ABSTRACT BOOK

Abstract book - 8th International Scientific Interdisciplinary Conference

8th International Scientific Interdisciplinary Conference

for medical students and young scientists

210 ХНМУ

http://isic.kharkov.ua

Kharkiv National Medical University, Kharkiv, Ukraine

May 14th-15th, 2015

BIOMEDICAL SCIENCES

Abdullaieva Sona, Hasanova Aynur, Aleksandrova A.V.

INFLUENCE OF TELMISARTAN TO THE MODIFICATION OF CARDIOVASCULAR RISK FACTORS IN PATIENTS WITH 2nd TYPE DIABETES

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and drug prescription

Introduction. The prevalence of arterial hypertension (AH) and diabetes mellitus (DM) in the modern world community is constantly growing and, according to forecasts, is continuing to rise in the coming years.The increase of diabetes and hypertension incidences are going practically parallel, and they are often combined with each other.AH occurs in 70-90% of patients with DM ;DM occurs in 20-50% of patients with AH.

Materials and methods. Observation and treatment with telmisartan for 12 weeks in 30 2^{nd} type diabetes patients (10 men, 20 women) with arterial hypertension (AH) were conducted. Age - 53,8 ± 1,32 years, duration of 2^{nd} type diabetes - 6,7 ± 1,1 years, AH - 11,4 ± 1,1 years. Cardiovascular form of autonomic neuropathy was found at 86.6%. The level of fasting glycemia - 6,3 ± 0,26 mmol / l, postprandial glycemia 7,9 ± 0,29 mmol / l, HbA1c 7,2 ± 0,18 mmol / l. The level of BP was assessed in terms of office measurement and self-measurement of BP by filling out the diary of self-control.

Results. The reference level of systolic blood pressure (SBP) was 154,3 ± 1,35 mm Hg, diastolic blood pressure (DBP) - 91,8 ± 0,91 mm Hg. During the observation there was a significant reduction of SBP (133,6 ± 1,03 mm Hg, $p < 0.05$) and DBP (84,3 ± 0,86 mm Hg, $p < 0.05$). The target level of BP (<130/80 mm Hg) was achieved in 18 out of 21 patients that were receiving only telmisartan. There was a statistically significant decrease of albuminuria from 0,13 ± 0,02 to 0,04 ± 0,05 g / day. ($p < 0.05$), in CCR from 86,3 ± 0,68 to 77,2 ± 0,58 beats / min ($p < 0.05$). A significant decrease of cholesterol values ($p < 0.05$) and triglycerides ($p < 0.05$) in serum was revealed in investigated individuals with initial hypercholesterolemia and hypertriglyceridemia.

Conclusions. Telmisartan has a positive effect on the modifiable factors of cardiovascular risk in patients with 2^{nd} type diabetes – arterial hypertension, hyperlipidemia, albuminuria. In addition, it noted a positive effect on CCR in patients with diabetic autonomic neuropathy, which indicates a decrease of sympathetic overactivity.

Abdur-Rahman Fatima, Shaposhnikova Yu., Zlatkina V.

HELICOBACTER PYLORI INFECTION: THE LATEST IN DIAGNOSIS AND TREATMENT

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of clinical pharmacology

Introduction. Helicobacter pylori is strongly linked to peptic ulcer disease and is classified as a group 1 carcinogen by the World Health Organization's International Agency for Research on Cancer.

The aim of this study was to review and update general practitioners on recommendations for testing and treating H. pylori infection, practical aspects of diagnostic

methods, proof of cure testing to prove eradication, and the management of eradication failure and recurrent infection.

Materials and methods. We were conducted selection, referencing and the following synthesis of more than 35 medical articles devoted to modern methods of diagnosis and treatment of H. pylori infection.

Results. H. pylori is present in 95% of patients with duodenal ulcers and in 70% of those with gastric ulcers. It is typically transmitted via the fecal-oral route during early childhood and persists for decades. The bacterium is a known cause of gastric and duodenal ulcers and is a risk factor for mucosa-associated lymphoid tissue (MALT) lymphoma and gastric adenocarcinoma. The history and physical examination are important to identify patients at risk of ulcer, perforation, bleeding, or malignancy. However, a systematic review of models using risk factors, history, and symptoms found that they did not reliably distinguish between functional dyspepsia and organic disease. Therefore, the test-and-treat strategy for H. pylori is recommended for patients with dyspepsia who have no alarm symptoms such as unexplained weight loss, progressive dysphagia, odynophagia, recurrent vomiting, family history of gastrointestinal cancer, overt gastrointestinal bleeding, abdominal mass, iron deficiency anemia, or jaundice. Endoscopy is recommended for patients who are 55 years or older, or who have alarm symptoms. Urea breath tests require the ingestion of urea labeled with the nonradioactive isotope carbon 13 or carbon 14.Specificity and sensitivity approach 100%. Stool antigen tests using monoclonal antibodies are as accurate as urea breath tests if a validated laboratory based monoclonal test is used. They are cheaper and require less equipment than urea breath tests.

Eradication of H. pylori is recommended in all patients with PUD. First-line therapy should have an eradication rate of more than 80%. Because pretreatment susceptibility is rarely known to the primary care physician, therapy must be chosen empirically based on regional bacterial resistance patterns, local recommendations, and drug availability. Test of cure for all patients after therapy is neither cost-effective nor practical. Indications for eradication testing with the urea breath test or stool antigen test include H. pylori–associated ulcer, continued dyspeptic symptoms, H. pylori–associated MALT lymphoma, andresection for gastric cancer. When indicated, eradication testing should be performed at least four weeks after completion of therapy.

The most important predictors of treatment failure with H. pylori eradication therapy include poor compliance and antibiotic resistance. After two failed eradication attempts, current guidelines advocate antimicrobial sensitivity testing. Culture should be performed in specialised laboratories, as the procedure is technically demanding. Several studies have shown that higher eradication rates are obtained when antibiotics are chosen based on susceptibility testing, and this seems to be a cost effective approach.

Conclusions. Eradication rates may also be lower with 7 versus 14-day regimens. Bismuth-containing quadruple regimens for 7–14 days are another first-line treatment option. Sequential therapy for 10 days has shown promise in Europe but requires validation in North America. The most commonly used salvage regimen in patients with persistent H. pylori is bismuth quadruple therapy. Recent data suggest that a PPI, levofloxacin, and amoxicillin for 10 days is more effective and better tolerated than bismuth quadruple therapy for persistent H. pylori infection.

Adeyemi A.A., Movchan Y.O., Yakymenko D.S., Myroshnychenko M.S.

METASTASES OF MALIGNANT TUMORS TO THE SKIN: RARE CASES IN THE PRACTICE OF A PATHOLOGIST

Kharkiv National Medical University, Kharkiv, Ukraine,
Pathological anatomy department

Introduction. Metastases of malignant tumors to the skin are of great interest in connection with atypical localization of metastatic lesions, histological type of tumor and prognosis of the disease. Any kind of cancer may metastasize to the skin. However, the incidence of metastasis of malignant tumors, affecting internal organs, to the skin is low. According to various sources, only 0,29-3,3 % of patients with various cytogenetic malignancies have marked skin metastases. Propensity of certain varieties of tumors to metastasize varies. Thus, in women, the cause of metastasis to the skin could be the following types of malignant tumors: breast cancer (69 %), colon tumor (metastases to the skin are observed only 9 % of patients), melanoma (frequency of metastasis to skin – 5 %), ovarian tumor (about 4 %). In men, the picture is different, they have metastases to the skin more often: lung cancer (metastases are observed in 25 % of cases), colon tumors (19 % of patients), melanoma (14 % cases), and malignant tumors of the oral cavity (12 % patients).

Clinical diagnoses of metastasis of malignant tumors to the skin tend to be difficult. This is due to the fact that the majority of metastases to the skin does not have the characteristic clinical picture and mistaken for dermatitis, fungal skin lesions, benign tumor formation, keloid scars. It is important to know the basic manifestations of metastatic tumors to the skin, their timely identification and adequate therapy, since the appearance of metastases to the skin is associated with a poor prognosis. The average life expectancy of the patient after their discovery is an average of 3 months.

According to most researchers, the relative rarity of metastatic tumors to the skin is because the skin has a strong protective effect. Therefore, most of the tumor cells, reaching the skin tissues, are eliminated, i.e. they die.

Results. We want to give our own observation from practice. Surgically removed biological material of a 62 year old woman with a clinical diagnosis «Tumor of the coccyx» was sent from the neurosurgery department to the pathological anatomy department of The Municipal Health Care Institution «The Regional Clinical Hospital – The Center of Emergency Medicine and Disaster Medicine» for morphological investigation. Macroscopically, the surgical removed biological material was a rather compact tissue fragment, whitish-gray color, size 1,4×0,6×0,3 cm. Histological examination revealed the structure of the skin with the underlying soft tissue with the presence in derma the area, in which the cells of clear cell carcinoma were seen. This is the most likely metastasis of clear cell renal cell carcinoma. In this case, to determine the exact origin of the detected skin metastasis immunohistochemistry, clinical and instrumental examination of the patient was recommended.

Conclusions. We hope that the published data on metastases to the skin and data from our own practice will be interesting and useful to students and teachers of medical schools and doctors of various fields.

Aheto Ebenezer, Davis Henry, Vasylieva O.V.

PHYSIOLOGICAL BASIS OF THE CARDIAC CYCLE

Kharkiv National Medical University, Kharkiv, Ukraine

Introduction. The heart is an organ located in the thoracic cavity between the lungs, behind the sternum and above the diaphragm. It consists of two pair of chambers (atria and ventricles) through which blood must circulate through in the heart. Blood moves first into the right atria then enters to the right ventricle through the tricuspid valve. Here the blood moves further through the pulmonary valve into the a.pulmonaris for the pulmonary circulation. Blood then returns to the left part of the heart through the pulmonary veins into the left atrium where it pushes through the mitral valve down to the left ventricle. From the left ventricle it moves through the aortic valve to the aorta where it goes to circulate through the rest of the body.

Results. Now as blood flows through the heart it produce sounds-why? This is due to blood rushing against the walls as well as hitting back against the various valves to prevent back flow of blood. There are basically 4 sounds produced by the heart-1^{st} and $2^{nd}$of which can easily be heard. S_1 is caused by closure of the mitral and tricuspid valves at the beginning of isovolumetric ventricular contraction. S_2 is caused by closure of the aortic and pulmonic valves at the beginning of isovolumetric ventricular relaxation. The third heart sound (S_3), when audible, occurs early inventricular filling, and the fourth heart sound ($S_{4)}$, when audible, is caused by vibration of the ventricular wall during atrial contraction. Nevertheless there can be irregular heart sounds perhaps due to increase blood volume. Take for example A third heart sound occurs pathologically when the atrial pressure is unusually high, which typically occurs when the extracellular fluid volume, and thus the blood volume, is much higher than normal, such a "volume overload" characteristic of congestive heart failure.

Also when your heart beats, it contracts and pushes blood through the arteries to the rest of your body. This force creates pressure on the arteries. This is called systolic blood pressure. A normal systolic blood pressure is 120 or below. Now during relaxation and dilatation of the ventricles of the heart when the ventricles fill with blood the diastolic blood pressure is produced. A normal diastolic blood pressure number is 80 or less. During abnormalities or irregularities of heart pumping functions in vessels usually due to peripheral resistance or cardiac output, they may result in systolic and diastolic hypertension.

The clinical use of the ECG is it helps to understand how the heart works. With each heartbeat, an electrical signal spreads from the top of the heart to the bottom. As it travels, the signal causes the heart to contract and pump blood. The process repeats with each new heartbeat. The ECG thus helps to identify electrical signals at each phase and as a result we can easily identify at what phase there is a problem. Further more it helps us to know how fast your heart is beating, whether the rhythm of your heartbeat is steady or irregular and the strength and timing of electrical signals as they pass through each part of your heart. Doctors may also use ECGs to detect and study many other heart problems such as heart attacks, arrhythmias and heart failure.

Albab Farkad Yousif Alani

SOFT TISSUE SARCOMA AND ITS LOCAL RECURRENCE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of histology, cytology and embryology
Scientific supervisor: as. Panasenko V.O.

Introduction. Sarcomas account for less than 1% of malignant neoplasms arising in the head and neck in adults. These tumors derive from the mesodermal tissue with a diversity of clinical behaviors due to various types of pathologic classifications. The classification of sarcoma according to the anatomic location in the head and neck region has proven helpful because of the influence of location on decisions regarding disease management. However previous articles have rarely focused on sarcomas that originated in the larynx. The paucity of cases and variety of tumor characteristics make it difficult to analyze the treatment modalities and outcomes in a large series. The purpose of this study was to review the patients with laryngeal sarcoma treated at our institute over a 20-year period. The clinical presentation, histopathologic features, treatment modalities, and outcome were analyzed. The literature was also reviewed.

Aim. The aim of this study was to compare genetic aberrations in primary soft-tissue sarcomas and their local recurrences and to evaluate the genetic changes occurring during tumor progression.

Materials and methods. Some tests, such as a computed tomography (CT) scan or a magnetic resonance imaging (MRI) scan, plain X-ray ,computed tomography scans, magnetic resonance, imaging scans, positron emission tomography scan, ultrasound and biopsy are often done to look for the cause of symptoms and to find a tumor (such as a sarcoma). Other tests may be done after a sarcoma is diagnosed to look for cancer spread.

Results. The patients showed a male predominance (9/10) and presented 8 types of pathology. Nine patients underwent surgery, including 2 total laryngectomy, 4 partial laryngectomy, and 3 endoscopic laser cordectomy. During a median follow-up of 92 months, the 5-year overall survival and disease-specific survival were 76% and 90%, respectively. Two patients developed recurrence, including 1 local recurrence and 1 distant metastasis.

Conclusions. Surgical intervention was the first choice in the treatment of soft tissue sarcomas. The prognosis is relatively good when compared with sarcoma originating from other anatomic sites.

Alexeenko R.V., Risovanaya L.M.

FEATURES OF THE REGULATION OF HUMAN LIFE IN THE PRESENT CONDITIONS OF THE WORLD

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of physiology

Introduction. Global problems of humanity in the 3rd millennium with the new exigencies of the scientists put a health problem. People are increasingly fits the world around us to meet their needs while losing body developed during the evolution of the defense mechanisms of adaptation.

The impact of current conditions brings man to limit mental loads. The twentieth century is the century of "information explosion", to create new types of communication -

radio, television, computer, which was reflected in the professional field. So, for most professions brainwork is currently characterized by high information load and a sedentary lifestyle, which leads to diseases of the cardiovascular system and psychosomatic disorders.

The ecological situation also influencing at the humans. Meanwhile, the impact of industrial activity on the natural environment (air pollution, soil, water bodies' waste production, deforestation, increased radiation caused by accidents and violations technology) threatens the existence of the man himself. About 80% of diseases of modern human - its result of environmental degradation on the planet.

Aim. Study of features of the regulation of human life in the present conditions of the world.

Results. The most important factor influencing the person is a lack of exercise. Organize the process of formation of a healthy way of life of the population and youth is impossible without knowledge of the structure of the human body, of the functioning of organ systems. Physically trained body has large spare capacity - hence better adapted to environmental changes. During physical exercise improved function of the nervous, cardiovascular, respiratory, excretory, and other systems, metabolism and energy, as well as the system of neurohumoral regulation. At the heart of life of the organism is the process of automatically maintaining the vital factors at the appropriate level, any deviation from which leads to the immediate mobilization mechanisms, reducing the level of (homeostasis).

Homeostasis - a set of reactions that maintain or restore the dynamic of the internal environment and some physiological functions of the human body. The constancy of the physico-chemical composition is maintained by self-metabolic, circulatory, digestive, dyhaniya- allocation and other physiological processes. In the process of adaptation of the organism to any factor, including pathogenic function of some systems, organs and cells is enhanced; they stimulate metabolism and increasing energy demand. On the contrary, the function of other systems, organs and cells that do not take part in the adaptation decreases, they weakened metabolism and reduces the need for energy. Since deficiency of oxygen in the environment (for example, an area of high mountains) are activated circulation, external respiration, blood system, i.e. systems responsible for providing the body with oxygen (gas transportation systems), but also decreases the activity allocation system, digestive and reproductive systems. Normal functioning of the organism self-regulation is provided in all the manifestations of metabolic biogenesis ultrastructures and implementation of multiple functions at all levels. Thus, reduction in the number of red blood cells becomes an incentive to develop kidney erythropoietin which activates erythropoiesis and normalizes the number of erythrocytes. At the same time, reduction in blood glucose level activates the sympathoadrenal system and the sympathetic neurohormones, increasing hepatic glycogenolysis, and normalizes glucose.

Conclusions. Regulation of human organism is a whole set of reactions and mechanisms aimed at controlling all life processes in accordance with the requirements of the genetic program of the organism and the environment in order to preserve life and procreation. That is why the task of scientists is that, based on the current conditions of nature and society, to find the best ways to maintain health.

Alekseeva T.M., Sukhdeep Singh, Tishakova T.S.

INVESTIGATION OF QUANTUM-CHEMICAL PROPERTIES OF IBUPROFEN

Kharkiv National Medical University, Kharkiv, Ukraine,
Scientefic advisor: prof. Syrovaya A.O.

Introduction. Ibuprofen belongs to the non-steroid anti-inflammatory drugs (NSAID), the class of drugs which are effective in reducing pain, inflammation, and fever, commonly employed in clinical practice. Ibuprofen complies with all requirements applicable to "ideal" over-the-counter analgesic: presence in different formulations (tablets, capsules and suspensions), which are quickly adsorbed in stomach and intestinal tract; quick creation of peak concentrations in plasma; relative short elimination half-life and at the same time long-term effect; minimal spectrum of adverse effects at the occasional and short administrations, good spectrum of safety and tolerability in children. The advantages of this medicinal product have been shown by international multicenter and randomized clinical trials. More than fifty years of experience in successful application of ibuprofen in broad clinical practice more than in 80 countries across the world as over-the-counter drug serves as case example of high efficacy and safety profile. However, despite of widespread occurrence in world practice data about quantum-chemical properties and spatial structure of ibuprofen is absent in cited literature.

Objective. The objective of this study is to carry out of quantum-chemical researches of ibuprofen molecule and perform computer estimation of pharmacological activity of the discussed compound.

Materials and methods. Research of quantum chemical properties of ibuprofen was conducted using Quantitative Structure Activity Relationship (QSAR), method of molecular mechanic MM+ and semi empirical method PM3. All calculations were carried out using the Polak – Ribiere conjugate gradient algorithm. During the research, the following parameters were studied: interatomic distance (Å), the angles between the bonds (°), atomic charges (a.u.), distribution of electron density of outer-shell electrons, the total strain energy (kcal/mol), bonding energy (kcal/mol), electronic energy (kcal/mol), inter-nucleus interaction energy (kcal/mol), heat of formation (kcal/mol), localization and energy of highest occupied (HOMO) and lowest unoccupied (LUMO) molecular orbitals (eV) and absolute hardness (η, eV).

Results. The quantum-chemical properties of ibuprofen, which are vital for understanding of mechanisms of biological and pharmacological activity at a molecular level, have been studied. The distance between atoms, total charge density, characteristics of molecular orbitals (HOMO, LUMO) of ibuprofen molecule have been determined. These values of HOMO and LUMO energies are -9.40034 and 0.2070536 eV, respectively. Using values obtained for HOMO and LUMO, the absolute hardness of ibuprofen molecule is equal to 4,8036968. ($\eta = ½ E_{LUMO} – E_{HOMO}$). By the comparison of hardness value (η) of hard molecules (BF_3 – 7,8 eV, HCL – 8,0 eV) and soft molecules (CH_3I – 4,7 eV, C_6H_6 – 5,2 eV) we can conclude that the studied ibuprofen molecule can be considered as a soft reagent. Thus, ibuprofen most actively will react with soft reagents.

Conclusion. Main geometrical and energetic parameters were established for ibuprofen molecule. It was shown that ibuprofen is a soft reagent. In general, theoretical results are in complete agreement with observed experimental reactivity.

Amjad Hamdallah

MODULATION ACTIVITY OF ALDEHYDE SCAVENGER ENZYMES IN POSTMITOCHONDRIAL FRACTION OF THIGH MUSCLE DIFFERENT AGES RATS

V.N. Karazin Kharkov National University, Kharkiv, Ukraine
Department of biochemistry

Introduction. Immobilized stress brings to injury of skeletal muscle. Sensitivity of skeletal muscle to stress injury changes during ontogenesis. That fact is a one of cause's appearance of sarcopenia at senescence. Sarcopenia most commonly condition in old ages. However it's not clear mechanisms of its development in senescence till present. At present we know about many various reasons bring to injury skeletal muscle in late ontogenesis. There is oxidative stress the most important among them. The carbonyl products of free radical oxidation mediate injury of the muscle cells during oxidative stress. We propose that age dependent decreasing of functioning cytosol aldehyde scavenger enzymes takes parts in change of sensitivity of muscle tissue to stress injury during ontogenesis. There are aldehyde dehydrogenase, aldehyde reductase and glutathione transferase the most important among these enzymes.

Aim. Take it into account the purpose of this work was comparatively investigation of aldehyde dehydrogenase, aldehyde reductase and glutathione transferase activity in postmitochondrial fraction of thigh muscle intact and immobilized rats different ages.

Materials and methods. 36 Male Wistar rats of three different age groups were employed in the present study: 1 – 1.5-months-old (pubertal); 2 – 12-months-old (adult) and 3 – 24-months-old (old) rats. Each age group of animals was subdivided into two subgroups: 1 – intact ones and 2 – those affected by immobilization stress. Animals were immobilized by tying to a stationary plank for 5 hours per day for 2 days. Activity of NAD-aldehyde dehydrogenase, NADH-aldehyde reductase and glutathione transferase were determined in postmitochondrial fraction of thigh muscle.

Results. Investigations have shown existence of different condition for utilization of carbonyl products of free radical oxidation in enzyme-catalyzed processes in skeletal muscle during ontogenesis. Age-dependent change in catalytic activity aldehyde scavenger enzymes in myoplasm of muscle fibers evidently doesn't take part in the formation of sarcopenia at 24-months-old rats after theirs prolonged immobilization. 12-months-old rats have high basal level of all investigated aldehyde scavenger enzymes in postmitochondrial fraction of thigh muscle. Moreover activity of these enzymes is supposed on high level after prolonged immobilized stress. These results point out high efficiency of reactive aldehydes catabolism in thigh muscle during stress in adult rats and resulted from high resistance of muscle tissue to stress injury in this age.

The pubertal rats have low basal level activity of NADP-aldehyde dehydrogenase, NADPH-aldehyde reductase and glutathione transferase. Beside during stress at 1.5-months rats there is typical modulation activity of aldehyde scavenger enzymes in postmitochondrial fraction of thigh muscle arise. It manifested by decrease activity of NAD-dependent oxidoreductases (aldehyde dehydrogenase and aldehyde reductase) in postmitochondrial fraction of thigh muscle immobilized rats compared intact ones. Such changes lead to emerging metabolic events which provoke to decrease efficiency of carbonyls utilization in muscle tissue of 1.5-months old rats. In turn that brings to

accumulation of cytotoxic carbonyl products of free radical oxidation in skeletal muscle and as result increase its sensitivity to stress injury in pubertal age.

Conclusions. High sensitivity of aldehyde scavenger enzymes in postmitochondrial fraction of thigh muscle to adverse effects of immobilized stress may be as result existence of age-dependent peculiarities in hormonal regulation of protein synthesis in the pubertal period of ontogenesis. However this idea needs in experimental verification.

Ayesha Aslam Shaikh, Mohammed Ismail Syed Ali

FACTS OF HEART

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of Human Anatomy
Scientific advisor: senior teacher, PhD Polyakova A.

Introduction. The heart has played an important role in understanding the body since antiquity. In the fourth century B. C., the Greek philosopher Aristotle identified the heart as the most important organ of the body, the first to form according to his observations of chick embryos. It was the seat of intelligence, motion, and sensation -- a hot, dry organ. Aristotle described it as a three-chambered organ that was the centre of vitality in the body. Other organs surrounding it (e.g. brain and lungs) simply existed to cool the heart.

Every day, your heart beats about 100,000 times, sending 2,000 gallons of blood surging through your body. Although it's no bigger than your fist, your heart has the mighty job of keeping blood flowing through the 60,000 miles of blood vessels that feed your organs and tissues. The heart pumps oxygenated blood through the aorta at about 1 mile (1.6 km) per hour. By the time blood reaches the capillaries, it is moving at around 43 inches (109 cm) per hour.

Every day, the heart creates enough energy to drive a truck 20 miles. In a lifetime, that is equivalent to driving to the moon and back. A kitchen faucet would need to be turned on all the way for at least 45 years to equal the amount of blood pumped by the heart in an average lifetime.

When you are at rest, it takes just 6s for your blood to get from your heart to your lungs, and back; and about 8s for it to travel from the heart to the brain and back; and just 16s for it to travel from the heart to the toes and back to the heart.

The heart communicates to the brain and the body in four ways including: 1) nervous system connections, 2) hormones produced in the heart itself, 3) biomechanical information via blood pressure waves, and 4) energetic information from the strong electrical and electromagnetic fields. The heart emits an electrical field 60 times greater in amplitude than the activity in the brain and an electromagnetic field 5,000 times stronger that of the brain.

There are 40,000 sensory neurons relaying information to the brain from the heart, leading researchers to call the heart the "little brain" and to coin the field as Neuro-cardiology.The right atrium holds about 3.5 tablespoons of blood. The right ventricle holds slightly more than a quarter cup of blood. The left atrium holds the same amount of blood as the right, but its walls are three times thicker. "Atrium" is Latin for "entrance hall," and "ventricle" is Latin for "little belly.

Conclusion. New-born's hearts beat faster than adult hearts, about 70 to 190 beats per minute. Your heartbeat changes and mimics the music you listen to.

Baikenich A.V., Rapava K.B., Cherepahin I.O.

VARIANTS OF BRANCHES OF ORBITAL NERVE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of Human Anatomy
Scientific advisor: Izmailova L.V.

Introduction. Knowledge of orbital nerves branching helps to figure out the pathology of nerves of the eye socket correctly, to assess the damage in personal injury, and understand irradiation pain.

Aim. Studying the variations of beginning, progress, branching and connections of the nerves of the orbit with the surrounding tissue is of practical importance.

Materials and methods. Variations of nerve branches explored at 18 dead bodies of babies, children, and adults. Research methodology: dissection, photographing and sketching.

Results. Orbital nerve divides into its main branches: frontal, lacrimal, nasal-ciliary nerves and mainly before the entry into the eye socket in the anterior-lateral wall of the cavernous sinus. The nerve either gives the three branches, or the nasal- ciliary nerve starts at the lower medial surface and then it is divided into frontal and lacrimal nerves. Discharge of nasal-ciliary nerve may be very high and be located close to the cell site area of the trigeminal node. Frontal nerve within the orbit varies in quantity and level off the branches, their connections and their location. The supratrochlear nerve can begin at the front (50 percent), medium (34%) or posterior (8.5%) thirds of the orbit a branch or two branches at different levels (7.5%) of the orbit may be separately (4.5%) or merged into one branch (3%). In 24.5% cases the supratrochlear nerve starts from the medial branch nerve in anterior third of the orbit. They are connecting twigs between the supratrochlear and the subtrochlear nerves in anterior segment of the eye socket.

Supraorbital nerve is divided at its medial and lateral branches into: 67% of cases-in the front third of the eye socket, in 17.5% cases on the border of the anterior and middle thirds of the eye socket, in 14.5% cases in the middle third and 1 per cent on the border between central and posterior third length of the orbit. In the one case, lacrimal nerve leaves from the frontal nerve at the right side, in another case on the left within the middle third-additional lacrimal nerve. The lacrimal nerve extends from beginning to the lacrimal gland as a single branch, sometimes two (3%). Lacrimal nerve may be connected with branches from nasal-singles nerve in the back third of the orbit. Nasal-ciliary nerve enters into the eye socket through the upper part of the lateral tendinous ring. The connecting branch with singles node starts from nasal-ciliary nerve principally in the area of common tendinous ring (90%), and less commonly behind (4) or ahead of it (6%).

Conclusions. So, there were direct contacts between the nasal-singles nerve and supratrochlear (1%), between nasal-singles and plaintive nerves (1%).

Bayrachnyy K.A., Tkachenko K.N.

STUDY OF GEROPROTECTIVE PROPERTIES OF METFORMIN

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of Pharmacology and medical Prescription

Introduction. Problem of aging have long worried about humanity. Today, science has known for some substances, well-studied in animals, which can slow aging and increase both the average and maximum lifespan. These substances - geroprotectors (protect against aging). One of these drugs is Metformin. Metformin (dimethylbiguanid) - antidiabetic agent for internal use, which belongs to a class of biguanides. But in addition to its main effect has been scientifically proved that there geroprotective action.

Aim. The project CrowdAge system was created to test the influence of some specially selected materials on life expectancy in the model yeast chronological aging, among whom was Metformin. We tried to prove or deny this information.

Results. The mechanism of geroprotective action of Metformin is still not clear, even though the effect of prolonging life span in yeast metformin is well described, and the drug is really studied as a treatment for age-related diseases, including cancer (regulates metabolism). The base of the geroprotective action of Metformin is blocking the transcription of genes encoding proinflammatory cytokines, which promotes overproduction of pathological inflammatory responses and malignant tumors by blocking access to the transcription factor NF-kB (nuclear factor kappa-bi). There are also suggestions that its effects are realized through the following properties: 1) loss of appetite - promotes weight loss and prevention of a large number of diseases associated with obesity; 2) inhibition of gluconeogenesis in the body - slowing down glucose absorption from the digestive tract and decrease of its concentration in the blood, thereby reducing hyperglycemia, which entails negative consequences - the destruction of collagen and elastin proteins, which leads to loss of skin elasticity, angiopathy, excess glucose is converted a fat, which contributes to the formation of atherosclerotic plaques; 3) inhibition of proliferation of smooth muscles in vassels, has a positive effect on the cardiovascular system; 4) normalization of lipid metabolism, reducing the concentration of LDL and VLDL, raise HDL; 5) fibrinolytic action - due to the suppression PAI-1 (plasminogen activator inhibitor type of tissue) and t-PA (tissue plasminogen activator), that is the prevention of heart attacks and strokes. Metformin is recommended to take 500 mg during or immediately after eating 1-2 times a day for 3-6 months. After this period, it is recommended to make a break for 1-2 months to restore the function of the pancreas and blood rheology. Metformin is absolutely contraindicated in patients with renal insufficiency, acute infections, pregnancy and severe hepatic impairment.

Conclusions. Study of geroprotective properties of Metformin is at the preclinical stage so the use of drug as geroprotector, despite the identification of anti aging mechanisms, it is difficult and has not found practical use in medicine.

Bezrodnaya A.I.[1], Khodosh Y.E.[2]

GENEALOGY ANALYSIS OF BRONCHIAL ASTHMA

Kharkiv National Medical University, Kharkiv, Ukraine,
Central research laboratory[1]

Introduction. Multifactorial diseases or diseases with hereditary predisposition (MFZ) - due to a combination of genetic and non-genetic factors. Etiology and pathogenesis

of MFZ complex, multi-stage and has not been known yet. Bronchial asthma (BA) - a chronic inflammatory disease of the airways in which development involves many cells and cellular elements, mast cells, eosinophilic granulocytes, T- lymphocytes and others. In susceptible individuals this inflammation causes repeated episodes of wheezing, breathlessness, heaviness in the chest and coughing, particularly at night and / or early morning.

Genealogical research allows to the practicing doctors to increase the effectiveness of medical and genetic counseling for secondary and tertiary prevention of the formation of groups at risk for asthma and improve mechanisms for identifying factors of manifestation.

Aim. The purpose and objectives. Purpose - genealogical analysis of susceptibility to disease relatives with varying degrees of relationship with a patient with asthma among populations of Kharkiv. Objectives: 1. Sets the coefficient of correlation between the age of manifestation of asthma in parents and children. 2. Investigate the predisposition to illness of relatives with varying degrees of relationship with a patient with asthma 3. Compare the features of sexual predisposition to asthma.

Materials and methods. Enrollment for genealogical study were 84 patients with asthma who underwent inpatient treatment at the I-th pulmonary department of Kharkiv City Hospital №13. Age of the patient at diagnosis is considered as the age of manifestation of pathology. Age of women from 18 till 83 years, age for men from 19 till 82 years. In 70 pedigrees had information about the age of manifestation of asthma in the proband and parents. Age distribution manifestation of asthma in all groups corresponded to the normal Gaussian distribution law. Pearson correlation coefficients (r) and its statistical error (s_r) was calculated. The difference fractions was assessed using the angular transformation φ. Testing statistical hypotheses of equality of correlation coefficients in pairs relatives performed using Student's t-test.

Results. Between the ages manifestation of asthma in parents and children is a direct connection. The value of the correlation coefficient for parent- children pairs is 0.54 ($p < 0.001$). There is a variation of correlation coefficients depending on the sex of patients. Maximum correlative relationship was found in pairs "mother-descendant" (r = 0,73). In pairs "father-descendant" this index half as much. (r = 0,36).

In the study of pedigrees of patients with asthma were found among 25 men (83.3%) first-degree relatives of kinship with asthma and 14 (16.7%) relatives of second-degree relatives with asthma. Among women - 71 (65.1%) first-degree relatives of kinship with asthma and 38 (38.5%) relatives of second-degree relatives with asthma. When comparing male and female predisposition to transfer asthma found that significantly more women than men who have relatives with asthma ($\varphi_{♀} = 1{,}861$, $\varphi_{♂} = 1{,}281$, $F_{fakt.} > F_{tabl.}$). Thus amount of sick relatives among the polled women-patients twice as much amount of sick relatives of patients-men as the first so second degree of cognation.Relatives of third-degree relatives (cousins sibs) with asthma were not found in our research.

Conclusions. The maximum risk of asthma are relatives of the first degree relatives, particularly if the mother is sick.

Bulgakova E.A.

MACRO MICROSCOPIC ANATOMY AND INTRATRUNKAL STRUCTURE HEPATIC PLEXUS NERVES

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of Human Anatomy
Scientific advisor: senior teacher, Lupir M.V.

Introduction. Macromicroscopic is study anatomy extra- and intra-organic nerves of the liver and bile ducts showed that the sources of innervation of the liver are the celiac plexus and branches of the vagus nerve, abdominal rami of phrenic nerve (lower phrenic plexus), as well as branches of the upper gastric plexus. In the innervation of the liver also participate sympathetic nerves, which are the parts of greates and lessen splanchnic nerves. Their fiber reach the liver as part of the hepatic plexus. Given the literature on options for the branch of the celiac trunk (Rio Branso, 1912; NI Odnoralov, 1965 et al.), As well as differences in the structure of the hepatic plexus (IL Raigorodskii, 1928; V.N.Shevkunenko, 1949; Baljet B., Drukker J., 1980), we have identified four basic forms in the topography of the nerve of this plexus depending on the variability of arterial trunks.

Results. In the first form, the most frequently observed (43 drug - 70%), hepatic artery is a continuation of the common hepatic artery. Division of hepatic artery on it terminal branches is relatively distally - near the gate of the liver, and throughout her accompany trunks anterior hepatic plexus, which at the gate of the liver respectively divided into right and left hepatic plexus.

In the second form of hepatic artery divided into its terminal branches are not at the gate of the liver, and the more proximal (more on the distance from the middle of the celiac trunk to the gates of the liver); these preparations hepatic plexus is also divided into plexus is right and left branches of a a/h.p. This embodiment we observed in 7 (12%) specimens.
In the third form in the liver-gastric ligament has an additional (left) hepatic artery from the left gastric artery, which is involved in the blood supply of the left lobe of the liver. The total number of trunks of plexus around this additional artery very significant. This form was observed at 6 (10%) specimens.

The fourth form has additional(right) ,hepatic artery extending from the superior mesenteric artery. In this form of the liver receives an additional innervation from the superior mesenteric plexus. Perivascular plexus of this artery has no connection with the posterior hepatic plexus, is involved in the innervation of the gallbladder and the right lobe of the liver. The greatest practical importance, a third form, in which a hepat-gastric ligament has expressed perivascular plexus around additional (left) of the hepatic artery. In these preparations are also branches of the anterior vagal trunk. If hepat-gastric ligament has artery it is perivascular plexus has extensive connections branches of upper gastric plexus and branches of coeliac plexus . In those preparations in which liver-gastric ligament is no additional artery is determined only by a small number of nerve branches From the front of the trunk of the vagus (4-6).

The data can be viewed not only in theory but also in terms of surgical tactics in different types of vagotomy. As you know, in the surgical treatment of gastric ulcer produced stem, selective, selective proximal vagotomy and other types. In the guidelines, published under the editorship of AA Shalimova (1979), as well as in other manuals (YM Panzer, A. Greenberg, 1979; W. Sibul, 1985; AA Shalimov, V.F.Saenko, 1987) provides a

detailed assessment of the said above types of vagotomy. Thus, when stem vagotomy dissected the main trunks of the vagus nerves, which is almost completely deprives organs upper abdomen parasympathetic innervation. Selective vagotomy wandering trunks, right and left, cross distal to othozhdenkya branches to the celiac plexus and liver. Surgeons believe that these types of vagotomy lead to parasympathetic denervation of the stomach all but saved innervation of other abdominal organs, particularly the liver.

Selective proximal vagotomy selectively denerviruet branch going to the cardiac department, the bottom and the body of the stomach, but saved the branches supplying the antrum, which, according to clinicians, allows to keep the greatest motor-evacuation function of the stomach.

Conclusions. Without giving an overall assessment of the benefits of different types of vagotomy (they have, no doubt, their indications and contraindications), should only be noted that, in terms of anatomy, stem vagotomy inevitably damage the branches reaching to the liver, whereas other types of vagotomy, especially selective proximal, largely retains branch heading from wandering trunks to the liver.

Chernyakova A.M., Karamian A.A.

ROLE OF OPPORTUNISTIC MICROORGANISMS AS MAJOR PATHOGENS OF INFLAMMATORY DISEASES IN NON-INFECTIOUS MULTIFIELD HOSPITAL

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of microbiology, virology and immunology

Introduction. The study of an etiology of inflammatory diseases is the actual medical problem especially to microbiology.

Aim. The purpose of this study was to investigate the etiology of pyoseptic complications in patients from various departments who were treated at multifield hospital.

Materials and methods. 3030 strains of opportunistic microorganisms were isolated from patients who were being treated in hospital. There are 1764 gram-positive strains (58.22%) and gram-negative - 591 strains (19.51%) among them. Also 297 strains of Candida fungi (9,14%) and 398 strains of anaerobic microorganisms (13.14%) were isolated, but their study was not part of our investigation.

Results. Gram-positive microflora was presented by: S.aureus - 529 strains (17,46%), S.pyogenes - 452 strains (14,92%), S.haemoliticus - 152 strains (5,02%), S.pneumoniae - 155 strains (5.12%). Among Gram-negative microorganisms were isolated: E.coli - 290 strains (9,57%), P.aeruginosa - 119 strains (3,93%), Klebsiella spp. (including K.pneumoniae, K.ozaenae, K. rhinoscleromatis) - 117 strains (3,86%), Proteus spp. (including P.mirabilis, P.vulgaris, P.penneri, P.rettgeri) - 25 strains (0,83%), E.cloacae - 29 strains (0,96%), E.aerogenes - 11 strains (0.36%).

2578 strains (85 % of the total number of bacteria) were allocated in monoculture, and 452 strains (15 %) were allocated in associations.

Grampositive microflora (S.aureus, S.pyogenes, S.haemoliticus) dominated in pulmonology, surgery and gynecology departments, gram-negative bacteria (E.coli, Klebsiella spp., P.aeruginosa) prevailed in therapy department.

Conclusions. Knowledge of these information is a practical value for doctors and for scientists who wants to improve and develop new drugs to prevent the occurrence of pyoseptic complications and the develop new approaches to the treatment.

Chernykh V. V., Bondarenko V. V.

THE FORENSIC VALUE OF THE CONCENTRATIONS OF ETHANOL AND ACETALDEHYDE IN THE BLOOD IN THE EXAMINATION OF ACUTE ALCOHOLIC POISONING

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of forensic medicine and medical law

Introduction. In forensic practice, one of the actual problems is the examination of acute alcohol poisoning. The complexity of this type of expertise is related to the identification and evaluation of a significant number of diagnostic features, including the concentration ratio of ethanol in the blood. It is known that during the metabolism ethanol is transformed into a highly toxic metabolite, acetaldehyde (ACO), which exceeds the toxicity of ethanol in more than 100 times. Currently in forensic practice, the concentration of ACO is not defined, despite the fact that the role of ACO in thanatogenesis in death from alcohol poisoning is well known.

Aim. To determine the feasibility of using the indicator of the concentration of acetaldehyde in the blood as an additional diagnostic criterion in examination of the acute alcohol poisoning.

Materials and methods. The research is based on 96 corpses of males aged 21 to 66 years, among which, 50 cases of death from acute alcohol poisoning (main group), and 46 cases of mechanical trauma (control group), mechanical asphyxia, and diseases of the cardiovascular system (sudden death). In the course of the forensic autopsy, using a dry syringe without a needle, the blood was collected from the femoral vein in an amount of 15 ml and was placed in a sterile penicillin vials, after which the objects were sent to the forensic toxicological laboratory, where the concentration of ethanol and ACO in the blood was determined by gas-liquid chromatography.

Results. As a result, it has been established that in the main group (acute alcohol poisoning) the concentration of ethanol in the blood was on average 5.5 ‰ which corresponded to the lethal level of alcohol intoxication, and the concentration of ACO was 0,0247 ‰ which was higher than the normal physiological value in more than 20 times. In cases of mechanical trauma the concentration of ethanol in the blood averaged 2,51 ‰ which corresponded to the level of strong alcoholic intoxication, and the concentration of ACO amounted to 0.008 ‰ which was higher than the normal physiological value in about 8 times. In cases of mechanical asphyxia the concentration of ethanol in the blood averaged 2,10 ‰ which corresponded to the level of intoxication of an average degree, and the concentration of ACO was 0,0155 ‰ which exceeded the norm by 15 times. In cases of sudden death, the concentration of ethanol in blood was 1,08 ‰ which corresponded to the level of slight intoxication, and the concentration of ACO reached 0.009 ‰ which was higher than the normal physiological value in 9 times.

In cases where the concentration of ethanol was less than 0.4 ‰ the concentration of ACO averaged 0,0007 ‰ which was within the physiological norm. In cases where the concentration of ethanol corresponded to slight degree of alcoholic intoxication (0.5 to 1.5 ‰) the concentration of ACO averaged 0,0054 ‰ which exceeded the norm by more than 5 times. In cases where the concentration of ethanol was consistent with moderate alcohol intoxication (1.5 to 2.5 ‰) the concentration of ACO averaged 0,011 ‰ which is more than 10 times above the norm. In cases where the concentration of ethanol corresponded to strong alcoholic intoxication (2.5 to 3.0 ‰) the concentration of ACO averaged 0,0183 ‰ which exceeded the norm by more than 18 times. In cases where the concentration of

ethanol was consistent with severe poisoning (3.0 and 5.0 ‰) the concentration of ACO averaged 0,0213 ‰ which exceeded the norm by more than 20 times. In cases where the concentration of ethanol exceeded 5,0 ‰ which corresponded to the level of lethal concentrations, the level of ACO averaged 0.028 ‰ which is almost 30 times higher than the physiological norm.

Conclusions. Thus, as a result of our work there have been received a direct correlation of the ratios of the concentrations of ethanol and acetaldehyde in the blood during acute alcohol intoxication, which indicates that the concentrations of acetaldehyde in the blood can be used as an additional diagnostic criterion for forensic examination of acute alcohol poisoning.

Chertenko T.

CLINICAL AND MORPHOLOGOCAL CHARACTERISTIC OF TUMORS OF THE CENTRAL NERVOUS SYSTEM. RESULTS OF ANALYSIS CASE HISTORIES AND BIOPSY MATERIAL OF KHARKIV REGIONAL HOSPITAL FOR THE PERIOD FROM 2010 TO 2014 YEARS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pathological anatomy

Introduction. There are two types of tumors of the central nervous system (CNS): primary CNS tumors and secondary (metastatic) tumors. The primary brain and spinal cord tumors are also divided into two types: benign and malignant. The biology of primary CNS neoplasms is totally different from biology of other types of tumors. So nowadays it's very important to know and understand morphological characteristics of primary CNS tumors. The World Health Organization in its new classification of CNS tumors, published in 2007 also focuses on the histological types of these tumors, because the knowing of these types can increase treatment efficiency for patients with such a problem.
The goal of this work is to research the histological types of CNS tumors.

Materials and methods. The research is based on 343 case histories of patients with tumors of the central nervous system and their biopsies in the period from 2010 to 2014 years. The statistical data was processed with Microsoft Exel 2007.

Results. Among the 343 cases of CNS tumors the study found 304 (88,7%) primary neoplasms of the CNS, 36(10,5%) metastatic tumors and 3(0,8%) tumors could not be distinguish by the routine microscopy. Among primary tumors the tumors of neuroepithelial tissue were counted in 172 cases (56,5%), tumors of cranial and paraspinal nerves in 24 cases (7,8%) , tumors of meninges in 100 cases (32,8%) and angioreticulomas in 9 cases (2,9%). Among primary neoplasms the benign tumors were counted in 119(34,7%) cases and malignant tumors in 184 (65,3%) cases.

Conclusions. 1. Primary tumors of the central nervous system occur much more often than secondary tumors in this location. 2. In the structure of primary CNS tumors predominate tumors of neuroepithelial tissue (56,5%).

Dziuba V.S., Sokol E.N.

