation pathologischer Klon gewinnt, führt zur allmählichen Verstärkung der pathologischen Blutbildung, Verdrängung der normalen Hämatopoese, Zirkulation der unreifen Blutbildungsbestandteile und Erscheinung der Herde der Extramedullärbildung in der Milz und in der Leber. Aktivierung verschiedener Tyrosinkinase ist der Startmechanismus dieses Prozesses. Die Behandlung der chronischen myeloischen Leukämie mit den üblichen Präparaten ( Myelossan ) lässt sich beim Teil von Patienten nur klinisch – hämatologische Remission erreichen, aber zytogenetische Remission sind nicht erreicht. In Amurer Gebiet wurde Gliweck – Therapie im Oktober 2009 25 Patienten verordnet. Die Resistenz zum Präparat wurde bei 4 Patienten diagnostiziert, die Erkrankung wurde fortgeschritten. Urtaler Ausgang wurde konstatiert. Kleine zytogenetische Antwort ( von 35% bis 75% der Zellen haben das Ph – Chromosom ) wurde bei 4 Kranken konstatiert, die anderen Präparaten geheilt wurden. 15 hatten grosse zytogenetische Antwort: 13 – volle zytogenetische Remission, 2 – teilweise zytogenetische Remission. 2 Kranken bekommen Gliweck weniger als 3 Monaten und wiederholte zytogenetische Untersuchung wurde bei diesen Kranken nicht durchgeführt. Nebenwirkungen: Flüssigkeitsretention, Ödeme, Gewichtszunahme, Übelkeit, Erhöhung des Transaminaseniveaus. Für die Patienten, die eine Resistenz zu Gliweck haben, sind heute zwei neue Tyrosinkinase – Hemmstoffe – Tassigna und Spraisel registriert.

## **8. PROBLEME DER ARZNEIRESISTENTEN TUBERKULOSE**

Schtyforuk W., Martschenko Ja. – Studentinnen des 3. Studienjahres  
Wissenschaftliche Leiter: Prof. Makarow I. Yu., Kornewa O.A.

In den letzten Jahren wird neben der Zunahme der Tuberkulosemortalität die Zunahme der Anzahl von Kranken festgestellt, die Mykobakterien, ausscheiden die zu den antituberkulösen Präparaten resistent sind. Es ist bekannt, dass eine der Ursachen der Wirkungslosigkeit der Chemotherapie bei den Kranken mit der Lungentuberkulose die Arzneiresistenz von Tuberkelmykobakterien zu den Hauptpräparaten der Tuberkulose ist. Das erste Basispräparat des hochselektiven Wirkungsmittels auf den Tuberkuloseerreger ist Streptomycin. Bei der Analyse der Angaben der primären Arzneiresistenz kann man betonen, dass die höchste Arzneiunempfindlichkeit zu Streptomycin – 34,8% und zu Isoniasid – 18,8% festgestellt wird. Die Widerstandsfähigkeit der Tuberkulosemykobakterien zu Isoniasid und Rhipampylin, Streptomycin zählt man zu der polyresistenten Tuberkulose. Die Behandlung solcher Kranken ist sehr schwer, weil die Mutation erscheint.

Die Mutationsursache ist die Anwendung aller Ressourcen eigenes Genoms für die Erhöhung der Virulenz der Antigenstrukturveränderungen und für die Verbreitung in den Populationen der Arzneiresistenz. Das Niveau der Suppression des Immunodefizits, die Zahl der labilen Reaktionen wächst von der Gruppe mit der erhaltenen Resistenz zur Gruppe mit der Monoresistenz, Poliresistenz. Struktur - Stoffwechselstörungen des immunologischen Homeostasis sind nachgewiesen. Bei der Manifestation der Erkrankung spielt den Zustand des Organismus eine Rolle. Der Tuberkuloseerreger unterscheidet sich von anderen Infektionserregern durch hohe Virulenz der Mykobakterien.

Die Arzneiresistenz der Mykobakterien ist das Resultat der Fehl- und unvollständigen Tuberkulosetherapie. Die Resistenz behindert die Behandlung, sie wird nicht effektiv, sehr kompliziert und teuer.

## **9. ANALYSE DER LETALITÄT BEIM MYOKARDINFARKT BEI DEN KRANKEN MIT DER ZUCKERKRANKHEIT DES 2. TYPES**

Batkowa S.S.- Studentin des 3. Studienjahres  
Wissenschaftliche Leiter – Sundukowa E.A. Kornewa O.A.

Die ischämische Herzkrankheit und namentlich der Myokardinfarkt ist eine der Todesursachen der Bevölkerung. Die Häufigkeit der Entwick-

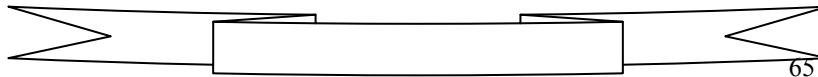


lung des Myokardinfarkts unter den Zuckerkranken ist 2 -3 mal hoher und Invaliditat und Sterblichkeit von ihnen sind hoher als bei den Menschen ohne Zuckerkrankheit. Das Ziel unserer Untersuchung ist die Auswertung der Letalitat beim Myokardinfarkt bei den Kranken mit der Zuckerkrankheit des 2. Typs, nach den Angabe der kardiologischen Abteilung des stadtlichen klinischen Krankenhaus. 84 Krankengeschichten wurden analysiert. Alle Kranken hatten verschiedene Risikofaktoren, darunter die arterielle Hypertonie (82,1 %), Rauchen (17,9 %). Die Fettsucht als Risikofaktor wurde bei 14,3 % der Gestorbenen festgestellt. Fruhe Hospitalisierung der Kranken mit dem Myokardinfarkt lasst sich die Letalitat bei dieser Erkrankung senken. Man ist hingewiesen, dass man spate Patienten-Neuzugang durch das Fehlen des Schmerzsyndroms erklaren kann. Die Haufigkeit der Letalitäten beim Myokardinfarkt wird durch seine Komplikationen bestimmt. Den ersten Platz nehmen die Komplikationen teil, die mit der Senkung des Herzauswurfs verbunden sind. Die durchgefuhrt Analyse zeigte, dass Todesrisiko beim Myokardinfarkt bei den Kranken mit der Zuckerkrankheit des 2. Typs im Alter wachst.

#### **10. PIROWS GEFRIERTE ZERSAGEN.**

Die Wissenschaftliche Leiter: N.P. Ambrosjewa, N.A. Tkatschjowa.  
Der Studentin des I. Studierjahres: A.Lisogub.