THE ANALYSIS OF THE MEDICAL STUDENTS' ANXIETY LEVEL WITH THE CONDITION OF HYPODYNAMY

Kharkiv National Medical University, Kharkiv, Ukraine,
Physiology department

Introduction. Education at the University includes the period of social and psychological adaptation of youth in the condition of information and analytical and emotional stress complete with hypodynamy. The lack of physical activity is one of the

most common reasons for the decline of adaptive resources of the organism according to many authors. Another important problem of the medical students health is a chronic emotional anxiety state. Kinesiologist J. Carson Smith believes that „physical activity is a kind of effective buffer for emotional influence". Therefore, the analysis of the influence of adequate physical exercises on student's psychophysiological state is urgent and important.

Aim. Objective: to study the character of the influence of the dosed physical activity on the level of situational and reactive anxiety of medical students.

Materials and methods. The study involved 47 students of the Medical University, this were young men at the 18-20 years. Depending on the dose of physical exertion, students were divided into two groups. Students of the first group were offered the total amount of exercise for 3 hours per week. Students of the second group exercise for 6-9 hours per week. For the dosed physical activity, 1-1,5-hour course of aerobic exercises (running) were selected. The investigation lasted for 3 months. According to the objectives of the experiment we evaluated: 1) the vegetative status of the student's organism according to the frequency indicators of cardiorespiratory system with gradual increasing of the physical exertions on the bicycle ergometer; 2) emotional state of anxiety using the test of the level of personal and situational anxiety by Spielberg- Haning at the beginning of the study and after 12 following weeks.

Results and discussion. The results showed that the adaptive capacity of the cardiorespiratory system in young men with low levels of motor activity and high levels of personal anxiety (group № 1) was significantly lower than in the students of group № 2. It was founded that 56,4% of students of group № 2 and 35,7% of students of group № 1 had the harmonious physical development. Students with low levels of motor activity had the level of personal anxiety 63,5 ± 1,5, that was significantly higher than between the students of the group № 2, who had 34,5 ± 1,2. Students of the group № 1 had the high level of introversion and neuroticism, which indicated a state of anxiety or reactive depression. According to the results of Spielberg- Haning test, 38,4% of the students showed a decrease of the level of anxiety in the first 2 weeks after the exercise, 25,8% in a month, 17,7% in 1,5 months, 11,3% in 2 months, 5,3% after 2,5 months, and only 1,5% showed no significant changes in the studied parameters during the experiments.

Conclusion. Daily regular exercises help to reduce the level of situational and reactive anxiety, which is a reliable method of preventing the development of chronic psycho-emotional state of anxiety and depression. Students who were running every day about for one hour noted the increase of the level of psychological and emotional stability, extraversion and motivation intensified, such character traits as self-discipline and self-control became apparent. It had a positive influence on learning and cognitive activity of students.

Dyadichev A.V.

MELANOMA

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of histology
Scientific supervisor: as. Panasenko V.O.

Introduction. Today modern science knows incredibly many diseases that affects outer integument of human body. Really, our skin is that organ which most of all is

susceptible to different types of damage. And, first of all, thanks to its great size. Let's look, why the skin is so important part of human body and what does it look like.

Aim. To describe malignant melanoma tumors.

Results. Skin is an outer cover of human body. This is the biggest human organ that weights 6 kg and has square of surface about two square meters. Skin has three layers: epidermis, derma and hypodermis. Derma and epidermis are alsolayered structures. Derma contains of papillary layer and reticulated layer. Epidermis contains of a lot layers that can be united in main five ones: basal layer, prickly layer, granular layer, shining layer and horny layer. Skin has many nerve endings and most of them lay in hypodermal layer. Skin develops from two germ layers: from ectodermal layer develops epidermis, from dermatoms develops derma and hypodermis. After pinching of the neural tube the last ectoderm becomes skin ectoderm and forms an epidermis of skin.

On the base of dermatomes of somites of mesoderm develops the base of skin — derma. Mesoderm of myotome loosens and becomes mesenchyme that in prefetal periodstarts differentiate to connecting tissue. Epidermis differentiates to separate layers, in derma forms fascicles of collagen fibers. Skin implements many different functions among which: protection, because it protects an organism from mechanical chemical and other outer impacts; excretion, because it excretes sweat and sebum through pores; thermoregulation; breathing, because it absorbs oxygen and storing, because it stores lipids and fats it hypodermal layer.

Melanoma perhaps is the most serious of skin diseases that represents a form of skin cancer. Melanoma is cancer of the melanocytes – cells that produce melanin – pigment that protects skin from bad influence of ultraviolet rays. There are two main reasons of melanoma: 90% of all melanomas are linked to UV radiation (sun exposure); 8% are due to chromosomal abnormalities.

As shows results of University of Colorado Denver, more susceptible to melanoma are old males that were getting a lot of ultraviolet rays. Melanoma is also the most spread oncology of young people.

There are six stages of melanoma, different to degrees of severity. On 0 stage the tumor is found only on the top layer of the epidermis. Treatment is by surgery. On I A stage the tumor has not spread to the lymph nodes or distant organs. Also treatment by surgery. On II A stage tumor penetrates the deep dermis. II B stage: additional tumors called "satellites" may be found within 2 centimeters of the original tumor. III A stage: melanoma has spread to the nearest lymph node. IV A stage: the melanoma has spread to other organs such as the lung, liver, or brain, or to distant areas of skin or lymph nodes.

An ability of favorable outcome is depending of the stadium. First stage: 5-year survival is about 97 percent. 10-year survival – about 95 percent. Second stage: 5-year survival is about 81 percent. 10-year survival is about 67 percent. Third stage: 5-year survival is about 59 percent. 10-year survival is about– 43 percent. Fourth stage: 5-year survival is about 15 to 20 percent. 10-year survival is about– 10 to 15 percent.

Conclusions. At first sight, there is very simple to protect ourselves from developing of melanoma we just mustn't have sun bathes in the midday, but as shows statistics with 8% of melanomas accidents are caused by genetics. The second ones are something that we still cannot prevent. To sum up, melanoma is a serious skin cancer that can affect different organs. There are four stages of melanoma, different for severity. To prevent development

of melanoma, we should protect our skin from straight sun rays and regulate quantity of mutagenes in our life.

Dyadichev O. V., Grabovetskaya E.R.

FROM MACRO- TO MICROCRYSTALS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of Medical and bioorganic chemistry

Introduction. Crystals are all around us. Crystals are solids having "repetitive", so-called, periodic structure forming regular polyhedra. Arrangement of particles is described as a crystal lattice. This is a three-dimensional model of arrangement of the particles in the crystal. The crystal lattice can be thought of as an array of “small boxes” infinitely repeating in all three spatial directions. Such a unit cell is the smallest unit of crystal that contains all of the structural and symmetry information to build-up the macroscopic structure of the lattice. Crystalline compounds can form one single crystal. However, most crystalline compounds are composed of many small crystals, i.e. they are polycrystalline. Single crystals are usually obtained artificially. Sizes of crystals vary from microscopic to a few meters. Scientific activity of Medical and Bioorganic Chemistry Department is devoted to the investigation of medicines which contain caffeine. Caffeine (1,3,7-trimetylxanthine) is widely used in medicine. It is applied in diseases involving suppression of central nervous and cardiovascular systems, brain vascular spasm (migraine), poisonings with drugs which depress the central nervous system, for increase of organism resistance to mental and physical stress, etc. Caffeine promotes the analgesic effect of nonnarcotic analgesics. Moreover, caffeine plays stimulating role in a human organism, because it makes the liver to release sugar in bloodstream. Caffeine postpones fatigue and increases human endurance. Also caffeine increases level of serotonin concentration, so it acts as a good psychostimulator. Caffeine consumption increases alertness, ability to concentrate, problem-solving ability, wakefulness, so caffeine plays “cognitive” function.

Aim. The aim of the work was to grow artificially, besides macro crystals of other chemical substances, the microcrystals of caffeine.

Materials and methods. Crystals can be obtained during the crystallization of melt, solution or gas. In laboratory crystals are usually obtained from solutions. Crystals of solute begin to precipitate upon cooling of saturated solution, as solubility decreases with lowering of temperature. In our experiment we used condensation method. We put some quantity of black tea in a small vessel. On this vessel we put objective glass and heated it.

Results. By cooling method we obtained crystals of blue vitriol ($CuSO_4$), table salt (NaCl), ammonium dihydrogen phosphate ($NH_4H_2PO_4$), sucrose ($C_{12}H_{22}O_{11}$), potassium alum ($KAl(SO_4)_2\ 12H_2O$), and needle-like crystals of caffeine which are so small that they are invisible to the naked eye and can only be observed under a microscope at a 100-fold magnification. In experiment with caffeine, we obtained white matt coating on the surface of objective glass. On verification with electronic microscope the crystals appeared to be crystals of caffeine.

Conclusions. Crystals of various chemicals, including caffeine microscopic crystals, which possess pharmacological activity, can be grown in vitro.

Ejagwulu Elizabeth, Shaposhnikova Yu., Nemtsova V.

LATEST EVIDENCE ON GOUT DIAGNOSIS, MANAGEMENT AND PREVENTION: WHAT THE CLINICIAN NEEDS TO KNOW

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of clinical pharmacology

Introduction. Gout is characterized by painful joint inflammation, most commonly in the first metatarsophalangeal joint, resulting from precipitation of monosodium urate crystals in a joint space. Definitive diagnosis of gout requires synovial fluid or tophus aspiration to identify negatively birefringent monosodium urate crystals under polarizing microscopy, but crystal evaluation is not routinely performed in clinical practice. Hyperuricemia may not be present during acute gout attacks and therefore may not be useful for diagnosis. Differential diagnosis of acute gout includes calcium pyrophosphate dehydrate or other crystal-induced arthritides and a septic joint. If a septic joint is suspected, joint aspiration with Gram staining and culture must be performed.

The aim of this study was to review the medical literature devoted to the standards of diagnosis and treatment of patients with gout and subsequent review by students and young scientists with the basic provisions of the most effective and rational schemes of diagnosis and treatment of gouty arthritis.

Materials and methods. We were conducted selection, referencing and the following synthesis of more than 30 medical articles devoted to modern methods of diagnosis and treatment of gout.

Results. Gout is typically diagnosed using clinical criteria from the American College of Rheumatology. Diagnosis may be confirmed by identification of monosodium urate crystals in synovial fluid of the affected joint. Microscopy of joint fluid is used less often, primarily in equivocal cases. In these situations, the diagnosis is established by aspiration of a joint or tophus and identification of needle-shaped monosodium urate crystals, preferably intracellular, with bright, negative birefringence on compensated polarized light microscopy. The differential diagnosis for acute monoarticular joint swelling includes pseudogout, infection, and trauma.

Acute gout may be treated with nonsteroidal anti-inflammatory drugs, corticosteroids, or colchicine. To reduce the likelihood of recurrent flares, patients should limit their consumption of certain purine-rich foods (e.g., organ meats, shellfish) and avoid alcoholic drinks (especially beer) and beverages sweetened with high-fructose corn syrup. Consumption of vegetables and low-fat or nonfat dairy products should be encouraged. The use of loop and thiazide diuretics can increase uric acid levels, whereas the use of the angiotensin receptor blocker losartan increases urinary excretion of uric acid. Reduction of uric acid levels is key to avoiding gout flares. Allopurinol and febuxostat are first-line medications for the prevention of recurrent gout, and colchicine and/or probenecid are reserved for patients who cannot tolerate first-line agents or in whom first-line agents are ineffective. Oral corticosteroids,intravenous corticosteroids, NSAIDs, and colchicines are equally effective in treating acute flares of gout. Patients receiving urate-lowering medications should be treated concurrently with nonsteroidal anti-inflammatory drugs, colchicine, or low-dose corticosteroids to prevent flares. Treatment should continue for at least three months after uric acid levels fall below the target goal in those without tophi, and for six months in those with a history of tophi.

Conclusions. Historically, urate-lowering medication was thought to worsen acute gout flares, but recent evidence suggests that allopurinol (Zyloprim) can be started during an acute flare if it is used in conjunction with an NSAID and colchicine. Patients receiving a urate-lowering medication should be treated concurrently with an NSAID,colchicine, or low-dose corticosteroid to prevent a flare.

Fed'ko K.O.

MORPHOLOGICAL FEATURES OF THALAMIC VENTRAL NUCLEAR GROUP OF HUMAN'S DIENCEPHALON

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of histology, cytology and embryology
Scientific supervisor: Ryhlik S.V.

Aim. Analysis of histoarchitectonic features of ventral nuclear group of human's diencephalon in different age groups.

Materials and methods. The materials were taken from histology department's archive. For making preparationswas used the method of allocation the region of the brain without dura mater from cranial cavity. Research was done on serial sections with thickness about 7-10 microns which were stained by Nissle's method and hematoxylin and eosin dye.

Results. The study was carried out in several stages. An analysis of age dynamics in the ventrolateral nucleus cell revealed characteristic patterns: with increasing age the number of neurons decreased and the number of glial cells in tissue increased. The reduction amount and density of neurons and capillaries increases with age number of capillaries that occur in one neuron. In all age groups there were diverse in form and size of neurons: large, medium and small with spikes.

Conclusions. With increasing age there is a progressive decrease in human density distribution, number and size of nerve cells, reducing the number of Nissle's substance, dystrophy and degeneration of neurons, accumulation of lipofuscin in them, reducing protein synthesis function, increasing the number of glial cells, the reduction of the capillary network, polymorphism of endothelial cells.

Galata D.I., Potapov S.N.

BONE MARROW MORPHOFUNCTIONAL PECULIARITIES IN FULL-TERM FETUSES AND NEWBORNS FROM MOTHERS WITH MIDDLE-GRADE PREECLAMPSIA SEVERITY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pathological anatomy

Introduction. Despite the modern methods of investigation and treatment, preeclampsia takes one of the first places among the complications of pregnancy and does not tend to decrease. Vascular and metabolic changes detected in preeclampsia, disrupt the formation and differentiation of the vital organs of the fetus, which in turn leads to disturbances of their structure and functioning in later ontogenesis.

Aim. The purpose of work was to detect influence of moderate severity preeclampsia on morphological peculiarities of the bone marrow lymphoid sprout in full-term fetuses and newborns.

Materials and methods. Sixteen bone marrows of full-term fetuses and newborns from mothers with middle-grade preeclampsia were included in the study. The controls were 12 bone marrows of full-term fetuses and newborns from mothers with normal pregnancy (according to the charts of pregnancy development). All fetuses have died during delivery due to acute disorder of umbilical-placental circulation (premature detachment of the placenta) or birth trauma. Newborns have died of postnatal asphyxia. Histological, histochemical, morphometric, immunohistochemical and statistical methods were used.

Results. Due to morphometric and immunohistochemical studies of myeloid tissue of full-term fetuses and newborns we found the following morphofunctional features. Cell density in the bone marrow lymphoid sprout of full-term fetuses and newborns from mothers with middle-grade preeclampsia was (8023±4,9) number/mm^2, what is significantly ($p<0,05$) higher of those in the controls (7876±5,9) number/mm^2. The relative volume of all B-lymphocyte clones was significantly ($p<0,05$) increased (86,0±2,82%, the controls – 77,0±3,07%), which attests to intensification of proliferation processes in B-lymphoid sprout of bone marrow. But in spite of the increase in the relative volume of mature cells (CD22) (64,0±2,5%; the controls – 62,0±3,25%) their specific volume was decreased, when compared to premature (HLA-Dr) and immature (IgM) B-cell clones, which is confirmed by the ratio of these clones (ratio IgM:HLA-Dr:CD22 – 1,0:2,66:10,6; the controls – 1,0:2,75:15,5).

Conclusions. Preeclampsia of a mother has a negative impact on the morphological status of the central organ of humoral immunity – bone marrow – of the fetus and newborn. Moderate antigenic influence in middle-grade preeclampsia intensifies processes of proliferation against a background of B-cell population maturation inhibition in myeloid tissue. It may manifest breakdown of adaptive mechanisms in the future ontogenesis with the development of various immunopathological states.

Gordiychuk Dariya A., Ahmed Raliat B., Salawu Khairat T.

ACETYLCYSTEINE AS AN IMPORTANT PANACEA

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and medical prescription

Introduction. Acetylcysteine also known as N-acetyl-L-cysteine (NAC) is pharmaceutical drug and nutrition supplement used primarily as a mucolytic agent and in the management of acetaminophen (paracetamol) poisoning. It is on the WHO's list of Essential Medicines. Some of the numerous pharmacological effects of acetylcysteine are antioxidant, antiradical, membrane stabilizing, detoxicating, immunomodulatory, anti-inflammatory actions.

Aim. So the target of our work is a justification of the pharmacodynamic effects of acetylcysteine at various urgent conditions in medicine.

Results. When large doses of acetaminophen is taken, N-acetyl-p-benzoquinone imine accumulates in the body and it is usually conjugated by glutathione, but due to its excess, the reserved glutathione in the body is not sufficient because of the excess of it to inactivate it, making it free to react with hepatic enzyme leading to the damage of hepatocytes. When acetylcysteine is administered, it acts to maintain or replenish depleted glutathione reserves in the liver and enhance non-toxic metabolism of acetaminophen. In conditions like chronic obstructive pulmonary disease (COPD), emphysema, pneumonia, bronchitis, tuberculosis and bronchiectasis with production of excessive and thick mucus, inhaled acetylcysteine is normally used for mucolytic therapy as an adjuvant for the above respiratory conditions, due

to splitting disulphide bonds linking proteins present in the mucus (mucoproteins) to reduce the symptoms, exacerbations and the accelerated lung function decline.

In diseases like neurodegenerative disorders, down syndrome, multiple sclerosis, Parkinson's disease, Huntington's disease, Alzheimer's disease, focal cerebral ischemia, subarachnoid haemorrhage and traumatic brain injuries an acetylcysteine exerts its action by increasing the level of glutathione peroxidase, free radical scavenging and by increasing the level of superoxide dismutase. Acetylcysteine inhibits homocysteine enhanced expression of an oxidized-LDL receptor, inhibits metalloproteinase-9 (gelatinase B) activity and expression in lipid-laden macrophage-derived foam cell by 60%, thereby demonstrating a potential for antioxidant to stabilize vulnerable atherosclerotic plaques.

Oral acetylcysteine is used for the prevention of radiocontrast-induced nephropathy (a form of acute renal failure). Acetylcysteine protects patients with moderate chronic renal insufficiency from contrast-induced deterioration in renal function after coronary angiographic procedures, with minimal adverse effects and at a low cost. Years of studies shows acetylcysteine's ability of treating and preventing the cause of chronic generalised periondontitis due to its antioxidant, antiradical and membrane stabilizing properties.

Conclusions. In conclusion acetylcysteine has a broad spectrum of actions and possible applications across multiple conditions and systems. As a drug, it represents the ideal xenobiotic, capable of directly entering endogenous biochemical processes as a result of its own metabolism. So further scientific investigations should be directed in new findings of possible acetylcysteine pharmacodynamics effect in case of different urgent medical problems.

Gordiychuk D.A., Dan'azumi Ibrahim A.

ACETYLCYSTEINE PERIODONTOPROTECTIVE AGENT IN CHRONIC GENERALIZED PERIODONTITIS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and medical prescription

Introduction. Acetylcysteine is the N-acetyl derivative of the amino acid L-cysteine, and is a precursor in the formation of the antioxidant glutathione in the body. The thiol (sulfhydryl) group confers antioxidant effects and is able to reduce free radicals.

In vivo protective effects N-acetylcysteine (NAC) against acetaminophen-induced hepatotoxicity in mice was studied. NAC at 1 g/L is added into drinking water for four weeks and followed by acetaminophen treatment. Acetaminophen treatment significantly depleted glutathione content, increased oxidation stress and elevated alanine (ALT) and aspartate (AST) activities; however, the intake of NAC significantly alleviated glutathione depletion and the elevation of ALT and AST activities. N-acetylcysteine is also used for preventing alcoholic liver damage; for protecting against environmental pollutants including carbon monoxide, chloroform, urethanes and certain herbicides. Oral acetylcysteine is used as a nephroprotective agent for the prevention of radiocontrast-induced nephropathy, a form of acute renal failure.

Aim. The target of our work - to prove the periodontoprotective properties of acetylcysteine in experimental chronic generalized periodontitis.

Results. The thesis devoted to experimental substantiation of prophylactic treatment expediency by acetylcysteine in chronic generalized periodontitis. In the basis of the

acetylcysteine periodontoprotective effects lies in its ability to prevent membrane destruction by the significant reduction of generation and accumulation of free radicals and by effective regulation of prooxidant-antioxidant homeostasis in serum and rat gums tissues with inflammatory–dystrophic periodontal disease. In addition, the efficiency of acetylcysteine periodontoprotective ability implemented by the stabilization performance of energy and carbohydrate metabolisms, prevention of separation processes of oxidation and phosphorylation, preservation of functional detoxication system under chronic generalized periodontitis condition.

Conclusions. In conclusion, N-acetylcysteine pharmacotherapeutic efficacy also consists of its ability to prevent and/or reduce the expression of aggressive chronic generalized periodontitis symptoms among other effects, which have been proved earlier.

Gordiychuk D.A., Ohiri Akuyoma M., Fom Mildred N.

THE WORLD'S MOST DANGEROUS DRUG

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and medical prescription

Introduction. Methamphetamine's chronic use otherwise called addiction is accompanied by chemical and molecular changes in the brain. About 50-60% of the young population of the country is affected. Statistics have it that male youths above the age of twelve and more frequently between the ages of eighteen and twenty five are chronic abusers of this drug.

Aim. The goal of our work is to identify and warning the risk of methamphetamine among young people users of our country.

Results. Methamphetamine is a central nervous system stimulant belonging to amphetamine and phenethylamine. It exists as two enantiomers: dextro and levo methamphetamine. In low doses, methamphetamine can cause an elevated mood with increased alertness. However, at higher doses, it can induce psychosis. Heavy recreational use of methamphetamine can lead to post-acute withdrawal syndrome (a syndrome that persists for months beyond the typical withdrawal period).

Some of the ways of administering methamphetamine include orally, snorted, smoked, dissolved in water or alcohol or through intravenous injections using needle. Smoking or injecting it promptly delivers it to the brain. Owing to the easily fading pleasure from the drug, users often take repeated doses in what is called a "binge and cash" pattern.

The psychoactive effects of this drug have three basis: stimulant, psychedelic and enactogenic. As a stimulant, it produces temporary improvements the physical or mental or both functions. The psychedelic nature produces experience of emotional communion and openness. These effects can be sympathy or empathy, whereas its enctogenic effect incorporates alteration of cognition by agonizing serotonin receptors. This effect makes it a hallucinogen. From another view, methamphetamine popularly called a club drug has aphrodisiac and euphoric effects. As aphrodisiac, we speak of it as a substance that increases libido (sexual desire), causing long lasting sexual activity. Dopaminergic action of methamphetamine causes meth mouth (abnormal teeth loss) and bruxism.

Conclusions. So the problem of methamphetamine addiction is the most dangerous in the world and our country. Therefore, we should propagate information about the possible consequences of its use among the young people to avoid millions of death.

Gubin N., Shmatko K., Gaynanova V.

FORENSIC MEDICAL DIAGNOSTICS OF LETHAL DAMAGES IN CASES OF BODY FALL FROM GREAT HEIGHT INTO THE WATER

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of forensic medicine and medical law

Introduction. Quite a lot of scientific researches are devoted to forensic medical diagnosis of body falls from a great height to the blunt solid object with prevailing surface. However, we didn't come across works devoted to establishing the nature of damage, mechanism of its formation & thus the causes of death due to fall of a body from a great height into the water. At the same time there are known cases of athletes jumping into the water from a height of 52.4 m, without causing any damage.

Taking into account the foregoing, in our opinion, the case of interest from our practice of commission forensic examination on the lethal trauma due to citizen K. falling into the water from a great height, whose body was found 29/06/2009 in the seaside area waters of Simeiz rock massif. According to eyewitnesses, K made the jump into the water from a lookout deck of the 'Diva' cliff from a height of 55 meters. During examining of the corpse in Yalta department of the Crimean Republican bureau of forensic medical examination revealed multiple bruisings, abrasions of the face, on the front surface of the neck, damages of mouth vestibule mucosa, transverse fractures of hyoid bone horns, focal hemorrhages under the pia mater of parietal areas & indicative changes of asphyxial or rapidly occurred death. Corpse blood contained 3.76 ppm of ethanol. Diatom plankton was not found. The expert didn't detect any signs of concussion. The expert who conducted the post-mortem examination knew no precise details so he concluded that the death of K. was the result of mechanical asphyxia from compression of the neck and closing of the mouth & nose openings with hand,& only after being followed by immersion of the body in the water.

Later, however, the experts of the Crimean Republican bureau conducted commission investigation of citizen K. death & studied all case materials. Herewith, the expert commission came to a different conclusion about the possibility of the injuries formation from the body fall from a great height, with upside down vertical entry into the water, the collision of the face and the front of the neck with the water surface, followed by asphyxial drowning.

Such expert's opinion didn't convince law enforcement agencies in their judgments about the circumstances of the incident. Commission forensic investigation was re-appointed in Kharkov Regional Bureau of Forensic Medicine, in which conducting leading experts of the Department of Forensic Medicine of Kharkov National Medical University took an active participation. Having studied the case materials and conducting the necessary studies, experts have come to the conclusion that as a result of direct, coordinated drop of citizen K. on the water from a height of 55 m, entering it with shod feet vertically, & a bit inclined front body surface to the water plane , subsequent dives, and a sharp blow on the water by front of the neck, front to back, and a few from the bottom up, it caused soft tissue damages. Hyoid bone fracture, originated due to its displacement backwards & upwards & horns adjoining on the cervical spine. Due to a sharp throwing of water jets on the vestibule, the oral cavity, larynx & hydrodynamic shock, the persistent laryngospasm, mechanical asphyxia occurred and that was the cause of death.

Conclusions. Based on the above-mentioned observations it can be concluded that the forensic diagnosis of injuries of body falling into the water from a great height requires improvement. There is a major necessity in comprehensive study of such trauma for identifying clear diagnostic criteria for its forensic evaluation.

Isayeva Narmin

EFFECTS OF HIGH-FREQUENCY RANGE OF ELECTROMAGNETIC RADIATION ON THE GROWTH PROPERTIES OF PATHOGENIC CORYNEBACTERIA

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of microbiology, virology and immunology
Scientific supervisor: Ph.D. Balac A.

Introduction. In our time, the influence of electromagnetic radiation on human exceeds the natural rate of a thousand times, but in the literature there are only individual variability with respect to opportunistic bacterial groups due to the influence of electromagnetic radiation, so Corynebacterium as a classic example of infectious agents is a good model for the study of the influence

Aim. The purpose of the definition of work- growth properties of pathogenic Corynebacteria under the influence of low-energy physics research factors.The object of research - strains of C.diphteriae.Sources of electromagnetic radiation - standard generators G4-141 with power P = 5 mW UHF inductor fluctuations had a standard signal G3-109. Found that treatment of bacterial suspensions wave with frequency of 61.0 GHz led to increase the growth rate of pathogenic Corynobacterium 1.2 times, while the frequency of 42.2 GHz led to a reduction in growth of 1.3 times. Thus, defined two modes, which led to the largest change in the growth rate of diphtheria: sequential mode ultrasonic irradiation with waves 61 GHz to cause the greatest encouragement, and sequential mode radiation waves 42.2 GHz, conversely inhibited the growth properties of pathogenic Corynebacteria .Certain modes opens the possibility to regulate the rate of growth of cultures of Corynebacteria in biotechnological processes as in the preparation of tetanus anatoxin , and the preparation of vaccines based on cell antigens.

Joshna Thapa, Asma Anwardeen

CONGENITAL DISEASE OF HEART

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of human anatomy
Scientific supervisor: senior teacher, PhD Polyakova A.

Introduction. A congenital heart defect is a problem with the structure of the heart. It is present at birth. The defects can involve the walls of the heart; obstruct blood flow, the valves of the heart, and the arteries and veins near the heart.

Some congenital heart defects are as follows.

Aortic stenosis is a narrowing of the aortic valve or a narrowing of the aorta directly above (supravalvar) or below (sub aortic) the aortic valve. Normally, oxygen-rich blood is pumped from the left ventricle, through the aortic valve, into the aorta and then out to the body. With aortic stenosis, it makes it very hard for the heart to pump blood to the body.

Pulmonary stenosis is a narrowing of the pulmonary valve. Normally the pulmonary valve opens to let low-oxygen blood flow from the right ventricle to the lungs where the

blood is oxygenated. Because of the narrowing, the right ventricle has to pump harder to get past the steno tic valve. This can sometimes lead to enlargement of the right ventricle. With pulmonary stenosis, problems with the pulmonary valve make it harder for the leaflets to open and permit blood to flow forward from the right ventricle to the lungs. In children, these problems can include: A valve that only has one or two leaflets instead of three. A valve that has leaflets that are partially fused together. A valve that has thick leaflets that do not open all the way.

Marfan syndrome. Children with Marfan syndrome are at risk for serious problems involving the cardiovascular system, including the following:

Mitral valve prolapse - an abnormality of the valve between the left atrium and left ventricle of the heart that causes backward flow of blood from the left ventricle into the left atrium. Arrhythmia (or dysrhythmia) - a fast, slow, or irregular heartbeat.

Aortic regurgitation - backwards leakage of blood from the aorta, through a weakened aortic valve, and into the left ventricle, resulting in stress in the left heart and inadequate blood flow to the body.

Conclusion. Aortic dissection - weakening of the layers inside the aorta, which can result in tears in the aortic wall and leakage of blood into the chest or abdomen; a medical emergency.

Kolodeznaya T.Yu., Zupanets K.O., Ratushnaya K.L., Dobrova V.Ye.

THE PROCEDURE OF SIGNING THE INFORMED CONSENT AS A KEY FACTOR OF BIOETHICAL NORMS GUARANTEE DURING CLINICAL TRIALS OF DRUGS

National University of Pharmacy, Kharkiv, Ukraine
Department of clinical pharmacology and clinical pharmacy

Introduction. Today according to the Nuremberg Code and Declaration of Helsinki one of the mandatory requirements of trials with human participation is signing the informed consent (IC) form by subjects before the start of any procedure of trial. Informed consent is a process that allows a patient or a healthy volunteer reaffirm their will freely participate in clinical trials (CT). The volunteers should understand all the procedures and risks of participating in CT. Such information is provided by a researcher to a potential volunteer during signing the IC. Unfortunately they do not always understand the aims and content of trial, its main terms, procedures and conditions. It is very important for volunteers to understand in which trial they agree to participate. The procedure of signing the IC form was designed to protect rights, health, well-being, confidentiality and ethical norms with respect to trial subjects.

The aim of the research was to analyze the level of the volunteers' understanding of the most common terms that could be used during signing the IC or participation in CT.

Materials and methods. The interview of 44 volunteers was held for the evaluation of volunteers' awareness during signing the IC. The questionnaire for respondents consisted of two parts: the first part included general questions (age, number of participations in CT) and questionnaire that allowed volunteers the self-assessment of their knowledge of terms which could be given across during CT, and the second – test questions of closed type for evaluating real knowledge of terms. The verification of the test in the questionnaire was conducted by the key.

Results. The analysis of results showed that from 44 volunteers more than a half (52.27%) were aged 36 – 45 years. 52.17% of respondents aged 36 – 45 years took part in 3 – 5 CT, 60% of volunteers aged 18 – 25 years – in 1 – 2 CT. The majority of respondents (86.36%) didn't have questions during reading the information, but 34.09% asked questions about unfamiliar or unclear terms, the answers on the raised questions were provided in 56.82% of cases and were satisfactory to 68.18% of respondents. The statistical analysis by Student's test of relations between volunteers' self-rating and evaluation of their real knowledge of CT's terms was carried out. It showed that the volunteers' self-rating is significantly higher than their test results ($P=0.029<p\text{-level}=0.05$). That means the self-rating does not always demonstrate the authentic knowledge and understanding of the terms that could be used during signing the IC at participation in CT by volunteers'.

According to the volunteers' self-rating the 15 terms (54 %) were familiar to all 44 respondents. The less known terms are randomization (34.09 % of respondents selected this term as "familiar"), angioedema (36.36 %) and myalgia (40.91 %). Then the impact of factors of obtained results of volunteers' knowledge of terms that could be used during signing the IC was analyzed. With the help of statistical analysis was established that factor "giving answers to volunteers" significantly affected testing points that were received by volunteers during test. The rest of factors didn't statistically affect received points.

Conclusions. The results of research demonstrate the necessity of the proper explanation of terms by researchers to volunteers and then making sure by asking volunteers questions how well they understand the received information. The work of the staff was assessed as positive based on the analysis of questionnaires. It is necessary to work out the additional preliminary procedures for providing better understanding of terms by volunteers (visual materials: photo novels, movies etc.). It is necessary to work out the procedure of control on preparing the IC by the staff of the Clinical and Diagnostics Center.

Kukushkina M.

THE INFLUENCE OF DEXAMETHASONE PRENATAL INTRODUCTION ON CEREBRAL METABOLISM IN RATS - DESCENDANTS OF THE 1ST GENERATION

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of biological chemistry

Introduction. Synthetic analogues of the natural hormones are widely used for the treatment of various diseases, (including diseases in pregnant women), for over 50 years. It is proved scientifically, that all corticosteroids (CS) can pass through the hematoplacental barrier and may be teratogenic. However, the influence of the antenatal corticosteroid therapy on the functional state of the brain have not been studied completely.

Aim. The purpose of our work was to study the peculiarities of cerebral metabolism of the 20-day-old rats – descendants of the female rats, exposed to the introduction of corticosteroids during pregnancy.

Materials and methods. The experiments were performed upon Wistar rats which were kept in standard conditions of vivarium. 3-month old female rats were given daily dexamethasone injections in a dose of 0.1 mg/100mg intramuscularly for a month before mating and throughout pregnancy. The rats of the control group were given (physiologic) saline injections instead of dexamethasone. 20-day-old rats - descendants were taken out from the experiment by decapitation using light ether anesthesia.

The contents of K, Na, Mg, general lipids, phospholipids, hexokinase activity in the brain homogenate were studied with the spectrophotometric methods. The content of the nerve growth factor was quantitated with ELISA.

Results. It was found, that the specific gravity of the brain in 20-day-old rats – descendants of the female rats, exposed to the introduction of corticosteroids during pregnancy, was reduced, as compared with the control group.

The content of biogenic elements in the brain of young rats was also reduced: Mg - 1.5 times as low, K - 1.6 times as low, Na - 1.3 times as low, the hexokinase activity - 2 times as low. The content of general phospholipids decreased 1.6 times as low. The nerve growth factor secretion also decreased significantly.

Conclusions. The features of metabolic parameters, discovered during our experiments allow us to conclude, that corticosteroids, administered during pregnancy, can cause the damaging action on the brain of the offspring.

Kulakova K. A.

ASSESSMENT OF EFFICIENCY AND SAFETY OF CONTRACEPTIVES MINI-PILL

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and drug prescription

Introduction. Worldwide, hormonal contraceptives are the most popular and widely used method of contraception. Despite the theoretically high efficiency, their actual efficiency and safety is much lower. To a large extent this disparity reflects difficulties in the selection of the drug, which corresponds to the hormonal background of women and the presence of side effects.

Aim. The purpose of the study. To estimate efficiency and safety of preparations mini-pill for oral contraception, considering advantages and shortcomings of preparations, side effects.

Results. The most modern oral contraceptives are mini-pill. The mini-pill are contraceptive tablets which contain a hormone progestogen , similar to the natural hormone progesterone, which is produced by a woman's ovaries. Products of this group are Charozetta, Ovret, Mikronor, Primolyut-Nor, Kontinuin, Ekslyuton. Progestin drugs do not inhibit ovulation, as combined oral contraceptives. The contraceptive effect of this group is based on the process of change in the quality of mucus that covers the uterus. Mucus becomes thick and it is an obstacle to the passage of sperm to the egg. If the sperm still gets to the egg, then the second factor contraceptive mini-pill comes into force: at change of a mucous membrane of uterus, the attachment of an embryo is impossible. Also, when taking these drugs the vermicular movement of fallopian tubes is slowed down. Progestational remedies efficiency largely depends on the accuracy of their application. They must be taken daily, and preferably - in one and the same time. Mini-pill is allowed to take breast-feeding women. Drugs of this group have a number of benefits: soft impact on a female organism, unlike the estrogen containing in the combined oral means, the mini-pill don't reduce a lactation and don't worsen taste of breast milk, render rather fast effect (in 4 hours the contraceptive effect reaches a maximum), reception is not directly connected with sexual intercourse, there is no risk of thrombosis, hypertension is not a contraindication, do not affect libido, are allowed for use during preparation to surgical manipulations, reduce pain

during menstruation. Also there are some drawbacks: accurate reception mode (must be used regularly in the same time), efficiency in comparison with the combined oral contraceptives is lower, there may be increase or loss in weight, lack of protection from sexually transmitted diseases and AIDS, possible reduction in contraceptive effect while taking anticonvulsants or anti-TB drugs that cause restriction of the drug in women with epilepsy, seizures, tuberculosis. Side effects: short-term changes of the menstrual cycle, the development of ovarian cysts, exacerbation of chronic thrush course of the disease, the nausea and weakness at diabetes which aren't demanding cancellation of a preparation, sensitivity to ultraviolet rays with formation of pigmentary spots.

Conclusions. Thus, we can say that the mini-pill are effective and safe drugs, the use of which can effectively provide contraception. The regular mode of reception of mini-pill has several advantages compared to the traditional mode. They consist in: reduce the number of menstruation, which corresponds to the wishes of the majority of women, additional therapeutic effect on premenstrual syndrome, dysmenorrhea, polycystic ovary syndrome, uterine fibroids, endometriosis.

Kumah Ruth Jadu

HOW THE BRAIN AND HEART INTERFACE WITH OUR EMOTIONS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of human anatomy
Scientific supervisor: senior teacher, PhD Polyakova A.

Introduction. In ancient Egypt it was believed that the heart was the organ responsible for feelings and emotion because it was the one organ that pumped blood throughout the body and that had any visible alterations in its beating when we changed our feeling: if we were happier, or angrier or sadder, or sleepier, our heart rate would be different. The heart physically communicates with the brain and the rest of the body. The communication pathways, which originate in the heart, travel through the emotional memory section of the brain and go all the way to the top of the brain responsible for thinking and reasoning.

Today we already know that it is not the heart that is responsible for feelings or emotion, but yes the brain. The heart does no longer have anything to do with this since it does not have a cerebral cortex. Neuroscientists have been studying the brain and have realized that it is the limbic system in our brains that govern our emotions. It consists of several parts of the brain working together; the amygdala, the hippocampus, the basal ganglion, and the thalamus, as well as other parts.

However, our emotions determine the state of our hearts. Now consider lying to yourself. You try convince yourself in your brain that the lie is the truth, but your still beats. Your heart continues to show feelings even when you have already convinced yourself the lie is the truth. It is hard or even impossible for the other person to tell until he/she checks the change of pace by hand or through 'lie detectors'. Lie detectors in reality are to check the change of pace in your veins or your heart. Even the iPhones and iPod touches have then now, as they ask you to place your finger on it for a while. During that 'while', it in reality is checking your heartbeat through your veins in your fingertip. If it continues at a normal pace, it will guess you have told the truth. If it notices changes, it will point that you have lied.

The heart is also a hormonal organ. Among other hormones, it produces one which is labeled by some as the "balancing hormone," because it contributes to the balancing of other hormones. This same hormone can facilitate the reduction or increase of stress hormones. The heart may also be responsible for the production of "Oxytocin," fondly referred to as the "love hormone." The love hormone plays an important part in our emotional and social development. For example, Oxytocin is in action when a mother feeds and tends her child. Compassion, caring, love, appreciation, gratitude, forgiveness and other behaviors may have a lot to do with how well the heart is functioning at the physical, emotional, mental and spiritual levels.

Conclusions. What causes some cases of heart attacks? Why do we feel so hurt in our heart when our emotions are toyed with? Why does our heart beat faster when we're afraid or excited? These are all emotional stimuli received by the brain which have negative or positive effect on the heart. So to have a healthier heart, we should think healthy, eat/drink healthy and emotionally and mentally exercise. The brain therefore is an emotion-creating organ and the heart through the neurons shared between it and the brain, is the emotion-responding organ.

Lomakina O., Oliynik A.

IMETELSTAT - NEW THERAPEUTIC REMEDY FOR ADVANCED NON-SMALL-CELL LUNG CANCER

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and medical prescription

Introduction. Targeted cancer therapies are drugs or other substances that interfere with specific molecules involved in cancer cell growth and survival. Telomerase is a therapeutic target because it is specific to cancer and critical for cancer cell immortality.

Aim. Geron Corporation carried out study, in which the efficacy of switch maintenance therapy with imetelstat in advanced NSCLC patients was evaluated and explored the potential use of TL as a surrogate (predictive biomarker) of imetelstat activity.

Imetelstat is a covalently lipidated 13-mer thiophosphoramidate oligonucleotide that acts as a potent specific inhibitor of telomerase. It binds with high affinity and acts as a competitive inhibitor of human telomerase enzymatic activity. Preclinical studies with imetelstat have shown its ability to inhibit telomerase in tumor cells and to compromise cancer cell viability in vitro. Imetelstat has broad tumor growth inhibition activity in multiple xenograft models, including metastatic non-small-cell lung cancer (NSCLC) and breast cancer. Eligible patients had pathologically confirmed stage IV or recurrent locally advanced NSCLC; had experienced no progression after completing first-line platinum-doublet chemotherapy (four cycles).

Materials and methods. 114 patients were randomized for this research: 52 patients received imetelstat alone, 24 received imatelstat plus bevacizumab, 12 received bevacizumab only, and 26 patients received neither. Imetelstat was generally well tolerated, with 32% and 26% of patients requiring dose reductions and delays, respectively. neutropenic fever and bleeding episodes (epistaxis, hemoptysis, pulmonary hemorrhage and intracranial hemorrhage) were infrequent (<2% each). The most frequent treatment-related non-hematologic adverse events involved the gastrointestinal (57.9%), musculoskeletal (45.6%), respiratory (39.5%), nervous (42.9%), tegumentary (26.3%), and psychiatric systems (21.9%). Overall, 17

patients discontinued treatment due to imetelstat-related adverse events as determined by the investigator. The most frequent causes for discontinuation were thrombocytopenia (6 patients), infusion reactions, and fatigue (2 patients each).

Results. Grade 3/4 neutropenia and thrombocytopenia were more frequent with imetelstat. Median progression-free survival was 2.8 and 2.6 months for imetelstat-treated versus control. Exploratory analysis demonstrated a trend toward longer median progression-free survival and overall survival in imetelstat-treated patients with short telomerase, but no improvement in median PFS and OS in patients with long TL.

Conclusions. Maintenance imetelstat failed to improve progression-free survival in advanced NSCLC patients responding to first-line therapy. There was a trend toward a improvement in median progression-free survival and OS in patients with short TL. Short TL as a predictive biomarker will require further investigation for the clinical development of imetelstat.

Mironchenko S. I., Kolesnik V.A., Brachkova D.S.

ALTERATION OF NITROGEN OXIDE METABOLITES IN ULTRAVIOLET-INDUCED SKIN LESIONS IN GUINEA PIGS IN RESPONSE TO THIOTRIAZOLINE OINTMENT WITH SILVER NANOPARTICLES

Kharkiv National Medical University, Kharkiv, Ukraine
Department of Pharmacology

Introduction. Excessive amount of nitrogen oxide (NO) results in immunological disorders which are known to play a major role in the development of not only early but also late effects of ultraviolet radiation (UVR). The aim of the study was to investigate concentration of NO metabolites and activity of inducible NO-synthase in blood in local UVR of albino guinea pigs in response to ointment containing thiotriazoline with silver nanoparticles (SNP). The animals were divided into 4 groups (n=6): 1 – intact; 2 – UVR (control); 3 – UVR + Thiotriazoline ointment (JSC “Chemical plant “Krasnaya Zvezda", Ukraine), reference drug, 4 – UVR + Thiotriazoline ointment containing SNP (obtained by electron-beam evaporation and vacuum condensation of substances), main group. Erythema was caused by irradiation of shaved skin regions using a mercury-quartz lamp (2 min). Ointment was applied to the skin 1 hour prior, 2 hours following irradiation and each day for 3 days. The content of total NO metabolites, nitrite anions, nitrates and activity of inducible NO-synthase (iNOS) in blood serum was assessed in 4 hours and at the 3rd day. The results showed that following local UVR all the guinea pigs developed erythema.

Moreover, skin UVR caused intensification of NO synthesis, which was confirmed by an increase in all of its metabolites in blood. Four hours following irradiation the content of total metabolites, nitrates and nitrite anion was significantly higher than in intact guinea pigs by 1.6, 1.5 and 2.6-fold respectively. On the third day the level of NO metabolites still remained high: total metabolites exceeded the norm by 2-fold, nitrates – 1.9-fold, nitrite anion – 2.6-fold. iNOS activity 4 hours after irradiation was increased by 2.1-fold, on the 3rd day – 3.1-fold in comparison with intact animals. The sharp increase in iNOS activity, leading to the accumulation of NO metabolites in blood indicates serious immunological changes that occur under the influence of local skin UVR. The animals that underwent application of thiotriazoline ointment were found to have erythema less severe than in the control group. Four hours after the exposure only nitrite anion levels reduced by 1.5-fold in comparison to the control. However, on the third day after irradiation, the content of all NO metabolites and iNOS was 1.3-fold (total metabolites and nitrates), 1.2-fold (anion nitrite)

and 1.4-fold (iNOS) lower in comparison to the control. Thiotriazoline ointment with SNP showed a higher pharmacological activity than the reference drug.

Results. The high immunoprotective action of thiotriazoline ointment containing SNP was evidenced by a decrease in blood levels of NO metabolites and iNOS as early as after 4 hours of exposure: 1.4-fold (total metabolites and nitrates), 1.7-fold (nitrite anion), 1.5-fold (iNOS activity) in comparison to the control. During this period, the total concentration of metabolites and nitrates (1.4-fold) iNOS activity (1.8-fold) was also below the level of these parameters in the group who underwent application of the reference drug. On the third day the focus of changes in the level of NO metabolites was similar to that observed after 4 hours: the content of all the metabolites of NO and iNOS decreased in comparison to the control group, reaching the level of intact animals, and reference drug (total metabolites and nitrates – 1.6-fold, iNOS – 1.8-fold).

Conclusions. Thus, local UVR of skin in guinea pigs causes an increase in blood concentration of NO metabolites and iNOS activity within three days. Employment of silver nanoparticles in thiotriazoline substance enhances immunoprotective action of ointment, accompanied by normalization of all NO metabolites and a decrease in iNOS activity in blood.

Mirza Himayatullah Baig, Bijay Chaudhary

SENSORY SYSTEM

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of human anatomy
Scientific supervisor: senior teacher, PhD Polyakova A.

Introduction. Sense Organs. The nervous system is responsible for sensing the external and internal environments of an organism, and for inducing muscle movement. Human sensation is achieved through the stimulation of specialized neurons, organized into five different modalities—touch, balance, taste, smell, hearing, and vision. The touch modality includes pressure, vibration, temperature, pain, and itch. Some animals are also able to sense magnetism and electric fields. Modality, timing, intensity, and location of the stimulus are the four features that allow the brain to identify a unique sensation.

Sensation Receptors. The neurons specialized to detect sensation are also called receptors because they are designed to receive information from the environment. Each receptor responds only to a stimulus that falls within a defined region, called its receptive field. The size of the stimulus can affect the number of receptors that respond, and the strength of the stimulus can affect how much they respond. For example, when a cat sits on your lap, a large population of receptors responds to the cat's weight, warmth, claws, and the vibrations from its purring.

Touch receptors are a type of mechanoreceptor because they are activated by mechanical perturbation of the cell membrane. The axon is located in either shallow or deep skin, and may be encapsulated by specialized membranes that amplify pressure. When the appropriate type of pressure is applied to the skin, these membranes pinch the axon, causing it to fire. The action potential travels from the point of origin to the neuron's cell body, which is located in the dorsal root ganglion. From there, it continues through another branch of the axon into the spinal cord, even as far as the brainstem.

Vision receptors are called photoreceptors because the stimuli that activate them are photons of light. The two types of photoreceptors are called rods and cones. Rods only sense the intensity of light, while cones can sense both intensity and colour. While cones function best in bright light, rods function better in dim light. Furthermore, rods are located diffusely over the retina at the back of the eye, but cones are located in the central line of vision in a region of the retina called the fovea. For this reason, dim objects in the darkness can be viewed better from peripheral vision than from direct focus. There are three kinds of cones in the vertebrate eye—one responsive to wavelengths of light corresponding to the colour blue, one responsive to red wavelengths, and one responsive to green wavelengths. These three colours form the entire range of colours that humans can perceive.

Hearing receptors, or hair cells, are mechanoreceptors located within a bony spiral structure called the cochlea. Sounds are interpreted by the brain from patterns of air pressure caused by the vibration of objects. Sounds can also travel through water or solid objects. In mammals, the pressure in the air is transformed into mechanical pressure by three ear bones called the malleus, incus, and stapes, located in the middle ear.

Conclusion. Balance Receptors. Vertebrate balance receptors are located in a specialized organ in the inner ear called the vestibular organ. This structure is located directly adjacent to the cochlea, and is composed of a triplet of semi-circular canals, each of which is oriented in a different plane—the X, Y, or Z axis. Movement of liquid in these tubes caused by rotation of the head or body are measured by vestibular hair cells. The stereo cilia of these cells are embedded in a gelatinous material called the otolith membrane. Gravity and body movements cause the otolith membrane to slide, which cause the stereo cilia to bend in a particular direction. This leads to electrochemical changes in the hair cell, causes an action potential in the associated nerve ending. Information from the vestibular system allows eye and head movements to fix on a particular target, and to stabilize a moving image. It also allows organisms to balance—for example, when a cat walks atop a fence.

Mohamad Sultan, Isaeva I.N, Karmazina I.S.

RESEARCH OF AUTONOMIC SUPPLY OF INTELLECTUAL ACTIVITY IN YOUNG PEOPLE

Kharkiv National Medical University, Kharkiv, Ukraine,
Scientific supervisor: Isaeva I.N.

Introduction. According to neurophysiology, there is a difference in the levels of the activity of different parts of the cortex hemispheres between males and females, which is manifested by the difference of speed of decision making, and reactivity, accompanied by different levels of physiological changes of some vital signs, such as elevating the heart rate, and blood pressure, as it can be seen in the results of the stroop test.

Aim. To investigate the differences of autonomic supply in males and females, during the state of mental activity using Stroop test.

Materials and methods. The study included 20 young adults (19-24 years), among them 10 males and 10 females. Vegetative indicators were selected for studying such as: systolic (SAP) and diastolic (DAP) arterial blood pressure which were studied by Korotkov method (mmHg); heart rate (HR) (bpm) which was calculated on the radial artery pulse, and Dagnini-Aschner (oculocardiac) reflex which was used to test the differences of reactivity of the autonomic nervous system between both sexes, and stroop test as the state of mental activity.

Results. According to the results the mean HR increases in percentage (18.3%) compared to the mean value in males (10.3%) with difference between their values before and after the test, but the mean DAP in males (18.7%) is higher after the test than that in females (14.8%), but the difference between the mean SAP value in males (12%) and females (14.3) its higher in females, and the mistakes in females decisions is more than twice that in males (112.5%), where the mistakes average in females is (1.7) and in males is (0.8), and that females act faster (average25.7 sec) than males (27 sec in average- which is longer in 4.8%), In addition the results of oculo- cardiac reflex test show that the mean HR in males in rest state was 67.2 bpm and that of females was 70.8 bpm, taking into account the same duration of pressing on the eyeballs (5-7 sec), this value decreased in males to 61.2 bpm (reduced by 6 bpm- 8.9%), and that for females to 60 bpm (reduced by 10.8 bpm- 15.2%).

Conclusions. 1. Our study shows that in females compared to that in males, which can be seen in the mistakes average in females (1.7) and in males (0.8), probably because females tend to act faster (average 25.7 sec) than males (27 sec in average- which is longer in 4.8%), because the HR and BP rise more in females the activity of these cortices is higher and the error rate is higher. 2. The autonomic supply and reactivity of the autonomic nervous system is higher in females as it can be seen by more "effective" results in oculo-cardiac reflex test ,where the HR in females decreases 1.7 times more than males.

Mosina N.

AGE FEATURES AND BLOOD SUPPLY OF THE THYMUS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of human anatomy
Scientific adviser: as. Ghranyna E.

Introduction. Thymus – thymus is the central organ of the immune system (lymph immunotsitopoez), located in the anterior upper mediastinum behind the breastbone, speaking on the jugular notch at the bottom reaches 3-4 ribs, occupying the top interpleural field. At the top of the thymus juts out into the neck where it can come into contact with the thyroid gland, and it reaches the bottom of the pericardium and covers it on a different length. Gland located behind the trachea and large blood vessels (brachiocephalic vein, superior vena Vienna, aortic arch and its branches). Most of its front and lateral surfaces covered with pleura.

Thymus gland has the following age-related features: formed before other organs of the immune system and the time of birth has a significant weight -in average 13.3 g (7.7 to 34.0 g). After the birth during the first 3 years of life thymus grows more intense. In the period from 3 to 20 years is quite stable thymus weight (average 25,7-29,4 g, according to VI Puzik). After 20 years of thymus weight gradually decreases due to age involution. Older people and old people, the weight of the thymus 13-15 with increasing age changes the microscopic structure of the thymus. The reseach revealed that after birth (about 10 years) cortex is prevails in the thymus. Parenchyma of thymus takes up 90% of the body. For 10 years the size of the cortex and medulla are approximately equal. In the future, the zone of the cortex becomes thinner, reduces the number of thymocytes. In the body grows fat tissue with connective tissue in people older than 50 years, it is up to 90 . Parenchyma of the thymus in the age involution does not disappear completely, and is stored in the form of islands surrounded by fatty tissue that lies behind the breastbone. Thymus is supplied with

blood vessels such: -a.a. thymici from a.thoracica interna from a. subclavia; -r.r. thymic a.a. intercostales (posteriores), departing in their final part in the sternum – branches of pars thoracica aortae descendens; -a.a. thymici of truncus brachiocephalicus (often absent)

Blood flow occurs by name in the arteries veins v. thoracica interna et v. brachiocephalica.

Innervation of the thymus carried out following nerve fibers: - afferent (bulbar) and parasympathetic - provided n. laryngeus inferior (branch n. laryngeus recurrens) - a branch of n. vagus. - afferent (spinal) - provided by ganglion cervicale medius and, to a lesser extent, from the ganglia cervicalia superius et inferius truncus sympathicus mainly along the arteries supplying the gland. Lymph drainage is carried out in nodi lymphoidei mediastinales anteriores, tracheales, tracheobronchial, bronchopulmonales et cervicales profundi.

Conclusion. Consequently, the size and structure of the thymus change significantly with age. Its largest size with respect to the body weight is observed in the fetus and infants of the first two years of life. Then the thymus continues to grow, reaching a maximum of the beginning of puberty, after which begins its involution. Breast tissue largely replaced by adipose tissue often forms, retaining the same organ. Under stress, due to deterioration of the corticosteroids small and medium thymocytes occurs devastation crust - accidental involution.

Mustafa M. Alhaad, Kudina O.V.

NEW THERAPY FOR THE TREATMENT OF ULCERATIVE COLITIS AND CROHN'S DISEASE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and general prescription

Introduction. The incidence of IBD has risen with the tide of civilization. Once thought of as a psychosomatic illness arising in individuals with passive personalities with a tendency to suppress personal conflicts, the cause of IBD remains elusive. Crohn's disease and ulcerative colitis are the two most severe digestive afflictions. They cause life-impairing symptoms, necessitate long-term dependence on powerful drugs, and often result in debilitating surgery and even death. Current treatment options include corticosteroids, 5-aminosalicylates, immunosuppressants, and TNFα antagonists. However, these are frequently ineffective in achieving sustained response and remission over time.

Aim. To review the evidence for the safety and efficacy of Entyvio in IBD, in order to ascertain patients likely to benefit from therapy and to integrate Entyvio into clinical practice.

Material and methods. Vedolizumab [Entyvio® (US, Europe)] has received its first global approval for the treatment of ulcerative colitis and Crohn's disease in the US and Europe. Entyvio is an integrin receptor antagonist, blocks the interaction of a specific integrin receptor with a specific protein, and thereby blocks the migration of those circulating inflammatory cells across those blood vessels and into areas of inflammation in the gastrointestinal tract.

Entyvio for ulcerative colitis was studied in two clinical trials involving approximately 900 patients and in three clinical trials involving approximately 1,500 patients for Crohn's disease. Patients were evaluated for measures of stool frequency, rectal bleeding, endoscopic findings, and a physician's overall assessment.

Results. A greater percentage of participants treated with Entyvio compared to a placebo achieved and maintained clinical response, achieved and maintained clinical remission, achieved corticosteroid-free clinical remission, and as seen during endoscopy, had an improved appearance of the colon.

Conclusions. The safety profile of Entyvio appears practical, possibly because it has a "gut-selective" mode of action, with no reported cases of progressive multifocal leukoencephalopathy, a condition which has been linked to another integrin antagonist.

Nagiyeva Aynur

OBESITY AS A PROBLEM OF CLINICAL MEDICINE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of normal human anatomy

Introduction. The urgency of the fight against obesity is caused not only its high prevalence, but also the negative impact the quality of life of patients, and especially high risk difference development of various diseases, leading to early disability and a substantial reduction of life expectancy obese. It was found that the incidence of hypertension (AH) in obesity is 75%, diabetes mellitus (DM) type 2 - 57%, coronary heart disease (CHD) - 20%, gallbladder disease and biliary tract - 30% of osteoarthritis - 14% of malignant tumors of the breast, uterus, and large intestine - 11%. It is estimated that the total economic damage associated with obesity, higher than that of cancer.

Aim of treatment of obesity - reducing the risk of associated diseases with obesity, and if present - to achieve control over them, maintaining MT achieved as possible for a longer time, improving the quality and increasing the life expectancy of patients.

Research that is desirable to the sick with obesity for early detection of disease: weight determination, determination of blood pressure, ECG at rest, exercise with exercise, chest X-ray, ultrasound of the heart, liver, gallbladder, pancreas, clinical analysis of blood and urine tests, determination of blood lipid levels, uric acid, fasting glucose, oral glucose tolerance test, serological studies.

The main treatments for obesity are herbal medicine, increasing physical activity, pharmacotherapy, and surgery. Diet therapy. Fasting for the treatment of obesity is not currently used in connection with a high risk of various complications (mental disorders; hypovitaminosis with the development of peripheral neuritis, lesions of the skin, hair and nails; arrhythmias). As a rule, when power is restored, patients gain weight more rapidly than it had been before fasting. For a stable weight reduction diets are recommended with a deficit of 600 calories a day, or a diet restricted fat intake ("low-fat" diet). These diets allow patients to lose weight to 10% for 6 months (500 g per week). Such a rate of weight loss are considered optimal. Low calorie (1000-1600 kcal / d.), And very low calorie (less than 1000 kcal / day.) Diets are nutritionally unbalanced and should be used only under medical supervision. Physical activity. Today, there are no clear data on the preferred type of physical activity for obese patients. Nevertheless, more physiological and effective in reducing weight are dynamic physical activities: walking, jogging at a moderate pace, swimming, skiing, cycling. Should be encouraged to physical exercise of moderate intensity for at least 30 minutes a day 5 times a week. Obese patients are also shown morning exercises and physiotherapy. When you assign any physical activity should take into account the physical capabilities of the patient and increase the load gradually, setting

realistic milestones. Surgical treatment. Bariatric treatment - a series of operations aimed at weight reduction. These operations can be divided into 2 groups: bariatric surgery without disrupting the function of digestion and metabolism of nutrients and transactions with controlled variation of normal digestion. The first type of surgery include an adjustable gastric banding, and various embodiments gastroplastical operations, which are based on formation of "small" gastric or stomach conversion into a narrow tube of not more than 200 ml by partial resection. The second group of surgical interventions include various bypass surgery. The average weight loss after these operations is 38-80% within 1.5-3 years.

Conclusions. Physicians should consider obesity as a disease and help obese patients by giving them adequate treatment. Treatment should be based on good clinical care and include interventions informed evidence-based medicine. In the treatment of obesity should focus on the real goals and remember that maintaining body weight - a lifelong process.

Nefedov A.A., Khomiak O.V., Kovalenko E.Y

EXPERIMENTAL ANALYSIS OF NEUROPROTECTIVE AGENT IN COGNITIVE DEFICIENCY DEVELOPMENT IN THE MODELING OF MULTIPLE SCLEROSIS

SE "Dnipropetrovsk Medical Academy of Health Ministry of Ukraine", Dnipropetrovsk, Ukraine,
Department of pharmacology and clinical pharmacology

Introduction. Diagnostics of cognitive, emotional, and other varied psychopathological disorders that develop in multiple sclerosis (MS) is required at the early stages of the disease. Modern trends of psychopathological disorders correction, along with traditional - psychotherapy and antidepressants, include neuroprotective therapy.

The aim of study was to explore the effect of citicoline (500 mg / kg) on the processes of learning and consolidation of memory trace in the test of the passive avoidance (PA) in experimental allergic encephalomyelitis (EAE).

The results of the studies indicate that on the 10th day of drug administration after a single subcutaneous inoculation of encephalitogenic mixture in complete Freund's adjuvant latent period (LP1). It is shown that in the group of passive control (intact) 12 day of study recorded a significant increase in the latent period (LP2), 8 times ($p < 0.05$) higher than initial rate that testified the effectiveness of learning in this group. In rodents with experimental equivalent of multiple sclerosis (active control) indicator of LP2 was 38% ($p < 0.05$) significantly lower compared to the group of passive control, and the number of animals without formed avoidance reflex was 80%. Course administration of neuroprotective therapy in rats with EAE promoted significant increase in the time of passive-defensive reflex on the 12th and 20th day of study. Thus, citicoline (500 mg / kg) promoted increase of the latent period, by 49% ($p < 0.05$) and 63% ($p < 0.05$) exceeding this index of the active control group on 12th and 20th day of passive-defensive skills testing respectively. Percentage of animals with skill acquisition or retention by 55% and 30% exceeded values in the active control group at appropriate intervals, which confirms the high nootropic potential of citicoline in rats with EAE. It should be mentioned, that the drug reduced lack of spatial memory: under the influence of citicoline coefficient of secure compartment advantages in animals with lost skills in experimental demyelinating disease of the CNS significantly increased 5 times ($p < 0.05$).

Conclusions. Thus, the course administration of citicoline slows down the development of learning disorders and memory consolidation engrams. In addition, citicoline reduces spatial memory deficiency what is relevant in the use of neuroprotective agents in complex treatment of patients with multiple sclerosis.

Olkhova A.O., Martynova S.M.

PROOXIDANT AND ANTIOXIDANT SYSTEMS' STATE PRESENTED AT RATS WITH COPPER HYPERMICROELEMENTOSIS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of biological chemistry

Introduction. Studies in our department show, that hypermicroelementosis give rise to nephropathy. It is known that an important role in the pathogenesis of inflammation plays an imbalance of the PO / AO systems, the presence of oxidative stress. It shows the necessarily to stud parameters of prooksidant and antioxidant systems with copper GME.

The aim of our study was to investigate the concentration of TBA-reactive products (diene conjugates (DC), malonic dialdehyde (MDA)), isoprostane-8, catalase activity, superoxide dismutase (SOD) and total antioxidant activity (TAA) in the blood serum of rats with experimental copper GME.

Materials and methods. Experiments were carried out on male rats of Wistar line, 1 month old, weighing 80-90 g, kept under standard vivarium conditions. Rats were divided into two groups: 1) Intact animals, who were introduced 1 ml of distilled water intragastrically by gavage daily for 1 month (control group). 2) Animals, who were introduced solution of copper chloride (copper contention 1.75 mg /l based on 1ml per 100g body weight) intragastrically daily by gavage. 1 month later the animals were removed from the experiment by decapitation under thiopental anesthesia. The concentration of MDA in serum was measured by standard methods (Zacharia E.A., Detsik Y.I., 1989), DK (Chevari S., 1991), isoprostane-8 (using ELISA KIT of the DRG firm (Germany)), OOA (Klebanov G.I. et al., 1999) and SOD activity (Kostjuk V.A., et al., 1990), and catalase (Dubinina E.E. et al., 1988).

Results. It has been established, that GME copper in the blood of rats increases the concentration of DC 2-fold, 3-fold MDA, 8-isoprostane 3.2 times, reduces OAA 1.5 times, increases catalase activity by 2 times and slightly increases SOD activity.

Conclusions. The results show that under the influence of elevated copper concentrations in the serum of rats increases the concentration of the primary products of lipid peroxidation - TBA-reactive substances (DC and MDA), isoprostane-8, which is a marker for the presence of oxidative stress. At the same time the antioxidant defense indices in the blood serum are lowered. All this indicates the presence of oxidative stress, which can cause metabolic and functional disorders.

Onuchukwu Chibuzor V., Aleksandrova A.V.

BELSOMRA AND ITS USE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and drug prescription

Introduction. Insomnia is a common condition in which a person has trouble falling or staying asleep. It can range from mild to severe, depending on how often it occurs and for

how long. Insomnia can cause daytime sleepiness and lack of energy. In search for an insomnia drug with less side effect and a different mechanism. Belsomra was developed, by Merck, as a modern drug it should be preferred to other hypnotics because of its mild side effects which depends on the dose given.

Results. Belsomra invention was in search for a hypnotic drug with a mild side effect and hence its approval was based after a series of clinical trials. Belsomra was based on three clinical trials in patients with insomnia characterized by difficulties with sleep onset and sleep maintenance.

Two similarly designed, 3-month, randomized, double-blind, placebo-controlled, parallel-group studies were conducted (Study 1 and Study 2). In both studies, non-elderly (age 18-64) and elderly (age ≥ 65) patients were randomized separately. For the studies together, non-elderly adults were treated with Belsomra 20 mg or placebo. Elderly patients were treated with Belsomra 15 mg or placebo. In Study 1 and Study 2, Belsomra 15 mg or 20 mg was superior to placebo for sleep latency as assessed both objectively by polysomnography and subjectively by patient-estimated sleep latency. Belsomra 15 mg or 20 mg was also superior to placebo for sleep maintenance, as assessed both objectively by polysomnography and subjectively by patient-estimated total sleep time. The effects of Belsomra at night 1 (objective) and week 1 (subjective) were generally consistent with later time points. Belsomra 10 mg and 20 mg were superior to placebo for sleep latency and sleep maintenance, as assessed objectively by polysomnography, its duration of action lasts for about four weeks.

Belsomra which was discovered by merck is an orexin receptor antagonist. The orexin neuropeptide signaling system is seen as a central promoter of wakefulness. Blockage of orexin receptor suppresses wakefulness, this prevents insomnia. Its mechanism of action involves inhibiting non-selectively both orexin receptors in the CNS. Orexin (hypocretin) is a neurotransmitter that regulates arousal, wakefulness, and appetite. Inhibition of this receptor leads to a sleep state. It was noted after trials that it had milder side effects unlike other hypnotics like barbiturates and benzodiazepines which produce paradoxical, cognitive and long term side effects.

Conclusion. The attained results after series successful clinical trials proves that this new drug has lesser side effects in comparison to other hypnotics in usage and hence should be prescribed more for usage in treating insomnia.

Petruk. B.U., Aleksandrova A.V.

EFFECT OF PLANTS NEUROSTIMULATING AND SEDATING ACTION ON HUMAN'S BODY

Kharkiv National Medical University
Kharkiv, Ukraine

Introduction. Nowadays our life is very dynamic and full of everyday stresses. Especially it affects the nervous system as brainwork dominates in our life. That is why daily exertions require constant activity from our nervous system. But considering a modern way of life of most people, our nervous system is losing its ability to function normally.

The aim of our research is to explore influence of plants of neurostimulating and sedating action on the human body.

Materials and methods. To explore neurostimulating and sedating action were elected representatives of the medicinal plants that are cultivated in Ukraine. With

characteristic attributes plants were classified into two categories: Plants with neurostimulating action - Rhodiola rosea (Rhodiola rosea L.), Schisandra (Schisándra chinénsis), Ginseng (Panax ginseng C. A. Meyer); Plants with sedating action – Origin (Origanum vulgare L.), Hops (Humulus lupulus L.), Peppermint (Mentha piperita), Valerian (Valeriana officinalis L.). To investigate stimulating effect and to measure the strength of influence of herbal medicine on the human body MMSE (Mini Mental State Examination) was used. By means of this test a level of brain activity according to such categories as orientation, perception, attention, memory, language, reading and writing has been determined. To investigate sedative effect and to measure the strength of influence of herbal medicine on the human body Spielberg-Hanin tests have been used. The survey consists of 20 statements which belong to the anxiety as a state and 20 statements for determination the anxiety as a disposition.

Results. The research of the plants with neurostimulating action, cultivated on the territory of Ukraine, has shown that the drugs based on Schisandra have the strongest tonic effect on the nervous system. The study of peculiarities of influence of the plants with tonic effect on the nervous system has made it possible to recommend taking drugs during long mental and physical activities individually for each person. The research of the plants with sedative action, cultivated on the territory of Ukraine, has shown that the drugs based on Valerian have the strongest sedative effect.

Conclusions. The plants with neurostimulating action are quite strong adaptogens, that is they contribute to adaptation of the human organism to environmental conditions. Thereby the drugs based on these plants can be actively used in case of physical and mental stress. While using herbal remedies with neurostimulating action it is necessary to take into account a type of organization of the body and also conditions of mental and physical activities. It is of great importance to consult a doctor before taking any herbal remedies with neurostimulating effect.

Petrychenko I.I.

ADAPTOGENIC PROPERTIES OF ELEUTEROCOCCUS AS THE BEST SUBSTITUTE FOR GINSENG

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and medical prescription

Introduction. Eleuterococus is used as a Biologically Active Additive (BAA) featuring bracing, toning (stimulating) and anti-stress effects. It helps to increase a non-specific body resistance and resistance to non-favorable environment. Spiny eleuterococus is a bush of an Araliaceae like ginseng; widespread in the Far East. Spiny eleuterococus is called “Siberian Ginseng” and considered to be a full value substitute for ginseng.

Results. The crude drug of eleuterococus, its roots and rootstock and, sometimes, leaves, which contains carotinoids, oleic acid, triterpene compounds, flavonoids and alcoloids. Eleuterococus is produced in various forms. The most popular is the alcoholic tincture of the plant, sold in 50 mil dark glass bottles. It can also be purchased in pills, each pill contains 48 mg of the active component, cevitamic acid and vitamin E. There are packages of 50 and 100 pills. Eleuterococus P is a tabloid sold at 100 pills in a package. Each pill contains 70 mg of a young plant and cevitamic acid. This plant is also produced in form of caps each 500 mg. It is also produced in syrup, 250 mil bottles. Today it is found in

the BAA called "Pantoral" as a component for maximizing the adaptogene effect. Modern researches explain the curing action of eleuterococus medications by glycosides – eleuterosides. There are several kinds of eleuterosides extracted from the eleuterococus root, featuring different compositions. They belong to different kinds of vegetable biologically active matters: eleuteroside A – a steroid, eleuteroside B – a derivate of phenylacrylic acid, eleuterosides D and E – lignans, I,K,L,M – triterpene saponines. Eleuterococus also contains glycans (eleutheranes A-G), caffeic aicid esters, hydroxyl coumarins. Related substances: essential oil, resins, gums, amylums, lipids. It is used as an energy stimulating product, has a general stimulating effect, strengthens the immune system and has an anti-oxidant action.

An acute administration of eleuterococus increases workability of the body, daily administration during a certain period of time gives way to its toning effects reflecting in longer workability increase and improving the state of health. Adaptogene features of eleuterococus are actively used for easier adoption to different environmental conditions and psychological adoption during long arctic expeditions, work in cold or hot climate, during difficult treks, flights or in highland. Eleuterococus influences the body in various ways, which includes: increases motor activity and stimulates conditioning, improves physical and mental performance capability, stabilizes arterial pressure in case of hypotension , strengthens resistance to unfavorable, extreme, stressful conditions, reduces sleepiness, improves eyesight and hearing, excites cerebrospinal system, stimulates basal metabolism, normalizes lipid metabolism, decreases holstering content in blood preventing arteriosclerosis, stimulates adipose involvement into metabolism, decreases experimental hyperglycemia. This medication is prescribed in combination therapy of such conditions as asthenia overfatigue, working capacity decrease, chronic fatigue syndrome, psycho-emotional stress, functional disorder of nervous system, vegetovascular dystonia, arterial hypotonia, anorexia, recovery period after exhausting diseases, rehabilitation after radiation and chemotherapy, immune deficiencies, erectile dysfunction. Eleuterococus is also used in cosmetology. It has positive effect on fatty skin seborrhea and premature boldness. Eleuterococus has a normalizing effect on lipid metabolism, which is very important for these diseases. Intake of eleuterococus medications helps a quicker recovery of protein composition of hemolymph and tissues healing.

Conclusions. Eleuterococcus is a valuable drug with unique properties and may be used in various fields of medicine.

Plushkina A., Kaligin M., Andreeva D., Gazizov I., Titova A., Sharipova E.

DYNAMIC OF EXPRESSION OF STEM CELL FACTOR RECEPTOR IN PANCREAS DURING ALLOXAN DIABETES IN RATS

Department of human anatomy, Kazan State Medical University
Kazan, Russia

Introduction. One of the most common markers for stem cells in pancreas is C-kit (CD117). It is the stem cell factor receptor and plays a main role in differentiation of progenitor endocrine cells of pancreas islets in prenatal development and persists after birth. But still the role of C-kit positive cells in islets cells regeneration during the diabetes mellitus type I has not been studied.

That's why **the aim** of our work was to evaluate the expression of C-kit in the islets of Langerhans during the experimental alloxan diabetes in rats.

Materials and methods. The work was made on 45 rats, which were injected intraperitoneally with alloxan, in doze of 180 mg/kg. Blood glucose levels were measuring 1,2,3,5,7 days after the injection. The organs were taken 1, 2, 3, 5, and 7 days after the injection. Material was fixed in 10% neutral formalin and embedded in paraffin by standard methods. Histological sections of the pancreas were studied immunohistochemically with antibodies against C-kit (marker of progenitor cells) and insulin (the marker of differentiated B-cells).

The results of the study showed the appearance of C-kit- positive cells in islets, which produced insulin after one day of the injection. These cells were persisted at all stages of the experiment.

Conclusions. Thus, we can conclude that the C-kit- positive cells facility of insulin producing may indicate their role in the correction of carbohydrate metabolism during diabetes mellitus type I. Scientific project is supported by grant of the President RF MK-3632.2011.7

Plyekhova O.A., Karnaukh E.V.

DOES CAFFEINE CAUSE HEADACHES, OR CURE THEM?

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and medical prescription

Introduction. Caffeine is a commonly used drug that increases alertness, decreases fatigue, and improves muscle coordination. Though coffee comes to mind as the most common source of caffeine, it's also naturally found in tea and chocolate, and it is often added to soft drinks and non-prescription drugs like pain-relievers and cold remedies. People vary in their sensitivity to caffeine. If used excessively, caffeine can be too stimulating and cause anxiety, sleep problems, muscletwitching, or abdominal pain.

Aim. To establish the cause of headaches by people, who drink coffee.

Results. Caffeine is a drug that has no flavor and occurs naturally in food. It can be made synthetically also. Caffeine is somewhat addictive and is added to some products, such as soft drinks and medications. The body quickly absorbs caffeine and it moves rapidly to the brain. It doesn't stay in the bloodstream, but is removed in the urine. How Does Caffeine Treat Headaches? Caffeine is a common ingredient in many prescription and over-the-counter headache medications. Caffeine additives make pain relievers 40% more effective in treating headaches. Caffeine also helps the body absorb headache drugs more quickly, bringing faster relief. By adding caffeine and, in turn, taking less medication, you can reduce the risk for potential side effects and possible drug addiction. And now I want to show you 5 causes of caffeine headache: Caffeine withdrawal; Varied caffeine consumption; Caffeine overdose; Caffeine sensitivity; Caffeine allergy. The number one cause of a caffeine headache is caffeine withdrawal**.** Even a small decline (50-100mg) in the amount of caffeine a person usually consumes can result in a mild headache. People who miss their daily dose, consume less than their average, or who are detoxing from caffeine will most likely experience this type of headache. People who consume caffeine in a hit or miss fashion tend to have more caffeine induced headaches than those that have the same amount every day. Also, for those that consume too much caffeine in a short amount of time often experience a headache as a common caffeine overdose symptom. Finally, those who are ultra-sensitive to the caffeine molecule or who have an "allergic-like" reaction to the

substance, can also experience a headache. However, this type of caffeine headache the least common. The most important question in our work is: how to remedy an aching head**?** The best remedy for a caffeine withdrawal headache is to consume more caffeine**.** As soon as a person begins to feel a tightness behind the eyes, he/she should evaluate their recent caffeine consumption and then consume an adequate amount of caffeine to stop the withdrawal. Pain relievers such as Excedrin also include caffeine and can remedy the caffeine withdrawal headache faster since they also have added pain relievers.

Conclusion. For those that are purposely detoxing from caffeine or for those that have consumed too much caffeine, we recommend the following: take pain relievers like ibuprofen, acetaminophen, aspirin, and naproxen (use only as directed); drink plenty of water; avoid medications, beverages, and foods with added caffeine; sleep. Most of the time a caffeine headache will peak in severity and then gradually get better as the body adjusts to having no caffeine.

Polyakov O.V. Pysarenko H.M. Holovanova A.J. Kirichek L.T.

NEUROHORMONAL AND METABOLIC PARAMETERS IN ONE-MONTH RATS UNDER THE STRESS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and medical prescription

Aim. Due to known more pronounced reaction of the child's body on any external stimuli aim of the present study was to study the state of stress implementing systems of adult-rats in compare to young-rats.

Materials and methods. The experiments were performed on 24 white rats of which 12 were adult animals of both sex, weight 180 - 220 and 12 one-month age, weight 45 - 80 gram. Acute stress simulated by immobilizing adult rats in cages for 20 hours, and one-month rats - fixation on the back for 3 hours. Stress reactions were judged by the dynamics of weight parameters of the hypothalamic - pituitary - adrenal system and acid balance.

Results. Based on the comparative analysis of neurohormonal indicators, shows that immobilization did not cause one-month animals typical stress reactions. But metabolic processes have significantly different from adults in the control, where were marked a statistically significant increase in blood sugar levels and decrease in intensity pro- and antioxidant reactions, and under stress immobilization in which hyperglycemia and oxidative imbalance were more pronounced than in adult rats.

Conclusions. As can be seen, the formation adaptation mechanism at young age depends on the degree of maturation of systems of self-regulation, of which metabolic outruns neurohumoral system and reacts before on effect of extreme factors.

Popenko S.A.

ERYTHROPOIETIN IS ELUSIVE DOPE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and medical prescription

Introduction. Erythropoietin is a glycoprotein hormone (a cytokine precisely). It is main regulator of erythropoiesis: it stimulates the production of red blood cells from late progenitor cells (or rather erythropoietin binds to erythropoietin-sensitive receptors that are located predominantly on erythroblasts, and promotes proliferation of blastic active forms)

and increases the outlet of reticulocytes from the marrow depending on the oxygen consumption.

Results. So it can increase the delivery of oxygen to the tissues and increase the efficiency of the organism. And this property is used by athletes. Active usage of erythropoietin dope started from the time when it became possible to produce erythropoietin artificially. By the mid-1980s, the first recombinant erythropoietin was obtained using the introduction of the human EPO gene (that is localized on the seventh chromosome in the 11q-12q) in ovarian cells of hamsters. Recombinant human EPO is identical in amino acid composition to the natural human EPO. However, there are slight differences in composition of glycoside residues that influence the physicochemical properties of the entire molecule of hormone. One of the newest recombinant EPO was synthesized in 2008: the company Roche Pharmaceuticals announced the appearance of the third generation of erythropoietin. The preparation of this group was named Mircera (methoxy-epoetin beta). Basically, this substance is not different from previous erythropoietins apart from polyethylene glycol that is attached to the frame of the preparation and contributes to long half-life. Thus, Mircera can be located in the body 6 times longer than darbpoetin alpha and 20 times longer than epoetin. This fact creates the possibility of large intervals between injections of the drug. And it is very difficult to identify using of this dope, because of imperfective methods.

Conclusions. Thus, erythropoietin became very widespread dope that can improve the results of spotsmen, and it stimulates pharmacists from entire world to looking for new effective methods to identify this substance to make sport safer, clearer and more honest.

Praharaj Pooja, Kaluzhina O.

CHRONIC INTRAUTERINE HYPOXIA INFLUENCE ON COLLAGEN SYNTHESIS IN THE PULMONARY ARTERY OF FETUSES AND NEWBORNS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pathological anatomy

Introduction. Fetal oxygen deficiency accompanies many complications of pregnancy (preeclampsia), somatic and infectious diseases of pregnant women, unfavorable factors influence. Cardiovascular system is one of the most vulnerable in intrauterine fetal hypoxia.

Aim. The aim of research is to identify features of collagen formation in pulmonary artery (PA) of fetuses and newborns under the chronic intrauterine hypoxia influence.

Materials and methods. It was made the experiment modeling intrauterine hypoxia of newborn with asphyxia in labor on laboratory WAG rats. The tissue of PA was research material. There were two groups of animals: control group 1 – fetuses and newborns from mothers who were not exposed to high-altitude hypoxia (18 cases); experimental group 2 – fetuses and newborns from mothers who suffered from high-altitude hypoxic exposure (16 cases). Morphological processing includes complex of histological, immunohistochemical, morphometric methods. Collagens III, IV, I type were defined by monoclonal antibodies to the respective collagens (Novocastra Laboratories Ltd.). Optical density of collagen immunofluorescence was measured by method of Gubina-Vaculik G.I. and others with a microscope "Axioskor 40" and software Biostat.exe and was represented in conditional units of luminescence (cond. un. lum.). All manipulations with animals were carried out

according to the rules of the European Convention for the Protection of Vertebrate Animals, Directive Council of the European Society for Protection of Vertebrate Animals.

Results. Macroscopically PA was elastic, smooth with shiny intima in control and experimental groups. Three membranes (inner, middle, outer) were determined in the vessel of both groups in microscopic examination. Thin basement membrane accumulated collagen type IV equally in control group that was detected as immunofluorescence with moderate intensity (0,526±0,02 cond. un. lum.). Subendothelial layer connective tissue accumulated uniformly mainly collagen type III (0,498±0,01 cond.un. lum.) and collagen type I was detected in luminescence with intensity with 0,53±0,01 cond. un. lum. The content of type IV collagen decreased in thickened basement membrane in the experimental group compared with the control one. Its optical density was 0,497±0,02 cond. un. lum. Collagen type III was determined in basal membrane structure, where how it is known must be collagen type IV – universally recognized basement membrane component of blood vessels. Presence of interstitial collagen type III demonstrated sclerotic changes. The optical density of collagen type I in the middle and outer membranes increased in the group with hypoxia compared with the control one, where its significance was 0,66±0,02 cond. un. lum.

Conclusions. Appearance of sclerotic changes in the basal membrane of the PA observed in the group with hypoxia as a result of interstitial collagen type III presence against deficiency of IV type collagen. Sclerotic processes is also observed in the media and adventitia as a result of interstitial collagen I production activation or faster maturation of collagen I type from collagen III due to hypoxia influence.

Shakiryanova A.V., Shcholok T.S, Bobrov A.E., Lutenko M.A.

TO THE QUESTION ABOUT MORPHOLOGY OF HUMAN MUSCULOCUTANEOUS NERVE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of human anatomy
Scientific supervisor: ass. prof. Izmailova L.V.

Introduction. Learning structure of musculocutaneous nerve represents big interest in both theoretical and practical sense, because mentioned nerve, according to literary facts, is characterized with numerous variations connected with its beginning, progress, ramification and its terminal branches.

Aim. To explore possible variants of the structure of musculocutaneous nerve.

Materials and methods. We explored this nerve located on limbs of 15 newborns. Our material shows that in all the cases musculocutaneous nerve is formed from lateral beam of brachial plexus.

Results. Further nerve in 10 cases moves through muscle at the middle of its length and follows between the back surface of the biceps muscle and the front surface of the coracobrachialis muscle. In two cases on our preparations nerve didn't break through coracobrachialis muscle, but moved on its medial surface till the border of upper and middle third of shoulder and further it was situated between biceps and shoulder muscles. On our material in two cases newborns' musculocutaneous nerve throughout upper third of shoulder was situated at the same connective tissue vagina. On the other extent, as in the other cases, both nerves were separated. From ulnar fovea it gets on antero-lateral surface of the forearm and is called lateral cutaneous nerve of the forearm.

At the forearm the nerve has different length. In one case lateral cutaneous nerve of forearm, after leaving ulnar fovea, immediately broke up into many branches in the skin of the anterior-lateral surface of the upper third of the forearm. On its way nerve gives a number of branches. On the shoulder muscular branches depart from it predominantly to coracobrachialis muscle, biceps and shoulder muscles. In 5 cases, this nerve gave a barrel to the biceps muscle which while coming to the muscle at the level of the upper third of the shoulder was divided into a number of branches. In two cases, this muscle was innervated by different branches of the nerve.

Talking about separate heads of biceps muscle of arm, its short head got 1-3 branches, and its long head 1-2 branches. The one, which goes to long head of the biceps muscle, on the level of upper third of shoulder went through the thick of this muscle, and gave three branches to the last one and on the level of middle of length of biceps muscle went out on its posterior surface. On the level of middle third of shoulder this branch connected with the common trunk of musculocutaneous nerve. Lateral cutaneous nerve of forearm in all cases sends branches to skin of anterior-lateral forearm surface. In three cases cutaneous nerves reached the level of radiocarpal articulation, in two - region of thenar, and in one - dorsal surface of the nail phalanx of the first finger. On our preparations, we observed connections of musculocutaneous nerve with a median nerve in the shoulder area and the terminal branches of the radial nerve - in the region of forearm. On the shoulder these connections go from the musculocutaneous nerve to the median nerve: in three cases at the level of the upper third of the shoulder, in one - on the level of its lower third and in one case - in the antecubital fossa.

Conclusion. In 4 cases we observed discharge of connecting branches from lateral cutaneous nerve to radial nerve. On the structure of preparations prevails cord of nerves in upper third of shoulder in shape of network in that medium-caliber loops prevail. In middle and lower third of shoulder nerve often looks like network that consists of large caliber loops.

Shcholok T., Kolisnik I.

INDIVIDUAL DIFFERENCES IN STRUCTURE OF HUMAN'S CELIAC TRUNK

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of human anatomy

Materials and methods. The individual differences of anatomic structure of celiac trunk were researched by us on 100 bodies of people of both sexes from 20 to 83 years old with a method of injection into vessels with radiography.

Results. The researches have shown that the level of ramification of celiac trunk from aorta in different people is varied. So, the level of celiac trunk's appearance in people with ectomorphic body hape against spinal cord ranges from a intervertebral cartilage between XII thoracic and I lumbar vertebrae to lower third of body of I lumbar vertebrae. Level of ramification of celiac trunk in people with endomorphic body shape is located within lower third of XI thoracic vertebra to level of intervertebral cartilage between XII thoracic and I lumbar vertebrae; level of ramification of celiac trunk in people with mesomorphic body shape matches with body of XII thoracic vertebra (from its upper end till lower end).

The corner of ramification of celiac trunk from aorta can be sharp, straight and blunt. Celiac trunk was completely absent in 3 preparations of 100 and his branches retreated from abdominal aorta by themselves. Diameter of celiac trunk is different in people of different age and body complection. Length of celiac trunk varies from 11 to 54mm; in people with endomorphic body complection it is 11-42mm, ectomorphic – 15-54, mesomorphic – 15-20mm. Dependence between diameter of celiac trunk and it's length isn't identified. The number of branches, retreated from celiac trunk isn't constant: in 7 preparations there were 2 branches retreated from it; in 4 preparations – 4 branches; in other 36 preparations celiac trunk divides into three branches.

Conclusions. The celiac trunk in people with ectomorphic body complection, as usual, divides into three usual branches, and with endomorphic body complection, moreover, the division of celiac trunk into 2 or 4 branches is detected.

Sheptukha N.

IMPROVING TREATMENT COMPLIANCE IN CORNEAL ALKALI BURN INJURY BY MEANS OF COMBINED DRUGS

SE "Dnipropetrovsk Medical Academy of Health Ministry of Ukraine"
Dnipropetrovsk, Ukraine,
Department of pharmacology and clinical pharmacology

Introduction. Injuries to the eye are most often the cause of visual impairment and blindness, and injuries caused by chemical burns to the cornea warrant particular attention. Successful treatment depends on choosing appropriate NSAIDs to combat inflammation, corneal infiltration and cell death, and antioxidant therapy to limit oxidative stress and to stimulate regenerative processes in the tissues.

Aim. To determine the most effective combination of NSAIDs and antioxidants for treatment of chemical injury to the cornea: 0,1% Diclofenac +1% Thiotriazolin (comb #1); 0,1% Diclofenac+1% Methylethylpiridinol(comb#2); 0,1% Diclofenac + 1% Taufon (comb#3).

Materials and methods. The experiment was performed on 15 chinchilla rabbits split up into 3 groups; each was assigned its respective treatment combination. 6-mm standardized alkali burn injuries were made in all groups. Treatment commenced one hour post-injury. The 3 groups of animals received instillations of 1 drop QID of their respective combinations of agents for 1 week. Conjunctival hyperemia,edema and corneal defect were then evaluated with a slit lamp at 12, 24, and 72 hours and on the 5th, and 7th days post-injury.

Results. At 72 hours post-treatment all animals within the 3 groups exhibited severe conjunctival hyperemia, except 2 individuals, treated with comb1, who exhibited moderate hyperemia. On day 7, 2 rabbits treated with comb1 exhibited mild hyperemia, while the rest of the animals maintained moderate hyperemia. At 72 hours post-treatment 3 rabbits treated with comb1, 1 rabbit treated with comb3, exhibited moderate conjunctival edema. The rest of the animals exhibited severe conjunctival edema. On day 7 no changes were observed.

At 72 hours 4 rabbits treated with comb1 and 3 rabbits treated with comb3 exhibited moderate improvement of the corneal defect. The rest of the animals remained in the severe category. On day 7 3 rabbits in the group treated with comb1 were promoted into the mild category, with the rest of the group remaining in moderate. 1 rabbit in the group treated with

comb2, and 4 out of 5 rabbits in groups treated with comb3 promoted to the moderate category.

Conclusions. The combination of 0.1% diclofenac + 1% thiotriazoline has the highest anti-inflammatory and healing effects and can be used to treat corneal alkali burn injury.

Shevchenko Yu.S.

DETERMINING OF THE ENERGY IMBALANCE IN PEOPLE WITH NORMAL WEIGHT AND OVERWEIGHT

Ukrainian Medical Stomatological Academy, Poltava, Ukraine
Institute of immunological and genetic bases of diseases and pharmacogenetics

Introduction. According to current views, the leading factors of increased body weight and obesity are considered the decrease of physical activity in conditions of uncontrolled consumption of high-calorie foods. Obesity is emerging as an energy imbalance when energy intake from food significantly exceeds its use. The optimal diet requires compliance to the physiologicalneeds and rhythms, balance between energy intake and expenditure in the body.