N.I. Pirogow arbeitete in seinem kleinen kalten Arbeitszimmer an gefrierten Teilen des menschlichen Korpers und zeichnete auf den Zeichnungen die Topographie der Zersagen. Er hat die Zersagen in verschiedenen Richtungen gemacht und studierte die topographische Beziehung zwischen den Organen und Teilen des Korpers. Er hat geschrieben :”Das waren ausgezeichnete Präparate, die sehr belehrend für die Ärzte sind.” Die Lage mehreren Organen (des Herzens, des Magens, der Darne) war nicht solche wie es bei der Sezierung, weil sich vom Luftdruck und Unversehrtheitsstörung der hermetisch geschlossenen Hohlen diese Lage verändert. Sowohl in Deutschland als auch in Frankreich versuchen später, mich nachzuahmen, aber ich kann tapfer behaupten, dass niemand solcher vollen Darstellung der normalen Lage der Organe nicht vorgestellt hat, wie ich.” Die Akademie der Wissenschaften hat diesen genialen Beitrag in die Wissenschaft mit grossen Demidowskipreis ausgezeichnet. Dieses Werk wird noch lange Zeit als Quelle der Wissen für vielen Generationen der Anatomen und Chirurgen dienen.





# SECTION du FRANCAIS et du LATIN

## **1. LE GRAND SAVANT ET CHIRURGIEN N.I. PIROGOV**

A. Boroieva – et-te de la 3-me annee.

Les dirigeants scientifiques – Boulat E. P., S. I. Nasarkina.

Nikolay Ivanovitsch Pirogov est un des plus celebres medecins, savants, anatomes et professeurs, qui jusqu'a ce temps a l'autorite la plus eminante dans la chirurgie militaire.

Ce fameux medecin est ne le 25 novembre 1810 a Moscou. Tout d'abord il a recu la formation initiale a la maison, puis il fait ses etudes a la pension privee de Kriajevov pour les enfants du titre noble. Il a passé un examen d'entree a l'universite a l'age de 14 ans, bien que tous les autres puissent y entrer après 16 ans. Ses annees etudiantines ont passé dans la periode de la reaction, quand il etait interdit de faire des preparations et les musees anatomiques etaient detruits. A l'universite c'est le professeur Moudrov qui a fait une grande influence a Pirogov par ses conseils etudier l'anatomie pathologique et s'occuper de la dissection. Apres la terminaison de l'universite il a commence a travailler a l'universite de Derpte (Allemagne).

En 1832 N. I. Pirogov a soutenu la these, dans laquelle il a pose et a resolu plusieurs questions tres importantes sur la technique du pansement de l'aorte abdominale et de la reaction du systeme vasculaire de l'organisme en general. En 1838 il etait invite a Paris, ou il a fait connaissance avec grands chirurgiens francais: Velpeux, Roux, Lisfranc, Amussat et d'autres. En 1839 il a publie son oeuvre fameuse "L'anatomie chirurgicale des troncs arteriels et des fascias" en latin et en allemand. En 1841 il a commence a travailler a l'Academie medico-chirurgicale de Petersbourg comme professeur de la chirurgie hospitaliere et l'anatomie appliquee. Il est devenu un chef du departement chirurgicale de l'hopital.

Dans les annees 1845-1855 il a pris part active a la defense de Sebastopol. C'est ici qu'il a utilise pour la premiere fois dans l'histoire de la chirurgie l'ether en tant que narcose dans les hopitaux de campagne. En 1881 on a celebre 50 ans de l'activite de ce grand savant et medecin. Plus tard il, lui meme, a trouve le cancer de la muqueuse dans sa cavite de bouche.

Il est mort le 5 decembre 1881 au village Vichnia (a present Pirogovo) dans la region de Vinitsa, ou son corps embaume a ete place dans la crypte de musee qui porte son nom. A Moscou on a eleve le monument a N. I. Pirogov.

Il a publie beaucoup de travaux scientifiques, par exemple: "Principes de chirurgie generale militaire", "Principes d'operation osteoplastique" et d'autres. N. I. Pirogov est connu aussi comme grand peda-

gogue qui militait pour l'instruction publique en Russie.

Les merites de l'academicien N. I. Pirogov dans le progres de la chirurgie nationale et mondiale sont immenses. Grace a ses travaux scientifiques et pratiques la chirurgie russe occupe l'une des premieres places au monde.

## **2.LA FORMATION DES MEDECINS PENDANT LA GRANDE GUERRE NATIONALE**

Barabach E., Zournadjian S. – et-tes de la 4-me annee

Les dirigeants scientifiques – Plastinin M. L., Nasarkina S. I.

En 1941 l'article de la tete du journal "Pravda" a annonce que la mission strategique de la medecine etait suivante:"Chaque soldat qui rentre dans l'ordre, c'est notre victoire. C'est une victoire de la science medicale sovietique. C'est une victoire de l'unite militaire aux rangs desquels le vieux soldat aguerrri dans les batailles, est revenu".

La plupart des ressources humaines et materielles de la mobilisation de la sante publique, qui compose 39,9 % de tous les medecins et 35,8 % du nombre des lits hospitaliers, se trouvait dans les regions occidentales de l'Union Sovietique. Des les premiers jours de la guerre ces regions etaient occupees par les unites attaquées de l'ennemi. Le service medicale subissait des pertes directement au champs de combat. Plus de 80 % des pertes sanitaires composaient le personnel troupe et le personnel grade. C'etait une avant-ligne du front. Pendant cette guerre plus de 85 000 medecins ont perdu ou ont disparu. C'etaient 5 000 medecins, 9 000 aides des medecins, 23 000 instructeurs sanitaires, 48 000 infirmieres et brancardiers.

Dans ces conditions la formation des medecins pour l'Armee en campagne est devenue une situation actuelle, qui determinait la faculte d'agir de la medecine a la guerre. L'Academie de medecine militaire S. M. Kirov est devenue une ecole essentielle pour le service medical militaire. Les medecins-capitaines qui perfectionnaient leur specialite, les auditeurs qui ont recu des connaissances medicales militaires speciales, ont compose la base du corps dirigeant medical du service de medecine de l'Armee Rouge. On a ete forme et envoye au front 1829 medecins -capitaines. En 1941 l'Academie a prepare 2 promotions avant terme. Les promus de l'Academie ont fait preuve de l'heroisme veritable, executant le devoir patriotique et professionnel a la guerre. 532 promus de l'Academie ont disparu au combat pour la Patrie. Les representants des autres etablissements medicaux ont porte des contributions dans notre victoire, p. ex.: le premier institut de medecine Setchenov. 2632 promus de cet institut ont servi

dans l'Armee et dans l'arriere du pays.