Aim. The aim of our study was to determine how the energy value of the diet conforms to the energy expenditure in young persons with normal and overweight.

Materials and methods. A study involved 68 individuals of both sexes 18-25 years old. We determined the weight, height, waist and hip girth and calculated the body mass index (BMI). Individuals with a BMI of 18,5-24,9 kg/m^2 were included to the control group (20 boys and 21 girls). Individuals with a BMI above 25 kg/m^2 formed a main group of people with the overweight (11 boys and 16 girls). Nutritional status was investigated by the method of 24-hour reproduction during two days. Calculation of basal metabolic energy was done by Harris-Benedict and Mifflin-St Jeor formulas. The recommended daily energy intake to maintain the current body weight was calculated using the coefficient of physical activity 1,2 for people with the minimal physical activity. Statistical analysis of data was performed using the software package Statistika 6,1.

Results. The results show that men of the main group are consumed in the weekend by 1,5 times kcal more than recommended by calculations based on the data usage Harris-Benedict formula. Comparison of actual energy intake of the recommended daily intake of energy, calculated according to Mifflin-St Jeor formula, of men from the main group exceeded for 1,4 times in the working day and 1,8 times in the weekend. Women of the main group actually consumed in the working day and the weekend by 1,3 times kcal more than recommended by calculations using data from Harris-Benedict formula. When comparing the actual energy consumption of the recommended daily intake calculated by Mifflin-St Jeor formula, the excess was respectively by 1,5 times in the working day and 1,6 times in the weekend.

Conclusions. It was concluded that people of both sexes with the overweight actually get more energy from food than required according to the level of basal metabolism and physical activity factor. The power imbalance between an excessive intake of nutrients and a low energy consumption is the basis for increased body weight among the young people.

Shiyan Denis, Akhundova Giella

INFLUENCESWEET NONALCOHOLIC THE GASSED BEVERAGES ON DIGESTIVE SYSTEM, THE PROCESS OF THE DIGESTIONANDON THE HUMAN ORGANISM INTHE WHOLE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of human anatomy

Introduction. At present popularity of sweet nonalcoholic the gassed beverages (SNGB) increased considerably.These beveragesare verywidespread and accessible. But very few people who drink SNGB think on the action, which renders on themorganism these beverages.

Aim. To determine the nature of the influence sweetthe nonalcoholic gassed beverages to the digestive system and to the organism man as a whole. To confirm or to refute process the influence of the control nonalcoholic sweet gassed beverage on the human organism, described in the literary sources. To draw conclusions.To grant the appropriate recommendations.

Materials and methods. For of the realization of the stated goal it was it is carriedout the research, which itincluded 4 module. 1. Survey of the literary sources and data of WHO (World Health Organization). 2. The opinion poll. Results showed that 86% of interrogated respondents use SNGB. From these people: 49% - periodically use, 31% - rarely use, 20% - frequently use. 26% all of those interrogated respondents they prefer to quench thirst by the sweet gassed nonalcoholic beverages. 68% of respondents consider thatSNGB damages on organism. 26% of respondents assume that these beverages do not damage on organism. 6% of respondents consider that the light beverages can be of benefit to organism. The experiment was conducted only with one of the beverages being investigated, which will be further designated “control beverage”. Beverage was selected because of its popularity. 3. Determination arterial pressure. (before and after reception by the tested person of control beverage). As results average value is indicated. Instrument - electronic tonometer. Results showed the following: arterial pressure sharply rises 30 minutes after the method of control beverage, in some tested people to the values higher than standard; only after 2 hours arterial pressure is reduced to the values, close to the original values. 4. Determination of the level of insulin in the blood.Instrument - Glyukometr. Accuracy - 0,1 the millimolel; threshold of response - 2.5. Method by Khagedorn-Ensen. Laboratory standard - 4,4 - 6,6mmol/l. Results showed the following: 30 minutes afterreceipt of a controlbeverageblood glucoserapidlyrose todigital valueshigher than normal(in mostcases).2 hours afterreceivingthe blood glucose leveldecreased tonormal butnotto baseline values.

Results. According to experimental and literature data, it is possible to draw a conclusion and to present the possible sequence of acting the control beverage on the human organism.In one 0,33-liter capacities of control beverage the day standard of sugar is contained. Phosphoric acid suppresses the action of sugar. An excess quantity of easily mastered carbohydrate is transformed in the organism into the fat. An abrupt increase in the content of insulin in the blood occurs. Mastering caffeine then concludes, arterial pressure because of this rises. In the bowels the phosphoric acid connects calcium, magnesium andzink. This accelerates metabolism. In techeniand two hours after the use of beverage calcium, magnesium and zinc together with the water, which is contained in the beverage, will be derived from the organism. According to the data of the literary sources, confirmedby experimental, the danger ofSNGB it consists of the following:1. Highcontent

ofsugar or the substitute of sugar. 2. Presence of carbonic acid dioxide.3. Content it is orthophosphoricoh acid among the beverages being investigated it is discovered only in the beverages of imported production. In the beverages of its Ukrainian and Russian production they substitute by citric acid.4. Content of preservative - the benzoate sodium.

Conclusions. Sweet nonalcoholic the gassed beveragesand renders negative the influence to the digestive system and to the human organism as a whole. It is especially dangerous for the human organismSNGB of imported production. We recommend to limit to the minimum or to completely exclude the sweet nonalcoholic gassed beverages from the ration.

Starov K.P., Stoyanov Y.D., Karnaukh E.V.

CONTEMPORARY ANALYSIS OF PHARMACEUTICAL MARKET OF MODERN SEDATIVE DRUGS BASED ON MELISSA OFFICINALIS ARE REGISTERED IN UKRAINE TODAY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and medical prescription

Introduction. Nowadays sedative drugs on vegetative base are widely used in practical medicine. And the most prevailing are preparations of balm (Melissa officinalis L.). The object of our research is information concerning market structure of sedative drugs based on balm registered in Ukraine and presented from 2012 till 2014.

Results. According to "The State Inventory of medical preparations of Ukraine" on 01.01.2013 Pharmaceutical market of Ukraine had 21 trade names of complex sedative drugs based on balm. The share of domestically produced preparations is 28,6 % (preparations like Corvalol, Sedaflor, Relaxil, Phytosed) where the particular place among producers is taken by Farmak Joint-Stock Company (Kyiv), "Kyiv Vitamins Plant" Joint-Stock Company (Kyiv), "Chemical plant "Red Star" JSC (Kharkiv). As for the foreign producers which share is 71,4%, the leading parts go to producers from the Czeck Republic (19%), Germany (14,5%), Poland (14,3%), Slovenia (9,5%), Spain, Switzerland and Hungary (4,7% each) (preparations like Novo-passit, Persen, Dophelhertz Melissa).

Conclusions. On the basis of obtained data it was established that the share of sedative drugs based on balm produced by Ukrainian companies is much smaller than the one of the foreign producers whereas the coefficient of liquidity of which is higher that lessen the level of drugs availability for the citizens with the medium level of income.

Stepansky D.A., Khomiak O.V., Kremenchutsky G.N., Rozumna A.A.

BIOCHEMICAL CHARACTERIZATION OF DIFFERENT BIOTYPES OF AEROCOCCUS VIRIDANS

SE "Dnipropetrovsk Medical Academy of Health Ministry of Ukraine"
Dnipropetrovsk, Ukraine
Department of pharmacology and clinical pharmacology

Introduction. Bacteriotherapy and bacterial prophylaxis of various etiology and localization infections, as well as non-infectious pathological processes, are becoming increasingly important due to increase in awareness of the role of humans and animals normal microflora. Aerococcuses cause pathological processes on one hand, on the other hand, are widespread in microflora of macroorganism. However, it has not been established the presence of pathogenicity factors in aerococcuses. Therapeutic and prophylactic drug of A. viridans 167 showed clinical efficacy in various pathological processes.

The aim of study was to explore the biochemical characteristic of different biotypes of Aerococcus viridans.

Materials and methods. We studied 118 aerococcus cultures isolated from the human body, objects of the environment and animal organisms. Bacteriological, bacterioscopic and biochemical methods were used.

Results. In our studies, it was found that explored aerococcus cultures can be divided into three biotypes by biochemical activity. First biotype cultures oxidized potassium iodide, 2nd biotype reduced selenium from sodium selenite and 3rd biotype oxidized potassium iodide with simultaneous reduction of selenium from sodium selenite. We studied the sensitivity of aerococcuses strains to penicillin antibiotics and lysozyme, resulting in establishing of a clear difference in effects of antibiotics, which indicates the existence of features in the structure of 1^{st}, 2^{nd} and and 3^{rd} biotype's cell wall. Aerococcuses biotypes differed in activity of superoxide dismutase, glutathione peroxidase and production of reactive oxygen species (ROS). These data showed a difference in the production of biologically active substances in different biotypes of Aerococcus viridans: hydrogen peroxide, superoxide, lactate oxidase, superoxide dismutase and GSH-peroxidase. Biotypes of 1st and 3 rd A.viridans types with equimolar production of ROS have stronger antagonistic action against catalase-negative strain of Vibrio NAG and catalase-positive E.coli. Antagonistic effect of the 2^{nd} Aerococcus viridans biotype in relation to catalase-negative Vibrio NAG strain and catalase-positive E.coli at a reduced lactate oxidase, and practically zero hydrogen peroxide production, can be explained by additional production of antagonistic substances, such as microcins, produced by aerococcuses.

Conclusions. The foregoing allows concluding that microorganisms of A.viridans species are widely distributed in nature, as representatives of macroorganisms' microbiocenoses. The studies divided culture into 3 biotypes: by relation to antibacterial compounds, ability to produce reactive oxygen species, antioxidant system activity and antagonistic activity, with a clear correlation on the explored properties.

Sukhonos N.K.

ACTIVE LEARNING METHODS OF STUDENTS IN HIGHER MEDICAL SCHOOLS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal and occupational diseases

Introduction. A research object is cognitive activity of students of higher educational establishment. The article of research is development of cognitive activity of students on condition of the use of active methods of studies (on the example of study of discipline «Internal diseases» are in Kharkov national medical university)

Aim. A research purpose: in theory to ground and partly experimentally to check up the method of the use of active methods of studies at the study of the special disciplines in higher medical educational establishments.

Materials and methods. Research methods: theoretical, empiric and statistical.

Results. In-process in theory the concept of active methods of studies is systematized as an effective mean in achievement of aims of education; found out features in organization of pedagogical process in higher medical educational establishment with the use of varieties forms and methods of active studies; principles of innovative approach are richly in content exposed in studies, varieties in the receipt of professional knowledge of students-physicians;

criteria, indexes and levels of formed of professionally cognitive activity of students-physicians, are certain.

Conclusions. Practical meaningfulness of research consists in because the developed methodical recommendations in relation to possibilities of the use of active methods of studies at the study of the special disciplines in higher medical educational establishments; results of experimental research can be the works utilized in organization with the students of higher educational establishment of different type, and also with the listeners of establishments of postgraduate education.

Telehuzova O.V., Gayduchenko M.I.

CHANGES IN ACTIVITY OF NASAL MUCOCILIARY CLEARANCE CAUSED BY EXPOSURE OF PATHOGENS

Vinnytsya National Pirogov Memorial Medical University, Vinnytsya, Ukraine
Department of histology

Introduction. The nasal mucociliary clearance system transports the mucus layer that covers the nasal epithelium towards the nasopharynx by ciliary beating. Its function is to protect the respiratory system from damage by inhaled substances. Impairment of nasal mucociliary clearance can result in diseases of the upper airways. Therefore, it is important to study the effects of pollutions and smoking on nasal mucociliary clearance.

Aim. To inspect the influence of little smoking experience, pollutants, allergens and pathogens on the functioning of the mucociliary system of medical students.

Materials and methods. The analysis of modern scientific literature on the investigated problem, application of saccharin test for determination of mucociliry transport's activity , survey study.

Results. Nasal mucociliary clearance is an important physiological function of nasal cavity that helps in protecting the lower respiratory tract from undesirable organic and inorganic matter including micro organisms. Activity of mucociliary transport was checked by the saccharin test which determines passing speed of saccharin particles entering the nasal cavity,the nasopharynx and the throat. The condition of a mucous membrane of nasal cavity was evaluated with the nasal cytogram. The saccharin test - is a widely used research method,which is rather informative method to study the mucociliary transport's speed.

It is used for studying the influence of various factors on the activity of mucociliary transport to assess the functional state of the mucous membranes of the respiratory tract before and after treatment. During the study, we suggested the hypothesis about the relationship between decrease of ciliary apparatus's activity and pathogenic factors of influence. Accordingly, it is possible to determine that the level of its functioning is reduced, apparently due to the replacement of ciliated cells to goblet cells , which leads to the hypersecretion of mucus and reduced the frequency of cilia oscillation. Nasal cytogram allowed to establish the state of the nasal mucosa and investigate the correlation of changes in the cellular composition of the smear with a degree violation of mucociliary transport.

Conclusions. Among the subjects tended to reduce the rate of mucociliary clearance associated with smoking, frequent SARS and chronic diseases of the respiratory system.

Tkachenko A.S., Tkachenko M.O.

PROINFLAMMATORY CYTOKINES AND PROTEIN OXIDATIVE MODIFICATION IN CHRONIC CARRAGEENAN-INDUCED GASTROENTEROCOLITIS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of biochemistry

Introduction. Nowadays the amount of food products containing food additives has been significantly increased. Food additive E407, also known as carrageenan, has been widely used as thickener and stabilizer in food industry. It has been established that the consumption of carrageenan can lead to the development of chronic inflammatory diseases of the gastrointestinal tract, but detailed mechanisms of carrageenan-induced intestinal inflammation are still poorly understood. In particular, the state of protein oxidative modification and levels of proinflammatory cytokines are not studied.

Aim. The aim of the investigation was to study the level of proinflammatory cytokines TNF-α and IL-1α and indices of protein oxidative modification in blood serum of rats with chronic carrageenan-induced gastroenterocolitis.

Materials and methods. The female Wistar rats were used for the experiment. Chronic carrageenan-induced gastroenterocolitis was reproduced by the free access of animals to 1% solution of carrageenan in drinking water. Laboratory animals were randomly divided into 3 groups. Animals from the 1st group consumed carrageenan during 2 weeks, animals from the 2nd group consumed carrageenan during 4 weeks and group № 3 consisted of intact animals. The level of TNF-α and IL-1α in blood serum of animals was measured by ELISA. The concentration of carbonylated proteins, as a marker of protein oxidative modification, was determined by spectrophotometric method in blood serum.

Results. It was found that the level of TNF-α was 5.5 times higher compared to the control group after two weeks of carrageenan consumption and 6 times higher after one month. The same dynamics of changes was observed for the level of IL-1α. The concentration of carbonylated proteins was 3.9 times higher in animals from the 1st group and 3 times higher in rats from the 2nd group compared to control animals. The observed elevation of carbonylated proteins might be explained by increased TNF-α- and IL-1α-induced generation of reactive oxygen species and lipid peroxidation products that could be considered as main inducing agents of protein oxidative modification.

Conclusions. The development of carrageenan-induced gastroenterocolitis is accompanied by elevation of proinflammatory cytokines TNF-α and IL-1α in blood serum and activation of protein oxidative modification that can be evaluated as the development of carbonyl stress.

Tokareva I.L.

METROLOGICAL SUPPORT DISSERTATION RESEARCH

Kharkiv National Medical University, Kharkiv, Ukraine,
Research Department

Introduction. For successful work on the dissertation requires knowledge of normative legal acts of legislation of Ukraine in the field of state metrological control and supervision of the measurements, the results of which are used in the vital area - health care.

Aim. analysis of metrological assurance in health care based on a study of normative legal acts of legislation of Ukraine.

Results. Law of Ukraine "On metrology and metrological activity" acts in the country since 1998 and sets out the legal framework for ensuring the uniformity of measurements in Ukraine, regulates public relations in the field of metrology, aimed at protecting the citizens and the national economy from the effects of incorrect measurements.

Objects of the state metrological control and supervision are: 1. The measuring equipment; 2. Measuring techniques; 3. Reagents used in laboratory studies.

Starting the implementation of research at the planning stage of the thesis should know: 1. Measuring instruments used in scientific work must be verified metrological territorial center of standardization, metrology and certification and have a certificate on the state checking. Verification is carried out once a year. Work on unverified devices is strictly prohibited; 2. measurement procedure should be mandatory approved by the Ministry of Health of Ukraine; 3. The reagents used in the laboratory must have a shelf life of what should be an entry in the log checking primary documentation.

Experimental studies should be carried out in laboratories accredited by the Ministry of Health of Ukraine, the right measuring work and have the appropriate certificate.

Conclusions. Fulfilling the requirements of the Act, of the thesis can be sure that the results of experimental studies, received in the course of work, will be reliable and reproducible.

Tokareva I.L.

QUALITY CONTROL RESEARCH

Kharkiv National Medical University, Kharkiv, Ukraine,
Research Department

Introduction. Quality, efficacy and safety of health services provided to citizens in health-care facilities, as well as the accuracy of the research is entirely dependent on the technical condition of medical devices. Invalid input parameters of medical equipment often lead to the establishment of misdiagnosis in patients which in turn, leads to incorrect treatment. This is - a potential danger to human health and life.

Aim. Purpose - primenienie metrological service HNMU in scientifically research and medical - preventive work of measuring tehniki- timely attorneys and certified refurbished with proper maintenance.

Results. To deal with quality of metrological support of scientific research of our university, there is a whole system of relations with the State Enterprise "Kharkov Regional Scientific - Production Center of Standardization, Metrology, Certification, "which serves as the control in the field of standardization, metrology, certification and state supervision of compliance with standards, rules and regulations, ensuring the unity and reliability of measurements in Kharkiv and Kharkiv region.

Conclusions. Permanent metrological control of measuring instruments used in scientific - research and medical - preventive work that is carried out metrological service of the University, provides a reliable and reproducible research results, to carry out quality work devices, which leads to the establishment of a doctor correct diagnosis and treatment of patients, zhiznenno- that is essential for human health.

Trofimov M.A.

ANABOLICS WISELY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and drug prescription
Scientific adviser: professor Ermolenko T.I.

Introduction. Human development has no boundaries. This fact is significantly proved with the annual increase in results at the world championships in various disciplines. But sometimes to achieve the goal people have to resort to new methods of achieving it. One of these methods in sports has become a dope.

Results. Dope is a group of drugs use of which during exercise allows to improve considerably athletic performance. The most common dopes include: 1) adrenalin stimulants 2) actoprotectors, 3) an erythropoietin 4) narcotic analgesics, 5) anabolic steroids, 6) masking agents. Particular interest was devoted to a group of anabolic steroids, which were synthetic analogs of the hormone testosterone. The main effect of these hormones is the anabolic effect, they are considerably accelerate growth of muscle tissue, in addition, they increase strength, endurance, performance, increase the number of red blood cells, enhance bone. Beyond that hormones lower the tone of voice, stimulate the secretion of the sebaceous glands, they also have masculinizing effects and may cause prostatic hyperplasia.

Due to a wide action of testosterone its medications have many side effects. The worst complication is the suppression of the synthesis of testosterone in the testicles. To prevent this effect gonadotropin should be included in the course of drug therapy because its synthesis is reduced while taking hormonal agents. Testosterone itself is metabolized in the liver, which causes her injury and the need of hepatoprotectors. Also, these drugs cause gynecomastia due to conversion of testosterone into estrogen, this pathology can be eliminated by taking antiestrogens. Increase of LDL cholesterol in blood. The appearance of acne, owing to activation of the sebaceous glands. The occurrence of cardiovascular diseases associated with increased levels of LDL, formation of kidney stones. Mental disorders are also observed. During the course of steroids excitation is marked, increases aggressiveness, and upon termination there is a withdrawal syndrome, which manifests itself in the psychic needs of passing the new and the new courses of drugs. However, any of these complications can be neutralized with the help of competent approach to drawing up a course of anabolic steroids.

Conclusion. Despite this, anabolic steroids are dangerous drugs, and the risk of complications remains very high. If during the course of hormonal therapy you succeeded to prevent undesirable effects, in the future you have virtually no chance to avoid violations of hormonal levels and reproductive function. Doctors all over the world talk about the problem of steroid use, but the pharmaceutical industry has evolved so that it is not the ordinary warnings to stop it.

Tymoshchuk V.S.

FEATURES OF FORENSIC EXAMINATION OF SEX CRIMES

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of forensic medicine, medical jurisprudence

Introduction. Scientific and practical interest regarding the problems of forensic sexual crimes states and is growing from both the practical forensics, so physicians and allied health professions and law enforcement.

Aim. The purpose of this study is to examine the features of forensic medical examination of sex crimes.

Materials and methods. We have analyzed data archival materials of the Kharkiv regional bureau of forensic medicine.

Results. Of all types of offenses against the person offenses against sexual freedom and integrity are the most dangerous, given the significant increase in their number. According to prosecutors, sex offenders accounted for 20% of the total, and recorded only one case of eight perfect. Almost a third of sexual offenses committed repeatedly, reflecting the lack of effectiveness of measures aimed at preventing such crimes. The weight of these examinations in Kharkiv regional bureau of forensic medical examination is about 0.85%. In the investigation of sexual offenses relating to the intimate aspects of human life, there are a number of issues for which needed skilled forensics involving dermatologist, obstetrician-gynecologists, urologists, pediatricians, internists, and others. This type of forensics is the most difficult, therefore, in its task of conducting a forensic expert and consultant physician - dermatologist is a careful examination of victims in order to identify not only the anatomical damage to the body, but also signs of sexually transmitted diseases (syphilis, gonorrhea) and if necessary, detection of diseases that are transmitted mainly through sexual contact (chlamydia, trichomoniasis, etc) that the abuser can infect the victim. For investigating authorities it can serve as a proof of sexual contact. The complexity of processing the forensic medical expert is that victims come for forensics in the direction of the investigating authorities are always on the same or next day after the commission on violence against them, and the incubation period of venereal diseases lasts from 3 to 45 days. In some cases there is a need for re-examination after a certain period of time. It should be noted that, for various reasons, the number of surveys on the presence of sexually transmitted diseases and sexually transmitted diseases among victims insignificant. This indicates a lack in the work of the investigating authorities and experts in gathering evidence of sexual contact. Therefore, in such cases it is necessary to more thoroughly and more fully carry out a survey of victims.

The survey survivors about sexual states can be held in a variety of conditions, but only in the official institutions: clinics, departments of specialized forensic medical examination, outpatient offices in residential treatment facilities; and very rarely in prison.

Conclusions. Forensic examination with respect to persons who have been raped or in relation to which committed sexual forcible sexual assault, is careful examination of victims in order to identify and description of injuries, as well as signs of venereal and other diseases that are transmitted mainly through sexual contact that can serve as a proof of committed sexual contact.

Urazova L.F., Ananko S.Ya.
TARGETED THERAPY FOR LUNG CANCER
Kharkiv National Medical University, Kharkiv, Ukraine,
Department of pharmacology and drug prescription

Introduction. Lung cancer remains the second leading cause of death in the world, despite the significant advances in cancer therapy made over the past several decades. Late diagnosis, often after the cancer has already spread to distant locations, is certainly a major reason why many patients are incurable. Naturally, the currently studied various methods

for increasing the efficiency of treatments for this disease. This includes things like developing new chemotherapy agents. In an effort to improve the therapeutic arsenal, a newer weapon has emerged in the fight against cancer: targeted therapy - a general term that refers to a medication or drug that targets a specific pathway in the growth and development of a tumor. By attacking or blocking these important targets, the therapy helps to fight the tumor itself.

Aim. The purpose of the investigation was to study and identify medicines for treatment, achieve a new increased survival rate and improvement of life quality of oncologic patients.

Materials and methods. Some drugs, such as erlotinib (Tarceva) are used to treat lung cancer. On the basis of literature data the patients, who were on advanced stages of lung cancer and who previously did not receive any chemotherapy, took part in one of the investigations. They were distributed into 2 groups: the patients of the first group were prescribed tarceva, patients of the second one – a standard chemotherapy – carboplatin and gemcitabine.

Results. In the course of observation the tarceva medicine confirmed its efficiency as a monotherapy in patients without progression of the disease as a first line of therapy. The medicine significantly increased the overall survival by 42.5%. Herewith skin rash was the most significant side effect, which is an evidence of sufficiently favourable (in comparison with cytotoxin medicines) profile of the medicine safety. Targeted therapy is not associated with hepatotoxicity, myelosuppression and neuropathy; with severe hepatic insufficiency a dose reduction of the medicine to half is necessary (75 mg/day), with renal insufficiency it is allowed to take a standard dose (150 mg/day).

Conclusions. Thus, the advisability of targeted therapy administration in case of lung cancer does not cause doubt and basing on the abovementioned data it is possible to assume that it can be supposedly is one of the advanced method for treatment of patients with lung cancer.

Yuzyuk M.

CLINICAL CASE OF ECHINOCOCCUS INFECTION IN THE LUNGS, CLINICAL CASE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of medical biology

Introduction. Echinococcus is widely distributed parasitic disease. Echinococcus in lungs is second most seen manifestation after echinoccocus in liver and might be simulate like another etiology. Hepatic echinococcus is rare cause of the hepatic disease, which is difficult to diagnose in the patients. In this case, modern methods of diagnostics allow to effectively make a diagnose. It's very important to understand how novel methods and diagnostics are important to protect the patient from death.

Materials and methods. Results of patient's history, physical check-up, chest x-ray, blood and pleural fluid's analysis.

Results. Case: Patient A. is 39 years old, came to a department of internal diseases in a regional hospital with the complaints of chill, weakness, unproductive cough, shortness of breath, heaviness and pain in the right side of the chest, temperature 37,8C. Patient feels himself sick for the last 4 months. Patient came to physician and was refer to the chest X-Ray after was right sided hydrothorax was found. Leading therapy didn't helpful. After a

month he consulted to phthisiatrician and the one made diagnose an idiopathic right-sided pleuritis. In the regional hospital blood analysis showed eosinophilia (quantity of eos 22%). Pleural fluid were taken. Echinococcus traces were found in pleural fluid - 3-7 cysts were in the sight. After consultation with infection disease specialist a pleural echinococcosis diagnose was made. 400mg albendazol twice a day as a treatment was recommended for 4 weeks. Observation: To solve the surgical problems (i.e. taking out the cysts from lungs) patient needs consultation of a surgeon. In the time of observation patient felt better, temperature became normal, pain in the area of the right side of the chest disappeared, dry cough retained.

Conclusions. To be able make right diagnosis and not waste time with unsuccessful treatments. MD should give enough attention to combination of patient's history, complaints, eosinophilia blood levels, pleural fluid analysis and X-Rays. Specific treatment could include invasive methods for helminthic cysts. Anyway, prophylaxis treatment sometimes is needed.

Zaporozhchenko E.

CLINICAL CASE OF ASCARIASIS LUMBRICOIDES IN THE CLINICAL PRACTICE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of medical biology

Introduction. Ascariasis lumbricoides is a world-widely distributed parasitic infection, especially in tropical and subtropical areas where unhygienic disposal of human excreta is common. It is estimated that more than 1.4 billion people are infected with A. lumbricoides, representing 25 percent of the world population. It was detected more than 30 cases of Ascariasis lumbricoides in the Kharkivska region in the last year. It's known, that Ascariansis can be caused by failure to observe the rules of personal hygiene, eating dirty food and by ingestion of contaminated water from open reservoirs.

Results. Case: Patient K. year of birth 1988, went to department of internal diseases in regional hospital with acute colicky periumbilical abdominal pain not referred to other sites, vomiting and constipation for 3 days. His body temperature was 37.5 °C. The main complaints were sickness, loss of appetite, disorder stool, general weakness and allergization. At the time of examination of feces impregnated eggs of ascaris were discovered in a great quantity. It is known, that the Patient get infected by worm eggs by eating poorly washed strawberries.

Observation: After first course of treatment, in the time of observation, the patient feels were better, temperature became normal. Surgeons medical intervention could still be needed.

Conclusions. Ascariasis lumbricoides is very serious disease and the main ways to identify it are microscope and the detection of eggs in faeces and the study of duodenales content. It was discovered, that those, who live in the towns and villages, where there are plantations of strawberries are at risk of infestation of the disease. All the strawberries should be properly checked by sanitary service. Correct diagnosis - successful treatment.

THERAPY

Abeer Elhaj, Akewusola Nimat Adeola, Doreen Naluzze, Ivanchenko S.

PREVENTION AS THE BASIS OF MEDICINE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department propedeutics to internal medicine № 1, basis of bioethics and biosafety

Introduction: in today's world, people face many different health problems. As a result, we have to look for preventive measures for diseases that come and increase their rate over time. However, the successful result of preventive measures is possible only with the active participation of the population.

Aim: to conduct literary analysisand estimate the commitment of the population to different types of preventive examinations.

Materials and methods: searching the PubMed database of digitized sources for key words "commitment", "preventive examinations" received 71 references to publications that contain these concepts.

Results: it was found that adults and children tend to visit a doctor for regular checkups, even if they feel healthy to carry out screening of diseases, to identify risk factors for the disease, discuss tips for a healthy and balanced lifestyle, stay up to date with vaccinations and boosters, and maintain a good relationship with their doctor. The most common preventive measures are verification hypertension (high blood pressure), hyperglycemia (high blood sugar levels, a risk factor for diabetes), hypercholesterolemia (high blood cholesterol), screening for colon cancer, depression, HIV and other common types of sexually transmitted diseases, such as chlamydia, syphilis, and gonorrhea, mammography (to screen for breast cancer), colorectal cancer screening, a“pap test” (to check for cervical cancer), and screening for osteoporosis. Genetic testing may also be performed to screen for mutations that cause genetic disorders or predispositions to certain diseases, such as breast cancer or ovarian cancer.

Conclusions: using the aforementioned methods of physical examination we can prevent many diseases manifestation and improve the quality of life dramatically. Successful prevention is possible only with the active participation of the population, on the condition that people will be familiar with the basics of medical and hygienic knowledge on these issues.

Abugu Livinus Nnadozie

THE FUNCTIONAL STATE OF THE HEPATOBILIARY SYSTEM IN PATIENTS WITH RHEUMATOID ARTHRITIS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №3

Introduction. The World Health Organization defines Rheumatoid Arthritis (RA) as a chronic systemic disease that affects joints, connective tissues, muscles, tendons, fibrous tissue. RA is one of the most frequent among rheumatic diseases and its therapy remains a difficult problem in modern medical science. An aggressive therapy is always enforced in the treatment of RA with different formulations for a sufficiently long period time, so that a significant number of patients develop various side effects; primarily gastropathies,

disturbed metabolism, hepatotoxicity etc. In the setting of a severe RA, there are visceral manifestations such as myocarditis, hepatitis, pneumonitis etc. This may be primarily due to circulating immune complexes. That is why, new therapy are geared towards agents that affect the immune processes and cytokine production. Supportive therapy is still a key factor in the treatment of RA.

Material and methods. With the aforementioned in mind (visceral manifestations and complications etc), the Rheumatology Department Kharkov Regional Hospital, set out to determine the level of affection of the hepatic system in the onset of RA. A total of 64 patients with seropositive RA forms were examined (38 women, 26 men) while the control group had 20 healthy individuals. Parameters tested included; blood serum protein, carbohydrate metabolism, level of glycated hemoglobin, immunreactive insulin, serum lipid spectrum, plasma content of Ca, Mg, K, level of seromucoid, sialic acid, C-reactive protein, rheumatoid factor, level of enzymes (aspartate aminotransferase (AST), alanine aminotransferase (ALT), alkaline phosphatase (ALP), gamaglutamyltranspeptidase). Instrumental investigations such as ultrasonography, X-ray examination, multiphase duodenal intubation were used.

Results. An interesting finding is that of the 64 patients examined, 44 patients (68.8%) were found to show visceral manifestation of the disease in the form of destruction of the hepatobiliary system. These were supported by subjective data such as complaints of aching dull pain in the right upper quadrant, bitter taste in the mouth, belching, nausea, intolerance to certain food, soreness at the point of projection of gallbladder. In the biochemical composition of bile were found such changes as decrease in the amount of bilirubin, bile acid with an increase in level of cholesterol. It was observed also, a significant increase in the level of liver enzymes (AST, ALT, ALP) likely due to reactive hepatitis.

Conclusiom. In conclusion, patients with joint-visceral form of RA, in the long run will develop changes in the hepatobillary system which is visible from clinical, laboratory and instrumental criteria specific to various disorders of the digestive tract. Again, violation of the biliary system in patients with RA is manifested as gallbladder dyskinesia, symptoms of chronic cholecystitis, changes in bile composition etc. Liver, with manifestation of reactive hepatitis is accompanied by a significant increase in transaminases (AST, ALT), ALP, and gamma globulin levels in blood serum. These are expressed as cytolysis syndrome, immune and inflammatory hepatic insufficiency.

Adeem Farked Yousif Alani

TAKOTSUBO CARDIOMYOPATHY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine 2, clinical immunology and allergology

Introduction: Takotsubo cardiomyopathy occurs predominantly in postmenopausal women soon after exposure to sudden, unexpected emotional or physical stress. For instance, the incidence of takotsubo cardiomyopathy increased substantially in elderly women living near the epicenter of the Niigata earthquake.4 Although the left ventricular dysfunction is transient and there is no evidence of obstructive epicardial coronary disease, an increasing number of angioplasty procedures have been performed for presumed acute coronary syndromes.

Material and methods: We investigated 7 patients (5 women, median age 74 years old with a range of 54 to 91 years old) who fulfilled the following criteria: 1 Takotsubo cardiomyopathy (TCM); 2) ST-T segment change in several leads in electrocardiogram; and 3) no history of old myocardial infarction, valvular heart disease, subarachnoid hemorrhage, or pheochromocytoma.

Results:Emotional and physical stress were observed in 16 patients (94%). Technetium-99m tetrofosmin tomographic imaging revealed decreased uptake at the apex of the left ventricle in 11 patients (85%) that later returned to uniform. No significant stenosis or angiographical slow flow in epicardial coronary arteries was observed (n = 9). Provocative focal vasospasm was induced in only one patient (14%) (n = 7). Moreover, no significant abnormality in the coronary microcirculation was detected by Doppler guidewire (n = 3) or contrast echocardiography (n = 1). No patients showed a rise in viral antibody titers. Biopsy specimens revealed interstitial fibrosis in six patients (100%) and slight cell infiltration in three others (50%) (n = 6).

Conclusions: These findings suggested that neither abnormalities in the coronary circulation nor acute myocarditis was related to the etiology. Although neurogenic stunned myocardium induced by emotional or physical stress was suggested as the etiology, further investigations are necessary.

Afolabi K.R, Andrieieva A.

WHAT IS NEW IN INFLUENCE OF FISH-OIL SUPPLEMENTATION IN REDUCTION OF CARDIOVASCULAR EVENTS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №1

Background: There are has been an argument about the benefit of fish-oil supplementation(FOS) in preventing cardiovascular events. However,a recent research revealed that it may reduce the overall atherothrombotic risk profile in patients with suspected coronary artery disease(CAD).

Aim: To research the studies on discussion of the correlation between fish-oil supplementation and decreased inflammation, thrombogenicity and lipid markers.

Materials and methods: According to the aim,in the research that was done by Multi-Analyte,Thrombogenic and Genetic Markers of Atherosclerosis(MAGMA) study.There were studied 600 patients with suspected CAD were enrolled in the study -128 of the patients were given FOS (67.2% men; mean age 64.4 years; body-mass index (BMI) 30.7) vs 472 who was not given FOS (61.7% men; mean age also 64.4 years, BMI 30.9).In addition,70.3% of the patients on FOS was on lipid-lowering therapy (including non- FOS group.The measurements were: lipid profile, inflammations and thrombogenicity markers using thromboelastography,aggregation and "urinary 11-dehydrothromboxane B_2, vertical density-gradient ultracentrifugation and AtherOx test^{TM} kit. General calculation made by variation analysis with student's criteria.

Results: It was found that patients who took FOS and were not on lipid-lowering medications had significant lower levels of total very low- density lipoprotein-cholesterol, intermediate-density-lipoprotein cholesterol, triglyceride,low-density lipoprotein-cholesterol, remnant lipoproteins and collagen-induced platelet aggregation. On the thrombogenicity profile, they had lower thrombin-induced platelet fibrin clot strength

(P=0.01) and "G" signifying clot firmness (P=0.0003). In patients who took statins, FOS had no significant influence on the lipid markers and thrombogenicity.

Conclusion: Thus in the research that was opened, FOS has influence in the reduction of inflammation,thrombogenicity and lipid markers seen in cardiovascular events.

AL-Ketan Mutaz, Pasiieshvili T.M.

THE PREVALENCE OF TYPE 2 DIABETES MELLITUS AMONG THE POPULATION OF JORDAN

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of general practice – family medicine and internal diseases

Introduction. According to the American Diabetes Association annually detected 800,000 new cases of diabetes, the vast majority of whom - patients with type 2 diabetes mellitus. The reasons for this rapid progression of disease prevalence are associated not only with a change in lifestyle and the transition to the so-called "Western style", characterized by a decrease in physical activity and the growth of obesity due to more nutritious meals, but also to the activities of the WHO changed the criteria for the diagnosis of the disease after intensive screening programs to detect diabetes. The danger of such a rapid progression of the prevalence of type 2 diabetes mellitus lies in the growth of cardiovascular mortality of humanity since the development of diabetes is accompanied by a 2-3-fold increase in cardiovascular disease.

Aim: to determine the prevalence of type 2 diabetes mellitus (DM) and impaired fasting glycemia (IFG) among the population of Jordan.

Material and methods: Data were analyzed from a cross-sectional study that included a random sample of 1121 Jordanians aged 25 years and above. A subject was deemed affected by DM if this diagnosis was known to the patient or if his or her condition complies with the American Diabetes Association definition. IFG was defined as a fasting serum glucose level of ≥6.1 mmol/l (110 mg/dl) but <7 mmol/l. HbA_{1c} >7.5% was defined as “unsatisfactory” metabolic control.

Results: The age-standardized prevalence of diabetes and IFG was 17.1% and 7.8%, respectively, with no significant differences between women and men. Of the 195 diabetic subjects, 146 (74.9%) had been previously diagnosed. More than half (54%) of those previously diagnosed were found to be with unsatisfactory glycemic control. Compared to the 1994 survey, there was a significant increase in the prevalence of diabetes by 31.5%. Increase in age, increase in body mass index, and having a family history of diabetes were associated with increased odds of diabetes and IFG. While the level of education had no effect on IFG, higher level of education was associated with a decrease in the odds of having diabetes mellitus.

Conclusion: The prevalence of type 2 diabetes and IFG is high in Jordan and is increasing. More than half of the patients with diabetes have unsatisfactory control. Therefore, they are likely to benefit from programs aimed at encouraging behaviors toward achieving optimum weight as well as physical activity behaviors. Physicians caring for patients with diabetes may need to adopt a more vigorous approach for diabetes control.

Al-Ketan M, Tytova A.

ENDOTHELIAL DYSFUNCTION INACUTE CORONARY SYNDROME

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine № 2, clinical immunology and allergology),

Aim: Study ofendothelium-dependent vasorelaxation mechanisms, theirrelationswith changes inhemodynamics in patients withacute coronarysyndrome, optimization ofdiagnosis of this disease, prognosisand effectsof this disease.

Materials and methods: 45 patients 33M (73%) and 12 F (27%), with (ACS) were examined anddistributed into two groups: The first group with acute(MI)-(15 patients), the second group with unstable angina (UA)-(30patients).The average age of the patients is 62±6,of them 14 (31%) had arterial hypertension, in 9 (20%) along with cardiovascular disease had clinical signs of diabetes type2. Almost half of the patients-22 (49%) suffered from nicotine addiction. Prolonged anginal pain at rest occurred in 7 (15, 5%) patients who were diagnosed with (MI). progressiveunstable anginaclass 1A observed in 10 (22, 2%) patients, and unstable angina class 1B in 7 patients . In 13 patients observed angina at rest, Among them, subacute angina in 9 patients, in 6 of them -Class 2A, in 3 of them - Class 2B, 4 patients -class 3B. Atypical variants course of corticosteroids were found in 12 (26.6%). physical examination: tachycardia in 13 (28.8%), bradycardia in 5 (11.1%) patients, BP was elevated in 14 (31%) patients. Level ofendothelin-1 inpatients with myocardialinfarctionlikelyincreasedcomparedwith normativedata inthe first day ofthe studyison average10.1pg /ml.The resultsobtained onday 10monitoring thesepatientsshowed asignificant reduction inendothelin-1. Thus, during this period the averageendothelin-1were6.2pg /ml. In patients with unstable angina was also likely increase ednotelin -1 in comparison with standard parameters in first day study. Average levels of endothelin -1 in this period were 8.3 pg / ml, compared to patients with myocardial infarction were lower. Indicators of the level of endothelin -1 in patients with unstable angina also falling on 10 days supervision of patients. . Study of endothelial vasorelaxation the presence of hyperlipidemia and hypertension suggest that the risk factors for acute coronary syndrome is not only affect the progression of structural changes in atherosclerosis, but also a negative effect on the functional state of the endothelium, causing disruption mechanisms of endothelium-dependent vasorelaxation.

Conclusions: Main risk factors that have a main role in appearance of ACS are: diabetes mellitus, hypertension, nicotinicdependence. Identifiedhyperlipidemia, hypercholesterolemia havepathogeneticimportance in the formationof ACS. In patientswith ACSestablishedchangesof ST segmentandT-wave,episodesof the left bundle branch block, indicating the presence ofischemia .Havinglotshypokinesia andakinesiasegmentswall of the leftventricleinechocardiographyconfirmed ACS patients, mostly is common for patients with MI, proves theendothelial dysfunctionin this disease and can be used as a an additional marker in the diagnosis of ACS.

Amoh Christin, Zazdravnov A. A.

RENAL STATUS OF CHILDREN WITH SICKLE CELL DISEASE IN ACCRA, GHANA

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of general practice – family medicine

Introduction: In West Africa, the prevalence of sickle cell disease (SCD) is 2%. The disease adversely affects growth, development and organ function including the kidneys. There is however a dearth of information about the renal status of SCD children in Ghana.

Aim: To assess the renal status of children with SCD in steady state.

Material and methods: This was a hospital-based cross-sectional study, conducted over a 4 month period, July to November 2008 at the Department of Child Health, (DCH) Paediatric Sickle Cell Clinic (SCC), Korle Bu Teaching Hospital (KBTH), Accra. Participants: Cases-357 SCD cases and 70 of their HbAA siblings as controls. Documentation of their socio-demographic data, clinical data and dipstick urinalysis findings, and renal ultrasonography on selected participants

Results: The mean [SD] age was 7.18 [3.15]yrs for cases and 5.16[3.28]yrs for controls. The genotypes were Hb SS (76.7%), Hb SC (21.8 %), and Hb $S\beta^{thal}$ (1.4%). Urinalysis showed leucocyturia in 12.6% versus 5.7% (χ^2=62.5 and the p=0.000)), isolated proteinuria in 2.8% versus 1.43% (χ^2=10.01 and p=0.001) haematuria in 2.6% versus 0% (χ^2=9.233, p=0.002) and nitrites in 2.2% versus 1.4% (χ^2 =16.3,p=0.02) of cases and controls respectively. The youngest SCD case with proteinuria was 2yrs. old. Proteinuria prevalence increased with age, , occurring in 5.7% of cases aged 9–11yrs. and 20.6% of cases aged 12yrs. Two-thirds of the proteinuria cases were aged 9–12yrs., of whom 50% were aged 12yrs. Renal ultrasound findings were normal in all those examined.

Conclusion: Urinary abnormalities suggesting nephropathy occur early in SCD patients in Ghana. Routine dipstick screening at clinic visits countrywide would help early detection and prompt intervention to limit renal impairment.

Bardinov D.V. Lahno O.V. Kirilovich E. I.

THE STATUS OF BONE METABOLISM IN PATIENTS WITH THYROTOXICOSIS SYNDROME

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №2

Introduction. When thyrotoxicosis is the amplification of both components of bone remodeling, but in a greater degree of resorption, resulting in the number of resorbed bone in each unit remodeling exceeds the number of newly formed. This leads to bone loss and osteoporosis.

Aim: to assess the degree of influence of different variants of the thyrotoxicosis syndrome on bone metabolism in patients without other risk factors of osteoporosis.

Materials and methods: 20 patients (women, age from 29 to 45 years) with the thyrotoxicosissyndrome: 7 patients with overt thyrotoxicosis despite the illness von Basedow - graves ' disease, 7 patients with subclinical hyperthyrosis on the background of toxic nodular goiter (TNG) and 6 patients with drug subclinical hyperthyrosis. Assessment of bone metabolism were carried out comprehensively by using dual-energy x-ray bone absorptiometry (DXA), laboratory evaluation of bone remodeling.

Results: changes of bone metabolism was assessed by t-test (DXA), serum hormone levels (osteocalcin, alkaline phosphatase, procollagen type 1, beta-cross labs, thyroid hormones, parathyroid hormone, LH, FSH, estradiol, testosterone). All the patients were recorded minor changes of mineral bone density (BMD) (t-test, from to -1,2 -1,6) related osteopenia. In this group of patients noted increased levels of osteocalcin and alkaline phosphatase.

Conclusion: in patients with different variants of the thyrotoxicosis syndromemarked the initial changes in mineral density of bone tissue and increased levels of markers of bone

resorption. Further research will determine the extent of these changes and their dependence on options thyrotoxicosis.

Berezhna[1] A., Tertyshnyy[1] V., Pligovka[2] V., Shaposhnikova[1] Yu.