Pendant toute la periode de la Grande guerre nationale les specialistes en medecine realisaient les relations directes et l'unite d'action au centre et dans les organisations locales d'après la ligne de la succession du traitement des blesses et des malades aux hopitaux d'evacuation du Commissariat du peuple de la Sante publique la realisation des plans d'Etat de l'execution des mesures antiepidemiques et d'autres. Les organisateurs competants et les savants d'une haute competence etaient a la tete des organes centrales de l'administration de la medecine.

### **3. INDICES DE L'INVALIDITE A LA REGION**

J.Segreneva –et-te de la 5-me annee

Dirigeants scientifiques-prof. L.N. Voyte, ass. de prof. O.J. Lakotsenina, L.I.Chpiltchouk

L'invalidite est une des importants indices de la sante. L'annee derniere le nombre total des examines dans les etablissements medico-socials de l'expertise a reduit 1,1 fois par comparaison avec 2008 annee et est compose 1,2% de la population adulte (7994 personnes).

En 2009 pour la premiere fois 7271 personnes sont devenus les invalides, la qualite des invalides a reduit en 3,9% par comparaison avec 2008 annee. L'invalidite a etablit chez 50,6% femmes et 49,4% hommes.

En 2009 dans la structure primaire de l'invalidite selon l'age ont predomine les personnes de l'age de pension. Le niveau moyen de l'invalidite primaire chez les personnes de pension est plus qu'en 4 fois haut, que chez les personnes de 18 ans a l'age de pension (386,2 et 77,6 conformement).

La sortie primaire a l'invalidite en 2009 a reduit et est compose 106,8 en 10 mille de la population adulte (2008-111,1,R.F.-80,6).

La premiere place dans la structure primaire de l'invalidite occupent les maladies du systeme de la circulation sanguine-52,9%. La deuxieme place appartient le cancer-11,5%, la troisieme place occupent les maladies du systeme osteo-musculaire et du tissue conjonctif-6,6%.A la distribution des indices d'après la gravite de l'invalidite primaire predominent les in-valides du deuxieme groupe (57%), les invalides du troisieme groupe composent 31,5%, du premiere groupe-11,5%.

#### **4. L'ANALYSE DE L'EFFECTIVITE DE L'ASSISTANCE MEDICALE HAUTEMENT TECHNOLOGIQUE CHEZ LES MALADES AVEC LA MALADIE ISCHEMIQUE DU COEUR ET LES METHODES DE SA REALISATION**

Barabach E., Zournadjian S.- et-tes de la 4-me annee  
Dirigeants scientifiques-ass. de prof. O.J.Lakotsenina, prof. L.N.Voyte,  
L.I. Chpiltchouk.

Malgre les succes notables de la medecine contemporaine, les maladies du coeur et des vaisseaux rencontrent souvent et sont plus graves. La place principale parmi de cette pathologie occupe la maladie ischémique du coeur (MIC) et sa complication (l'infarctus du myocarde). La MIC est une des causes principales de la mortalite parmi de la population des pays developpes et affecte les hommes aptes au travail plus souvent que les femmes.

D'après les resultats des examens medicaux approfondis de la population travaillante et de l'observation medicale prophylactique complementaire ont detecte les maladies du systeme de la circulation sanguine chez 23,4% personnes. Le traitement conservatif n'est pas toujours effectif. Les formes nombreuses de la MIC sont les indices absolus pour le traitement chirurgical. L'algorithme du choix des malades avec la MIC pour les porter secours de l'assistance medicale hautement technologique a fait penetrer a la polyclinique N1 de ville.

Le but de l'etude: analyser les resultats de porter secours de l'assistance medicale hautement technologique.

Les materiaux et les methodes de l'etude: les resultats du traitement de 150 malades diriges de la polyclinique N1 de Blagovestschensk a l'institute de recherché scientifique (IRSP) et de perfectionnement de E.N.Mechalkine en 2008-2009.

Les resultats de l'etude. En 2008 a l'IRSP de Mechalkine de Novosibirsk 74 personnes ont ete envoye pour la realisation de la coronarographie et du traitement chirurgical, 7 personnes ont refuse du traitement, 9 personnes ont fait la coronarographie, l'affection du cous coronaire n'est pas revele, le traitement chirurgical n'est pas fait; 2 patients sont morts pendant l'attente a cause de la gravite de la pathologie. 25 personnes ont recu le traitement chirurgical, 5 patients ont recu le shunt aortocoronaire, 15 patients ont fait l'angioplastie transluminale percutanee avec stenting, 3 patients ont fait l'ablation radiofrequence, 2 patients ont fait l'operation de la prothese des valvules.

En 2009 a l'IRSP de Novosibirsk 76 personnes ont ete envoye au traitement chirurgical. 33 patients ont passé le traitement chirurgical. Pen-

dant la coronarographie chez 10 patients n'est pas revele des affections du cours sanguine et les est refuse de traitement chirurgical; 3 patients sont morts pendant l'attente a cause de la gravite de la pathologie; 2 personnes ont refuse de traitement. De 33 patients traites 6 malades ont fait le shunt aortocoronaire, 23-l'angioplastie transluminale percutanee, 1 malade - l'operation du moulage de myocarde, 3 malades- la prothese des valvules. 28 personnes attendant l'invitation au traitement. Ainsi, en 2009 le pourcentage de l'hospitalisation a augmente a l' IRSP.

D'après les resultats de traitement en tous les cas marque l'amelioration de l'etat general: le syndrome douloureux a diminue, la tolerance aux changements physiques a augmente, la qualite de vie a amelioré. Tous les malades qui ont recu le traitement a l'IRSP etaient invalides. La nouvelle expertise medicale reiterative 42 patients sont restes 2 groupe de l'invalidite, 14 malades a diminue l'invalidite de la 2 groupe a 3 groupe, 2 patients ont leve l'invalidite et les patients ont mis au travail. Ainsi, en resultat du traitement les possibilites de la rehabilitation ont elargi comme medicale que sociale.

#### **5. L'APPORT DE V. P. VOROBIEV DANS LE DEVELOPPEMENT DE L'ANATOMIE DE LA PERIODE SOVIETIQUE**

Mitschenko A., Mansimova G. – et-tes de la 2-me annee.  
Les dirigeants scientifiques – Pavlova A. E., Nasarkina S. I.

Vorobiev Vladimir Petrovitch (qui est ne en 1876 et est mort en 1937) est un des grands savants, qui etait fondateur de l'ecole anatomique de Kharkov.

En 1908 il a soutenu la these du doctorat en medecine "L'innervation des tendons de l'homme". Il a elabore la methode de l'etude macro-et microscopique du systeme nerveux peripherique. Il a etudie les nerfs du coeur et de l'estomac. Il a perfectionne la methode de la concervation des cadavres. En 1924 il s'est mis a la tete de l'equipe de l'embaumement du corps de V. I. Lenine. V. P. Vorobiev a cree "L'atlas de l'anatomie de l'homme" en cinq volumes.

Il a ecrit une serie des divisions a l'oeuvre fondamentale "L'anatomie de l'homme". En 1927 il a remporte le Prix de V. I. Lenine. En 1934 il est devenu le membre actif de l'Academie des Sciences de la Republique Socialiste Sovietique d'Ukraine.

## 6. COMMENT SE FORME UNE IMAGE VISUELLE?

Bronnikova E., Tschegortsova J. – et-tes de la 2-me annee  
Les dirigeants scientifiques: Vodopian A. V., Nasarkina S. I.

L'oeil de l'homme represente un systeme complexe. Le but principal de ce systeme, c'est une perception plus exacte, le travail initial et la transmission de l'information qui se trouve a l'emission electromagnetique de la lumiere visible. Toutes les parties isolees de l'oeil et les cellules et leurs composants servent au maximum a l'execution complete de ce but. Les rayons de lumiere se trouvent des objets entoures par la cornee a l'oeil. La cornee au sens optique c'est une lentille reunie forte qui fait le foyer des rayons de lumiere dans les divers cotes. Les rayons de lumiere refractes a la surface anterieure et posterieure de la cornee, passent sans obstacles par le liquide transparent qui remplit la chambre de l'oeil anterieure jusqu'a l'iris. La pupille, c'est un orifice rond dans l'iris, permet aux rayons situes au centre de continuer son voyage a l'interieure de l'oeil. Puis la lumiere se refracte par le cristallin. Le cristallin c'est aussi une lentille, comme la cornee. Sa difference de principe consiste en cas que chez les gens a l'age jusqu'a 40 ans, le cristallin est capable de changer sa force optique. Ce phenomene porte le nom de l'accommodation. Le corps vitre est situe derriere le cristallin. Le corps vitre se repand jusqu'a la retine et remplit le volume grand du globe oculaire.

Les rayons de lumiere par le systeme optique tombent enfin a la retine. La retine sert comme l'ecran spherique sur lequel reflechit le monde ambiant. Nous connaissons du cours d'ecole de la physique que la lentille spherique convergente donne l'image retournee de l'objet. La cornee et le cristallin ce sont deux lentilles collectives, et l'image sur la retine aussi retournee. Autrement dit le ciel se trouve a la moitie inferieure de la retine, la mer se trouve a moitie superieure et le navire se trouve a la macule. La macule c'est une partie centrale de la retine, qui repond a l'acuite haute de la vue. Les autres parties de la retine ne permettent pas nous lire et travailler au compiuter. Toutes les conditions pour la perception des petits details des objets ne se trouvent qu' a la macule.

Dans la retine l'information optique se percevoit par les cellules nerveuses sensibles a la lumiere, fait le codage des impulsions electriques et se transmet par le nerf visuel a l'encephale pour le travail difinitif et la perception consciente.



## **7. LES OPERATIONS ENDOVIDEOCHIRURGICALES AU DIAGNOSTIC ET AU TRAITEMENT DES MALADES.**

Matchevskaia M. – et-te de la 3 annee

Les dirigeants scientifiques: Volkov L. A., Nasarkina S.I.

Actuellement au diagnostic et au traitement des differentes maladies chirurgicales on utilise largement des technologies peu traumatiques modernes, ce sont les endovideooperations. Ces operations sont peu traumatiques, elles ne sont pas accompagnees par beaucoup de plaies d'operations. On surveille les complications rares. Sa periode post-operatoire dure plus facile que celle-ci après des operations effectuees par la methode traditionnelle. Les termes de la rehabilitation sont dimunues. A la chirurgie abdominale on utilise largement la methode de l'endovideolaparoscopie.

Les derniers 20 ans au departement chirurgical de l'hopital municipal on fait les operations laparoscopiques a l'estomac, a la vesicule biliaire, au pancreas, a l'appendice vermiforme, aux hernies differentes de la paroi abdominale anterieure, d'après la phlebectasie variqueuse superficielle. Pendant les annees 2009-2010 on a fait 400 operations laparoscopiques differentes avec le but diagnostique et therapeutique.

Nos surveillances permettent de marquer que la laparoscopie c'est une methode effective diagnostique et therapeutique. Les operations facilitent la periode post-operatoire, favorisent la diminution des complications post-operatoires et diminuent la periode de la rehabilitation.

## **8. ЛАТИНСКИЙ ЯЗЫК И МЕДИЦИНСКАЯ ТЕРМИНОЛОГИЯ**

Шпицына Н.—1 к.

Руководитель – Шпильчук Л.И.

Латинский язык и основы терминологии – это новый предмет, который изучают будущие врачи, провизоры и представители других специальностей. Латинский язык принадлежит к италийской группе индоевропейской семьи языков. Первоначально он был языком небольшого племени латинян, а со временем стал государственным языком огромной Римской Империи. Литературный латинский язык – это язык выдающихся произведений ораторской и исторической прозы и поэзии. Терминология является главным отличием профессионального языка от обычного обиходного языка. Усвоение и понимание терминологии – обязательное условие приобретения специального образования. Основная функция термина заключается в том, чтобы

точно и однозначно называть, обозначать некоторое понятие науки, области техники и т.п. Научное понятие – это результат научного теоретического обобщения, выражение определенной научной теории, научной системы знаний. Терминология – это совокупность наименований, слов и словосочетаний, используемых для точного и однозначного обозначения научных понятий в системе понятий данной науки, отрасли техники, производства. Максимальная точность, однозначность, упорядоченность, унификация и стандартизация – это основные качества, которыми должны обладать термины. Современная русская медицинская терминология – это результат многовекового развития мирового и русского врачевания, медицинской науки. Медицинская и биологическая терминологии достигли по сравнению с терминологией других отраслей наибольшей степени интернационализации под влиянием двух классических языков античного мира – древнегреческого и латинского.