ASSOCIATION BETWEEN INSULIN RESISTANCE AND HYPOTHYROIDISM IN PATIENTS WITH HYPERTENSION AND OBESITY

1- Kharkiv National Medical University, Kharkiv, Ukraine, Department of clinical pharmacology

2- State institution "National Institute of therapy named after L.T. Malaya NAMS of Ukraine" Kharkiv, Ukraine

Introduction. Subclinical thyroid dysfunction (STD) represents a condition of slight thyroid hormone excess or deficiency, which may be associated with important adverse effects. Since cardiovascular system is rich in thyroid hormone receptors and is one of the major sites of action for thyroid hormones, it is relatively sensitive to changes in the levels of thyroid hormones. Subclinical hypothyroidism (SCH) and overt hypothyroidism (OH) are also established risk factors for insulin resistance, hyperlipidemia, hypercoagulability and low grade inflammation. Several studies have proved the association between insulin resistance and hypothyroidism for overt hypothyroidism, but there is controversy as to whether this association is also present in subclinical hypothyroidism. The prevalence of thyroid disease in patients with diabetes is significantly higher than that in the general population. This indicates a possible interplay between thyroid status and insulin sensitivity.

Aim. We aimed to investigate the relationship between thyroid function, carbohydrate metabolism and insulin resistance in patients with essential hypertension (EH), abdominal obesity and subclinical hypothyroidism.

Materials and methods. The study was conducted in the outpatient department of State institution "National Institute of therapy named after L.T. Malaya NAMS of Ukraine". The patients visiting the clinic were screened and 85 male and female patients each suffering from autoimmune thyroiditis was enrolled in the study after prior consent. First group - 62 patients in the phase SCH; second group - 23 patients with normal thyroid function. Thyroid profile (TSH, FT3 and FT4) and insulin levels were estimated using electrochemiluminescence immuno assay using commercially available kits. Lipid profile and sugar levels were analyzed using commercially available kits. Insulin resistance was estimated using homeostasis model assessment (HOMA-IR) from fasting serum glucose and insulin using the OxfordHOMA calculator (http://www.dtu.ox.ac.uk/homa/index.html). Statistical processing of results was performed using the program SPSS 13. Baseline characteristics of the study participants were expressed in mean ± SD and percentage.

Results. Average values of parameters of carbohydrate metabolism in the first group of patients was: glucose - 5,79±0,12 mmol/l, insulin - 17,483±0,728 mkU/ml, HOMA - 4,362±0,225 U, TTG in 1 hour - 8,870±0,240 mmol/l, TTG in 2 hours - 6,387±0,187 mmol/l. In the second group: glucose - 4,436±0,112 mmol/l, insulin - 12,846±0,983 mkU/ml, HOMA - 2,522±0,193 U, GTT 1 hour - 6,559±0,167 mmol/l, TTG in 2 hours - 4,655±0,173 mmol/L.comparison of medians in groups of studied parameters showed statistically significant differences ($p < 0.05$) found between insulin levels and the HOMA index. Correlation analysis determined the relationship between body weight and glucose ($R = -0214$, $p = 0.043$) and T4 ($R = 0206$, $p = 0.047$), also found a relationship between BMI and insulin ($R = -0217$, $p = 0.037$) and T4 ($R = 0255$, $p = 0014$).

Conclusions. Our study demonstrated that hypothyroidism leads to a state of insulin resistance. In patients with abdominal obesity, EH and concomitant subclinical hypothyroidism disorders of carbohydrate metabolism significant metabolic disturbance, mediated most likely with peripheral action of the hormone T4. Significant changes of body weight of these patients and, consequently, higher BMI is associated with fluid retention characteristic of subclinical hypothyroidism. The interaction between insulin resistance and high TSH has profound clinical implications. At low insulin sensitivity, relatively minor differences in TSH are associated with marked changes in lipid risk factors and thus cardiovascular risk.

Bezuglova I., Ofure Abigael Obinyan

CEREBROVASCULAR PATHOLOGY IN PATIENTS WITH DIABETE MELLITUS

Kharkiv National Medical University, Kharkiv, Ukraine,

Introduction. Cerebrovascular disease (CVD) is the most life threatening neurological event, often caused by diabetes mellitus. The progression and poor prognosis of CVD in patients with diabetes mellitus type 2 are determined by endothelialdysfunction, which results from the negative influences of hyperglycemia, protein glycosylation, and thedevelopment of oxidative stress.

The aim of investigation is to detect the causal relationship between hemodynamic and metabolic disorders in patients with diabetes mellitus type 2 and diabetic encephalopathy.

Materials and methods. 87 male and female patients with diabetes mellitus type 2 and diabetic encephalopathy stage 2 with their glycosylated hemoglobin ranging from 7.2% to 8.8% and 20 male and female healthy individuals in the control group were examined. The examination included neurological, hemodynamic, biochemical and statistical investigations.

Results. There was decreased blood flow velocity inthe aa. carotis int. by 32.9%,aa. cerebri med. by 35.2%, aa. vertebralis by 45.1%, a. basilaris by 32.1% and increasedpulsatility index(PL)andcirculatory resistanceindex (RL)on average1.8 times and1.75 times as compared to the control group. In the blood samples analyzed, there was a 5 times increase in the levels of circulating damaged endothelial cells and a 1.9 times increase in the levels of endothelin-1 in patients with diabetes mellitus compared to the control group.

Conclusion. Diabetes mellitus type 2 accompanied by diabetic encephalopathy stage 2 is characteristic of impaired carbohydrate metabolism and endothelial cell damage. The correlative analysisconfirms thepathogeneticvasoconstrictoreffect ofendothelin-1 on cerebralvessels. Thus, diabetic encephalopathyin patientswith diabetes type 2is theresult of a combinedimpactof metabolic andhemodynamic factors, among which an importantrole is played byendothelial dysfunction,which isstrategically an importanttherapeutic targetin the treatment andpreventionof cerebrovascularcomplications of diabetes mellitus.

Bilchenko A.O., Prosolenko K.O.

EFFECT OF TREATMENT IN PATIENTS WITH CAD ON ALBUMINURIA

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine 1

Introduction. Albuminuria and C-Reactive protein (CRP) predict cardiovascular mortality and morbidity in patients with pre-existing cardiovascular disease independent of conventional risk factors.

The aim of our study is to assess the relationship between albuminuria and atherosclerotic markers in patients with coronary artery disease (CAD) and the effect of CAD treatment on albuminuria.

Material and methods: We selected 39 adults with CAD. 20 were women and 19 were men, mean age *65,4+7,2*. Each patient was evaluated for *Urine Albumin*-to-*Creatinine Ratio* (UACR), lipid profile, intima-media thickness (IMT) by ultrasound and CRP level. Patients were divided into 4 groups depending on the class of drugs that were used (β-blockers, ACE inhibitors, calcium channel blockers and angiotensin receptor blockers).

Results: The prevalence of albuminuria in our study was 64,1%.The level of albuminuria was 28,9±12,9 mg/mol. The UACR in males was 29,24±14,56 mg/mol and in females 21,3±0,01 mg/mol. Subjects with IMT≥ 0,9 mm had greater albuminuria level (33,4±5,6 mg/mol) than those with IMT<0,9 mm (21,3±7,1 mg/mol). UACR was correlated with IMT (r = 0,34, p=0.04). Subjects with and without dyslipidemia had similar albuminuria level (28,1±8,2 mg/mol 29,2±6,9 mg/mol, p>0,05). Subjects with *elevated* CRP level had greater UACR(35,9+5,1 mg/mol) than those with normal CRP level (22,3+5,2 mg/mol)(p<0,05). UACR was correlated with CRP level (r = 0,41, p=0.02).Patients who used ARBs and CCBs had a significantly lower UACR (ARBs - 16.9±10.19; CCBs - 15.49±7.42) compared to patients who used ACE inhibitors (25.00±11.72) and β-blockers (26.16±11.34).

Conclusions: Patients with CAD who used ARBs and CCBs had significantly lower levels of albuminuria compared to baseline than patients who used ACE inhibitors and β-blockers.

Boma Douglas

RENAL ARTERY DENERVATION: PERSPECTIVES OF MODERN METHOD OF TREATMENT OF RESISTANT HYPERTENSION

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of Internal medicine №3

Introduction. Renal denervation (RD) - one of the most modern methods of treatment of resistant hypertension (RH). The basis of the technique was by proposed H. Levin and M. Gelfand in 2003. It is the damage to afferent and efferent renal sympathetic nerves via catheter radiofrequency ablation (RFA). The first study HTN-1 showed lower blood pressure (BP), even in patients who had no BP with persistent hypotensive effect. HTN-2 showed that the number of patients who achieved target BP or decrease BP≥10 mm Hg. c., at 84%. Other clinical studies have shown that BP affects the index , decreases left ventricular mass and thickness of the interventricular septum; increases exercise tolerance in patients with chronic heart failure (CHF); lowers levels of glucose and insulin in patients with diabetes mellitus (DM); reduces the recurrence of atrial fibrillation (AF).

The aim was to find modern methods of treatment of RH.

Materials and methods. Analyzed 216 case histories of patients with hypertension at the Kharkiv Regional Hospital. Among them RH identified in 23 patients (10.65%). The average age was equal to 48,6±7,5 years. The duration of hypertension was 15,3±4,4 years. Patients with coronary heart disease were 16 (70.08%), with CHF - 11 (48.8%) with diabetes - 7 (30.66%), and 2 (8.76%) with AF. Therapy consisted of three or four antihypertensive drugs (one of which is a diuretic) in optimal and maximum doses.

Results. All 23 patients underwent a full medical examination, of which only 15 (65.7%) had no contraindications to the use of RD (diameter of the renal artery (RA)>4 mm,

length>20 mm, there was no surgical history to RA, RA stenosis ; GFR>45 mL/min/1,73 m², no vascular events in 6 months the procedure; artery hypertension was essential). To them it was recommended method of RFA renal nerves. In Ukraine, RD performed in National Scientific Center "M.D. Strazhesko Institute of Cardiology, MAS of Ukraine" (Kiev) and Odessa cardiosurgical center. In Odessa technique of RD advanced 3D mapping, which provides greater efficiency of the method and patient safety.

Conclusions: Thus, RD allows in patients receiving antihypertensive medications to achieve target blood pressure, sometimes it is possible to reduce the number and doses. We believe that the method is promising RD for use in clinical practice and promising to continue the study of its effects in patients with hypertension, particularly with concomitant diabetes, CHF, AF, etc.

Butov D.O., Pomogaev S. O., Akzhigitova A.A.

CHANGES IN THE LEVEL OF NITRIC OXIDE BLOOD AT PATIENTS WITH PULMONARY MULTI-DRUG RESISTANT TUBERCULOSIS IN THE PROCESS OF CHEMOTHERAPY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of phthysiology and pulmonology

Introduction. There is a paucity of published data on the effect of tuberculosis (TB) chemotherapy on nitric oxide (NO) synthesis and metabolism in newly diagnosed and relapsed patients with or without multi-drug resistant tuberculosis (MDR-TB).

The aim. To research changes in the level of nitric oxide blood at patients with pulmonary multi-drug resistant tuberculosis in the process of chemotherapy.

Materials and methods. The pattern of NO response in 140 patients with pulmonary TB, including 74 with MDR-TB and 66 without MDR-TB has been studied and compared to the NO status of 30 healthy donors. Patients comprised those with newly diagnosed TB and recurrent or relapsed TB. The NO status was assessed by measuring inducible NO synthase (iNOS) and nitrites and nitrates levels. This was measured prior to treatment initiation and two months after the prescribed chemotherapy.

Results. Increased levels of NO indices were found in patients with tuberculosis when compared to healthy controls. After two months of chemotherapy a significant decrease in NO indicators was observed in the patients with TB, particularly in those without MDR-TB and newly diagnosed TB. The decline in NO activity was less prominent in patients with recurrent TB and MDR-TB, which suggests lower level of immunologic and reparative processes in such patients.

Conclusion. Changes in serum levels of nitrites and nitrates as well as iNOS activity in neutrophils may serve as diagnostic criteria to differentiate various clinical forms of TB and help as prognostic tool to predict treatment outcome.

Butova E.Y.

THE PREDICTORS OF CARDIOMETABOLIC ABNORMALITIES FOR PATIENTS WITH HYPERTENSION AND DIABETES MELLITUS TYPE 2

Kharkiv National Medical University, Kharkiv, Ukraine
Scientific advisor: professor Bobronnikova L.R.

Introduction. Risk factors for diabetes mellitus (DM) type 2 and arterial hypertension (AH) are very similar. They include abdominal obesity, insulin resistance, hyperglycemia, dislipoproteinemia. They are also quite closely linked pathophysiologically,

and therefore rarely found in isolation. Under certain conditions, unfavourable effects of these factors on the organism sharply increases, which increases of the overall risk for both diabetes and the cardiovascular disease. Thus, the clinical importance is the concept of cardiometabolic risk for the patients with hypertension and diabetes mellitus type 2.

Aim. Investigating the features of cardiometabolic abnormalities for patients with AH and DM type 2.

Materials and methods. 45 patients (17 men and 28 women) with hypertension of the IInd stage and 2nd degree and diabetes mellitus type 2. The average age of patients was 54,5 ± 4,5 years. There were evaluated anthropometric indicators, index HOMA-IR, examined carbohydrate and lipid metabolism, C-reactive protein (CP), echocardiography and ultrasound of common carotid arteries with measurement of the thickness of the intima-media complex of the common carotid artery (CCA IMT). The patients were divided into groups: the group 1 (n = 24) with concomitant hypertension and with diabetes mellitus type 2; group 2 (n = 21) without hypertension. Control group was 20 healthy individuals.

Results. Abdominal obesity (AO) of the 2nd degree ($p < 0.05$) was diagnosed for 49.8% of patients of the group 1. The left ventricular hypertrophy (LVH) was diagnosed for 68.2% of patients of the group 1 and 43.2% for the group 2 ($p < 0.01$). HbA1c levels for patients of the group 1 was 1.2 times higher in comparison to patients of the group 2 ($p < 0.001$). Hypercholesterolemia for 68.4%, hypertriglyceridemia for 42.0%, an increase from 22.4% HSLPNP, reducing HSLPVP for 33.1% of patients of the group 1 ($p < 0,001$) was observed. The content of PSA for patients of the group 1 was 1.4 times higher, and HOMA-IR index is 2.4 times higher in comparison to the indicators of the group 2 ($p < 0.01$). The atherosclerotic plaques in the carotid arteries were detected for 49.7% of patients of the group 1 ($p < 0.05$). TIM OSA patients in group 1 was 1.2 times more than in comparison to the group ($p < 0.01$) and correlated with the level of total cholesterol ($r = 0,44$; $p < 0.01$), HOMA-IR index ($r = 0,38$; $p < 0.01$).

Conclusions. The insulin resistance and AO have the decisive importance for the progression of cardiometabolic abnormalities for patients with hypertension and diabetes mellitus type 2. The insulin resistance and AO contribute to the development of LVH progression of atherosclerosis and dyslipidemia due to impaired glucose metabolism and development of systemic inflammation.

Chidimma Ucheze, Al-haddad Mustafa, Pasiieshvili T.M.

BURNOUT SYNDROMEIN GRADUATESTUDENTS OF MEDICAL UNIVERSITY

Kharkiv National Medical University, Kharkiv, Ukraine

Department of general practice – family medicine and internal disease

Introduction: Among the many challengesof professional development, strangely enoughat first glance,declares itselfthe problem of "burn-out" of future specialists. Constant workload,thehighrequirements for the students, the lack oftimeleads tochronic stress. Therefore,it becomesactual studying ofthe burnout syndrome-a processof gradual loss ofemotional, cognitiveand physical energy, which is manifested in symptomsof emotional and mental exhaustion, physical fatigueand reducesatisfaction fromactivities.

Aim: identification of the burnout syndrome among graduate students of medical university.

Materials and methods. By the method of Boyko V.V., weconducted a surveyof 67students (36 boys and 31 girls) 6th yearat the age of 22 to 24 years. Students were asked to answer "yes" or"no" tothe proposed 84 approval. The results were evaluated by point system of 1 to 10 in accordance witha "key". Total score was calculated for each of 12 symptoms.

Results. According to the studyphase "Tension", which includes the experience of stressful circumstances, dissatisfaction with themselves, "driven into the cage," anxiety and depressionformedin 13.6% of the respondents. Phase"Resistencia" (inadequate emotional selective response, emotional andmoral disorientation,expansion ofsavingsemotions sphere, reduction of professional duties) occurred in31.2% of the students. Phase "Exhaustion" (emotionaldeficiency, emotional distancing, personal distancing(depersonalization), psychosomatic andpsycho-vegetativedisorders)registered at14.1%. The analysis ofthe dataof empirical researchhas shown thatthere is a relationshipbetweenacademic performance(aswe have donegroup) and the presence ofthe burnout syndrome. Also,noteworthy,thatthe study did not reveal any student who does not have symptoms of the burnout syndrome.

Conclusion. Thus, the formationof the burnout syndrome occursbefore theindependent professional activity. Development ofthe emotional burnout syndromedue to the presenceof intensepsychological and emotionalactivities: intensive communicationand perception, processing and interpretation of theinformation obtained andmaking decisions.

Dospehova M.A.

STUDYING OF PATHOLOGICAL PHYSIOGNOMICAL SIGNS AS POSSIBLE PREDICTORS OF RESPIRATORY DISEASES

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of Propedeutics of Internal Medicine N 2 and Nursing Care
Scientific supervisor: Pionova H.N.

Introduction. Ounce of prevention is worth a pound of cure. Question is – how to diagnose disease? As it known, condition of face sings can be some kind of internal organs condition map. Pathological physiognomical signs (PPS) are alterations of structure and form of basic facial features. From pathological physiognomical point semiotics of bronchial asthma is vascular distention in nose and near it, cheek cyanosis; semiotics of bronchitis is cyanosis of ear skin, semiotics of pneumonia is paling of some nose parts; semiotics of emphysema is complex cyanosis of lips, cheeks and forehead, and for respiratory failure it's enlarged pores of nose alae. Actuality: possibility of using PPS for diagnosis of respiratory diseases and their severity is important line in studying of these diseases. Early recognition and possibility of modification of risk factors are top priority of preventing measures of these pathologies.

Aim: study presence of definitive PPS in patients with respiratory diseases. Detect possible link between expressiveness of PPS and severity of respiratory diseases, including COPD.

Matherials and methods: double blind trial, statistic method, map with set of sings and 5-ball scale of measuring of their intensity: 1 ball – presence of 1 sign, 2 balls – 2 slightly expressed signs, 3 balls – 2 intensively expressed signs, 4 balls – 3 signs, 5 balls – 3 or more strong expressed signs.

Results: 30 patients with respiratory diseases (10 men and 20 - women)were examined. Age of patients from 22 to 73 years. PPS definitive for respiratory diseases were found in 28 (93%) patients. Intensity of PPS were 2.7 balls for patients with B group of COPD, 4.5 balls for C group patients of COPD, 4.8-5 balls for D group patients. Additional sentinel pile on cheeks had 100% patients with bronchial asthma. Increasing of cheek muscle tension has 91% patients with pulmonary emphysema. Dilatation of cheek hemocapillarys, facial line between eyebrows and turning down of corners of mouth had 96% patients with pleuritis.

Conclusion: data is attests to the fact that there is a direct relation between intensity of PPS and severity of COPD. PPS are informative for respiratory diseases diagnosis with 93% accuracy.

Elhaj Abeer, Akewusola Nimat Adeola, Doreen Naluzze, Ivanchenko S.

PREVENTION AS THE BASIS OF MEDICINE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department propedeutics to internal medicine № 1, basis of bioethics and biosafety

Introduction: in today's world, people face many different health problems. As a result, we have to look for preventive measures for diseases that come and increase their rate over time. However, the successful result of preventive measures is possible only with the active participation of the population.

Aim: to conduct literary analysisand estimate the commitment of the population to different types of preventive examinations.

Materials and methods: searching the PubMed database of digitized sources for key words "commitment", "preventive examinations" received 71 references to publications that contain these concepts.

Results: it was found that adults and children tend to visit a doctor for regular checkups, even if they feel healthy to carry out screening of diseases, to identify risk factors for the disease, discuss tips for a healthy and balanced lifestyle, stay up to date with vaccinations and boosters, and maintain a good relationship with their doctor. The most common preventive measures are verification hypertension (high blood pressure), hyperglycemia (high blood sugar levels, a risk factor for diabetes), hypercholesterolemia (high blood cholesterol), screening for colon cancer, depression, HIV and other common types of sexually transmitted diseases, such as chlamydia, syphilis, and gonorrhea, mammography (to screen for breast cancer), colorectal cancer screening, a“pap test” (to check for cervical cancer), and screening for osteoporosis. Genetic testing may also be performed to screen for mutations that cause genetic disorders or predispositions to certain diseases, such as breast cancer or ovarian cancer.

Conclusions: using the aforementioned methods of physical examination we can prevent many diseases manifestation and improve the quality of life dramatically. Successful prevention is possible only with the active participation of the population, on the condition that people will be familiar with the basics of medical and hygienic knowledge on these issues.

Feldman D.A., Chervan I.V., Popova T.O.

IMPACT OF LIPIDIC DISBALANCE ON FORMATION AND PROGRESS OF ARTERIAL HYPERTENSION IN PATIENTS OF A CARDIOLOGICAL PROFILE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of clinical pharmacology
Scientific supervisor: ass. prof. Ilchenko I.A.

Introduction. Hyperlipidemia (HL) and arterial hypertension (AH) have common pathological mechanisms, enhance the progress of each other, promote development of cardiovascular complications.

Aim. To investigate impacts of various HL on uprising and progression of AH.

Materials and methods. During the period of 3 years we analyzed interactive peculiar properties of HL and development of AH in cardiological patients, except for acute cardiac events. 112 patients (58 men and 54 women; an average age was 52.7 ± 3.8 years) with HL, and without AH were examined on the stage of inclusion into the investigation. We studied particularities of lipidogram (total cholesterol (TC), lipoproteins of low (LDL), very low (VLDL) and high (HDL) density, triglycerides (TG)), 24-hour monitoring of ABP (24-HABPM) which was conducted every 6 months during the period of 3 years.

Results. Out of the risk factors in the examined patients, except HL, we registered also such ones as: smoking (78 %), abdominal adiposity (80 %), ischemic heart disease (81 %). Depending on the time of AH development we could distinguish the 4 groups as follows: the 1st group (22 patients, 19.6 %) in which AH was developing during the period of 1 year; the 2nd group – in 2 years (31 patient, 27.7 %); the 3rd group – in 3 years (43 patients, 38.4 %), the 4th group – during the period of 3 years AH was not developing (16 patients, 14.3 %). The most frequent cause of AH uprising was raising of TG (the 1st group – 1.98 ± 0.08 mmol/l (67 % of patients); the 2nd group – 1.92 ± 0.09 mmol/l (62 % of patients); the 3rd group – 1.88 ± 0.09 mmol/l (54 % of patients)). For progression of AH an associated raising of TG and LDL was important (correspondingly: the 1st group (65 % of patients) – 1.96 ± 0.08 mmol/l; 4.52 ± 0.09 mmol/l; the 2nd group (57 % of patients) – 1.91 ± 0.08 mmol/l; 4.24 ± 0.10 mmol/l; the 3rd group (48 % of patients) – 1.88 ± 0.07 mmol/l; 4.13 ± 0.08 mmol/l). In the 4th group of patients we fixed an isolated raising of TC (6.82 ± 0.08 mmol/l – 67 % of patients); raising of TC and VLDL (19 % of patients – 6.74 ± 0.09 mmol/l; 0.68 ± 0.06 mmol/l correspondingly); raising of LDL and VLDL (14 % of patients – 4.09 ± 0.0 mmol/l; 0.54 ± 0.08 mmol/l).

Conclusions. HL is one of the risk factors of AH development. For appearance of AH raising of TG has the biggest importance, and for further progression of AH – a combined raising of TG and LDL. An early detection and treatment of HL with mode of life modification, even in the absence of AH, can lessen a distant cardiovascular risk.

Gabisoniya T.N., Minukhina D.V.

PATHOGENETIC VALUE OF VISFATIN AND ADIPONECTIN IN PATIENTS WITH STABLE ANGINA AND OBESITY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №2, clinical immunology and allergology

Introduction. Coronary heart disease (CHD) is the leading health problem in many countries, as characterized by high morbidity and mortality. One of the most common forms

of ischemic heart disease is stable angina. Comorbidity of stable angina and obesity is the trigger mechanism of the pathophysiological cascade development and progression of atherosclerosis.

The purpose of the present research is to optimize the diagnosis and treatment of cardiometabolic disorders on the basis of clarifying the pathogenetic role of adipocytokines -visfatina and adiponectin in the development of atherosclerosis in patients with stable angina and obesity.

Materials and methods: 60 patients with stable angina. All the patients were divided into 2 groups: patients with stable angina with concomitant obesity (n = 35) and patients with stable angina without obesity (n = 25). The control group consisted of 10 healthy individuals.

Expected results: the study of the dynamics of exchange adipokinovogo visfatin level reached 30,1 ± 1,2 ng / l, and adiponectin decreased to 5,17 ± 0,15 ng / l , indicating that hipoadyponektynemiya and hipervisfatynemiya associated with the development of obesity in patients with stable angina. Given the above, it can be assumed that adypokin' s dysfunction exchange against the backdrop of increased body weight contributes to the development and progression of atherosclerosis in patients with stable angina by exhaustion antiatherogenic opportunities of adiponectin and activation metabolic disorders by visfatyn.

Conclusions: Thus, the study of pathogenic importance visfatin and adiponectin in patients with stable angina and obesity can be used as a predictor of the development and progression of stable angina.

Garmash P., Garmash N., Bolokadze E.

COPD WITH SIMULTANEOUS RENAL AFFECTION

Kharkiv National Medical University, Kharkiv, Ukraine

Introduction. In contemporary society, chronic pulmonary diseases are included in a group of leading diseases at the level of hypertension, ischemic heart disease, diabetes mellitus: over 30% for all other forms of human pathology. The World Health Organization refers COPD to the disease having a high social burden. According to the prognosis for the period to 2020, made by the experts from the WHO, COPD will become one of the leading causes of death. It is known that kidney is one of the mains organs involved in maintaining the homeostasis of the organism.

Materials and methods. In this clinical study, we have 27 patients who were hospitalized in the Pulmonology Department. They had the chronic obstructive pulmonary disease (COPD) of the C, D group and pulmonary insufficiency (PI) of the II-nd and III-rd degrees. There were 20 (74%) males and 7 (26%) females. The average age of the patients was 53 ± 3,7 years (men – 54 ± 2,6 and women – 45 ± 3,7). The coronary heart disease and hypertension were the most frequent comorbidities. All patients were divided into 3 groups: I group – patients, diagnosed COPD, C group, PI – the II-nd degree, totally 7 (24%) patients, including 4 men and 3 women. II group – patients with COPD, D group, PI – the II-nd degree, all together 12 (50%) patients, including 10 men and 2 women. III group – patients with COPD, D group, PI – the III-rd degree, all together 8 (26%) patients, including 6 men and 2 women.

Results. While examining the functions of external respiration (FER) – in patients of the group I, it was found that respiratory volumes (RV) in men make on average (74 ± 3,7), and in women – (76 ± 2,9); FEV_1 in men is (65 ± 4,0), in women – (70 ± 1,3). At the same time in groups II and III, when examining the FER, it was found the significant

deterioration of these indices – so RV in men make on average 43 (± 2,6), in women – (57 ± 1,4), and FEV1 in men is (38 ± 2,2), in women – (49 ± 2,3). In the study of MAU in patients from the group I, the test was positive in 4 cases – the MAU level was 0,03 g/L, and the level of creatinine in the urine was 2,2 mmol/L. The patients of the II-nd and the III-rd groups had the significantly higher MAU level – from 0,15 to 0,3 g/L, the level of creatinine – 17,7-26,5 mmol/L in cases. Proteinuria was found only in 4 men from the group III and was on average 0,5 g/L.

Conclusions. The role of kidneys in the regulation of acid-base balance of the blood in patients with COPD is the following: the first compensatory mechanism of the tubular apparatus is the increase of titrating acids, and at later stages the augmentation of ammoniogenesis occurs.

Gerasimchuk U. S., Lahno O.V.

EXPERIENCE IN TREATING PATIENTS WITH IRRITABLE BOWEL SYNDROME

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine 3

Introduction. Irritable bowel syndrome (IBS) with symptoms of dysbiosis can be observed in 70-80% of cases of coronary heart disease, diseases of the hepatobiliary system, endocrine disorders, etc. As a rule, combined with symptoms of IBS asthenic syndrome.

Aim – to evaluate the efficiency of the anxiolytic drug in the complex therapy of IBS with concomitant asthenic syndrome and to investigate the possibility of its combined use with drugs aimed at correcting dysbiosis.

Materials and methods. Carried out a randomized, examination and treatment of 19 patients with IBS and women asthenic syndrome (age 38 to 59 years, diagnosed with primary pathology: from 7 - Coronary heart disease (CHD), 7 - hypertension, in 2 - diffuse euthyroid goiter, in 2 - cholelithiasis, from 1 - chronic pyelonephritis). The diagnosis of the underlying disease and irritable bowel syndrome confirmed the necessary clinical, instrumental and laboratory methods. Patients randomly divided into 2 groups. 10 patients of the 1st group, in addition to treating the underlying disease anxiolytic give 10 mg three times a day, 9 patients in group 2 received the same dose anxiolytic combined with lactulose 20 ml, 2 times per day. Analysis of the results was performed after 10 days of treatment on a 20-point scale assessment of asthenic syndrome and IBS. The results of the quantitative analysis of statistically processed.

Results. Before treatment the mean activity coefficient of asthenic syndrome was 12,4 ± 2,7 points. 10 days after treatment in group 1, this ratio decreased to 7,2 ± 1,9 points ($p < 0.05$) and in the 2 nd - to 6,9 ± 2,2 points ($p < 0, 05$). And in the 1st and the 2nd groups the majority of patients observed a decrease in the severity of discomfort or pain in the abdomen. At the same time, the normalization of stool and reduced intestinal dyspepsia symptoms often observed in the 2nd group (7 out of 9), compared with 1-D (3 of 10). Side effects of drugs during the 10-day treatment were absent.

Conclusions. Anxiolytic can be successfully applied in therapeutic and gastroenterological practice not only for correction of asthenic syndrome, and IBS. Without any fear of side effects and anxiolytic be used in combination with drugs with a prebiotic effect.

Grevtsova H.E, Kovel I.V., Suprun S.A.

EFFICACY AND SAFETY OF PROBIOTICS AS ADJUVANT AGENTS FOR TREATMENT OF HELICOBACTER PYLORI INFECTION

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of Internal Medicine №1

Introduction. Anti-Helicobacter pylori therapy is the treatment designed to eradicate H. pylori. Indications for anti-helicobacter pylori treatment are defined by the Maastricht consensus. However, side effects as a result of antibiotic therapy (diarrhea, nausea, vomiting, flatulence, taste disturbance) are observed in 18.2% of cases and often lead to premature discontinuation of antibacterial drugs. The result is unsuccessful eradication of H. pylori.

The aim of this investigation was to study the efficacy of probiotics during therapy of H. pylori, determine their ability to increase the eradication of H.pylori and reduce the side effects of the treatment.

Materials and methods. Thirty one patients aged 18 to 60 years with uncomplicated verified duodenal peptic ulcer associated with H. pylori in the acute stage were examined. Among them there were 16 (51.61%) males and 15 (48.39%) females.

Endoscopic survey of the upper gastrointestinal tract, as well as histological, biochemical methods, ELISA kit for detecting H.pylori were used to verify diagnosis. All patients were randomly divided into two groups. The first basic group (21 individuals) included patients who received standard seven-day anti-Helicobacter pylori therapy (Pantoprazole 40 mg twice daily, Amoxicillin 1000 mg twice daily; Clarithromycin 500 mg twice daily), 1 probiotic (Symbiter Acidophilus 1 capsule orally daily for 14 days). The second control group (10 individuals) consisted of patients who received only standard seven-day anti-Helicobacter pylori therapy (Pantoprazole 40 mg twice daily, Amoxicillin 1000 mg twice daily; Clarithromycin 500 mg twice daily). Both groups in their composition and clinical characteristics were uniform and had no considerable difference.

Results. After treatment, the pain was relieved in 95.2% of patients in the basic group and 90% of the control group. Dyspeptic syndrome was observed in 80.95% of patients of the basic group and 90% of the control group, but against the background of probiotics it was removed faster (on the third day from the beginning of the treatment in 85.7% of patients of the basic group and in 40% of the control group who had have those symptoms before treatment). A visual evaluation of the control endoscopic picture on the 30th day from the beginning of the treatment showed that all patients in both groups had scarring defects of ulcers. The eradication control was performed on the 30th day from the beginning of the treatment using CITO-TEST H. Pylori Ag, histological method and ELISA. Eradication was achieved in 95.23% of patients of the basic group; whereas in control group this index was 80%. Our data were consistent with the results of studies of the efficacy of probiotics during therapy of H. pylori obtained earlier.

Conclusion. There is an increase in efficacy of Helicobacter pylori eradication therapy and decrease in side effects (dyspepsia) while using probiotics and the standard therapy of H. pylori.

Halo Azad Khidwrbagi, Pasiieshvili T.M.

USING OF ELECTRICAL NERVE STIMULATION IN PATIENT WITH DIABETIC NEUROPATHY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of general practice – family medicine and internal diseases

Introduction: Neuropathy in most cases occurs as a manifestation of other pathological conditions. Currently, there are about 400 diseases, one of the signs of which is the defeat of nerve fibers. Most of them are quite rare and for many clinicians basic pathology which is accompanied by the development of neuropathy is a diabetes mellitus. In developed countries, it takes one of the first places on the incidence of neuropathy (30%). According to various studies, diabetic neuropathy is detected in 10-100% of patients with diabetes.One of the main clinical manifestations of neuropathy is a chronic pain syndrome that negatively affects the quality life of the patient.

Aim: To evaluate the use of percutaneous electrical nerve stimulation (PENS) in the management of patients with painful diabetic peripheral neuropathy.

Material and methods: A total of 50 adult patients with type 2 diabetes and peripheral neuropathic pain of more than 6 months duration involving the lower extremities were randomly assigned to receive active PENS (needles with electrical stimulation at an alternating frequency of 15 and 30 Hz) and sham (needles only) treatments for 3 weeks. Each series of treatments was administered for 30 min three times a week according to a standardized protocol. After a 1-week washout period, all patients were subsequently switched to the other modality. A 10-cm visual analog scale (VAS) was used to assess pain, physical activity, and quality of sleep before each session. The changes in VAS scores and daily requirements for oral analgesic medication were determined during each 3-week treatment period. Patients completed the MOS 36-Item Short-Form Health Survey (SF-36), the Beck Depression Inventory (BDI), and the Profile of Mood States (POMS) before and after completion of each treatment modality. At the end of the crossover study, a patient preference questionnaire was used to compare the effectiveness of the two modalities.

Results and discussion: Compared with the pain VAS scores before active (6.2 +/- 1.0) and sham (6.4 +/- 0.9) treatments, pain scores after treatment were reduced to 2.5 +/- 0.8 and 6.3 +/- 1.1, respectively. With active PENS treatment, the VAS activity and sleep scores were significantly improved from 5.2 +/- 1.0 and 5.8 +/- 1.3 to 7.9 +/- 1.0 and 8.3 +/- 0.7, respectively. The VAS scores for pain, activity, and sleep were unchanged from baseline values after the sham treatments. Patients' daily oral nonopioid analgesic requirements decreased by 49 and 14% after active and sham PENS treatments, respectively. The post-treatment physical and mental components of the SF-36, the BDI, and the POMS all showed a significantly greater improvement with active versus sham treatments. Active PENS treatment improved the neuropathic pain symptoms in all patients.

Conclusions: Percutaneous electrical nerve stimulation is a useful nonpharmacological therapeutic modality for treating diabetic neuropathic pain. In addition to decreasing extremity pain, PENS therapy improved physical activity, sense of well-being, and quality of sleep while reducing the need for oral nonopioid analgesic medication.

Iermak A.S.

COPEPTIN'S DYNAMICS AND ANTHROPOMETRIC PARAMETERS IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND OBESITY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №2, clinical immunology and allergology

Introduction. Ischemic heart disease (IHD) is one of the most important problems of modern cardiology. Destabilization of IHD's course can finish by development of acute myocardial infarction (AMI). Comorbid pathology as a combination of AMI and obesity becomes rampant in recent years.

Aim: to estimate copeptin's dynamics, the presence and nature of the links between copeptin and anthropometric measurements (volume neck (VN), waist circumference (WC), waist circumference/hips circumference (WC/ HC)).

Materials and methods. We examined 105 patients with AMI, among which 75 persons with obesity and 30 patients with normal body weight. Obesity I stage diagnosed in 25 people, II stage was found in 25 people. Body mass index (BMI) was determined by the formula: BMI (kg/m^2) = body weight/$(height)^2$. Copeptin determined by ELISA using a reagent kit «HumanCopeptin» (BiologicalTechnology, Shanghai).

Results. Analysis of copeptin's level showed that in patients with obesity I stage this marker was higher compared to patients without obesity at 33,8%, and in patients with obesity II stage - at 62,4%; in patients with obesity II stage the concentration of this marker was higher at 43,2% compared with the obesity I stage. With regard to anthropometric measurements in patients with obesity I stage and II stage compared to patients without obesity VN's, WC's, WC/ HC's levels were above 18% and 33%, 21% and 30%, 7% and 14% respectively. We found direct links between BMI and copeptin r = 0,61, WC and copeptin r = 0,83, VN and copeptin r = 0,86 in patients with AMI and obesity. According to multivariate regression analysis, the most valid factors relatively copeptin's level were VN (β = 0,79) and BMI (β = 0,53). Predictors forecast of copeptin with the corresponding coefficients are given in the following formula:

x = 120,1973 + 0,2175 x NC, where x - copeptin, mmol/l.

Conclusions. An increasing obesity's stage was associated with an increasing of the copeptin's level and antrometric measurements. Along with the definition of BMI it is advisable to determine the VN's level as a factor that has a high predictive value relatively copeptin's level. Using the proposed regression equation involving VN allows to predict the copeptin's level that attracts the attention of researchers due to the possibility of its using in practice in community health institutions of all levels.

Ilyukha S., Yeryomenko G., Taranenko A.

A RETROSPECTIVE ANALYSIS OFCALLS TO EMERGENCY MEDICALCARE TO PATIENTS WITHALLERGY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine № 2 and nursing

Introduction: Complicationsof allergic diseasesareone of the leadinghealth problems.Today we havea trend tomore frequent casesof emergency conditionsin allergology.

Aim: to study the statisticsofcalls toemergency care to patients with allergic complications in Kharkov. And to find out if there is any economic gain from preventative treatment of allergy.

Materials and methods: According to the ambulance service for 2014 reported a total of 7906 calls for patients with allergy, representing approximately 7% of the total number of callsper year.The number of callstopatients withbronchial asthmawas6680, acuteurticaria - 539, anaphylactic shock - 59, angioedema-228unidentifiedallergic reaction-400.1156patients were hospitalized in various clinics.

One visit of ambulance spent from the state budget about 400UAH, and the essential drugs forthe urgent care for patients with allergy costs18UAH. The urgent care for patients with allergy costs about 1000000 UAH for the year. And preventative treatment of patient with allergy costs 700000 thousands UAH per year.

Results: So that, we found outthatstatecharge on the providingof urgentcare costs more than treatment and preventionof allergic diseases. Economically, it is better to preventative treatment than urgent care for patients with allergy.

Isaac Adaora

NEW MODERNIZED TREATMENT OF RHEUMATOID ARTHRITIS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №3

Introduction. The new modernized treatment of rheumatoid arthritis is known as biological therapy or biologics. They are genetically engineered proteins derived from human genes. They are designed to inhibit specific components of the immune system that play pivotal roles in fueling inflammation, which is a central feature of rheumatoid arthritis.

Results. Biologics are used to treat moderate to severe rheumatoid arthritis that has not responded adequately to other treatments. They differ significantly from traditional drugs used to treat rheumatoid arthritis in that they target specific components of the immune system instead of broadly affecting many areas of the immune system. Biologics may be used alone but are commonly given along with other rheumatoid arthritis medications.

Biologics have been shown to help slow progression of pivotal when all other treatments have failed to do so. Aggressive rheumatoid arthritis treatment is known to help prevent long-term disability from rheumatoid arthritis.Biologics include: tocilizumab, adalimubab, certolizumab, etanercept, golimumab, infliximab, rituximab. The most common side effect seen with biologics is pain and rash at the injection site.

Conclusion. In conclusion from recent researches biological therapy has proven to be very effective so far with minimal side effects.

Istomina O.V.

ROLE OF VEGF IN DEVELOPMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN COMBINATION WITH HYPERTENSION

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal and occupational diseases

Introduction. Nowadays lot of attention is paid to issue of comorbid disease. On the basis of progressive humanity development, it is mentioned a decline of ecological situation, reduction of human motor activity, increasing of bad habits, poor nutrition and organism

senilism. All these factors are lead to formation of several disease in humans at the same time. The prevalence of comorbid pathology averages 76,6%, 82% - for women, 72% - for men. One of the most common comorbid conditions is a chronic obstructive pulmonary disease (COPD) in combination with hypertension. According to the data WHO (newsletter 310, 2014) COPD and hypertension are included to the list of ten leading death causes in the world.

Results. Hypertension is found in COPD patients with varying frequency (from 6,8% to 76,3%) with average 34,3%. On this stage endothelial dysfunction can be considered as one of the most important independents risk factors for diabetes, atherosclerosis, COPD, hypertension, sepsis and growth of malignant neoplasms. One of the main endothelium functions is vascular growth regulations. One of the angiogenesis markers is vascular endothelial growth factor (VEGF). Among the angiogenic factors family, VEGF is considered to be a major one while neovascularization. Proteins which belong to the VEGF family group are glycoproteins that stimulate the formations of new blood and lymph vessels and also increase vascular permeability. One of the main factors for comobid pathology development is hypoxia and cells structure transformation under the mechanical factors influence that initiates VEGF production. By evaluation of GOLD 2014 revision COPD is characterized by a bronchial tubes affect (obstructive bronchiolitis) so as parenchymal distruction (emphysema). There are an extremely alveolar septa thinning and significantly reducing of their vascularization while progressive capillary endothelium loss and alveolar epithelium that leads to the substitution of lung tissue by the fibrous. Hypoxia promotes HIF-1a stabilization (hypoxia inducible factor-1a) which rapidly degraded at a sufficient oxygen concentration. HIF-1a and HIF-1βb is combined under hypoxia condition. Received complex is binded to a specific sensitive to the hypoxia region of the VEGF genes and increase its expression. Isolated mechanical stretching in a cell culture can contribute to VEGF realizing. Physical activity leading to the increasing of blood flow increasing shear stress and endothelial cells transformation followed by not only by increased VEGF level but also by increasing VEGFRs amount. A growth of shear stress and activation of the renin-angiotensin-aldosterone system while hypertension is also associated with increased VEGF content by mechanical influence on the vascular endothelial cells and angiotensin 2 interaction with angiotensin first type receptors which leads to the expression HIF-1a growth and increasing of VEGF synthesis.

Conclusion. Thus VEGF and its receptors can be involved in many processes while COPD and hypertension, such as: airway walls remodeling, endothelial cell apoptosis and vascular remodeling.

Kadykova O.I., Shaparenko O.V.

LEVEL OF sCD40LIN PATIENTS WITH ARTERIAL HYPERTENSION AND TYPE 2 DIABETES MELLITUS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №2 and clinical immunology and allergology

Introduction. The role of sCD40L is considered as a marker of risk of arterial hypertension. There is still question for discussion about the importance of sCD40L in formation of the insulin resistance in patient with arterial hypertension, diabetes mellitus type 2. To identify the impact on sCD40L level of cardiovascular risk, taking into account the degree of insulin resistance for hypertensive patients having concomitant diabetes

mellitus type 2.

Aim. The purpose is to summarize the available knowledge on the insulin resistance, arterial hypertension for patients with diabetes mellitus type 2.

Materials and methods. It investigated 60 patients having hypertension combined with diabetes mellitus type 2. During the study they will be used some subjective (complaints, history of disease and life) and objective methods (examination, palpation, percussion, auscultation, blood pressure). cClinical and laboratory research included determination of the following indicators: indicators for carbohydrate metabolism; indicators showing the lipid profile; ELISA determined: sCD40L; research implementation instruments like a electrocardiography, echocardiography and daily monitoring of blood pressure. All patients treated with standard therapy methods.

Conclusion. The level of sCD40L increased in patients with type 2 diabetes mellitus combined with arterial hypertension. sCD40L is the greatest potentiation of insulin resistance is type 2 diabetes mellitus and arterial hypertension.

Kadykova O. I., Shaparenko O.V.

INTERACTION BETWEEN INSULIN RESISTANCE DEGREE AND LEVEL OF ARTERIAL HYPERTENSION IN PATIENT WITH DIABETES MELLITUS TYPE 2

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №2 and clinical immunology and allergology

Introduction. Arterial hypertension is one of the major problems of modern cardiology in all advanced countries of the world. The diabetes mellitus type 2 is a marker of risk of arterial hypertension. The new modern represented concepts of interaction between arterial hypertension and insulin resistance degree in patient with diabetes mellitus type 2 are described. The role of sCD40L is considered as a marker of risk of arterial hypertension. There is still question for discussion about the importance of hormones of adipose tissue in formation of the insulin resistance in patient with arterial hypertension and diabetes mellitus type 2.

The purpose is to summarize the available knowledge on the insulin resistance, arterial hypertension for patients with diabetes mellitus type 2.