## **9. МЕДИЦИНСКИЕ СИМВОЛЫ**

Анохина В., Фефелов А.—1 к.

Научный руководитель: С.И. Назаркина

В разные времена в разных культурах медицинские символы отражали восприятие жизни и смерти, здоровья и болезни, напоминали об образе врачевателя и методах лечения. Говоря о происхождении медицинских символов, мы вспомним известные нам имена богов — покровителей врачебного искусства. Распространенными врачебными символами в разное время были изображения пестика и ступки, уринария, медицинских банок, которые украшали гербы городов, известных своими больницами. Существует ряд общих медицинских эмблем: 1) изображение змеи, в том числе в сочетании с чашей, с треножником Аполлона, свечой, зеркалом, посохом; 2) изображение сердца на ладони; 3) изображение горящей свечи, символизирующие какое-то определенное направление в области медицины: а) символы терапии – ландыш, флорентийский младенец, пеликан, уринарий (сосуд для сбора мочи), рука, которая прощупывает пульс; б) символы хирургии – капля крови, различные хирургические инструменты, пентаграмма; в) различные военно-медицинские эмблемы, эмблемы различных медицинских обществ. Медицинская эмблема – это условное изображение, которое символизирует медицинскую сферу, принадлежность к медицинской профессии, различные отрасли в области медицины, какие-то отдельные медицинские специальности. Древние мифы были своеобразной формой осмысливания ми-

ра и его глубокого познания человеком. С веками многие представления менялись. Но смысл основных медицинских эмблем сохранился до сих пор.

### **10. ИСТОРИЯ ВРАЧЕВАНИЯ (ДРЕВНЯЯ ГРЕЦИЯ И ДРЕВНИЙ РИМ)**

Сибилева Д. - 1 к.

Старший преподаватель: Л.И. Шпильчук

История полупрофессионального и профессионального врачевания насчитывает несколько тысячелетий. Наиболее ранними из дошедших до нас источников являются несколько фрагментов медицинских текстов Алкмеона Кротонского (6 в до н. э.) Свыше 100 медицинских сочинений той эпохи собрано в «Гиппократовом сборнике» («Corpus Hippocraticum»), приписываемые величайшему врачу древности Гиппократу (460-377 г.г. до н.э.). В сборнике даны описания болезней, приведены методы их распознавания и лечения.

Значительный вклад в медико-биологическую лексику внес греческий философ и ученый Аристотель (384-322 гг. до н.э.).

В эпоху эллинизма (конец 4-1 в.в. до н.э.) центром научной медицины стала Александрийская медицинская школа, которая прославилась деятельностью –Герофила и Эразистрата . Они вводили неологизмы. На протяжении всей своей истории латинский язык испытывал сильное влияние греческого языка . Ссылкой на авторитет греческих врачей является медицинское сочинение «О медицине». Оно было написано на латинском языке Авлом Корнелием Цельсом в I в до н. э.

Греческий и латинский - территориально и исторически взаимодействующие индоевропейские языки. Недостающие обозначения заимствовались латинским языком из греческого.

Врачи античной эпохи должны были владеть двумя языками - греческим и латинским.

Это двуязычие явилось традиционной закономерностью развития терминологии медицины и фармации на протяжении всех последующих веков и продолжается в настоящее время.

### **11. МЕДИЦИНА В ДРЕВНЕЙ ГРЕЦИИ И ДРЕВНЕМ РИМЕ**

Царенко О.—1 к.

Руководитель: Н.А.Ткачёва

О медицине классического периода истории Греции рассказывает выдающийся памятник медицинской литературы “Гиппократов

сборник”, составленный около III в. до н. э. из сочинений древнегреческих врачей и названный именем великого врача античного мира Гиппократата.

В медицине Греции имелось два направления: народная и храмовая.

Медицина в Греции издавна носила светский характер: “Она основывалась на эмпирии и в своей основе была свободна от теургии, т. е. Призывания богов, заклинаний, магических приемов и т. п.”

Согласно Гомеру в греческом войске времен Троянской войны были искусные народные врачи, которые успешно лечили раны и знали свойства целебных трав.

В древней Италии вплоть до II в. до н. э. обходились без врачей

профессионалов. Лечили дома народными средствами: травами, кореньями и

плодами, настоями и отварами, часто совмещая это все с магией и наговорами.

Древний Рим внес существенный вклад в развитие военной медицины. Постоянная римская армия, ведущая широкие завоевательные войны, требовала большого количества врачей-профессионалов.

Ученые и натуралисты древних Греции и Рима внесли огромный вклад в развитие медицины. Конечно, несовершенство техники того времени и незнание людьми фундаментальных законов естества не позволили им полностью избавиться от заблуждений в сфере человеческого тела, однако то, что было сделано, действительно заслужило того, чтобы имена ученых и простых медиков древнего мира были внесены в анналы истории.

## **12. АНЕСТЕЗИЯ В ДРЕВНЕМ РИМЕ И ГРЕЦИИ**

Меньчакова К., Дурнева О.— 1 к.

Научный руководитель: Н. А. Субычева

Анестезия - явление уменьшения чувствительности какой-либо области тела или органа, вплоть до полной её потери. Термин «анестезия» применил греческий философ Диоскорид для описания наркотикоподобного действия мандрагоры. Попытки изобрести обезболивающее были предприняты ещё в I веке до н.э. Анестезия, в наше время, имеет очень большое значение для выполнения, различ-

ной сложности, операций. Две идеи с древнейших времен владеют умами человечества: устранить боль и вернуть к жизни внезапно умершего. Вероятно, обе эти идеи возникли одновременно и многие века развивались независимо друг от друга. Идеи устранения боли , привела к возникновению анестезиологии, вторая- к созданию реаниматологии.

### **13. МИФЫ ДРЕВНЕЙ ГРЕЦИИ**

Поливанова Е. - 1 к.

Научный руководитель: Н.А. Субачева

Мифы древней греции-это поэтический мир древних легенд дошедших до нас из глубины тысячелетий,в них тесно переплелись реальные события и фантастические представления о происхождении мира и человека-каждое новое поколение людей заново открывает для себя античные сказания о великих богах и героях,о рождении звезд и планет.

Время не властно над историей троянской войны,ни над легендами о чудесном путешествии аргонатов за золотым руном и приключениях одиссея!

И в наше время актуальна эта тема,богиня судьбы и в наше время решает судьбы!

### **14. КУЛЬТУРА АНТИЧНОСТИ**

Давыдова Е., Першута В., 1 к.

Научный руководитель: Назаркина С.И.

Древние народы и цивилизации оставили нам богатое наслед-ство. Античное искусство, родившееся в Древней Греции и Древнем Риме, послужило родоначальником всего последующего западного искусства. Слово "античный" происходит от латинского "антиквус", что в переводе на русский означает "древний". Впервые термин "античность" был использован примерно в XV веке в Италии, во время формирования новых настроений эпохи Возрождения. На протяжении всей эпохи античности укреплялось представление об античном искусстве, античной культуре в самом широком проявлении как об идеальном, недостижимом образце для подражания. Античные греческие и римские произведения привлекали мастеров эпохи Возрождения не только как образчики высочайшего мастерства, но и своей идеологической подоплекой, возвращающей образ человека и утверждающей высочайшую ценность свободы. Таково было великое мировоззрение античности.

Во многовековой истории развития человеческого общества особая роль принадлежит античному периоду, что обусловлено, главным образом, его вкладом в мировую культуру. При этом культура античности (как и культуры других эпох) рядом исследователей часто отождествляется с понятием "цивилизация", как это имеет место, например, во взглядах Э.Тэйлора. Отождествление этих понятий ведет к неясности в понимании самого содержания культуры.

## **12. АНЕСТЕЗИЯ В ДРЕВНЕМ РИМЕ И ГРЕЦИИ**

Меньчакова К., Дурнева О.— 1 к.

Преподаватель – Н.А. Ткачева

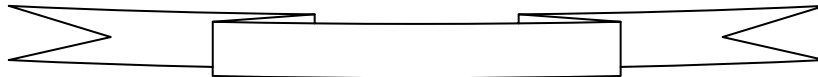
Искусство борьбы с зубной болью - одна из древнейших отраслей медицины. В нее внесли свой вклад представители различных цивилизаций и народов. Любопытно, что многие изобретения в этой сфере, которые до сих пор используют зубные врачи, были сделаны столетия и даже тысячелетия назад.

Стоматология – это одна из самых древнейших в мире профессий.

Удаление зубов – это одна из самых древних врачебных манипуляций, чаще всего проводившаяся с целью устранения зубной боли. Были найдены описания положений пациента при удалении зубов. В странах Древнего Мира существовали рецепты борьбы против зубной боли. Например, Древние Египтяне считали, что мышцы могли вылечить зубные боли. Наши прадеды были убеждены, что зуб начинает болеть оттого, что в нем поселяется “зубной червь” и выгрызает дыру.

Археологи из разных стран среди обнаруженных останков людей, живших около 7-9 тысяч лет назад, находили коренные зубы с просверленными в них отверстиями. В Древнем Риме, как и в других странах Древнего Мира, существовали ремесленники (золотых дел мастера, резчики по кости), которые изготавливали протезы и восстанавливали дефекты зубных рядов.

Также в Древнем Мире использовали щетки и пасты для гигиены полости рта. Древние римские писания описывали огромное количество смесей для паст и порошков.



## Оглавление

### Section of the English Language—5

#### **THE FESTIVAL OF KYOTO**

Sakai M. – the 5th-year student — 6

#### **SAMURAI AND NINJA**

Inoue R. –the 5th-year student — 6

#### **THE DIFFERENCE OF TRANSPORTATION BETWEEN JAPAN AND RUSSIA**

Oya N. –the 5th-year student — 6

#### **JAPANESE FOOD CULTURE**

Hamahata Y. –the 5th-year student — 6

#### **FRACTAL ANALYSIS OF POLARIZATION REVERSAL PROCESSES IN FERROELECTRIC CRYSTALS**

##### **SUMMER HOLIDAYS WITH JAPANESE FRIENDS**

Moiseenko A., Nevedomskaya N., Galkina S.,  
Skolubovich A., Tarasyuk E., Zverev A. — 6

##### **SUMMER HOLIDAYS WITH JAPANESE FRIENDS**

Moiseenko A., Nevedomskaya N., Galkina S.,  
Skolubovich A., Tarasyuk E., Zverev A. — 9

#### **13 FAR EASTERN ANNIVERSARY SCHOOL OF ACTUAL PROBLEMS OF CHEMISTRY AND BIOLOGY MEDICAMENTOUS TREATMENT OF PITUITARY ADENOMAS**

Konikova D.- the 6<sup>th</sup> year student — 10

#### **THE USE OF THE RADIOTHERMOMETRY-METHOD FOR DIAGNOSTICS OF THE MAMMARY GLAND CANCER**

Kolesova M., Khokhlova E. - the 5-th years students — 11

<b>ALIEN BODIES OF THE STOMACH</b> Bova E., Zasukhina A. – the 3 <sup>rd</sup> year students	—	<b><u>13</u></b>
<b>PARKINSON'S DISEASE</b> Karpanin V.I. - the 3 <sup>nd</sup> year student	—	<b><u>13</u></b>
<b>THE DYNAMICS OF OCULAR REFRACTION CHANGE IN THE SECOND- YEAR STUDENTS OF THE AMUR STATE MEDICAL ACADEMY DURING A YEAR</b> Gosteva A. A.-the 6 <sup>th</sup> year student	—	<b><u>14</u></b>
<b>WHAT IS THE LETHARGICAL SLEEP</b> Nuriev E – the 3 <sup>rd</sup> year student	—	<b><u>15</u></b>
<b>ACUTE PURULENT OMENTITIS</b> Byrdin Y.V. - the 3-d year student	—	<b><u>16</u></b>
<b>NATURAL FOODS AND COSMETIC GOODS, CONTAINING BIOLOGICALLY ACTIVE COMPOUNDS OF SOY BEANS</b> Lapin D. the 3-d year student	—	<b><u>17</u></b>
<b>BASIC KNOWLEDGE ABOUT MUCOVISCIDOSIS AND THE VARIANTS OF PHENOTYPE OF WELL-KNOWN PATIENTS</b> Peschanskaya S. - the 2nd year student	—	<b><u>17</u></b>
<b>ENDOSCOPIC TREATMENT OF VENOUS TROPHIC ULCERS</b> Nevedomskaya N.- the 3 <sup>rd</sup> year student	—	<b><u>18</u></b>
<b>ROLE OF OXYCODONE AND OXYCODONE/4ALOXONE IN CANCER PAIN MANAGEMENT</b> Nekrasova O. – the 3-rd year student	—	<b><u>19</u></b>
<b>MALE TRICHOMONIASIS</b> Storozhuk A. - the 2nd year student	—	<b><u>20</u></b>
<b>DIETARY SUPPLEMENTS. BENEFITS AND HARM.</b> Ivanchenko A.-the 2-nd year student	—	<b><u>20</u></b>
<b>PATHOGENESIS OF HEPARIN-INDUCED THROMBOCYTOPENIA</b> Schekochihina O. - the 1 <sup>st</sup> year student	—	<b><u>21</u></b>