Results. Examination of insulin sensitizers and antagonists imbalance nature and assessment of the compensatory mechanisms acting at different stages of insulin resistance in patients with arterial hypertension and diabetes mellitus type 2 were done. The new study approach will include the research of diastolic dysfunction for hypertensive patients, accompanied by type 2 diabetes, where it will be taken into account the degree of insulin resistance. The research will also include a new data in order to evaluate the cardiovascular risk using consideration the dynamics of sCD40L level for hypertensive patients having concomitant diabetes mellitus type 2. The research will be based on the comprehensive assessment of the neurohormonal indicators dynamics against standard treatment of patients having hypertension accompanied by diabetes mellitus type 2 and using ACE inhibitors (ramipril).

Kalinichenko A.,Tytova G.

NITRIC OXIDE METABOLISM IN PATIENTS WITH POSTINFARCTION CARDIOSCLEROSISAND OBESITY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №2 and clinical immunology and allergology

Introduction. Cardiovascular disease takes one of the first places in the structure of morbidity and mortality in most countries. The cause of chronic heart failure is coronary heart disease (CHD), which occupies a dominant position among cardiovascular diseases and myocardial infarction. The combination of coronary heart disease and obesity increases the risk of cardiovascular complications.

Aim to establish the role of nitric oxide in the progression of endothelial dysfunction in patients with postinfarction cardiosclerosis and obesity.

Materials and methods. The study included 60 patients with postinfarction cardiosclerosis who were treated at the Kharkiv City Hospital № 27. Determination of nitrite (NO2-) in serum was measured by diazoreaktsiyi of reagent Griss followed by kolorimetryc estimation of azo compounds at analyzer Labline - 80 (Austria). Statistical analysis of data was carried out by determining descriptive indicators: median (Mediana) and the mean value (Mean).

Results. In patients with postinfarction cardiosclerosis nitrite level was 7,66 ± 0,3 mmol / l, and in patients with obesity and postinfarction cardiosclerosis - 9,66 ± 0,2 mmol / l ($p < 0.05$); nitrate levels - 12,91 ± 1,6 mmol / l in patients with postinfarction cardiosclerosis and obesity was 15,42 ± 0,8mkmol / l ($p < 0.05$), respectively.

Conclusions. The metabolism of nitric oxide plays a leading role in endothelial dysfunction, which manifests itself in the activation of vasodilatory mechanisms, depending on the presence of obesity and is an integral part of the pathogenesis in patients with postinfarction cardiosclerosis and obesity.

Koteliukh M.Yu.

THE ROLE OF MATRIX METALLOPROTEINASES AND THEIR INHIBITORS IN THE DEVELOPMENT OF ACUTE MYOCARDIAL INFARCTION

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №2 and clinical immunology and allergology

Introduction. Today, the cardiovascular diseases are the actual problem worldwide. It is known that matrix metalloproteinases (MMP) and tissue inhibitors of matrix metalloproteinases (TIMP) are considered as prognostic markers of the heart diseases. Therefore, the study of MMP and TIMP in patients with acute myocardial infarction (AMI) represent scientific interest.

Aim: analyze the role matrix metalloproteinases and their inhibitorsin the development of acute myocardial infarction.

Material and methods. For study matrix metalloproteinases and inhibitors we studied statistics, which were obtained Cardiology department medical university, Warsaw, Poland; Molecular and vascular biology, Center for transgene technology and Gene therapy, university of Leuven, Belgium; Experimental and molecular cardiology/CARIM, university of Maastricht, Netherlands. The MMP and TIMP were studying using immunoassay methods.

Results. The study showed that the level MMP-2, MMP-9, MMp-13 was increased in comparison with the control group. The content of TIMP-1, TIMP-2, TIMP-4 was decreased in the all groups compared with the control group. After reaching their peak within the first 7 days post-MI, both MMP-9 and MMP-2 activity decreased, but still remains significantly elevated between 7 and 14 days post-AMI. The reliability of the results of everyone indicators was $p < 0.05$.

Conclusion. Hence, studies have shown that there is elevated of level MMP-2, MMP-9, MMP-13 in patients of acute myocardial infarction. In the future we planned to study MMP-13 and TIMP-4 in patients with acute myocardial infarction with the presence and absence of type 2 diabetes.

Kovalenko A.N.

CLINICAL-AND-MORPHOLOGICAL CHARACTERISTICS OF CHRONIC GASTRITIS IN THE PATIRNTS OF DIFFERENT AGE GROUPS WITH H. PYLORI INFECTION

SE «Railway Hospital of the Odessa Railroad», Odessa, Ukraine

Introduction. The term "gastritis" was first used in 1728 by the German physician Georg Ernst Stahl to describe any (histologically confirmed) inflammation of the gastric mucosa. In the past many considered gastritis a useful histological finding, but not a disease. This all changed with the discovery of *Helicobacter pylori* by Robin Warren and Barry Marshall in 1982 leading to the identification, description and classification of a multitude of different gastritis. Worldwide, the epidemiology of gastritis overlaps that of *Helicobacter pylori* (*H. pylori*) infection, which affects approximately 50% of the world's population. The incidence of gastritis around the world consistently parallels people's socio-economic status.

Aim: to analyse clinical and-morphological features of chronic gastritis in the patients with *H. pylori*.

Results. The chronic gastritis are classified on the basis of their underlying cause (e.g, *H pylori*, bile reflux, nonsteroidal anti-inflammatory drugs [NSAIDs], autoimmunity or allergic response) and histopathologic pattern, which may suggest the cause and the likely clinical course (e.g, *H pylori* –associated multifocal atrophic gastritis). Other classifications are based on the endoscopic appearance of the gastric mucosa (e.g, varioliform gastritis). Assessing gastritis involves a clinical examination, serology (pepsinogens and antibodies against infectious agents and/or auto-antigens), endoscopy (applying standardized biopsy protocols), and histology to distinguish between nonatrophic and atrophic gastritis. It is important to distinguish between gastritis and gastropathy (in which there is cell damage and regeneration, but minimal inflammation), because they are frequently included in the differential diagnosis of chronic gastritis. Chemical or reactive gastritis is caused by injury to the gastric mucosa resulting from reflux of bile and pancreatic secretions into the stomach, but it can also be caused by exogenous substances, including NSAIDs, acetylsalicylic acid, chemotherapeutic agents, and alcohol. These chemicals cause epithelial damage, erosions, and ulcers that are followed by regenerative hyperplasia detectable as foveolar hyperplasia, and damage to capillaries, with mucosal edema, hemorrhage, and increased smooth muscle in the lamina propria with minimal or no inflammation. Because there is minimal or no inflammation in these chemical-caused lesions, gastropathy or chemical gastropathy is a more appropriate description than chemical or reactive gastritis, as proposed

by the updated Sydney classification of gastritis. It is important to keep in mind that mixed forms of gastropathy and other types of gastritis, especially *H pylori* gastritis, may coexist.

There is no universally accepted classification system (including the Sydney system and Olga staging system) that provides an entirely satisfactory description of all of the gastritis and gastropathies. However, an etiologic classification at least provides a direct target toward which therapy can be directed, and for this reason, such a classification is used in this article. In many instances, chronic gastritis is a relatively minor manifestation of diseases that predominantly manifest in other organs or manifest systemically (e.g, gastritis in individuals who are immunosuppressed). *H pylori* gastritis is a primary infection of the stomach and is the most frequent cause of chronic gastritis, infecting 50% of the global population. Cases of histologically documented chronic gastritis are diagnosed as chronic gastritis of undetermined etiology or gastritis of undetermined type when none of the findings reflect any of the described patterns of gastritis and a specific cause cannot be identified. We used special methods of stomach acid evalution, gastroduodenoscopy, cytological, histological, immunohistochemical and studies of the stomach mucosa biopsy. The results obtained showed that older people were more likely than middle-aged patients had no regeneration of epithelium, while their bottom revealed a weak degree of regeneration. A significant level of regeneration of bottom of the epithelium is not fixed at one. For the middle-aged persons the weak level of stromal fibrosis and moderater degree of fibrosis, both in the body and antrum were rather frequent. In infected older patients weak degree of fibrosis in the antrum was observed rarely, but the moderate one was more frequent than in the non - infected patients. Fibrosis in the body of the stomach was expressed more frequently in elderly patients with *H. pylori* infection than in uninfected persons. The ultrastructural data of this infection is characterized by pronounced plasmacytoid infiltration, activation of plasma cells, renewal of epithelial cells, the destruction of apical membrane of parietal cells, vascular endothelium and activator.

Conclusion: When choosing a treatment strategy an independent negative effect of age, duodeno-gastral reflux and either presence or absence of *H. pylori* should be considered.

Kravchun P. P., Kadykova O. I.

THE PATHOGENETIC ROLE OF DISORDERS OF CARBOHYDRATE METABOLISM IN THE PROGRESSION OF CHRONIC HEART FAILURE IN PATIENTS WITH POSTINFARCTION CARDIOSCLEROSIS, TYPE 2 DIABETES AND OBESITY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №2 and clinical immunology and allergology

Introduction. The chronic heart failure problem is magnified in individuals with diabetes and obesity, in whom incidence rates are two to five times greater than those in the general population.

Aim. The aim of our study was determined the pathogenic role of disorders of carbohydrate metabolism in the progression of chronic heart failure in patients with postinfarction cardiosclerosis, type 2 diabetes and obesity.

Materials and methods. There were examined 295 patients, which were divided into four groups. The first group included patients with postinfarction cardiosclerosis and type 2 diabetes (n=68), the second – patients with postinfarction cardiosclerosis and obesity (n=76), the third – patients with postinfarction cardiosclerosis, type 2 diabetes and obesity

(n=71) the fourth – patients with postinfarction cardiosclerosis (n=80) and control group consisted of practically healthy people (n=35). All patients were determined following carbohydrate metabolism. Determination of glycated hemoglobin content (HbA_{1c}) in whole blood was performed by photometric method according to response to thiobarbituric acid with the use of commercial test system developed by «Reagent» company (Ukraine) in conformity with the enclosed instruction. The level of glucose was determined by glucose oxidation method in capillary blood, taken in the fasted state. The concentration of insulin were determined in the serum of patients by ELISA («Monobind», USA). There were definition insulin resistance by formula: the concentration of insulin × the level of glucose in the blood /22,5. The statistical processing of results was performed with the help of software package «Statistika» (StaSoftInc, USA). The values calculated: the average (M), dispersion, standard deviation, the median (m), accuracy and level of significance (p). The standard programme of correlation analysis with calculation of average arithmetic means was used: $M \pm m$, σ, and level of accuracy (p). Pearson correlation coefficient was applied to evaluate the interaction stage between the samples (r).

Results. The level of glucose, insulin, HbA_{1s} and insulin resistance were significantly increases in patients with postinfarction cardiosclerosis, type 2 diabetes and obesity. The study showed that in patients with postinfarction cardiosclerosis, type 2 diabetes and obesity the disorders of carbohydrate metabolism were associated with functional class of chronic heart failure.

Conclusions. The pathogenic role of disorders of carbohydrate metabolism in patients with postinfarction cardiosclerosis, type 2 diabetes and obesity was determined in the progression of chronic heart failure.

Lapshyna K.

RELEVANCE OF THE PROINFLAMMATORY BIOMARKERS USAGE IN NONALCOHOLIC FATTY LIVER DISEASE PATIENTS WITH HYPERTENSION

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of Internal Medicine №1

Introduction. Recently nonalcoholic fatty liver disease (NAFLD) received much amount of attention that is primarily due the prevalence of the disease - 10-30% of the general population in developed countries and developing countries. Hypertension is one of the most common diseases in the world - and affects 30-35% of the adult population. Recently, much attention is paid to the combination of these two pathologies. In several works NAFLD connection with hypertension was shown, but this pathology alters the prognosis for these patients, both in terms of the progression of liver failure, and in terms of a significant increase in the frequency of complications of cardiovascular disease.

Results. NAFLD is the most common cause of abnormal results of liver function in adults and children. The histological spectrum of NAFLD covers steatosis, nonalcoholic steatohepatitis (NASH), fibrosis and cirrhosis. Simple steatosis in most cases has a benign clinical prognosis, but NASH is characterized by a progressive course that in 10-15% of cases leads to cirrhosis.

Liver biopsy is the only reliable way of diagnosing and staging NASH but its invasive nature limits its use. Ultrasonography, computed tomography and magnetic resonance imaging are widely used to visualize NAFLD. These are non-invasive methods,

but none of them have sufficient sensitivity and specificity to distinguish NASH with steatosis. Cytokeratin 18 (CK18) has been extensively studied as a biomarker off NASH in adults and been shown to be able to distinguish steatohepatitis from hepatic steatosis. Cross-sectional studies have associated serum levels of the CK18 fragment with histologic features of liver in individuals with NAFLD. A two-step approach using CK-18 and fibroblast growth factor 21 further improves the accuracy in diagnosing NASH.

Conclusion. So today, the study of various aspects of the proinflammatory biomarkers usage for the NASH diagnosis and definition of further treatment strategy in NAFLD patients with hypertension is very relevant and appropriate.

Lebedynets P.V., Bohdanov A.N.

SELECTIVE INTRA-ARTERIAL THROMBOLYSIS FOR ISCHEMIC STROKE PATIENTS

V. N. Karazin Kharkiv National University, Kharkiv, Ukraine
Department of psychiatry, narcology, neurology and medical psychology
Research supervisor: assoc. prof. Lebedynets D.V.

Introduction. New approaches to ischemic stroke (IS) treatment include the usage of brain reperfusion methods within the first hours of the beginning of a disease. The European Stroke Organization (ESO) recommends to practice the systemic intravenous thrombolytic therapy with recombinant tissue plasminogen activator (rt-PA) in the first 4.5 hours of ischemic stroke (IV-tPA) with the use of. However, it is possible to practice the selective intra-arterial thrombolysis (IAT) upon any contraindications to IV-tPA or after the 4.5 hours.

Aim. The purpose is to identify the number of advantages and complications of IAT as IS treatment method upon any contraindications to IV-tPA or for patients who have been taken to the hospital after 4.5 hours from the first symptoms of IS.

Materials and methods. 5 cases of IAT have been analyzed on patients with the verified diagnosis of IS. The severity of patients was graded by the National Institutes of Health Stroke Scale (NIHSS). All patients had severe stroke in range of 15 to 25 on NIHSS. The diagnosis was confirmed based on CT and dopplerography of precerbal and cerebral vessels. Selective cerebral angiography was perforformed and acute thrombotic occlusion of great vessel (internal carotid artery or M1-segment of middle cerebral artery) has been revealed. The bolus infusion of 2-3 ml of rt-PA has been made into occluded vessel, following the infusion of 20 ml of rt-PA if complete recanalization was not seen. The IS outcome was evaluated based on CT and NIHSS data within the 24 hours after infusion and on NIHSS and modified Rankin Scale (mRS) on the 30^{th} day.

Results. 4 cases showed the complete recanalization of occluded vessel. 3 cases showed the improvement to 5-7 points on NIHSS within the 24 hours from the infusion, 1 remained the same score, and 1 worsened to 27 points. Based on CT data 2 patients had hemorrhagic transformation of IS, one had PH2 by ECASS, the second had PH1 by ECASS. On 30^{th} day after IAT the mRS showed 1 points in one patient and 2 points in two patients. The 30-days mortality was 2 patients.

Conclusions. The IAT in IS has a number of advantages and disadvantages. Due to the fact, that patients underwent IAT had initially a severe stroke (more than 15 points on NHISS), the achieved complete vessel recanalization in 80% of patients and the good outcome in 60% of patients based on mRS data on 30^{th} day allow us to use this treatment

method more widely. However, the further analysis of hemorrhagic transformation of 40% of patients and fatal outcome in 40% of cases is strongly recommended in order to minimize such cases in the future.

Lopina N.

NONINVASIVE INDICATORS OF ARTERIAL STIFFNESSIN PATIENTS WITH CORONARY ARTERY DISEASE AND TYPE 2 DIABETES MELLITUS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine № 3

Introduction. In patients with type 2 diabetes mellitus (T2DM) increased cardiovascular risk. It is still relevant search noninvasive methods for early diagnosis of atherosclerotic vascular lesions and arterial stiffnessin patients with T2DM and coronary artery disease (CAD).

Aim: To assess noninvasive indicators of arterial stiffness (AS) in patientswith coronary artery disease (CAD) and concomitant type 2 diabetes mellitus (T2DM).

Material and methods: We examined 64 patients with CAD (19 males, age 60.5 ± 4.7 years). All patients with CAD were divided into 2 groups: the 1st (n=32) – patients with concomitant T2DM, the 2nd (n=30) - patients without T2DM. Baseline characteristics ofpatients included history of CAD (7.2 ± 2.3 years), T2DM (4.7 ± 0.5 years). The levelof HbA1c was less than 7.5%. The control group includes 20 healthy volunters. In all patients were determined the levels of total cholesterol (TC), low-density lipoprotein cholesterol (LDL), very LDL (VLDL), triglycerides (TG), high-density lipoprotein cholesterol (HDL) by enzymatic colorymetric method. Also we conductedcoronaryangiography, ultrasound of the carotid arterieswith determination of intima-media thickness (IMT) of the common carotidartery(CCA), AS was measured as carotid-femoral pulse wave velocity (cf-PWV) on the rheovasography, ankle-brachial index (ABI) was evaluatedby the ratio ofthe systolicblood pressureon the legand armin all patients.

Results: All patients with CAD had significantly higher levels of TC, LDL, VLDL and significantly lower levels of HDL as compare with control group and there were no significant differences between diabetic patients and patients without T2DM. The study found that among patients with T2DM dominated combined dyslipidemia, which was manifested in an additional increase of TG level ($p<0.05$). According tocoronaryangiographyamong 1st group of patients in 75% cases registeredatherosclerotic lesion of two or more coronary arteries (CA), in the 2nd group at 70% casesregistered atherosclerotic lesion of one CA ($p<0.05$).IMT-CCA values were significantly higher in the 1st group of patients compared with the 2nd group (1.38±0.12 vs 1.12±0.11, $p<0.05$). cf-PWV and ABI valuealso were significantly higher in the 1st group 9.31 ± 1.54 vs 7.58 ± 0.97 m/s and 1.49 ± 0.08 vs 1.13 ± 0.09 respectively.There were correlations between cf-PWV and IMT-CCA ($r=0.41$, $P=0.043$), cf-PWV and ABI ($r=0.32$, $P=0.039$), IMT-CCA and ABI($r=0.39$, $P=0.037$). There were registered correlation between cf-PWV and extentof coronary atherosclerosis ($r=0.31$, $P=0.044$). And also there were registered correlation between IMT-CCA and extentof coronary atherosclerosis ($r=0.32$, $P=0.045$).IMT-CCA and cf-PWV were significantlyhigher in diabetic patientswith hypertriglyceridemia ($p<0,05$).

Conclusion: Determination of noninvasive indicators of arterial stiffness, such ascf-PWV, IMT-CCA and ABI, are necessary inthe routine clinicalpracticefor the early diagnosisandprevention of vascularcomplications, including coronaryatherosclerosisin

patients withtype 2 diabetes mellitus. AS wassignificantly more increased in diabetic patientswith hypertriglyceridemia and depend on duration of T2DM.

Melenevych A.

ROLE OF EPITHELIAL-MESENCHYMAL TRANSITION IN FORMING COPD

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal and occupational desease

Introduction. Medical judgments about epithelial-mesenchymal transition (EMT) have appeared at the beginning of the 2000s. The essence of the phenomenon is the loss by epithelial cells of their genotype and acquisition of mesenchymal phenotype traits (Razumov V.V., Bondarev O.I., 2012). It is believed that the EMT is involved in the pathogenesis of many lung disease, including COPD (Domokos B., Nikica M., Rahul Y M. et al., 2013).

Results. EMT can be classified into three categories with functional differences. Type I EMT is associated with physiological processes involved in tissue and organ formation during embryogenesis. This transition is reversible and the primary mesenchyma can undergo a re-transformation into secondary epithelium. This mesenchymal-epithelial transformation (MET) is required for finishing the process of cell differentiation and for defining the threedimensional structure of the organs. Type II EMT is associated with tissue fibrosis. In this fibrotic process, fibroblasts accumulate secreting collagen fibres, leading to dysfunction of the organ. EMT type II is involved in the regeneration of tissues, however in the presence of a chronic inflammation the tissue repair processes become excessive, leading to fibrosis. Type III EMT refers to the acquisition of a migratory phenotype by malignant epithelial cells and is associated with tumour invasiveness. During metastasis, epithelial cells lose their polarity and detach from the basal membrane. These cells can migrate through the extracellular matrix and reach the blood circulation to find new metastatic sites to target (Mallory P., Olga B., Philippe L. et al., 2014). Identification of EMT requires a selection of specific markers. The loss of the epithelial phenotype is characterised by a decrease in the expression of epithelial proteins including junction proteins (E-cadherin and zonula occludens-1), cytokeratins of the cytoskeleton and a decreased expression of the surface protein MUC1 (Mucin 1, cell surface associated). Although the loss of those proteins has been largely described during EMT, the acquisition of mesenchymal markers is more difficult to prove. Markers used for defining the mesenchymal phenotype are vimentin, desmin, fibronectin and the production of matrix metalloproteinases. The diversity of mesenchymal markers highlights the complexity of EMT and the need to use different markers to characterise this process. COPD is characterized by progressive airflow obstruction, mainly due to the inflammation induced by inhalation of cigarette smoke. EMT is involved in the process of bronchial remodeling in COPD. Activating influence of a cigarette smoke on the process of EMT is proved in the researches in vitro. Besides, it is suggested the role of EMT in formation of peribronchial fibrosis (Javier M., Teresa P., Adela S. et al., 2013).

Conclusion. Further study of the role and mechanism of participation EMT in the formation of COPD open new opportunities for efficient targeted methods of early prevention and treatment of this disease.

Molodan D.V.

ENDOTHELIAL AND METABOLIC ABNORMALITIES IN PATIENTS WITH HYPERTENSION ASSOCIATED WITH OBESITY AND HYPERURICEMIA

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of propedeutic internal medicine 1, bioethics and biosafety

Introduction. The occurrence of such pathological conditions as hypertension and obesity which are closely related to the metabolic, neurohormonal and hemodynamic disturbances and affecting the condition of the endothelium. The influence of hyperuricemia on endothelial function in these patients is poorly understood, particularly in combination with other metabolic changes.

The aim was to investigate endothelial function and metabolic abnormalities in patients with hypertension and obesity in the presence of hyperuricemia.

Materials and methods. The study was performed on 49 persons (22 (44.89%) males, 27 (55.11%) females) with following I and II stage of hypertension, 1-3 degree of blood pressure increasing, and with obesity I-II degree. The mean age of the examined persons was (58.17 ± 1.69 years). All patients were divided into two groups according to the level of hyperuricemia: I – persons with normouricemia (NU) (n=22), II – persons with asymptomatic hyperuricemia (AHU) (n=27). 12 almost healthy normotensive patients served as control group and were matched by sex and age with the patients of the main group.

Results. In the group of patients in EDVD control group was 12.42 ± 1.13%, in the group of patients with the NU – 5.4 ± 1.11%, while in the group with the AHU – 2.03 ± 0.99%, ($p_{к,1,.2}$<0.05). The level of nitric oxide metabolites (NOM(NO2 + NO3)) in the control group was 21.05 ± 5.60 mmol/l, in patients with NU – 32.79 ± 4.88 mmol/l and at AHU - 40.18 ± 13.86, ($p_{к,1,.2}$<0.05). Study of microalbuminuria (MAU) and asymmetric dimethylarginine (ADMA) indicate increasing indices of these in hypertensive patients with obesity. Their level was highest in patients with AHU – 28.00 ± 12.73 mg/day and 0.73 ± 0.12 mmol/l ($p_{к,1,.2}$<0.05), respectively. In hypertensive patients with obesity the development of combined dyslipidemia and hyperinsulinism was identified, more obvious in patients with high levels of uric acid in the blood. Deterioration of purine metabolism, lipids and carbohydrates causes an adverse effect on the condition of the endothelium. Uric acid has a damaging effect of the endothelium.

Conclusions. In patients with essential hypertension associated with obesity, there is a disorder of endothelial function, resulting in a decrease in EDVD, increasing the level of NOM, ADMA and MAU. The deterioration of endothelial function was more obvious in patients with increasing levels of AHU. In multiple regression analysis revealed that changes EDVD largely depend on other factors such as AC, UA, LDL, triglycerides, glucose, total cholesterol.

Narizhnaya A., Ryndina N.

FUNCTIONAL CLASS OF CHRONIC HEART FAILURE AND IMMUNOINFLAMMATORY MARKERS (IL-1B, IL-10) IN PATIENTS WITH ISCHEMIC HEART DISEASE AND TYPE 2 DIABETES

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №2 and clinical immunology and allergology

The aim is to study the changes in the activity of inflammatorymarkers based on determining the dynamics of IL-1β and IL-10 concentrations in patients with various

functional classes of chronic heart failure in patients with ischemic heart disease depending on the presence or absence of type 2 diabetes.

Material and methods. 85 patients with chronic heart failure II - III FC due to ischemic heart disease who were treated at the cardiological department of the Kharkiv City Clinical Hospital № 27 (mean age 65,13 ± 8,66 years) were investigated. The first group included 50 chronic heart failure patients with diagnosed type 2 diabetes, the second - 35 chronic heart failure patients without type 2 diabetes.

The concentration of the proinflammatory cytokine IL-1β, anti-inflammatory cytokine IL-10 was determined by ELISA.

Conclusion. The presence of type 2 diabetes in patients with chronic heart failure on a background of ischemic heart disease is characterized by an imbalance of cytokine system working, which manifests by high concentrations of proinflammatory IL-1β and low anti-inflammatory cytokine - IL-10.The attempts of balance work of immunoinflammatory markers are characterized by both – pro- and anti-inflammatory link high activity in patients with chronic heart failure without type 2 diabetes.

Nebesna H.O., Kerbazh N.R., Goptsii O.V.

ADIPOCYTOKINES AND CARBOHYDRATES METABOLISM INDEX INTERACTION IN PATIENTS WITH ARTERIAL HYPERTENSION

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №1
Scientific supervisor – professor Babak O.Y.

Introduction. During last years it was determined that disturbances of carbohydrates and lipids metabolism, obesity and arterial hypertension have a close pathogenic interconnection. Currently more and more researchers are interested in the detailed study of pathogenesis of such metabolic dysfunctions.

The aim is to study the interaction between insulin, leptin concentration and tumor necrosis factor – alpha in patients with arterial hypertension.

Materials and methods. A total of 123 patients with hypertension and high body mass (mean age 53.87±0.92 years) were examined. Leptin, tumor necrosis factor – alpha and insulin levels were measured by ELISA method. Insulin resistance index (HOMA index) was calculated according to the formula.

Results. All patients were divided to 3 groups depending on the level of fasting blood insulin: in patients from the first group (n=41) insulin levels ranged from 1.75 to 7.66 mkgU/ml; in second group (n=41) the levels were 7.72-14.44 mkgU/ml; and patients from the third group showed the result of 14.45-77.20 mkgU/ml. When comparing the levels of tumor necrosis factor – alpha (TNF-alpha) and insulin resistance index in groups, a clear and significant increase of this indicator alongside blood insulin levels increase was shown: first group – TNF-alpha (5.42±0.44 pg/ml), HOMA index (1.04±0.05 cu); second group – TNF-alpha (6.71±0.38 pg/ml), HOMA index (2.04±0.09 cu); third group – TNF-alpha (10.38±0.70 pg/ml), HOMA index (7.35±0.70 cu), ($p<0.05$). A similar upward trend was observed when comparing the levels of leptin: first group (9.84±0.56 ng/ml: in men – 7.03±0.79 and in women – 12.03±2.64 ng/ml); second group (10.30±0.79 ng/ml: in men – 7.32±0.77 ng/ml and in women – 11.52±0.99); third group (12.74±0.80 ng/ml: in men – 11.94±1.37 ng/ml and in women – 13.30±0.96 ng/ml), ($p<0.05$ between third and first, second groups). Correlation showed a direct significant relationship between insulin and

leptin levels (R=0.32; p=0.04), TNF-alpha levels (R=0.36; p=0.002) and HOMA index (R=0.86; p=0.0001) in patients from the second group; between insulin and leptin levels (R=0.46; p=0.002), TNF-alpha levels (R=0.44; p=0.004) and HOMA index (R=0.96; p=0.0001) in patients from the third group.

Conclusion. It was found that the increase of adipocytokines in the blood of patients with arterial hypertension increases alongside the increase of insulin levels, which confirms the influence of TNF-alpha and leptin on the development of hyperinsulinemia in hypertensive patients with high body mass.

Oliinyk M.O.

THE ROLE OF TNF-α IN METABOLIC DISORDERS IN PATIENTS WITH OSTEOARTHRITIS AND TYPE 2 DIABETES MELLITUS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine № 3

Introduction. Tumor necrosis factor-α (TNF-α) activates degenerative processes in the joint, is involved in the regulation of carbohydrate metabolism, induces insulin resistance in adipose tissue and muscle, inhibits genes that are involved in digestion and depositing glucose.

Aim: to investigate influence of concentration in plasma tumor necrosis factor-α (TNF-α) on parameters of carbohydrate metabolism, lipid metabolism and articular syndrome in patients with osteoarthritis (OA) and type 2 diabetes mellitus (T2DM).

Material and methods. The study was performed on 28 patients (5 males), aged 58.6±0.31 with combination OA and T2DM in Regional Hospital of Kharkov, control group (n=20). Baseline characteristics of patients included history of OA (7.39±0.52 years), T2DM (9.8±0.97 years). The survey plan included: anthropometric data, indices of carbohydrate exchange (glucose, insulin (IRI), HbA1c, HOMA-IR), total cholesterol (TC), TG and level of C-reactive protein (CRP). The level of TNF-α was determined by ELISA. All patients were made X-ray examination of knees.

Results. We found the level of TNF-α in serum was significantly higher in patients with T2DM and OA (3.5-fold; $p<0.05$) compared with the control group. In patients with OA and T2DM the average level of glucose was (8.6±0.31), HbA1c - (8.6±0.21), IRI - (13.12±0.36), HOMA- IR - (5.14±0.27), TC - (6.2 ± 0.27), TG - (1.94 ± 0.17), CRP - (14.6±0.63) and was significantly higher compared to control group ($p<0.05$). In the group with combined course of OA and T2DM correlation between TNF-α and BMI ($r=0.72$; $p<0.05$), the ratio of OT/OS ($r=0.60$; $p<0.05$), TC ($r=0.67$; $p<0.05$) and TG ($r=0.45$; $p<0.05$) were found. The relationship between TNF-α and carbohydrate metabolism we could determine in its correlation with glucose ($r=0.71$; $p<0.05$), IRI ($r=0.50$; $p<0.05$), HbA1c ($r=0.60$; $p<0.05$) and HOMA-IR ($r=0.46$; $p<0.05$). Existing correlation between TNF-α and level of CRP ($r=0.46$; $p<0.05$) and radiographic changes by Kellgren ($\tau=0.50$; $p=0.000<0.05$) indicates on the possible impact of this cytokine in the development of OA.

Conclusion: The results suggest the possible use the level of TNF-α in serum as a possible marker of progression of metabolic disorders in patients with OA and T2DM.

Petiunin P.O., Zolotaikina V.I.

IMMUNE INFLAMATION, RENAL FUNCTION IN CHRONIC HEART FAILURE AND CHRONIC HEART FAILURE ACCOMPANIED BY CHRONIC KIDNEY DISEASE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of the internal medicine 2, clinical immunology and allergology

The aim of the present study was to examine the severity and origin of the disorders of glomerular (creatinine (Cr), creatinine clearance (CrC), cystatin C (CsC)), tubular (urine-β2-microglobulin)) kidney function, changes of electrolyte balance (Na+, K+ in serum) and their connection with the activity and the formation of immune inflammation (TNF-α) and interstitial fibrosis (TGF-β1) in patients with chronic heart failure (CHF) alone and accompanied by chronic kidney disease (CKD).

Materials and methods: The study was performed including 103 patients (53 males, 50 females), 66,8± 9,8 years old with coronary artery disease and CHF of I-IV functional class (FC). The first group (I) included 61 patients with CHF without CKD, the second group (II) included 42 patients with CHF accompanied by CKD. The control group was 20 healthy persons. The levels of TNF-α, TGF-β1, CsC, β2-microglobulin were examined by ELISA, the levels of Cr were determined by Yaffe method; K+ serum – by ion-selective method; Na+ serum – by potentiometric method; the CCr – by Cockroft-Gault formula; statistical methods also were used.

Results: It was estimated that there was a significant increase of the level of Cr by 22,9% ($p<0,05$), decrease of the level of CCr by 27,4% ($p<0,05$), increase of the level of CsC by 48,3% ($p<0,05$), increase of the level of β2-microglobulin by 56%($p<0,05$), increase of the level of TGF-β1 by 81,4% ($p<0,05$), increase of the level of TNF-α by 48,3% ($p<0,05$) in group I, compared to the control group. The level of Cr increased by 66,3% ($p<0,01$), CCr decreased by 48,5% ($p<0,01$), CsC increased by 83,3% ($p<0,01$), β2-microglobulin increased by 113,9%($p<0,01$), TGF-β1 increased by 122,8% ($p<0,01$), TNF-α increased by 74,7% ($p<0,01$) in group II, compared with the control group. Differences between the results of I and II groups were significant ($p<0,05$). The levels of Na+ and K+ were normal in I group and control group patients, but the patients of II group developed a significant increase inthe level of Na+ by 12,6% in comparison to the control group ($p<0,05$).

Conclusion: The results indicate the presence of subclinical glomerular disorders, kidney tubular interstitial fibrosis which was triggered by the cytokine activation in CHF, especially in CHF accompanied by CKD. A greater degree of β2-microglobulin increase than CsC and CCr in both groups indicates that tubular functions in CHF and CKD are deteriorated before glomerular ones; a positive correlation of TNF-α and TGF with CsC and CCr indicates the participation of immunological and growth factors in the development of nephropathy in CHF and CHF accompanied by CKD.

Radzishevska Y.K.

ULTRASOUND MARKERS OF STIFFNESS DEFINITION IN PATIENTS WITH ARTERIAL HYPERTENSION AND ARTERIAL HYPERTENSION ASSOCIATED WITH TYPE 2 DIABETES MELLITUS

Kharkiv city clinical hospital № 27, Kharkiv, Ukraine

Introduction. In our research the structural and functional state of the heart and vessels, their stiffness and ultrasound signs of their disorders in patients with arterial hypertension and arterial hypertension with type 2 diabetes mellitus were studied.

The aim of this study is to select the most informative ultrasound markers of heart and blood vessels that indicate changes of arterial stiffness, stiffness of myocardium and progression of their dysfunction in patients with arterial hypertension and associated type 2 diabetes mellitus.

Material and methods. 134 patients were examined: the first group - 44 patients with essential arterial hypertension stage II grade 2-3, the second group - 45 patients with essential arterial hypertension stage II grade 2-3 and type 2 diabetes mellitus, control group - 45 healthy persons. The groups were comparable for age, sex, risk factors of cardiovascular complications. General clinical examinations, ultrasound examinations of the heart and vessels with ultrasound device ULTIMA RA firm RADMIR (Ukraine) were carried out. Data were processed by non-parametric statistical methods using the integrated package «STATISTICA 6.1».

Results. 27 major ultrasound markers of heart and blood vessels dysfunction in patients with arterial hypertension and arterial hypertension with type 2 diabetes mellitus were revealed. Among the factors that distinguish norm from pathology more significant changes had such parameters of arterial stiffness as augmentation index and Young's modulus of elasticity. Parameters of endothelium vasodilatation of the brachial artery, the thickness of the intima-media of carotid artery correlated with the severity of a pathological condition: the occurrence of hypertension, type 2 diabetes mellitus, subcompensation of type 2 diabetes mellitus. Development of type 2 diabetes mellitus in patients with arterial hypertension and its progression ware associated with high sensitivity of index of isovolumetric relaxation time on the mitral valve, endothelium-dependent vasodilatation of the brachial artery, the average values of resistivity index of arc renal arteries, pulsation index of arc renal arteries.

Conclusion. The most informative markers of heart and blood vessels ultrasonography ware defined for use in clinical practice to assess the stiffness and dysfunction of the heart and blood vessels in patients with arterial hypertension, particularly in the case of associated development of type 2 diabetes mellitus and various stages of its compensation.

Romanenko V., Ogneva O.

THE ROLE OF TUMOR NECROSIS FACTOR-α IN PATHOGENESIS OF NONALCOHOLIC FATTY LIVER DISEASE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №3

Introduction. Tumor necrosis factor-α (TNF-α) is an adipokine that can cause the cytotoxic effects and can stimulate the apoptosis, impairing liver function. There is a need in further study of TNF-α influence on liver cells properties and its role in the pathogenesis of nonalcoholic fatty liver disease (NAFLD) against the background of diabetes mellitus (DM) type 2 and obesity.

Aim. To assess the correlation between TNF-α and indexes of liver function in patients with NAFLD combined with DM type 2 and obesity.

Materials and methods. 50 patients with NAFLD in combination with DM type 2 and obesity (body mass index $\geq 30 kg/m^2$) were examined. The control group included 20 healthy individuals. Indexes of enzyme and pigment metabolism were defined by

biochemical methods («Dac spectroMed» kit). The level of TNF-α was determined by immunoassay method («Vector-best» kit).

Results. The mean level of TNF-α in patients was significantly increased (96,65 ± 0,72 pg/ml; p <0.001) in comparison with the control group (29,19 ± 1,05 pg/ml). The direct correlation was established between TNF-α and aspartate aminotransferase (r = 0,58; p <0.05), alanine aminotransferase (r = 0,47; p <0.05), total bilirubin (r = 0,59; p <0.05), conjugated bilirubin (r = 0,59; p <0.05), alkaline phosphatase (r = 0,77; p <0.05).

Conclusion. The increase of TNF-α level can negatively affect on liver function, amplifying the processes of citolisis and cholestasis in patients with NAFLD in combination with DM type 2 and obesity.

Romanova I.A. , Andrusha A.B.

PECULIARITIES OF MANAGEMENT OF PATIENTS WITH CUTANEUS MANIFESTATIONS OF HEMOBLASTOSIS IN FAMILY MEDICINE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of general practice - family medicine and internal medicine

Introduction. Hematologic malignancies - one of the most urgent problems of modern medicine throughout the world. Their timely diagnosis increases the patient's chances of recovery and preventing complications. Dermatitis – is a frequent symptom of hematologic malignancies (75-95% for T-cell lymphomas), but it may be a manifestation of other diseases. Very often patients with cutaneous lymphomas, especially in the early stages, are treated by a dermatologist, cosmetologist, allergist, physician / family doctor as a chronic eczema, allergic contact dermatitis, or psoriasis for a long time without any progress.

Aim of our study was to attract an attention of family physicians on the "masks" of hemoblastosis, namely their skin manifestations, which often occur in some types of leukemia and lymphomas.

Materials and methods. We have analyzed the most common cutaneous manifestations in hematology, which can be divided into four categories: 1) specific changes; 2) changes - "satellites"; 3) infections of the skin; 4) secondary changes during chemotherapy. Specific lesions are associated with infiltration of a skin by malignant hematopoietic cells and are particularly important for the recognition of the disease . They are usually presented by tumors, infiltrates on a smooth surface or nodular elements. Atypical cutaneous manifestations in the form of a bull, necrosis, prurigo and others are frequent symptoms of myeloid blood disorders. Hypereosinophilic syndromes manifest changes in the type of vasculitis or ektodermoza. A maculopapular exanthema is typical for an angioimmunoblastic lymphadenopathy. More likely an unknown origin of lesions are reported. These include neutrophilic dermatosis, "vascular" manifestations (eritromelalgiy, superficial phlebitis, and others.), paraneoplastic pemphigus, nodosum and annular erythema, hyperpigmentation, and others. Cutaneous lesions associated with chemotherapy, are a constant differential diagnostic problems in patients with hematological malignancies. They manifest themselves in the form of alopecia, erythema multiforme, papula-macular exanthema, urticaria, diffuse or focal pigmentation, necrosis of the fingers. There are also frequent infections of the skin, which are caused by a wide variety of pathogens in immunocompromised patients. They can be fatal and occur clinically atypical, requiring in

each case a skin biopsy from microbiological, mycological and histological analysis of the biopsy.

Results. The above skin manifestations should be carefully differential diagnosed. The presence of symptoms characteristic of hematological malignancies, such as hepatosplenomegaly and lymphadenopathy, helps to push on the idea of genesis of hematology cutaneous manifestations. In addition, specific changes in peripheral blood of hematological malignancies helps to figure out the disease. For example, pancytopenia and the presence of blast cells should alert the doctor in relation to acute leukemia. Leukocytosis with a left shift is associated with chronic myeloid leukemia, and absolute lymphocytosis, basket cells, Botkin shade - with chronic lymphocytic leukemia. It is important to remember that, when a family doctor or physician of subspecialty is sure of the dermatological diagnosis, but spent therapy is ineffective, it is required to think about the need to biopsy the skin lesion and refer the patient to consult a hematologist. A hematologist, in turn, has a wide range of research methods to confirm / exclude hemoblastosis (bone marrow puncture with an estimate myelogram, histological examination of lymph node biopsy and skin graft, cytochemical analysis, etc.). Given the large number and variety of hematologic disorders, it is not surprising that mucocutaneous manifestations of hematologic disorders are not uncommon.

Conclusion. Thus, therapeutics, dermatologists and physicians should be aware of cutaneous signs of hematologic diseases for early diagnosis, treatment, and timely referral to relieve suffering and decrease morbidity and mortality.

Rudenko M., Tytova G.

RENAL DYSFUNCTION OF PATIENTS WITH CHRONIC HEART FAILURE OF ISCHEMIC ORIGIN AND CHRONIC PYELONEPHRITIS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine № 2, clinical immunology and allergology
Scientific superbisor: professor Kravchun P.G.

The purpose of the study: to study of the extent and nature of the violation of glomerular and tubular kidney function of patients with chronic pyelonephritis and chronic heart failure.

Materials and methods. 60 patients with coronary heart disease and clinical manifestations of CHF I-IV functional class were examined. First group (I) consisted of 40 patients with chronic heart failure without concomitant CKD. Second group (II) - 20 patients with CHF and chronic pyelonephritis. The control group - 20 healthy individuals. A general clinical methods; ELISA - definition of tsytatynu C (cis) and β2-microglobulin urine (β2-MG).

Results. In group I identified a significant increase in creatinine level by 21.9% ($p < 0.05$) decrease in GFR by 26.7% ($p < 0.05$), increased by 48.3% cis ($p < 0.05$) increase in β2-mG by 55% ($p < 0.05$ compared with the control group. in group II creatinine level increased by 66.3% ($p < 0.01$), GFR decreased by 47.5 % ($p < 0.01$), increased cis to 84.3% ($p < 0,01$), β2-MG increased to 113.9% ($p < 0.01$) compared with the control group.

Conclusions. Indicators of glomerular renal function with β2-MG levels in urine, indicating a close relationship between glomerular and tubular function with activity of immune inflammation and interstitial fibrosis as in "stagnant" heart failure due to ischemic

kidney origin, and heart failure in patients with comorbid background as chronic pyelonephritis varying degrees of severity.

Shekhovtsova Yu.

THE FUNCTIONAL STATE OF THE PANCREAS IN PATIENTS WITH TYPE 2 DIABETES MELLITUS WITH DIFFERENT PHENOTYPE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №3

Introduction. Type 2 diabetes mellitus (T2DM) has been described as a cause of pancreatic exocrine insufficiency (PEI). The role of obesity in this patients are discussed.

The aim of our study was to analyze the functional state of the pancreas in patients with T2DM with different phenotype.

Materials and methods: The study was performed on 62 patients with T2DM; control group (n=20). Patients were divided into 2 groups: 1st group (n=20) – T2DM with BMI < 25.0 kg/m^2, 2nd group (n=42) – T2DM with BMI > 25.0 kg/m^2. The survey plan included: BMI, pancreatic elastase -1 (PE-1), α-amilase, CRP.

Results: BMI in patients of 2nd group was significant higher than in 1st group and control group (32.8±0.8 vs 22.4±0.25 and 21.75±0.2, $p<0.05$). PE-1 levels were below the cutoff value in 56 cases (90%). 15 of them (26.8%) had level < 100 mcg/g. We revealed 1.6-fold decrease in PE-1 in patients of 2nd group (126.7±7.5) and 1.4-fold decrease in patients of 1st group (141.3±5.88) compared to control group (204.9±0.99) ($p<0.05$). We found 1.9-fold and 2.1-fold increase in α-amilase serum level in patients 1st and 2nd groups (32.99±2.5 and 29.9±3.63) which was significant higher than in control (15.45±0.68) ($p<0.05$). Level of CRP in patients both groups were significantly higher compared to control (5.29±1.08 and 4.6±0.78 vs 0.25±0.18, $p<0.05$). We found correlation between BMI with PE-1(in 1st group r=-0.61; in 2nd group r=-0.47, $p<0.05$), CRP (in 1st group r=0.49; in 2nd group r=0.75, $p<0.05$), α-amilase (in 2nd group r=-0.68, $p<0.05$). Also the study showed correlations between CRP and PE-1 (in 1st group r=-0.70; in 2nd group r=-0.59, $p<0.05$), CRP and α-amilase (in 2nd group r=-0.42, $p<0.05$), α-amilase and PE-1(in 2nd group r=0.34, $p<0.05$).

Conclusion: More than 90% of patients with T2DM had exocrine pancreatic function test altered. The greatest changes were found in patients with higher BMI. Higher BMI is an optional factor of progressive functional insufficiency of the pancreas, thereby complicated the course of T2DM.

Shirgba Sonter Jacob, Kochubiei O.

ALDOSTERONISM AND HYPERTENSION: CONN'S SYNDROME

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of propedeutics to internal medicine, basis of bioethics and biosafety department №1

Introduction. Most hypertension is Essential Hypertension Proportion of Essential/Secondary depends on definition of "secondary" (eg if elevated BMI was a "secondary cause" 75% of patients would have it). Conn syndromeis an aldolsterone - producing adenoma. Conn's syndrome is named after Jerome W. Conn(1907–1994), the American endocrinologist who first described the condition at the University of Michigan in 1955.