**BRAIN TUMORS ARE FOUND AT ALMOST ANY AGE**

Yegorova I. – the 2<sup>nd</sup>-year student — 22

**THE SIGNIFICANCE OF OCCUPATIONAL DISEASES AND  
SIGNS OF MEN'S BELONGING IN PERSON'S IDENTIFICATION**

Kostin I. – the 3<sup>rd</sup> year student — 23

**ORGANIZATION OF STUDENTS HEALTHY LIVING – STYLE  
DURING STUDY**

Kushnarev V. – the 2-nd year student — 24

**TYPES OF SOMATIC CONSTITUTION IN FIRST-YEAR  
STUDENTS**

Krivopusk S., Prilepko K. –the 2 –year students — 26

**FEATURES OF VENOUS SYSTEM OF A HEAD'S  
CEREBRAL PART**

Philippov A. – the 2<sup>nd</sup>-year student — 27

**TRICHOMONAS VAGINALIS**

Bondarovich K. – the 2<sup>nd</sup>-year student — 28

**STEM CELLS: VICTORIES AND DOUBTS**

Loskutnikova M. – the 1<sup>st</sup>-year student — 29

**ADAPTOGENS IN THE CORRECTION OF LIPID  
PEROXIDATION PROCESSES INDUCED BY THE  
INFLUENCE OF COLD AND ULTRA-VIOLET RAYS**

Tarasov A., Shevchenko E., Sharifova Z.– he 3<sup>rd</sup>year students — 30

**MODERN METHODS OF TREATMENT OF CHRONIC AUTOIM-  
MUNE THROMBOCYTOPENIC PURPURA** — 30

Somova A.A. – the 6<sup>th</sup>-year student

**FALSITY OF RACISM'S "THEORY" IN STUDIES ABOUT BRAIN**

Shlyaga S., Pakulov M. – the 2<sup>nd</sup>-year students — 30

**FALSITY OF RACISM'S "THEORY" IN STUDIES ABOUT BRAIN**

Shlyaga S., Pakulov M. – the 2<sup>nd</sup>-year students — 30

**WHAT ARE STEM CELLS, AND WHY ARE THEY IMPORTANT?**

Zotova G. – the 2 year student — 31

**UVEITIS**

Darchieva A. – the 2-nd year student — 33

**MYCOTIK INFECTIONS – THE PROBLEM OF  
CONTEMPORANEITY**

Sadykova K. , Saidova O., Davydova Ye.– the 4-th year students —33

**THE ANALYSIS OF MORBIDITY AND THE EFFICIENCY OF  
THE TREATMENT OF CANDIDIASIS ACCORDING TO THE  
DATA OF THE REGIONAL SKIN AND VENERAL CLINIC—34**

**APPLICATION OF LASER LIGHT AND POLYOXIDONIUM IN  
PATIENTS WITH FURUNCULOSIS**

Dukhovny E. A. – the 4th year student — 35

**MODERN DIAGNOSTICS OF MYOCARDIAL INFARCTION**

Litovchenko Ye. A. – the 4-th year student —36

**INTERACTION OF HEMOCAPILLARIES WITH VEINS OF THE  
MUCOUS MEMBRANE OF ESOPHAGIAL AND GASTRIC PAS-  
SAGE**

Paliy A. - the 2<sup>nd</sup> year student — 37

**STONE HEART**

Paliy A. - the 2<sup>nd</sup> year student — 37

**THE NEW CLASS OF DRUGS**

Butelina Ye. Kucher Y.-the 3<sup>rd</sup> years students — 38

**EFFECT OF CHANGES IN BODY TEMPERATURE ON THE  
FUNCTIONAL ACTIVITY OF ORGANS AND SYSTEMS**

Skolubovich A.A.-the 4 th year student — 38

**SU JOK THERAPY IN EMERGENCY CASES OF  
IMPAIRED CONSCIOUSNESS**

Shamina O. S. – 5<sup>th</sup> year student — 39

**44. THE ENDORLNE FUNCTION OF ADIPOSE TISSUE**

Karatsuba S., Melnikova M. - the 2<sup>nd</sup> year students — 40

**INVOLVEMENT OF 5-HYDROXYTRYPTAMINE TYPE 3 RECEPTORS IN SEVOFLURANE-INDUCED HYPNOTIC AND ANALGETIC EFFECTS IN MICE**

Ivanova K. – 3<sup>rd</sup> year student — 40

**THE USE OF GLIMEPIRIDE (AMARYL) IN WORKING PATIENTS WITH DIABETES OF MELLITUS TYPE 2 AND OBESITY—41**

Moiseenko A. – the 4<sup>th</sup> year student — 41

**ADDICTION OF NONCHEMICAL ETIOLOGY**

Sharifova Z. – the 4-th year student — 42

**PECULIARITIES OF DIAGNOSTICS OF METABOLIC SYNDROME.**

Koptsev A.- the 4-th year student — 43

**HARDNESS OF ARTERIES AND VASCULAR RESISTANCE**

Idrisova S. - 4-th year student, Demina K. - 4-th year student—43

**CHEKHOV AS A DOCTOR**

Kuzuytina N.G. – the 2-th year student — 44

**THE CASE OF LONG – TERM FOLLOW – UP OF THE PATIENT WITH DISSECTING THORACOABDOMINAL AORTIC ANEURYSM**

Vitukhina Z.-the 6-th year student — 45

**PLANNING OF PREGNANCY IN WOMEN WITH PYELONEPHRITIS. PREVENTION OF GESTATIONAL PREGNANCY**

Maslenikova K. – the 4<sup>th</sup> year student — 46

**CHESS AND MEDICINE.**

Razdobudko M. – the 3-year student, Yuriev E. – the 4-year student—47

**IRIDODIAGNOSIS**

Karatsuba S. - the 2<sup>nd</sup> year student — 48

**THE CHALONES AND REGULATION OF PROLIFERATION OF THE CELLS**

Kushnaryov V. – the 2-nd year student — 49

**THE DOCTRINE ABOUT CONSTITUTION**

Melnikova M. - the 2-d year student — 49

**GENETICS OF MUCOVISCIDOSIS**

Gerasimets E. – the 6-th year student — 50

**ULMONARY COMPLICATIONS IN DIABETES MELLITUS**

Martynenko A. – the 2-nd year student — 50

**NEW TECHNOLOGIES IN ESTIMATION OF THE STATE OF GIRLS' HEALTH OF BLAGOVESHCHENSK**

Vasilyeva Ye.V., Arutyunyan KA. - ass. — 51

**TRANSPLANTATION OF HEART**

Radchenko Y.-the 3th year student — 53

**ADAPTOGENS EFFICIENCY IN THE PRECAUTION OF NURSE-  
RY AGED CHILDREN'S DISEASES OF  
RESPIRATORY ORGANS**

Chubarova D. – the 3-rd year student — 54

**INFLUENCE OF B-CYCLODEXTRIN COMPLEX  
COMPOUNDS WITH PARAAMINOBENZOIC ACID**

Yanushevskiy K. – the 2-nd year student — 55

**OPTIMIZATION OF TREATMENT OF PATIENTS WITH CRITICAL ISHEMIA OF LOWER EXTREMITIES.**

Bairam-zade N., Golova A. – the 4th year students - 56

**P.F.LESGAFT'S CONTRIBUTION TO THE DEVELOPMENT OF ANATOMY AS A SCIENCE**

Che G.S.(Alisa) – the 1-st year student — 56

## **DEUTSCHE ABTEILUNG — 57**

### **DIE AKTINOMYKOSE DER BRUSTDRUSE, DIE LOBULARER KREBS BEI SEKTORALE RESEKTION SIMULIERT**

Der Student des Studienjahres W. Tschurin — **58**

### **CLONORCHIASIS**

Die Studentin des 1. Studienjahres A. Gunbina — **58**

### **DIE VERWUNDETESORTIERUNG**

Die Studentin des I. Studierjahres: T.Sjomina — **59**

### **PIROGOWS OPERATIONEN UNTER DER VOLLEN ATHER-NARKOSE**

Die Studentin des I.Studienjares W.Michajlowa — **60**

### **VERANDERUNGEN DES ERHALTENS UND DES EMOTIONALEN ZUSTANDES BEI DEN RATTEN IM HOHENEN KREUZFORMIGEN LABYRINTH NACH DER DEPRIVATION DER PHASE DES RACHEN SCHLAFES**

Pendjurowa E. Rsaewa S. – Studentinnen des 5. Studienjahres — **60**

### **MODERNE BEHANDLUNGSPRINZIPIEN DER AKUTEN PROMYELOZYTENLEUKOSE**

Nikischina E. – Studentin des 5. Studienjahres — **62**

### **BEHANDLUNG DER KRANKEN MIT DER CHRONISCHEN MYELONISCHEN LEUKAMIE MIT DEM GLIWECK – PRAPARAT**

Suworowa I. – Studentin des 5. Studienjahres - **63**

### **8. PROBLEME DER ARZNEIRESISTENTEN TUBERKULOSE**

Schtyforuk W., Martschenko Ja. – Studentinnen des 3. Studienjahres — **64**

### **ANALYSE DER LETALITAT BEIM MYOKARDINFARKT BEI DEN KRANKEN MIT DER ZUCKERKRANKHEIT DES 2. TYPES**

Batkowa S.S.- Studentin des 3. Studienjahres—**64**

**PIROWS GEFRIERTE ZERSAGEN.**  
Der Studentin des I. Studierjahres: A.Lisogub — 65

## **SECTION du FRANCAIS et du LATIN—66**

**LE GRAND SAVANT ET CHIRURGIEN N.I. PIROGOV**  
A.Boroieva – et-te de la 3-me annee — 67

**LA FORMATION DES MEDECINS PENDANT LA GRANDE  
GUERRE NATIONALE**  
Barabach E., Zournadjian S. – et-tes de la 4-me annee — 68

**INDICES DE L'INVALIDITE A LA REGION**  
J.Segreneva –et-te de la 5-me annee — 69

**L'ANALYSE DE L'EFFECTIVITE DE L'ASSISTANCE MEDI-  
CALE HAUTEMENT TECHNOLOGIQUE CHEZ LES MALADES  
AVEC LA MALADIE ISCHEMIQUE DU COEUR ET LES  
METHODES DE SA REALISATION**  
Barabach E., Zournadjian S.- et-tes de la 4-me annee — 70

**L'APPORT DE V. P. VOROBIEV DANS LE  
DEVELOPPEMENT DE L'ANATOMIE DE LA PERIODE SOVI-  
ETIQUE**  
Mitschenko A., Mansimova G. – et-tes de la 2-me annee — 71

**COMMENT SE FORME UNE IMAGE VISUELLE?**  
Bronnikova E., Tschegortsova J. – et-tes de la 2-me annee — 72

**LES OPERATIONS ENDOVIDEOCHIRURGICALES AU DIAG-  
NOSTIC ET AU TRAITEMENT DES MALADES**  
Matchevskaia M. – et-te de la 3 annee — 73

**ЛАТИНСКИЙ ЯЗЫК И МЕДИЦИНСКАЯ  
ТЕРМИНОЛОГИЯ**  
Шпицына Н.—1 к. — 73

**МЕДИЦИНСКИЕ СИМВОЛЫ**

Анохина В., Фефелов А. — 74

**ИСТОРИЯ ВРАЧЕВАНИЯ (ДРЕВНЯЯ ГРЕЦИЯ И ДРЕВНИЙ РИМ)**

Сибилева Д. — 75

**МЕДИЦИНА В ДРЕВНЕЙ ГРЕЦИИ И ДРЕВНЕМ РИМЕ**

Царенко О. — 75

**АНЕСТЕЗИЯ В ДРЕВНЕМ РИМЕ И ГРЕЦИИ**

Меньчакова К., Дурнева О. — 76

**МИФЫ ДРЕВНЕЙ ГРЕЦИИ**

Поливанова Е. — 77

**КУЛЬТУРА АНТИЧНОСТИ**

Давыдова Е., Першута В. — 77

**ЗУБОВРАЧЕВАНИЕ**

Жулай А. — 78

**ДЛЯ ЗАМЕТОК**