Results. Aldosterone is a steroid hormone (mineralocorticoid family) produced by the outer section (zona glomerulosa) of the adrenal cortex in the adrenal glands It plays a central role in the regulation of blood pressure mainly by acting on the distal tubules and collecting of the nephrons, increasing reabsorption of ions and water in the kid, to cause the conservation of sodium, secretion of potassium, increase in water retention, and increase in blood pressure and blood volume. When dysregulated, aldosterone is pathogenic and contributes to the development and progression of cardiovascular and renal disease. Aldosterone has exactly the opposite function of atrial nutriuretic hormone secreted by the heart.

Causes: Primary hyperaldosteronism has many causes, including adrenal hyperplasia and adrenal carcinoma. The syndrome is due to: 1. Solitary adrenal (conn) adenoma, 35%. 2. Bilateral (micronodular) adrenal hyperplasia, 60%. 3. Glucocorticoid remediable aldosteronism (dexamethansone-suppressible hyperaldosteronism) 1%. 4. Rare forms, including disorders of the renin-angiotensin system 1%.

Complications list for Conn's syndrome: The list of complications that have been mentioned in various sources for Conn's syndrome includes: Enlarged heart (Heart symptoms); Loss of deep tendon reflexes; Heart disease - due to high blood pressure; Stroke- due to high blood pressure; Congestive heart failure - due to high blood pressure; Coronary artery disease - due to high blood pressure; Abnormal heart rhythm - due to low blood potassium levels; Death - due to low blood potassium levels

Diagnosis measuring aldosterone alone is not considered adequate to diagnose primary hyperaldosteronism. The screening test of choice for diagnosis is the plasma aldosterone:plasma renin activity ratio. Renin activity, not simply plasma renin level, is assayed. Both aldosterone and renin are measured, and a ratio greater than 30 is indicative of primary hyperaldosteronism.Treatment- spironoloctone. Treatment of Conn's syndrome is usually successful. Many patients with a single adrenal adenoma will be able to stop drug treatment and will have normal blood pressures. Nevertheless, many specialist centres will follow a patient with Conn's syndrome for life. This is to monitor the rare possibility of growth of a second adenoma.

Conclusion. Patients with bilateral hyperplasia should have life-long monitoring of effectiveness and side-effects of drug treatment. Again, quality of life is generally good, although some patients may not be able to tolerate spironolactone treatment.

Sukhonos N.K.

THE CONDITION OFCYTOKINE STATUS WITH VIBRATION DISEASED PATIENTS IN CONJUNCTION WITH HYPERTENSION DISEASE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal and occupational desease

Introduction. The analyze of the structure of professional diseases for the last decade has indicated the acceleration of pathology stipulated by the influence of physical factors of industrial environment and, in particular, vibrations. Vibratory factor leads to diverse changes in organism. The growth of cardiovascular pathology with the degree of severity of a professional disease was marked. According to numerous authors` data the hypertensive disease (HD) prevails in the structure of accompanied cardiovascular diseases. Considering the unfavourable industrial influence from

the position of chronic stress the study of cytokine status at vibration disease in conjunction with cardiovascular pathology presents special interest.

Aim. The analysis of the cytokine status with rates vibration diseased patients in conjunction with hypertension disease.

Materials and methods. It was included 107 patients with the vibration disease diagnosis of local vibration of the I and II stages, aged 41 -66(average age 54±6,17). The content of cytokines in blood serum was detected with the help of immune-enzyme method with the help of diagnostic test-system «ProCon IL-4», «ProCon IL-6», «ProCon IL-8», «ProCon TNFα» with the set of reagents for the quantitative determination of cytokines in man`s biological liquid according to the instruction of the producer «Protein contour» (Russia).

Results. The received results indicate that concentrations of proinflammatory cytokines that is the tumor necrosis factor -α (TNFα), interleukin - 6 (IL-6), interleukin-8(IL-8), are high and for certain differ from the results of the control set, $p<0,001$. The change of activity rates of proinflammatorycytokines with vibration diseased patients is characterized by meaningful increase of TNF-α, $p<0,001$ (8,51pc/ml Me[6,99; 11,64]), , IL-6 (9,0pc/ml Me[6,42;10,39]) and IL-8 $p=0,0076$ (28,37pc/ml Me[18,54; 36,57]).The level of proinflammatorycytokines increased according to the degree of vibration disease. This confirms the statistically significant increase of IL-8 ($p<0,001$) in the group VD II in conjunction with HD II (33,0pc/ml; Me[28,3;38,62]). Also the level of proinflammatory cytokines was increasing according to presence of accompanied HD. The similar dynamic was detected for IL-6($p=0,031$), which level with the VD II with HD II patients compounded (10,95pc/ml; Me[7,55; 12,95]). In the course of the research it was set the temperate change of the level in the serum of VD patients with and without the presence of accompanied HD of proinflammatory cytokine interleukine-4 (IL-4). The level of proinflammatory cytokine is moderately decreasing in the comparison group IL-4 ($p=0,075$): In the group VD II(4,75pc/ml; Me[4,15; 6,48]) .

Conclusions. It was detected the increase of the level of proinflammatory (TNFα, IL-6, IL-8) and moderate decrease of proinflammatory cytokine interleukine-4 (IL-4) with the help of comparative analyze of the cytokine status at different levels of vibration disease severity and with the presence of accompanied hypertensive disease. It is proven that more vivid changes of cytokine profile are registered with the patients with expressed level of vibration disease and with the presence of accompanied hypertensive disease. The unidirectionality of the detected changes indicates the presence of single links of pathogenetic mechanisms of studied diseases development. The detected pathogenetic abnormalities with the vibration diseased patients in conjunction with arterial hypertension give the possibility to develop new pharmacological approaches to the inhibitor of proinflammatory cytokines at given contingent of the sick.

Tabachenko E.S.

OBESTATIN LEVELS IN PATIENTS WITH ARTERIAL HYPERTENSION AND DIABETES MELLITUS TYPE 2 DEPENDING ON THE PRESENCE OF OBESITY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №2, clinical immunology and allergology

Introduction. Obestatin - a hormone secreted in stomach and intestines, was opened in 2005 by members of the Faculty of Medicine at Stanford University by computer analysis

of the human genome. Refers to a peptide hormone encoded by the same gene as ghrelin. It is known that ghrelin plays a potential role in the development of obesity and diabetes. Recent work indicates that obestatin can also regulate the survival of β-cells and insulin secretion. Studies of the molecular mechanisms shown that obestatin regulates adipocyte function and protects against pathological consequences caused by the insulin resistance. However, the problem of obestatin changes in patients with arterial hypertension depending on presence of metabolic disorders remains a topic of scientific debate.

Aim: to analyze the effect of obestatin on body weight in patients with arterial hypertension and diabetes mellitus type 2, as well as to evaluate the character of the relationship between anthropometric parameters (waist circumference, hips circumference, body mass index) and obestatin in this cohort of patients, depending on the presence or absence of obesity.

Materials and methods. The study examined 105 patients with arterial hypertension. The main group included 75 patients with a combination of arterial hypertension and diabetes mellitus type 2 (mean age 60,03 ± 1,17). The comparison group consisted of 30 arterial hypertension patients without diabetes mellitus type 2 (mean age 57,1 ± 2,23, $p < 0.05$). As a control group were involved in 30 healthy subjects. Patients of the main group were assigned to the presence or absence of obesity according to body mass index. Obesity was diagnosed in 39 patients (the first subgroup), and 36 patients had a normal body weight (second subgroup). The presence of obesity was adjusted according to the definition body mass index which is determined by the formula by Kettler: BMI (kg / m2) = body weight / (height) 2. Exclusion criteria were acute and chronic inflammation, diffuse connective tissue diseases, cancer, concomitant thyroid disease, the presence of symptomatic hypertension and chronic heart failure more II A stage. All the patients underwent clinical and biochemical blood tests, instrumental studies.

Obestatin determined by ELISA using commercial test system «Human Obestatin (OB) ELISA Kit», China. Statistical analysis of the data was carried out using the statistical software package «Microsoft Excel». Data are presented as mean values and error of the mean. Statistical significance was determined at various secondary criterion F-Fisher. Analysis of relationships conducted using Spearman correlation (r).

Conclusions. Comorbidity of arterial hypertension and diabetes mellitus type 2 is associated with high obestatin activity, compared with a group of arterial hypertension patients without diabetes mellitus type 2 and the control group, which suggests the compensatory reaction at this stage. Presence of obesity in patients with arterial hypertension and diabetes mellitus type 2 is accompanied by maladaptive decreasing of obestatin compared with patients without obesity, which can be considered as an important factor in the development and progression of the obesity according anorexic obestatin's properties.

Telnova S.

FEATURES OF LIPID AND CARBOHYDRATE METABOLISM IN PATIENTS WITH NONALCOHOLIC FATTY LIVER DISEASE IN COMBINATION WITH HYPERTENSION AND HYPOTHYROIDISM

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine № 1

Introduction. Examine the state of lipid and carbohydrate metabolism in patients with nonalcoholic fatty liver disease (NAFLD) in combination with arterial hypertension (AH) and hypothyroidism.

Materials and methods. The study included 28 patients with NAFLD with concomitant hypertension and hypothyroidism (12 men and 16 women). The patients' age was from 40 to 77 years, mean age 57.7±9.7 years. The control group consisted of 17 healthy individuals. For the diagnosis of nonalcoholic steatosis using ultrasound of the abdominal cavity. Function of the thyroid gland (TG) was assessed by quantitative determination of free thyroid hormones - T3 and T4, and thyroid stimulating hormone (TSH) in serum by enzyme-linked immunosorbent assay. The patients were diagnosed subclinical hypothyroidism (SH), the criteria which were normal levels of thyroid hormone - free T3 and T4 TSH increase of more than 4.0 mkME / ml.

Results. All patients were diagnosed to changes in the indices of lipid metabolism. NAFLD patients with concomitant hypertension and SG showed a significant increase in the concentration of total cholesterol (TC) compared with the control group sing (5.7 ± 0.3 mmol/L, P >0.05). By analyzing the lipid profile, there was an increase in the content of atherogenic cholesterol substances: as the level of low-density lipoprotein (LDL-3.73 ± 0.21 mmol/L, P>0.05) and cholesterol levels very low density lipoproteins (LDL VLDL- 0.81 ± 0.08 mmol/L) was significantly above those of the control group. Indicators of triglyceride (TG) levels (0.176 ± 1.79 mmol/L, P >0.05) were also significantly higher than the control group data. Results of the study were fasting glucose within 5.14 ± 0.17 mmol/L, P >0.05.

Conclusions. In patients with NAFLD in combination with hypertension and hypothyroidism showed a significant increase in performance of TC, TG, LDL and VLDL, which is a risk for early cardiovascular complications in these patients.

Ternovaya N, Priashchenko M, Bolokadze E., Malich T.

SOME URGENT ASPECTS OF DIAGNOSIS FOR COPD PATIENTS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of propedeutics of internal medicine 2 and nursing care

Material and methods. We have studied the level of A1-antytripsin (A1AT) in patients with B and D groups of chronic obstructive pulmonary diseases (COPD pts), depending on smoking duration, body mass index (BMI) and respiratory function (FEV1 , VC).

Aim. With this aim, we analysed the data from 23 patients with COPD and subdivided them into for 2 subgroups, where subgroup 1 included 11 patients with COPD B and subgroup 2 included 12 patients with COPD D; the control group consisted of 10 health persons. Thus, smoking duration (pack-years) - 11.3±2.4*, 27.4±4.2*, 3.6±2.4, BMI (kg⁄m2) - 24.5±1.2, 19.9±2.5*, 26.4±1.4, respiratory function (% of the norm) - FEV1−75.2±1.3 VC−82.2±2.7, FEV1−56.3±2.7* VC−63.2±1.8*, FEV1−85.5±0.9 VC−90.1±1.3, A1AT(μmolИ) - 0.432±4.7*, 0.397±5.1*, 0.643±3.2 (*−p<0.05 vs. Control group).

Results. The lowest respiratory function was observed in patients of subgroup 2, where also the lowest BMI values were observed against the background of long of smoking duration. Further, there was a downward trend in serum A1AT level in the patients with COPD vs. the control group, although in all cases studied the A1AT level was with normal range.

Conclusions: Long-term smoking duration and the trend to decrease in IMT and serum A1AT in the patients with COPD may be suggested as predictors of the disease progression as defined by a decline in respiratory function, exercise tolerance and progression of symptoms of pulmonary disease.

Tryfonova N.

CHANGES IN THE LEVELS OF PROINFLAMMATORY CYTOKINES AND PREGNANCY-ASSOCIATED PLASMA PROTEIN A IN PATIENTS WITH UNSTABLE ANGINA AND TYPE 2 DIABETES

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of propaedeutics of internal medicine № 2 and nursing

Introduction: Problem of combination of cardiovascular with diabetes mellitus type 2 is very actually nowdays due to not only considerable distribution but also rapid development of complications which result in disability or death rate of patients. On frequency an origin of unstable angina is 13% in distributing of patients with ischemic heart disease. Unstable angina arises up in 2 – 3 times more frequent in the group of patients with diabetes mellitus type 2 than in cases without diabetes, motion of disease is considerably burdened here, and a prognosis is more unfavorable. Even now, without regard to the conducted researches, all ways of high growth of heavy vascular events for patients are unknown for patients which suffer on diabetes mellitus. The indexes of biochemical markers make curiosity in blood of patients – their levels represent activity of processes which take place in forming and destruction of atherosclerotic plates. Among them, except for the markers of vascular inflammation (C – reactive protein, interleykinum – 6 also markers of neoangiogenezis and endogenous destruction, to which the pregnancy assotiated protein of plasma A behaves.

Purpose of our research was to improvement of diagnostics of patients with unstable angina in combination with diabetes mellitus type 2 on the basis of complex estimation of level of interleykinum-6, C-reactive protein, pregnancy assotiated protein of plasma A.

Materials and methods. We were conduct a complex inspection of 114 patients with unstable angina, which were admit to the Kharkiv city clinical hospital №27. Patients were divided into 2 groups: 53 patients were suffered on isolated unstable anginaand 61 persons have diabetes mellitus type 2 as comorbidity pathology.

Results: It is set at research of proinflammatory cytokines, that level of IL-6 for patients with unstable angina and diabetes mellitus type 2 was made 50,59±1,8 pg/ml and for certain exceeded the index of group of comparison (6,18±1,2 pg/ml) and control group (2,05±1,2 pg/ml) ($r<0,05$). The reliable increase of level of C-RP was set in the basic group of patients (8,53±1,17 ng/ml) in comparing to the patients on isolated unstable angina (1,96±1,12 ng/ml) and practically by healthy persons (0,51±0,02 ng/ml) ($r<0,05$).

At the study of connection of PAPP-A with other indexes of vascular inflammation were found out direct cross-correlation copulas between the levels of PAPP-A and C–RP ($r=0,82$; $r=0,78$, $r<0,05$) for the patients of both groups, and them reliable increase in comparing to the control group ($r=0,80$; $r<0,05$). The direct cross-correlation copulas between the levels of PAPP-A and IL-6 for the patients of both groups ($r=0,65$; $r=0,61$, $r<0,05$), and them reliable increase in comparing to the control group ($r=0,64$, $r<0,05$) were found out. Thus, in case of diabetes mellitus type 2 the hyperglycaemia resulted in activating of vascular inflammation, where glycaemia is related to interleykinum - 6 ($r=0,84$; $r<0,05$), C-reactive protein ($r=0,84$; $r<0,05$).

Conclusions: Degree of activating of immune inflammation for patients with comorbidity patology on a background diabetes mellitus type 2 characterized a type the increase of level of interleykinum–6 in 8,1 times ($r<0,05$), and C – reactive protein in 4,3

times (r<0,05) by comparison to patients with the isolated motion of unstable angina. Increase of level of PAP-A in 2,6 times (r<0,05) for patients with unstable sngina in combination with diabetes mellitus type 2 associated with insulinrezistens and confirmed metabolic disorders.

Tymoshenko G.Y.

THE FEATURES OF LIPID PROFILE IN PATIENTS WITH CHRONIC NONCALCULOUS CHOLECYSTITIS AND TYPE 2DIABETUS MELLITUS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №3

Introduction. Chronic noncalculous cholecystitis (CNC) in patients with type 2 diabetes mellitus (DM-2) occurs more frequently than in the general population. DM-2 is accompanied by disturbances of carbohydrate and lipid metabolism.

Aim: to investigate changes of lipid profile in patients with combined course of CNC and DM-2.

Materials and methods. The study was performed on 40 patients (22 females, 18 males): group 1 (n = 20) - with combined course of CNC and DM-2, group 2 (n = 20) – with isolated CNC.The average age was 47.9 ± 3.7 years, the mean duration of DM-2 was 9.8 ± 1.4 years, the level of HbA1C < 7.5% in all patients. The survey plan included:carbohydrate metabolism (insulin, glucose, HbA1C, HOMA-IR), lipid profile (total cholesterol (TC), triglycerides (TG), low density lipoproteins (LDL), high density lipoproteins (HDL).

Results. Dyslipidemia were significantly more frequent in group 1 than in group 2 (89.4% vs 46.3% respectively, p < 0.05). Hypertriglyceridemia was detected more frequently in patients group 1 compared with patients group 2 (78.2% vs 39.1% respectively, p < 0.05);the levels of TC and LDL in patients group 1 were higher than in group 2 (on average 79.5% and 37.2%; 62.8% and 27.1% respectively, p < 0.05). The level of HDL was lower in patients group 1 than in group 2 (on average 19% and 13% respectively, p < 0.05). The levels of LDL correlated with TC levels (r = 0.68; p <0.05), with HOMA-IR (r = 0.52; p <0.05).

Conclusions. It is determined that in patients with CNC and DM-2 dyslipidemia occurs more pronounced than in patients with isolated pathology. The correlation between impaired lipid metabolism and severity of DM-2 is revealed in patients with CNC.

Tytova A.Yu. Adeyemi A.A., Soe T.

DEPRESSION AND SLEEP DISORDERS IN PATIENT'S WITH CARDIOVASCULAR DISEASES

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine 2, clinical immunology and allergology

Introduction. Comorbidity of depression and Acute Myocardial Infarction (AMI) is of current interest due to their potentiating interaction.Depression and sleep disturbances can lead to the worsening of the course of the disease as well as to be one of the causes.

Aim: to study depressive and sleep disorders in patients with primary and recurrent AMI on the basis of the constitutional approach, the analysis of age changes and sex, EF.

Materials and methods: The study involved 57 patients with AMI:36 patients with primary AMI (20 men and 16 women, average age 53,4±11,2 yrs)-1st group and 21 patients with recurrent MI (11 men and 10 women, average age 62,7±9,3 yrs)-2nd group. For

estimation of anxiety and depression Beck Depression Inventory and the Hamilton Anxiety Scale (HARS) were used. For a sleep quality estimation Pittsburgh Sleep Quality Index (PSQI) was used. The evaluation was done on 2-3rd and 14-15th day from the onset of AMI. All patients were examined due to standards of AMI diagnostics, on 14-15th day they underwent a 6-minute walk test to assess exercise tolerance.

Results: In 1st group on 2-3rd day patients with anxiety disorders dominated. The prevalence of clinically significant anxiety (> 11 points on HARS) and mild depression (13±2 points on Beck scale) was observed mostly in female. At 14-15th day in 1st group the severity of anxiety disorders had reduced. In 2nd group on 2-3rd day, symptoms of moderate depression (18±1 by Beck scale) in 8 patients and major depression (23±3 points by Beck scale)-in 13 patients with a prevalence of women over 65 y.o.were found. At 14-15th day the ratio of moderate to severe depression in the 2nd group was 57% to 43%respectively. In 82% of patients with severe depression EF was <40%, this subgroup showed a significant decrease in exercise tolerance due to the 6-minute walk test. Among patients with severe depression in 47% of cases, there was complicated course of AMI compared with patients with mild depression-32%, and 1st group-26%. The degree of severity of affective disorders was more significant in men of asthenic body type and was independent of constitutional features in women. The majority of all patients noted sleep disturbances due to inability to fall asleep fast, frequent awakenings, need to use the toilet, bad dreams more than 1 time per week. Analysis of other reasons, patients with disturbed sleep during the last week before study showed 12% - noted the presence of "excitement, emotions, fear", 8% - numbness of various localization, 1% - lower back pain. Indicated associated causes 6% they "were not observed in the last week", 12% - said at least one time, 48% - 1-2 times a week, 40% - 3 or more were observed twice a week. In 78% of the study other than those specified in the questionnaire causes of sleep disorders were noted. Daily bedtime was from 10 pm to 12 pm; time spent on falling asleep 78,9 ± 35,7 minutes; the awakening was from 3 to 7 am; the number of real sleep per night was 4,4 ± 0,2 hours. The majority of patients evaluated sleep quality as a rather bad and very bad. Sleep disorders in 2^{nd} group appeared 25% more often then in pts of 1^{st} group, which was assumed as an additional risk factor for cardiovascular issues.

Conclusions: Patients with primary AMI were suffering mainly of anxiety disorders versus patients with recurrent AMI which suffered mainly from depression and sleep disorders. The increase of depression severity was associated with the presence of LV systolic dysfunction, reduced exercise tolerance, with elderly age and a rising up of the percentage of complicated AMI. Among men, affective disorders were more significant in men of asthenic body type. Anxious and depressive disorders are more substantial in women vs men regardless of their somatotype. Sleep disorders are found to be a significant risk factor for cardiovascular issues and should be prevented and therapeutically corrected. The study of these aspects is important to optimize the treatment and rehabilitation of patients with AMI and improve their prognosis.

Viun T.I.

ASPECTS AND FEATURES OF DISEASES OF CARDIOVASCULAR SYSTEM IN PATIENTS WITH CHRONIC PANCREATITIS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of general practice - family and internal medicine
Scientific supervisor: professor Pasieshvili L.M.

Introduction. At present the problem of aggregate flow of internals diseases is becoming increasingly important. This is related to the fact that in everyday medical practice, these patients account a substantial majority and in each case require the development of adequate therapy. Among these diseases the first place belongs to diseases of the cardiovascular system, which by their prevalence, disability indices and mortality rates are far ahead from other pathological conditions. At the same time, according to the statistical calculations, diseases of the pancreas such as chronic pancreatitis (CP) have large prevalence. The combination of two groups of diseases identifies certain characteristics of clinical symptoms resulting from crossing of pathogenetic links and therapeutic measures.

The aim of this paperwas to determine the features of clinical manifestations of hypertension or coronary heart disease in patients with CP.

Materials and methods. The study involved 37 patients with CP, including 21 caseswith the run against a background of hypertension, and 16 with CHD. The age of patients ranged from 27 to 59 years (in average - 41,4 ± 5,7 years), dominated by women - 37 people (78.4%). Duration of disease on CP was in the range of 4 to 18; the diseases of cardiovascular system had a history of 6 to 17 years. CP preceded most of the aforementioned diseases (27 patients - 73%), in 7 person (18.9%) – hypertension, and in three (8.1%) - CHD. Control group was represented by 19 individuals with CP without the associated cardiac pathologies. All patients were hospitalized and passed inspection protocols under management of these patients. The progress of pain and dyspeptic syndromes was assessed.

Results. Thus, the occurrence of pain syndrome in patients with an isolated CP was associated with error in diet or physical activity. The pain was localized in the left abdomen (17) and irradiated to the left scapula, back (14); lasted 3-4 hours and decreased a bitafter the prescriptionof antispasmodic and enzyme medicines. At the same time there were unstable stool with a tendency to retention of feces. At the same time for the 3-4th dayof stay in the department thrpain was significantly reduced. In patients with aggregate hypertension the pain occurrence at the point of projection of pancreas was significantly often (66.7%) accompanied by the increased blood pressure and was accompanied with the prolonged nauseain 13 people (61.9%). In these patients there was no defined irradiation of pain to the left half of the body, its duration depended on the height of arterial tension. In patients with CHD, the pain occurred against the backdrop of cardiodynia, accompanied by tachycardia, and in 9 (56.3%) cases - with the emergence of extrasystole. If patients determined the occurrence of stenocardiaat night (7 -43.8%), the discomfort occurred at the left upper quadrant whichdid not led to the full-scale attack of pain; and such clinical manifestations persisted for a long time - 3-4 hours. In the morning these patients showedthe defined general weakness, lethargy, malaise. The prescription of antispasmodic drugs for such patients during the acute cardiac pathology almost did not lead to improvements, but the pain disappeared under the influence of pathogenetic therapy of the appropriate nosology form - hypertensive or coronary drugs. Another problem in the indicated patients was the dyspeptic syndrome manifested by prolonged (2-3 months) symptoms.

Conclusions. The combined course of CP and hypertension and coronary artery disease or CHD leads to changes in clinical symptoms, signs of cardiac pathology come to the fore, manifestations of disease of the pancreas become smoothed out or gain some atypical course. Emerging pain syndrome in this case is likely to have a reflex nature as a result of the sympathetic nervous system involvement. Another feature of such patients is long dyspeptic syndrome, which persisted for 2-3 months.

Vorobyova H.

INTERACTION OF THE CONDITION OF THE IMMUNE SYSTEM AND WAY OF LIFE OF YOUNG PEOPLE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of propedeutics of internal medicine 2 and nursing care

Introduction. Health of young people is one of the most urgent problems in Ukraine. According to the domestic and foreign researchers, the number of healthy newborns in the major cities of Ukraine doesn`t transcend 1%, more than 60% of young people smoke, and 50% of adolescents are limited in the choice of profession because of the health reasons.

Aim. The determination of the level of immunity HNMU students and identify the main factors that affect the immune system.

Materials and methods. We have carried out a survey and data processing.

Results. The study surveyed 35 students at the age of 18-21 years: The dependence of the immune status (IS) was analyzed according to the three groups of factors: psychogenic, bad habits and frequency of recurrences of herpes. We have found out a clear correlation between the state of IP and psychological status. So, 66% of students with low levels of immunity observed fatigue, 85% is a constant stress, 55% are not able to relax and feel insecure in the classroom. Our results are consistent with the modern concept (about 80% of all diseases are linked in one way or another, with psychogenic effects.) A similar dependence has been established in respect of bad habits. 69% of students with low immunity are heavy smokers, 48% of the students frequently use alcoholic beverages, which is four and a half times more than in the groups with good immune status and the average (24% and 12%, respectively). In addition, students with low immune status more likely to suffer recurrences of herpes.

Conclusions. The results of this study may be an indirect indicator of the immune system of the respondents. There is a clear dependence of the immune system to the presence of the respondents bad habits. This, in turn, proves that the state of the immune system can and should be influenced by the formation of a healthy lifestyle.

Zaikina T.S., Rynchak P.I., Kovalyova Yu.A., Kasim Abd Elrahim

CORRELATION OF SCD40L LEVEL AND THE LEVEL OF INSULIN IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND DIABETES MELLITUS TYPE 2

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine №2, clinical immunology and allergology

Introduction. sCD40L is a new independent marker of autoimmune inflammatory reaction in the vessels.

Aim: to evaluate the correlation between sCD40L and insulin in the blood in patients with acute myocardial infarction and diabetes mellitus type 2.

Materials and methods: 115 patients were enrolled in this study. They were divided in two groups: I group- 60 patients with acute myocardial infaction and diabetes mellitus; II group- 55 patients with acute myocardial infarction without diabetes mellitus. Levels of sCD40L and blood insulin were evaluated using immunoassay analysis. Statictical analysis was made with the evaluation of average levels (M), error of the average level (m), reliability of differences (p) between nonparametrical samples.

Results. Average level of sCD40L in the I group was significantly higher than in II group – 3,84 ± 0,03 ng/ml and 3,28 ± 0,06 ng/ml accordingly ($p<0,05$). Average level of insulin in the I group was significantly higher than in the II group – 37,85 ± 0,91 mg/dl and 11,15 ± 0,33 mg/dl ($p<0,05$). sCD40L has direct correlation with an insulin in both groups, but this connection in more intense in patients with concomitant diabetes mellitus – $r=0,50$ and $r=0,45$ ($p<0,05$) accordingly.

Conclusions. It is necessary to evaluate levels of sCD40L and insulin for the understanding of activity of inflammatory process in the coronary vessels.

Zaozerskaya N.V., Aksjonova N.

QUALITY OF LIFE AND PSYCHOLOGICAL TRAITS OF CHARACTER IN PATIENTS WITH DIABETES VS CARDIOVASCULAR PATHOLOGY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of internal medicine № 2

Introduction: Diabetes mellitus and cardiovascular diseases are very common diseases in human population. Diabetes and hypertension, IHD may deteriorate the quality of patient's life, has an impact as on physical so on emotional status of the patients. The purpose of this research investigation is to learn and estimate influence of the clinic-psychological factors on the quality of life of patients with diabetes mellitus and cardiovascular pathology.

Methods: We usedShort Form Health Survey-36 (SF-36) questionnaire, psychological tests: Spielberg, EPI, Schmieschek, socio-demographics and clinical parameter characteristics for examination of the patients with diabetes mellitus (DM), cardiovascular diseases (CVD). Subjects were examined in the Kharkov Regional hospital. The study enrolled 12 patients with DM 1 type without cardiovascular pathology and 10 pts with cardiovascular diseases: hypertension, coronary artery disease, and heart failure. 10 healthy persons were observed as control group. M-59%, F-41%; mean age in group with DM - 43.7 years, CVD – 52.8 patients had hypertension, 4 – angina pectoris, 4 – atherosclerotic cardiosclerosis.

Results: Worsening of quality of life was revealed in both groups DM and CVS. For people with DM more pronounced decreasing of role physical functioning, general health perceptions, role limitations due to emotional problems and norm - based general mental health was detected. For CVD group: role limitations, vitality, energy or fatigue, bodily pain were more significantly marked. Personal psychological status of the patients with DM showed more high level of introversion, and high level of personal anxiety and situational anxiety were found in patients with CVD. Choleric and melancholic patients were revealed in DM group, sanguine and phlegmatic – in CVD group.

Zhuravlyova A., Ogneva O., Homich M., Ganshin N.

THE CORRELATION BETWEEN THE OVERWEIGHT AND THE RISK OF CANCER PATHOLOGY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of Internal Medicine № 3

Introduction. Ukraine is currently ranked second in Europe in terms of the rate of detection of malignant disease among the population. According to the National Cancer Registry Bulletin one of four men and one of six women under the age of 40 years identify cancer during preventive check-ups and diagnostic procedures because of other diseases. WHO researches devoted to the study of factors that contribute to the development of neoplastic disease, attach great importance to the overweight. However, the analysis of the scientific literature pointed to the shortage of statistical data on the correlation between malignant diseases and overweight.

Aim. To assess an iterrelation between overweight and common forms of cancer pathology.

Materials and methods. The data of 348 case histories of patients that were treated of various somatic pathologies in Kharkiv Regional Hospital in the period of 2009-2010 are examined: coronary heart disease - 43, hypertension - 80, diabetes mellitus - 47, peptic ulcer - 29, cholelithiasis and chronic cholecystitis - 38, liver cirrhosis - 18, chronic pancreatitis - 38, osteoarthritis - 27, rheumatoid arthritis - 28. The sample was spontaneous. Body mass index (BMI) and cancer history were evaluated.

Results. It was noted that 67% of patients had different degrees of obesity. 42% of these were obese 1^{st} degree, 37% have 2^{nd} degree of obesity, 18% - obesity grade 3, and 4% were obese 4^{th} degree. Oncopathology in anamnesis or at the time of the examination was identified in 11% of all studied cases. It was found that 78% of patients with malignant diseases suffered from different degrees of obesity, and the incidence of cancer pathology positively correlated with increasing BMI ($r=0,7$; $p<0.05$).

Conclusions. Thus the results of the study showed the presence of statistical correlation between the frequency of detection of malignant disease and overweight in patients with different degrees of obesity. Consequently, the obtained data may be used as additional prognostic criteria of risk of tumor development in this group of patients. Proper nutrition, exercise and absence of bad habits are considered to be the factors that hinder the development of obesity and may be recommended to prevent the incidence of cancer.

`

SURGERY, TRAUMATOLOGY AND ORTHOPEDICS

Adeem Farkad Yousif Alani

THE ROLE OF URGENT ULTRASOUND IN THE DIAGNOSIS OF ACUTE INTESTINAL OBSTRUCTION IN PREGNANT

Kharkiv National Medical University, Kharkiv, Ukraine,
Departmentof surgery 2

Introduction: Problem of diagnostics and treatment of sharp intestinal impassability for pregnant, especially in late terms, is to the end of not decided.

Aim: improvement of results of diagnostics and treatment of sharp intestinal impassability for pregnant, especially in late terms, including, due to application of urgent ULTRASONIC.

Material and methods: The presence in our clinic (Kharkov city clinical hospital of emergency medical aid to them. Professor A. I. Meshchaninov) service hour ultrasound and the concentration of all the pregnant women of the town with suspected acute surgical pathology allow you to analyze the results of the urgent application of this diagnostic method in various pathologies. Suspected surgical pathology for 2014 was hospitalized 122 pregnant. On the duration of pregnancy they were distributed as follows: up to 12 weeks of pregnancy - 30, from 12 to 24 weeks-50, over 24 weeks - 42. Suspected AIO 6 was hospitalized pregnant women. Of them up to 12 weeks of pregnancy - 1, from 12 to 24 weeks-2, over 24 weeks - 3. Roentgen Study of abdominal organs was conducted one pregnant (she was then operated with its consent in connection with that emergency crews considered it more appropriate, the other main diagnostic method was ultrasound. About AIO operated 3 pregnant. Among them, the timing of pregnancy: up to 12 weeks of pregnancy - 1(7 weeks), over 24 weeks - 2 (27 and 28 weeks.) In all cases, the reasons were adhesive small bowel obstruction , in one case of necrosis of the intestine.

Results:Our data on ultrasound signs of AIO and high informational method coincide with the above literature ,I would like to emphasize our agreement with the conclusion of Algherese of Harbeke (abstract of Ph. D. thesis, 2009.) that when intestinal AIO opportunities ultrasound above x-ray in the early stages of the disease. A feature of an ultrasound examination of abdominal cavity of pregnant women in the big deadline is the narrowing of the ultrasound window for examination of the intestine due to enlarged uterus. However, the ultrasonic window is sufficient for studies of the intestine. In 3 operated pregnant performed the following surgery: dissection of adhesions,transnasal intubation of bowel, drainage of the abdominal cavity, and in one case resection necrotized part of the colon with anastomosis “side to side”. In all cases recovered, pregnancy was saved. One of the patients in 29 weeks occurred independent genera.

Conclusions: Ultrasound in the diagnosis window and high informational along with x-ray is the methodof choice, and in the case of pregnancy, the only safe method of diagnosis.

Adeem Farked Yousif Alani

OUR EXPERIENCE OF USING FIXATION APPARATUS OF INJURIES IN PATIENTS WITH SPINAL CORD INJURY (SCI)

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of traumatology and orthopedics

Introduction: The Issue of treatment of patients with spinal cord injury SCI , despite the progress made in trauma, is still relevant. After conservative treatment of persistent disability are 40% of the victims, which is almost 3 times higher than in the operated patients. Mortality from spinal cord injury SCI is more than 30%. Treatment of spinal cord injury in patients with multiple injuries should combine the principles of treatment of traumatic shock with early rigid fixation of bone fragments. Currently in the treatment of spinal cord injury SCI received active surgical tactics.

Aim. Improve treatment outcomes in patients with spinal cord injury SCI in case of multiple trauma.

Materials and methods. This abstract presents the experience of treating 5 patients on the basis of traumatological department, Kharkiv Municipal Emergency Hospital in period of 2009-2014. We used the external fixation technique in 5 patients with spinal cord injury SCI. For diagnosis were used clinical, radiological and SKT methods.

Results. When choosing a treatment spinal cord injury SCI we followed the recommendations of AO, taking into account the type and nature of spinal vertebra injury . At 5 injured external fixations technique was performed as anti-shock event and required subsequent use or a combination of internal fixation in the future, the remaining victims was the final treatment option. The frequency of good and satisfactory results in operated patients was 84.2%.

Conclusions. Emergency operative stabilization of spinal cord fixation device is needed as an essential component of therapy and anti-shock method, aiming at a strong fixation of bone fragments, which can be used as the primary stabilizing, and the ultimate way to treat patients with multiple injuries.

Basylaishvili S.Yu, Lukashova O.P.

ULTRASTRUCTURE OF NON-SMALL CELL LUNG CANCER CELLS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of oncology

Introduction: Non-small cell lung cancer is a morphologically diverse group that includes squamous cell carcinoma, adenocarcinoma of different degree of differentiation, including alveolar adenocarcinoma, well as their combinations in the same tumors in various proportions. Using standard techniques of electron microscopy ultrastructure of 6 cases of squamous cell lung cancer, 8 cased of adenocarcinoma, and 2 cases of the alveolar lung cancer was studied.

Results. It was found that squamous cell carcinoma cells are characterized by the presence of microfilaments and tonofibrils in the cytoplasm, indicating epithelial origin of this type of cancer. In low-grade differentiated cancer these elements are located in the cytoplasm as separate fibers, while high-grade differentiated - gathered in the dark long cords. In the cytoplasm, many free ribosomes and polysomes are found, which may indicate the active processes of protein synthesis directed to the synthesis of keratin, separate

mitochondria and lysosomes, sometimes – dilated cisterns of rough endoplasmic reticulum and the vacuole. The bright nuclei with winding circuit and decondensed chromatin contain large nucleoli. Squamous cell carcinoma cells are connected via desmosomes, however, plasma membranes often diverge and between them the intercellular spaces form.

In lung adenocarcinomas, as well as adenocarcinomas of other locations, tumor cells form similarity of glands, surrounded by a basement membrane, and having a central lumen. In the apical part of the gland they are connected via desmosomes. Adenocarcinoma cells possess certain protein synthetic and secretory activity, as indicated by the presence of secretions in the lumen of the gland, granules with serous contents in the cytoplasm and intracellular gaps as alternative for lumen of the gland and where also secretions can collect. In each of the studied cases the ultrastructure of lung adenocarcinoma cell has its distinctive appearance, inherent only to a given tumor. Some of them consist mainly of low-grade differentiated tumor cells with light nuclei and the main components of cytoplasm are free ribosomes and polysomes, indicating that their main function is the production of proteins for their own needs, in particular for the processes of growth and division. In other predominant dark functionally less active cells with pleomorphic nuclei, dilated profiles of rough endoplasmic reticulum and swollen mitochondria, in the other - the majority of tumor cells contain intracellular lumens. There are tumors, all nucleoli of which have a spiral structure, and some adenocarcinomas characterized by bright sharply pleomorphic cells. In one tumor can present tumor cells with different functional activity and undifferentiated (stem) cells.

Alveolar adenocarcinoma composed of tumor cells, which owe their origin to type 2 pneumocytes, a characteristic feature of which is the presence of specific cytoplasmic granules containing surfactant, a substance that maintain alveoli turgor. Tumor cells can be assembled in groups or form glands. The cytoplasm contains an abundance of granules filled with lamellar myelin-like substance, there are large lipid corpuscles lying free in the cytoplasm as well as inside the granules.

Conclusion. Lung cancer polymorphism may indicate that a mutation in the carcinogenesis affect not only the genes that are responsible for metastasis and unlimited division, but also other genes, whereby the structural and functional properties of tumors, including their sensitivity to radiotherapy and chemotherapy are modified. These electron-microscopic features of lung cancer of different histological structure can be used as an additional criterion in the differential diagnosis of complex cases.

Boyarskiy A.A., Khodak A.S.

METHOD OF APPLYING ESOPHAGEAL - GASTRIC ANASTOMOSIS DURING RESECTION INTRATHORACIC PART OF THE ESOPHAGUS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of oncology

Introduction: Until now the complete cure of cancer of the esophagus is possible to reach only by surgery. Whereein the five-year survival rate of patients ranges from 25% to 35% according to different authors. At the same timepostoperative mortality in these diseases is 20%. The main cause of postoperative mortality is the failure of the esophageal - gastric anastomosis.Not less dangerous fatal complication that significantly affects the quality of life of the patient, is reflux of gastric contents into the esophagus. We propose a

new method of applying the anastomosis, which reduces ischemia of tissue in anastomosis area, and also reduces throwing stomach contents into the esophagus.

Material and methods. After lateral thoracotomy on the right and midline laparotomy, we mobilize the esophagus and stomach tumor, perform the intersection of the esophagus above the edge of the visible tumor 4-5 cm. We intersect with the removal of the stomach cardia. The preparation is removed. With using the stapler we suture gastric stump and pressurize second row sero - muscle sutures. We transfer stomach into the pleural cavity. After that we fix the end of the esophagus with muco - submucosal sutures to the front surface of the gastric stump.We form the rear wall of the anastomosis with two-row suture. Thereafter, the first row of sutures applied through all layers of the front lip of the anastomosis.

Results. Then we stitch one ligature the gastric fundus to the left of anastomosis, esophagus 2-3 cm above the bottom of the anastomosis and stitch the gastric fundus to the right of the anastomosis. We tie the ligature. Below designated ligatures we impose another 3-4 gray sero - serous sutures on the opposite walls of the fundus of the stomach to cover the full area of the anastomosis. This is followed by transnasal intubation gastric stump, drainage of the thoracic and abdominal cavities and closure of surgical wounds.

Thus, the anastomosis is formed between the bottom of the esophagus and stomach. In the process of forming an anastomosis there forms an elastic cuff around the esophagus and the new gas bubble. Due to the proposed method, the newly formed fundus of the stomach becomes more mobile, there is less tissue trauma by reducing the number of sutures to form an anastomosis, increases its reliability, and also creates the cuff, prevents throwing of stomach contents into the esophagus.

Conclusions: Following this procedure there were operated 18 patients. Complications such as anastomotic failure were not. There is noted by good functional performance of the anastomosis.

Goni S.A.T.

LOCAL RADIATIVE LESIONS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of surgery №2

Introduction. Radiative lesions (RL) - a pathological changes that occur in the body as a whole and in individual organs and tissues under the influence of ionizing radiation. There are general and local radiative lesions. In terms of occurrence RL divided into early (occurring within the first 3 months after exposure) and late. In the pathogenesis of late RL major role played by the defeat of the genetic apparatus of cells radioresistant tissues and organs, characterized by low proliferative activity. These are such tissues like vascular endothelium, muscles, bones, nerves and liver. These tissues are not showing any signs of damage immediately after exposure or in the early period after it. However, the defeat of the genetic apparatus of inactive cells with albeit rare division lead tooccurrence of non-viable offspring. Gradually, this leads to such consequences as thrombosis and obliteration, the appearance of late radiative ulcers, tissue sclerosis, osteoporosis, malignancy.

Aim - to investigate the incidence of bone lesions in patients who underwent radiotherapy.

Materials and methods. The analysis of radiographic studies of 36 patients who were treated in the SI "Grigoriev Institute for Medical Radiology of National Academy of Medical Science of Ukraine" in the period from 2000 to 2014 years. Patients appealed over 10-18 months after undergoing radiation therapy for breast cancer complaining of dull pain

and discomfort at the site of exposure. In analyzing chest X-Rays ribs and collarbone osteoporosis at exposed areas in 10 patients (28 %) and structural changes of bones in 26 patients (72%) were found. Pathological fracture was found in one patient (3%) and was regarded as the effects of radiative therapy.

Conclusions. The least sensitive to radiation is bone tissue. RL of bones in X-ray can be detected not always, but histological examination revealed significant structural changes and osteoporosis. Most often osteoporosis occurs in ribs and collarbone during radiotherapy of breast cancer. This lesion has little clinical importance because of the low incidence of pathological fractures in this localization. Proper diagnosis and differential diagnosis of radiation and metastatic bone lesions is important for the choice of treatment and rehabilitation.

Goni S.-K.T.

THE OPTIMAL METHOD OF OBTAINING PRP FOR TREATMENT OF CHRONIC LIMB ISCHEMIA

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of surgery №2

Introduction. Platelet-rich plasma (PRP) contains numerous growth factors that have angiogenic activities. In PRP, blood is drawn and spun in a centrifuge to separate the platelets. The "platelet-rich plasma" is then re-injected back into the patient in the area of the damaged tissue. It is a safe method of stimulation. It is shown that the stimulatory effect of platelet-rich plasma is manifested when the concentration of platelets therein is 1,000,000/ml.

Aim - to determine the optimal method of obtaining PRP.

Materials and methods. We took the whole venous blood of healthy volunteers by centrifugation and by various methods isolated PRP. Each time all blood samples were centrifuget by the same ways. The platelet count were measured in laboratory in each sample. By double centrifugation at speed 3500 for 15 minutes and then for 15 minutes at a speed of 3000 we have obtained plasma with low concentration of platelets (46-82x109\l). By double centrifugation at speed 4500 for 15 minutes and then for 15 minutes at a speed of 2000 we have obtained same plasma with low concentration of platelets (42-78x109\l). By centrifugation one time for 10 minutes on a speed 2000 we have obtained plasma with concentration of platelets (282-343x109\l). By centrifugation one time for 3 minutes on a speed 1000 we have obtained plasma with high concentration of platelets (520-701x109\l).

Conclusions. To stimulate angiogenesis in ischemic muscle we administered from 1 to 2 ml of PRP in 5 points in the gastrocnemius muscle. In this case, the amount of plasma should not be limited to 1 ml and a somewhat lower concentration of platelets in the plasma is compensated by introducing a larger volume. The method of mild centrifugation of whole blood is considered optimal for use in the hospital.

Dolgov V., Medyanik E., Mezhenskaya K.

ANOMALIES OF THE CORONARY ARTERIES

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of operating surgery and topographic anatomy

Introduction: Congenital abnormalities of the coronary arteries have more than 2% of the people. Allocate the following anomalies of the coronary arteries: - The only coronary artery; - Additional coronary arteries; - Discharge of the left or both coronary arteries from the pulmonary artery (Bland - White - Garland syndrome); - High position the

orifice of one of the coronary arteries (ectopia); - The cleavage of the distal part of the coronary arteries in the coronary sulcus; - Coronal fistula (vessel falls in the chamber of the heart).

Results. Anomalies of the coronary arteries result in focal ischemia or myocardial infarction with subsequent development of heart failure and even death. Symptoms. Developmental lagging, fatigue, weakness, exertional exercise dyspnea, heartbeat accompany anomalies of the coronary arteries. Clinical pattern. Asymptomatic quiescent or symptom complex of severe cardiopulmonary diseases (required extracorporeal membrane oxygenation). Phenomenon of precordial systolic jitter, lowering of systolic and increasing of pulse pressure can appear. These symptoms can be mistaken for patent ductus arteriosus.

Diagnostics. Chest radiograph has no specific signs of this disease. When listening is often found systolic murmur at the apex, as due to circulatory disorders, changes occur in the mitral valve and mitral insufficiency. On the electrocardiogram to detect signs of left ventricular enlargement, signs of deterioration supply the heart muscle, and even signs of scarring of the heart muscle. By means of coronary angiography more accurately diagnose this defect. With the introduction of contrast material reveals its penetration through the collaterals to the left coronary artery and then into the pulmonary artery.

Conclusion. The goal of surgery is elimination of the anomalies to prevent the development of heart failure, myocardial infarction or focal ischemia. The first phase of the treatment is removing of congestion stagnation. Perform the complete transposition of abnormal coronary artery to the aortic radix, ligation of the part, which separates from the artery. Fistulization between left coronary artery and left subclavian artery.

Ievtushenko D.V., Robak V.I., Byzov D.V.

MANAGEMENT OF PATIENTS WITH MIRIZZI SYNDROME

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of general surgery №2

Introduction: Mirizzi syndrome is a rare complication of long goingcholelithiasis, commonly accompanied by variety of structural changes in hepatopancreatoduodenal region. Surgical treatment is effective but quite challenging, especially in non specialized departments.Laparoscopic management of Mirizzi syndrome is quite chalanging due the absence of tactile response and issues with convertion of 2D camera view.

Aim:To present results of treatment in 17 cases of Mirizzi syndrome in single hospital and aspects of diagnosis, preoperative, postoperative care and surgery itself.

Material and methods: Surgical treatment performed at 17patients with Mirizzisymdrome in period of five years.Mean age of 62.9years(40 to 83 years) Main parameters(clinical changes, lab results,sonographye.t.c.) were evaluated.

Results: According to the Csendes classification we divide three groups: type I- 7 patients- (41.0%)type II- 2 (11.8%)type III- 6(35.4%) - type IV-2(11.8%).Laparoscopy as a first step of surgical treatment was performed at 5 patients with Mirizzi syndrome type I-II. At 8 patients open cholecystectomy was performed. At 6 patients-cholecystectomy with drainage of bile ducts, and at 3 patients- cholecystectomy and hepaticojejunostomy(all with type 3 Mirizzy.In cases with significant defect of common bile duct we performed plastics using intact area of gallbladder wall or partial(2 cases) cholecystectomy.Concomitant and related surgical pathology (at 8 cases gangrenosecholecystitis with local peritonitis, 1 case-liver abscess, 1 case- multiple liver abscesses, 1 case of combination ofcholecysto-

choledocheal and cholecysto-duodenal fistula)provide significant impact on type of treatment and process of recovery.Leukocytic index of intoxicationbyKalf-Kalif (LII) measured at all patients, RR- 0.51-2.1. At admission mean level of LII were 3.82(from11.2 to 0.47) At 5-7 day after the surgical treatment LII normalized (mean 1.0)All patients recovered well and were discharged from hospital insatisfactory conditions.

Conclusion: Preoperetive diagnosis of Myrizzi syndrome is difficult tusk. Combination of anamnesis of current disease, length of cholecistitis, and results of ultrasonography(smaller size of gallbladder, presence of gallstones in neck area) reflects high possibility of significant changes in Calot triangle. Open approach is safe and effective especially for patients with type 3-4 Mirizzy. We recommend lengthof postsurgical in-hospital stay at 5-7 days, as the time for normalization of basic parameters.

Isaac Precious Adaora

RECENT FINDINGS FOR COLORECTAL CANCER TREATMENT

Kharkiv National Medical University, Kharkiv, Ukraine

Introduction. .In the structure of cancer morbidity in the world, colorectal cancer is currently in fourth place. Colon, or colorectal, cancer is cancer that starts in the large intestine (colon) or the rectum (end of the colon).

Results. Newer surgery techniques. Laparoscopic surgery is done through several small incisions in the abdomen instead of one large one, and it's becoming more widely used for some colon cancers. This approach usually allows patients to recover faster, with less pain after the operation. With robotic surgery, a surgeon sits at a control panel and operates very precise robotic arms to perform the surgery. Chemotherapy. Different approaches are being tested in clinical trials, including: New chemo drugs or drugs that are already used against other cancers (such as cisplatin or gemcitabine).New ways to combine drugs already known to be active against colorectal cancer, such as irinotecan and oxaliplatin, to improve their effectiveness.The best ways to combine chemotherapy with radiation therapy, targeted therapies, and/or immunotherapy. Targeted therapy: Several targeted therapies are already used to treat colorectal cancer, including bevacizumab (Avastin), cetuximab (Erbitux), and panitumumab (Vectibix). Immunotherapy: Researchers are studying several vaccines to try to treat colorectal cancer or prevent it from coming back after treatment. Unlike vaccines that prevent infectious diseases, these vaccines are meant to boost the patient's immune reaction to fight colorectal cancer more effectively.

Conclusion. Many types of vaccines are being studied. For example, some vaccines are created by removing some of the patient's own immune system cells (called dendritic cells) from their blood, exposing them in the lab to a substance that will make them attack cancer cells, and then putting them back into the patient's body. At this time, these types of vaccines are only available in clinical trials.

Karchins′kyy O. O., Orlova T. V.

USING THE REMOTE INFRARED THERMOGRAPHY IN THE DIAGNOSIS AND ASSESSMENT OF TREATMENT EFFECTIVENESS OF PARANASAL SINUSITIS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of otorhynolaryngology

Introduction: To date stated the high prevalence of inflammatory diseases of the paranasal sinuses, as the early and the late stages of development. Also was found out that

in many cases these processes are atypical, due to the unfavorable ecological situation and deformed immunological reactivity. At the present level of medical problem diagnosis of various pathological conditions paranasal sinuses remains problematic.

Materials and methods: We were using remote infrared thermography for remote use (RIT). The study involved 126 patients, including patients with paranasal sinusitis - 95 people. These are based on the results of patient examination and treatment of patients with various inflammatory conditions of paranasal sinuses. The patients' age ranged from 18-78 years. All surveyed divided into groups: Group 1 - control group - 31 people; Group 2 - patients with inflammatory diseases of the paranasal sinuses - 95 people. RIT held all thematic patients and the control group using thermograph of the 4th generation based on microbolometer matrix format 384h288 elements of the built-in screen. Informativity of thermograms was compared to: overview otolaryngology; X-ray PNS (paranasal sinuses); CT PNS; histological examination of surgical specimens.

Results: 1. It was dentified the distributions of distance infrared thermography paranasal sinuses in healthy people by gender and age. 2. Examined changes in performance of remote infrared thermography in patients with various forms of paranasal sinusitis. 3. We have created a special processing algorithm thermogram head in the affected paranasal sinuses. 4. Developed technique of remote infrared thermography in patients with paranasal sinusitis.

Conclusion: The use of thermography computer processing expand opportunities for diagnosis and assessment of effective treatment of patients with paranasal sinusitis.

Khodak A.S., Khodak V.P.

TUMOR STEM CELLS AS THE SOURCE OF MALIGNANT NEOPLASMS RISK

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of oncology
Institute of Medical Radiology named after S.P.Grygoriev, NAMS of Ukraine

Introduction. Development of malignant cells and maturation of stem cells are of great interest for current oncology. Different theories of carcinogenesis have been put forward at different period of science evolution. One of such conception is theory of malignant tumors origin from transformed stem cells.

Aim. Research objective is to study the mechanism at stem cell transformation and its revealing.

Materials and methods. The main target of antitumor drugs is to be cancer stem cells, as it is very difficult to identify them among other tumor cells with the help of morphologic verification.

Conclusion. Thus, process of stem cells transformation into malignant ones is rather complicated. Conception of stem cells or their predecessors origin is relatively new, so a lot in these processes is not clear yet.

Khodak A.S., Khodak V.P.

COMPLICATIONS AT MAMMARY GLAND CANCER AFTER SALVAGE OPERATION

Kharkiv National Medical University, Kharkiv, Ukraine,
Institute of Medical Radiology named after S.P.Grygoriev, NAMS of Ukraine

Introduction. Breast cancer (BC) is the most common malignancy among women. Every 9th woman in Europe has risk to develop MGC. The leading method of treatment is

surgical. One can trace the clear tendency to conduct organ saving radical operations. According to many authors carrying – out of such operations increases the risk of MGC local recurrence, which is the result of not sufficient radicalism of operation and possible existence of some tumor nodes in gland at once.

Aim. To determine the rate of local recurrences after organ saving operations at MGC.

Materials and methods. 140 patient with MGC have been following up after sectoral radical operations. The operation has been carried out when tumor was not more than 2.5 cm in diameter and when it localized in external quadrants. After diagnosis verification the patients had preoperative gamma therapy according to clinic methods. After operation all the patients were given polychemotherapy. Hormone therapy was given at indication. 72 patients had stage I cancer, 38 patients had stage IIA and 30 patients had stage IIB. The age of patients was from 25 to 65 years.

Results. 13 patients (9.3%) had after operation recurrences during 5 years period. One patient (8%)had recurrences during the first year, two patients (15%) had recurrence during the second year, seven patients (54%) had recurrence during the third year, two patients (15%) had recurrence during the fourth year, one patient (8%) had recurrence during the fifth year. The greatest number of recurrences has developed in the age group from 25 to 40 years (70%).

Conclusion. Thus, recurrence rate after organ saving operations in patients with MGC was 9.3%. Patients young age is bad prognostic factor. The greatest number of recurrences develops during the third year after the operation.

Koshman S. K., Lozkho N.V., Pazhin S.A.

INNOVATION METHOD OF TREATMENT OF CHILDREN CEREBRAL PALSY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of the operative surgery and topographic anatomy

Introduction: Children cerebral palsy (CCP) is a disease in which the motor and muscle activity, coordination of movements are impaired. The cause of cerebral palsy is damage motor centres or their pathways during prenatal period or while its birth. This disease has very hard consequences for parents and child.

Aim: To introduce new method of surgical treatment of CCP.

Materials and methods. In the CIS countries there are about 18,000 times a year of cases of cerebral palsy. Earlier all of the treatment was only in drugs, but it was a successed only in muted serious consequences and has not fully solved the problem. However, in 2012, in Russia for the first time in the CIS was conducted surgery on the matter. The most important thing in the manipulation is to set a baklofen pump, designed for people who need long-term treatment of spasticity. Baclofen is a derivative of gamma-amino butyric acid and its operating principle is to suppress the abnormal activity of motor neurons in the spinal cord, which is due to the lack of regulatory influence of the overlying parts of CNS. As a result, it helps the patient to deal with the symptoms of the disease due to continuous administration of precise doses of medicament into the spinal canal. Pump itself is a circular metal disk with thickness of 2-3 cm and about 7 cm in diameter. The pump is implanted under the skin in the abdominal area along the border separating right lateral and inguinal area, and then programmed with the remote control. Every 1.5-2.3 month added a new piece of baclofen with the aid of percutaneous puncture. It should also be noted the risks of the

operation - Fault mechanical component with increased doses of active substances could occur such side effects as dizziness, drowsiness, fatigue, insomnia, nausea, vomiting, constipation, respiratory disorders, and decreased muscle tone. You should also check lumbar catheter patency be required it will require a new operation.

Conclusions. In total for 2013 was conducted 50 such operations and established a government support program, which issued in 2013 - 400 of quotas, and in 2014 - 450. Patients are observed for reduction of pain and discomfort, effectively reducing spasticity, allowing leading a more active lifestyle, improve sleep.

Lapshyn D.V.

COMPARISON OF SEVERITY SCALES OF THE CONDITION AND DAMAGES FOR VICTIMS WITH ASSOCIATED INJURIES

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of emergency and urgent health care, orthopedics and traumatology

Introduction. Despite the fact that in the world there are a number of scales of assessment to determine the severity of the damage, the selection of the most informative ones and easiest to use is very difficult. It is related to the specifics of main scales (scales with physiological, anatomical parameters or its combinations) and the difficulties arising from differences in terms and concepts adopted in different countries in determining the different types of damage.

Aim: the substantiation of rational evaluation system of injuries and the severity for victims with multiple and associated injuries based on the analysis of the most used in practice native and foreign assessment methods and choosing the optimal one.

Material and methods. We have evaluated 90 combined trauma victims, who were treated in the polytrauma department of Kharkiv Regional Hospital in 2012-2013. All the victims were divided into 3 groups: 1) group of victims who had to survive in any case; 2) a group of victims that could not survive because of a serious injury; 3) a group of victims, the result of an injury was dependent on early diagnosis and treatment.. The assessment of severity of injury and severity of victims condition was carried out using scales ISS, *ВПХ*-П (Military surgery - Damages), APACHE-II and ВПХ-СП (Military surgery - condition). The assessment of severity of injury and condition of victims was carried out using the scales ISS, *ВПХ*-П (Military surgery - Damages), APACHE-II and ВПХ-СП (Military surgery - condition). It was also held by expert assessment of victims by highly qualified specialists from department.

Results. The closest to the expert assessment was the usage of ISS scale. Thus, the statistical analysis (comparison of 2 methods for assessing the severity of contingency tables) was established coincidence of expert assessment in determining the severity of patients condition and possible injury results with the results we have gotten using the scale of severity of injury ISS with a high degree of reliability (Pearson criterion χ^2 - 829,4205; Spearman rank correlation - 0,993028). The data confirmed the effectiveness of ISS with high probability (error <0.001). Comparing methods of APACHE-II and expert evaluation it was set relatively reliable data coincidence, but much lower than using ISS (Pearson criterion χ^2 – 313,1483; Spearman rank correlation – 0,710461). Comparing methods of *ВПХ*-П (Military surgery - Damages) and expert evaluation it was also established relatively

reliable data coincidence (Pearson criterion χ^2 – 276,4644; Spearman rank correlation - 0,725469). Comparing methods of ВПХ-СП (Military surgery - condition) and expert evaluation it was also established relatively reliable data coincidence, although much lower than in ISS and APACHE-II(Pearson criterion χ^2 – 241,9186; Spearman rank correlation – 0,651872).

Conclusions. The biggest percentage coincidence in assessing the severity of injury scale and expert assessment is using the scale ISS. It means that we can use ISS not only to determine the severity of injuries but to determine the severity of victims condition too. Using the math stastic methods we have analised the results of treating the victims with combined trauma in case of surviving or death using the scales *ISS*, *ВПХ*-П (Military surgery - Damages), *APACHE-II* and ВПХ-СП (Military surgery - condition). And we have compared it with the actual results and got: in the group of survived victims, the forecast of ISS scale coincided in 99.1% of cases, scale APACHE-II - 97,7%, *ВПХ*-П (Military surgery - Damages) coincided in 90% of cases, ВПХ-СП (Military surgery - condition) in 88% of cases.In the group of patients who died the forecast on ISS scale coincided in 100% of cases, on the scale of APACHE-II - 95,2%, *ВПХ*-П (Military surgery - Damages) coincided 100%, and in of field surgery and ВПХ-СП (Military surgery - condition) - 100% matches in the group.

Lievashova A.I.

DYNAMIC OF VEGF LEVEL IN PATIENTS WITH LUNG CANCER

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of oncology

Introduction. Lung cancer ranks first in the structure of morbidity and mortality among malignancies in men. Its detection in advanced stages among adults in Ukraine, unfortunately, is very common.

Aim. Define the expression of VEGF (vascular endothelial growth factor) in patients with non-small cell lung cancer (NSCLC) before and after the surgery.

Materials and methods. 17 patients of Thoracic Department of Kharkiv Regional Clinical Oncology Center with NSCLC were examined.Patients were divided into two groupsclinically:first – patients, who don't have metastases to regional lymph nodesaccording to histological study – 7(41,2%); second - patients with metastases to regional lymph nodes - 10 (58,8%).Blood sampling in patients with NSCLC was performed before the surgery to determine the initial level of VEGF, 14 days and 1 month or more after surgery - to study its dynamics in the postoperative period.

Results. We found out in the first group: preoperative mean value - 212.8 pg / ml (normal to 182 pg / ml), 2 weeks after the operation - 632 pg / ml, a month or more after the operation - 149.3 pg / ml. In the second group it was found: preoperative mean value - 343 pg / ml, 2 weeks after the operation - 560 pg / ml, a month or more after the operation - 283.7 pg / ml.

Conclusion. VEGF in patients with NSCLC has diagnostic value, even when the process isn'twidespread. It is appropriate to monitor the level of the marker a month or more after the surgery or other special treatment. VEGF may increase in the early stages of NSCLC, which may serve as an additional diagnostic test. It is also can be used as a marker of radicality of special treatment.

Mayorova M.V., Istomin D.A., Oleynik A.A.

THE PREVENTION OF TROMBOEMBOLITHICAL COMPLICATIONS IN CASES OF FRACTURES PROXIMAL PART OF THE FEMUR

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of traumatology and orthopedics
Scientific supervisor – professor Golka G.G.

Introduction. Fractures of proximal part of a femur are the most frequent variant of it's injury. Tromboembolism is a terrible complication of fractures of proximal department of a femur. It takes the first place in the structure of a lethality among all complications. It is caused by surgical manipulations in a zone of vessels of the increased risk and long immobilization which leads to the decreasing of venous blood circulation, and also changes rheological properties of blood in the postoperative period.

Aim: an assessment of efficiency of medicamentous prevention of the tromboembolithycal complications for patients with fractures of proximal part of femur.

Materials and methods. 85 patients were involved in research, from them 38 men and 47 women aged from 39 till 81 year. All of them were on treatment in departments of traumatology of Kharkiv municipal emergency hospital with the diagnosis "The closed fractures of proximal part of a femur". Patients were divided into 2 groups: the first group included 56 patients, which were treated by a surgical method within 2-10 days after receiving a trauma. The second group was made by 29 patients, which were treated in a conservative way, using a method of skeletal traction. For patients of the first group there were used low-invasive OS by screws, OS by plates with locking compression, prosthesis replacement of a hip joint depending on injury type. The patient of both groups received prevention of a tromboembolism. The risk of a clot formation was estimated by criteria: data of anamnesis and the complaints, physical examination, blood tests, a koagulogramm.For the prevention of a tromoboembolism the Nardroparinum of calcium was used. The scheme of prevention to patients of the 1st group was: 12 hours before the operation and in 12 hours after it, for the 3rd day after operation it was given 0,2-0,4 ml of a Nadroparinum calcium subcutaneously, from the 4th to the 10th day it was given 0,3-0,6 ml. Regarding to patients of the 2nd group following scheme was used: during 10 days it was given 0,4-0,6 ml of a Nadroparinum calcium. The principle of the earliest beginning of physical activity was observed and an elastic compression of the lower extremities was applied in the intra-and postoperative period.

Results. In the first group of patients after application of a Nadroparinum calcium the phenomenon of a tromboembolism was noted only at one patient with a varicose diseases in the anamnesis, at other patients of this group of the clinical and laboratory data talking about the tromboembolithycal complications weren't revealed. The average term of their stay in a hospital was 18 days. In the second group of patients the clinical and laboratory data talking about the tromboembolism weren't revealed. The average term of their stay in a hospital was the 48 days.

Conclusions. The surgical method of treatment of injuries of proximal parts of a femur is the most rational because of the minimizing probability of appearance of the tromboembolithycal complications and reduction of terms of hospitalization. Medicamentous prevention by a Nadroparinum calcium significantly reduces probability the

tromboembolithycal complications for patients with fractures of proximal parts of a femur both at surgical, and at conservative treatment methods.

Mikhaylusov R.N.

CUVETTE FOR DISPENSING LIQUID OPTICAL RADIATION IN MEDICAL PHOTOBIOLOGICAL RESEARCH

Kharkiv Medical Academy of Postgraduate Education, Kharkiv, Ukraine

Introduction. When the experimental medical photobiological studies on irradiation of liquid media sources visible light is important consistency study the biological environment and a uniform illumination of the sample liquid. It has been revealed the absence of laboratory glassware that would allow reliably protect the irradiated samples from microbiological contamination, exposure to "background" artificial or natural light and other physical factors that may affect the "purity" of the experiment while maintaining consistency radiation parameters on the entire surface of the sample liquid.

The purpose of scientific research was the development and manufacture of laboratory glassware, which fully complies with the requirements listed above.

Material and methods. Were tested commercially available test tubes, cups and cuvettes, but none of the available products do not meet the criteria. In the analysis of the scientific and patent literature, we also did not find any samples for use. In this connection, developed, manufactured and experimentally tested "Cuvette for dispensing liquid optical radiation."

Results. To ensure a uniform distribution of irradiance in the irradiated liquid cuvette was created from two independent, parallel arranged parts which fit snugly into one another. On one side there is one "window" for irradiation in the second part there are 6 identical cylindrical containers. The structure is made of polytetrafluoroethylene (PTFE) brand 4MB. We have developed a cell eliminates the loss of light energy, and the same surface area of irradiation containers (1 cm^2), facilitates the calculations. Just ditch allows an independent exposure of each container with the same or different parameters (depending on your goals), regardless of exposure of other vessels. Developed on the "Cuvette for dispensing liquid optical radiation" received a patent for utility model of Ukraine (UA) №67013. Developed with the help of the cell was held 4600 research irradiation liquid biological materials.

Conclusion. In the operation of the ditch showed reliability, ergonomics, usability. In the course of experiments have revealed a high repeatability of similar studies, full compliance with the requirements of the experimental requirements. Additionally, it should be noted that the cell is easy to clean, it can be sterilized by autoclaving, chemical and ultraviolet (UV) methods.

Olefir O.S., Robak V.I., Kurbatov V.A.

CAUSES OF POSTOPERATIVE MORTALITY IN ACUTE NECROTIZING PANCREATITIS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of general surgery 2

Introduction. Severe acute pancreatitis remains one of the most difficult diseases in diagnostic and treatment. To optimize medical tactics in patients with necrotizing pancreatitis, it is important and topical to find criteria that will quickly and accurately separate patients requiring more intensive medical tactics.

Materials and methods. There is an analysis of surgical treatment of 125 patients with severe acute pancreatitis. In postoperative period 34 (27,2%) patients died. To defining criteria that significantly affect the course of the disease; we carried out the analysis of clinical characteristics of patients with acute pancreatitis with the isolation of a group of patients who died in the hospital from complications of pancreatic necrosis.

Results. The average age of the deceased patients was (60,5±3,56) years. In comparison with the average age of the survived patients (47,75±1,89) years. The average time from onset of illness prior to admission of patients in the surgical hospital was (5.2±2.1) days; hospitalization of patients with severe acute pancreatitis was quite late. Suppurative necrotic pancreatitis revealed at 80 (64,0%) patients. Necrotic pancreatitis with extrapancreatic complications revealed at 45 (36,0%) patients. In the group of died, suppurative necrotic pancreatitis revealed at 30 (88,2%) patients, necrotic pancreatitis with extrapancreatic complications at 4 (11,8%) patients. Parapancreatic fat injury revealed at 80 (64,0%) patients. At 26 (76,5%) patients from 34 died parapancreatic fat injury revealed.

Conclusion. 1. Postoperative mortality from complications of acute necrotizing pancreatitis is 27.2%. However suppurative necrotic pancreatitis and parapancreatic fat injury revealed at 64% of patients with acute necrotizing pancreatitis. 2. High risk of developing of post-operative complications in patients with severe acute pancreatitis is caused by the nature of the injury of the pancreas and retroperitoneal fat, age, alcoholic etiology of the disease, presents of disorders of body weight, diseases of liver, kidneys, cardiovascular system.

Omelchenko-Seliukova A.V.

THE EFFECTS OF TOTAL INTRAVENOUS ANESTHESIA ON COGNITIVE FUNCTIONS IN ELDERLY PATIENTS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of critical care medicine, anesthesiology and intensive care

Introduction. Present advances in technology and anesthetic care have enabled increasingly older patients to be viable candidates for routine surgery. It is projected that patients older than 60 years will become the largest segment of the surgical population by 2020. One of the serious medical and social complication of general anesthesia and surgery in old patients is development of postoperative cognitive dysfunction (POCD). It is known, that one of the main reasons of POCD is effect of drugs for anesthesia.

Aim. In the present study we aimed to investigate the effect of the total intravenous anesthesia (TIVA) with various drugs on the postoperative cognitive functions (CF) in older patients.

Materials and methods. Were examined 27 patients aged from 60 to 74 years, mean age 66,7 ± 4,7 years. Among them were 17 men and 10 women, who met the standard of the ASA I-II. The study included patients without pathology of the central nervous system and the absence of general anesthesia by 5 years, and which the results of the Montreal cognitive assessment scale (MoCA) were ≥25 points. All patients had routine abdominal operations. Cognitive function was assessed on day before operation, day 3 and 7 after operation using the Montreal Cognitive Assessment (MoCA). A score of ≤24 was indicative of cognitive dysfunction. Patients were divided into 3 groups depending of the method of anesthesia. In 1st group (8 patients) anesthesia was introduced by TIA based on ketamine, in 2nd (9

patients) - based on propofol, in 3rd (10 patients) – on thiopental sodium. Analgesia was provided in all groups by fentanyl. There was't significant difference in character and time for surgery, the age, the mean arterial pressure, heart rate and oxygen saturation into groups. Statistical analysis of data was performed by statistical programs Microsoft Office Excel.

Results. MoCA test results before surgery were insignificantly different in all groups. CF became worse significantly on 3rd day after sergery in 6 patients of group 1 (75%), 5 patients in 3rd (50%) and 1 patient in group 2 (11.2%). In the 1st group mainly suffered indicators of concentration and stability of attention and short-term and long-term memory. Whereas, in the other groups were registered violation of long-term memory. In 7 days after surgery state of CF in 88% of patients improved, but 4 patients in1 and 2 patient of 3rd group received ≤24 in MoCA test.

Conclusions. In 44% of elderly patients after routine surgical treatment under total intravenous anesthesia there was a decrease CF. The use of TIVA based on propofol has less impact in the development of POCD.

Robak V.I., Ievtushenko D.V., Byzov D.V., Kurbatov V.A.

INTESTINAL FAILURE IN COURSE OF ACUTE NECROTIC PANCREATITIS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of general surgery №2

Introduction: in patients with acute pancreatitis the first target organ is the gastrointestinal tract. The gastro-intestinal tract injury leads to the development of intestinal failure - syndrome involving violation of all functions of the digestive system, making intestine main source of intoxication.

Aim: to find the correlation between degree of intestinal failure and severity of acute pancreatitis.

Material and methods:Thereisananalysis of surgical treatment of 125 patients with acute pancreatitis. The age of patients ranged from 19 to 90. Men were 80 (64%), women - 45 (36%). 80 patients had an infected pancreonecrosis. 34 (27,2%) patients died. To assess the degree of intestinal failure we used the Intestinal Failure Scale – IFS (Syplyviy V., 2007). To assess the degree of severity of acute pancreatitis we used Acute Sepsis Severity Evaluation Scale – ASSES (Syplyviy V., 2005). Direct correlation was calculated using the Spearman rank coefficient r_s.

Results: The degree of intestinal failure in patients with infected pancreonecrosis was (38±3,56) points, with non infected pancreonecrosis – (27±3,62) points ($p<0,05$). The degree of severity of acute pancreatitis in patients with infected pancreonecrosis was (15,89±0,74) points, with non infected pancreonecrosis – (12,03±0,48) points ($p<0,05$). The degree of intestinal failure in died was (39±2,01) points, survived – (24±1,97) points ($p<0,05$). The degree of severity of acute pancreatitis in died was (15,05±1,04) points, survived – (11,74±0,77) points ($p<0,05$). Calculating the coefficient of rank correlation between the received data $r_s=1$ – the correlation is statistically significant.

Conclusions: 1. The course of acute necrotizing pancreatitis is accompanied with intestinal failure. 2. There is a direct correlation between the degree of intestinal failure and the severity of course of acute necrotic pancreatitis

Panich R., Shuba D.

OPERATIVE SURGERY OF THE ECTOPIC PREGNANCY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of operative surgery and topographic anatomy

Introduction. Most ectopic pregnancies (93-97%) occur in the distal Fallopian tube. They are called tubal pregnancies. If a woman plans to have children in the future, but for some reason has only one fallopian tube, there is a problem of its preservation.

Results. Some methods are used for preservation of fallopian tubes during operative surgery of the tubal pregnancies. There is vacuum aspiration technique. The vacuum aspirator is introduced into the uterus of a pregnant woman, which leads to delamination of the ovum from the uterine wall. Another method is laparoscopic surgery. Ectopic pregnancy refers to a condition, which the surgery is performed on an emergency basis. Indication for surgery is the occurrence of ectopic pregnancy complications that threaten the life of the woman. It is used to determine the location of the ovum and its disposal. It is made from three trocar puncture. Trocar (10 mm) is introduced through the navel for the laparoscope. Two trocars (5 mm) are introduced in the lower abdomen for scissors, clamps, biopsy forceps, needle holder, etc. Instruments are necessary for some manipulations - stop bleeding, resection of part of the body, removal of pathological formations, suturing. Trocar wound (5 mm) is sealed by plaster. On the wound of 1 cm is applied intradermal absorbable suture thread. Any laparoscopic procedures are followed by carefully laundering of abdomen from getting inside the blood. It eliminates the possibility of adhesion formation, and decreased similar situations in the future. Furthermore, there is a method of transabdominal approach with the introduction of methotrexate. Methotrexate may be given, which allows the body to absorb the pregnancy tissue and may save the fallopian tube, depending on how far the pregnancy has developed. According SA Mesogitis et al., methotrexate is injected into the fertilized egg transdermally using method of "free hand". It is performed through the 22G needle diameter by the control of transabdominal ultrasound. All patients were noted complete resolution of ectopic pregnancy with trophoblastic tissue regression without any adverse reactions. Introduction of methotrexate in the fallopian tube is performed under control of transvaginal sonography. Successful results have been observed in 83% of cases. Methotrexate therapy is safe and effective.

Conclusion. The most effective and safe method is transabdominal approach with the introduction of methotrexate. It is easier to save fallopian tube in early period of pregnancy, when there are no complications. It is therefore necessary to conduct health education among women. This education must consist of information about preventing of complications and early diagnosis of ectopic pregnancy in the case of its occurrence. Preventive examinations of childbearing population must be performed.

Pavlichuk E., Shuba D.

SURGICAL TREATMENT OF VERTICAL STRABISMUS IN ADULTS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of operating surgery and topographic anatomy

Introduction: The most common cause of vertical strabismus is paresis or paralysis of the superior oblique.There is often a selective head position - eye tortikollis and syndrome «V» in these patients.Presently known that surgical treatment of strabismus in

paresis of the superior oblique is to strengthen the affected muscles or weakening its antagonist - the inferior oblique, but often debilitating perform operations on the antagonist muscles - the inferior oblique of the same eye (recession or myotomy).However, dosing with the intervention of varying severity hyperfunction of the inferior oblique muscle is a difficult task for ophthalmic surgery.The disadvantages of the inferior oblique recession are low efficiency of interventions in addressing its expressed hyperfunction and correct large angles of vertical strabismus, and, consequently, inadequate cosmetic and functional results of treatment of this type of strabismus.Myotomy inferior oblique muscle is not physiologicalbecause muscle loses contact with the eyeball. The basis of surgical treatment of vertical strabismus due to hyperactivity of the inferior oblique muscle surgery is anterior transposition (anteriorisation) of the inferior oblique muscle.Meaning of the operation is to transfer the natural place of attachment of the inferior oblique posterior pole of the eye into the anterior segment of the eyeball, with fixation at the lateral edge of attachment points of the inferior rectus muscle.As a result, the dosage front transposition of the inferior oblique muscle vertical strabismus in the primary position of gaze completely eliminated in 93% of cases. Residual angle resolves the following stages of surgical treatment. «V» -sindrom eliminated in 82% of operated patients.Selective head position due to hyperfunctions lower oblique muscles is eliminated in 95.7% of cases. In 98% of cases it was possible to achieve binocular vision. A positive cosmetic result is achieved both in the primary position of the eye (look straight ahead) and in other areas of sight.

Conclusions. Based on the above data it can be concluded that the operation of the dosage front transposition of the inferior oblique muscle with its hyperfunction varying degrees is an effective method of surgical correction of vertical strabismus.Method of the dosage front transposition of the inferior oblique muscle can achieve not only the symmetrical position of the eyes in the primary position of gaze but also to achieve consistent eye movements as a whole, providing a high cosmetic effect of treatment of strabismus.

Riga A.S.

DYNAMICS OF BIOCHEMICAL BLOOD TESTS IN PATIENTS WITH SEVERE PERITONITIS IN THE FIRST DAY AFTER SURGERY AND ON THE MODEREN ANTIBIOTIC THERAPY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of general surgery 2

Introduction. Despite advances in diagnosis, surgery, and antimicrobial therapy, mortality rates associated with complicated intra-abdominal infections remain exceedingly high. The 2013 update of the World Society of Emergency Surgery (WSES) guidelines for the management of intra-abdominal infections contains evidence-based recommendations for management of patients with intra-abdominal infections. Mortality is higher in older patients. It is known that the natural aging process begins with an average of 35 years of age.

Aim. Explore the daily dynamics of the biochemical analysis of blood (serum creatinine, urea, amylase, general bilirubin) in patients with severe peritonitis on the background of the modern surgical correction (classic laparotomy) and modern antibiotic therapy (cephalosporin III generation, and fluoroquinolones, and metronidazole), depending

on age. The blood collection was performed before treatment and after treatment and antibiotics start during 24 hr.

Materials and methods. Data analysis included 19 patients aged up 18 to 76 years old: 9 patients younger than 35 years (group 1) and 10 patients aged over 35 years (group 2). Nonparametric statistical methods used due to the small sample by Software package program STATISTICA 7.0 Median (Me), maximum (max) and minimum (min) have been compared by Mann-Whitney test.

Results. The average age of the patients of 1st group was 27 years (min 18; max 35), of 2nd group -55 years (min 37; max 76). TheMe of serum creatinine level (mol/l) before treatment was0.048 (min 0.42; max 0.162) (1st gr) and 0.092 (min 0.044; max 0.192) (2nd gr), $p_{1,2}$=0.7429, after 24 hr 0.12 (min 0.039;max 0.148) (1st) and 0.148 (min 0.001; max 0.177) (2nd), $p_{1,2}$=0.4807. The Me of urea level (mmol/l) before treatment was4.9 (min 3.8; max 9.8) (1st gr) and 7.1 (min 4.0; max 16.3) (2nd gr), $p_{1,2}$=0.1671, after 24 hr5.9 (min 4.6; max 9.7) (1st) and 7.6 (min 5.35; max 14.1) (2nd), $p_{1,2}$=0.2358. The Me of serum amylase level (U/l) before treatment was15.75 (min 11.2; max 31.9) (1st gr) and 19.5 (min 8.8; max 33.6) (2nd gr), $p_{1,2}$=0.1995, after 24 hr16 (min 15; max 54.6) (1st) and 27 (min 15.5; max 33.6) (2nd), $p_{1,2}$=0.2358. The Me of general bilirubin level (mmol/l) before treatment was14.6 (min 8.5; max 19.3) (1st gr) and 14.4 (min 1.28; max 44.6) (2nd gr), $p_{1,2}$=0.4234, after 24 hr15.0 (min 6.8; max 22.5) (1st) and 19 (min 10.2; max 27.5) (2nd), $p_{1,2}$=0.0273.

Conclusions. The result suggest that in patients with severe peritonitis who are older 35 years the general level of bilirubin is significantly higher than in patients with severe peritonitis younger than 35 years ($p<0.05$). It happens during 24 hrs of hospital admission and after surgical correction despite the same type of antibacterial therapy. We speculate that in patient older 35 years the liver is more sensitive to antibiotic therapy and traumatic stress and can lead to complications: postoperative jaundice, extrahepatic and intrahepatic cholestasis.

Shubina M.

CHOICE OF SURGICAL TREATMENT OF 'COMPLEX' FEMORAL HERNIA

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of operating surgery and topographic anatomy

Introduction. Crown of death (LAT. corona mortis) is a vascular anomaly observed in approximately in 15-30% of people. It pronounced by anastomosis between obturator artery and inferior epigastric artery. This old name indicates to fatal bleeding in the past from the large artery which was damaged during the herniotomy. In normal conditions, as it is known, obturator artery begins from the internal iliac artery. Development is seen how changing of the thin anastomosis with inferior epigastric artery to the main trunk of obturator artery, which goes down into the pelvis just near internal opening of the femoral canal. If the venous trunk accompanies named artery, the threat of injury of the vessel becomes even more likely.

Results. Crown of death is located near the inner surface of the lacunar ligament. If the anastomosis between the pubic branch of obturator artery and the obturator branch of the inferior epigastric artery more strongly developed, it would appear that the obturator artery, which normally is a branch of the a. Iliaca interna, goes from the inferior epigastric artery and, going from front to back and up to down to obturator canal can intimately adjoin to the

neck of the hernial SAC, as if covering the front, inside and partly behind. In these cases the dissection of hurting ring as inside (through the lacunar ligament) and up (through the inguinal ligament) is damage of the artery.

In this time are present three methods of PLASTY of inguinal hernias with using of a front approach: the method of Magsu, which consists in simply closing the ring, Bassini operation and herniotomy by Lotheissen-McVay using Cooper's ligament. The last can be used in 'corona mortis'. Herniotomy by Lotheissen-McVay restores three areas of muscular – pectineus and most prone to hernia formation, namely, deep inguinal ring, triangle Gesselbah's and femoral canal. The method Lotheissen-McVay consists of riveting arch of aponeurosis of transverse muscle with Cooper's ligament medially and the sheath of the femoral muscles laterally. The weak one incision is necessary to prevent large pull through stitches. Assumes that the surgeons must operate the femoral hernia on the lateral side of the hernial SAC, but in this case can be the accidental wounding of other anatomical formations: femoral artery and vein, the inguinal ligament. Therefore, the elimination of prejudice in femoral hernia is possible only with the medial side of the hernial SAC through the dissection of the lacunar ligament, where in some people lies 'Crown of death'. This anatomical feature requires a cautious and careful dissection of the lacunar ligament, strictly under Visual control.

Conclusion. In case of abnormal wound anastomosis did occur, you must press the source of bleeding by swab, cross the inguinal ligament, and then select the inferior epigastric artery to wrap its trunk, or its obturator branch, which gives anastomosis with obturator artery.

Sushetskaia D.A.

SURGICAL TREATMENT OF ENDOMETRIOSIS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of operative surgery and topographic anatomy

Introduction. Endometriosis is one of the urgent problems of modern medicine. Around 176 million women of reproductive age suffer from this disease (Adamson et al., 2010). Endometriosis - an inflammatory disease characterized by focal proliferation of endometrial tissue outside the uterus. This pathology is one of the leading in the structure of infertility (30%) and is the most common cause of pelvic pain in women of reproductive age (Rogers et al., 2009). In 2013, the World Society for endometriosis published Consensus on current management of endometriosis (Neil P. Johnson, Lone Hummelshoj for the Society Montpellier Consortium, March 25, 2013).

Results. The most effective treatment for endometriosis is surgery. According to the literature the number of surgical interventions for endometriosis is 40%. Laparoscopic surgical removal of endometriosis is an effective first-line approach for the treatment of pain associated with endometriosis (Jacobson et al., 2009). Although the results of randomized clinical trials showed no advantage over the removal of excision (Wright et al., 2005; Healey et al., 2010), it is recommended excision of organ chamber using techniques «shaving». When performing the method «shaving» used monopolar needle electrodes using a cutting current, which unlike the scissors have scissor handles and an end part provided with a connector for a cable of the active electrode. In the cutting dissected sero-muscular layer at the interface intact and diseased tissue. This technique enables the maximum preservation of the pelvic organs, their innervation and blood supply. With this

method, the recurrence rate of endometriosis not exceed 8% and pregnancy rate after treatment is about 84%, 57% of them in the natural cycle (V. Bejenari 2013).

Preference should be given laparoscopic excision (cystectomy) ovarian endometriomas compared with laparoscopic ablation (drainage and coagulation) in order to minimize the likelihood of recurrence of symptoms and endometrioma, and should comply with all the principles of microsurgery allowing for the effects of gentle instrument modes of energy (electricity, lazernoy-, cryo, ultrasound, etc.) to maximize the preservation of ovarian reserve (Hart et al., 2008). Perisakralnaya neyrektomiya can provide some positive results for some women, but it is not recommended because of potential side effects. Only in the case of dysfunction related bodies, in the presence of extensive infiltrative structures in the pelvis shows a radical surgery with preservation of reproductive function or without saving it. According to the literature often done endometrioid ovarian cysts removal of 53% of endometrioid heterotopias excision of 46.8% and 32% of resected nodes. The need to ovariectomy or resection of the colon occurs in 0.5% and 1.1%, respectively (Bejenari V., 2013). Despite the modern methods of surgical treatment of endometriosis risk of recurrence is 10 to 55% during the year (Vercellini et al., 2009).

ConclusionsIt can be concluded that during the surgical treatment of endometriosis should prefer laparoscopic procedure organosberegajushchih «shaving», as it allows with minimal risk of relapse restore reproductive function of women.

Svirepo P.V., Volik M.S.

THE USE OF MINIMALLY INVASIVE SURGICAL TECHNIQUES IN THE TREATMENT OF SOLITARY HEPATICHYDATID

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of surgery №2

Introduction. The introduction of ultrasonography (USG) and spiral computed tomography (SCT) into clinical practice significantly increased the number of patients with parasitic cysts. Modern minimally invasive methods of surgical treatment of hepatic cysts worldwide are becoming more common.

The purpose of our study is to evaluate the results of surgical treatment of solitary hepatic hydatid (HH) using minimally invasive techniques.

Material and methods. There were 28 patients with the solitary HH under observation in the clinicfrom2000 till 2015. All patients were diagnosed with primary hydatid disease. The size of hydatid cysts did not exceed 100 mm in diameter. The age of patients ranged from 22 to 75 years, among them there were 9 men (32.3%) and 19 women (67.7 %) respectively. Wherein the right lobe of the liver was affected in 18 (65.6%) cases of observation and the left one in 10 (34.4 %). Associated lesions of other organs caused by echinococcus were not revealed. All patients underwent complex clinical and instrumental investigations, including conventional blood tests, serological tests, chest x-ray, ultrasound and CT with bolus contrast enhancement. All patients were operated after the consultation of an infectious disease physician and antiparasitic therapy.

Results. Analysis of surgical treatment results showed that 21 (75 %) patient underwent laparoscopic echinococcectomy with excision of fibrous capsule. Wherein atypical (wedge) resection of the liver was performed in 8 (38.1%) patients with peripheral HH location. In 7 patients (33.3%) with subdiaphragmatic HH location the oncotomy of the

cyst cavity with excision of fibrous capsule in parts were made that was technically convenient. In 6 (28.6%) patients the echinococcectomy with the fibrous capsule without opening the lumen was managed to perform. No postoperative complications were noted.

Puncture methods of thetreatment were used in 7 (25%) patients. 5 of them (71.4%) were diagnosed intrahepatic location of HH with a diameter up to 3 cm. This method involved fine-needle puncture of the cyst with aspiration of the content and processing of the cavity of chitinous layerby hypertonic saline solution (20-30%). 2 (28.6%) patients underwent percutaneous puncture and drainage of HH with a diameter up to 6 cm due to the presence of severe somatic pathology and high surgical riskcorrespondingly.

Conclusions. 1. Laparoscopic echinococcectomy is an effective method of treatment in case of removal of the fibrous capsule. 2. The use of puncture treatment methods is possible in patients with high surgical risk andat the patient`s refusal of surgery. 3. The choice of method of surgical treatment of uncomplicated hepatic hydatid depends on the location of the cyst, the degree of surgical risk.

Trofimova A.V., Tyshko A.S., Zaytseva O.V., Liubomudrova K.S

ULTRASOUND DIAGNOSTICS OF EARLY INTRA-ABDOMINAL COMPLICATIONS IN PATIENTS WITH GENERALIZED PERITONITIS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of surgery №3
Scientific supervisor - corr. member NAMSU, prof. Lupaltsov V.I.

Introduction. The abdominal cavity postoperative complications in patients with generalized peritonitis (GP) are one of the most serious problems of surgery, because of high mortality rates in their treatment. Application of minimally invasive techniques in surgical practice allowed to use widely an ultrasound scanning (USS) in algorithms when diagnosing the intra-abdominal postoperative complications.

The purpose of the research was to evaluate the possibility of sonographic study in elderly patients with generalized peritonitis when using minimally invasive treatment methods.

Materials and methods. The study included 61 patients with secondary GP, developed as a result of the destruction of a hollow organ. Men – 25, women – 36. In 19 patients, the postoperative period was complicated by peritonitis (5), early adhesive intestinal obstruction (4), abscesses (7) and inflammatory infiltrates (3) progression in the abdominal cavity. At admission all patients have an extension of intestinal lumen and thickening of its wall according to the USS.

Results. During uncomplicated postoperative period, in 42 patients on the first day the signs of peritonitis and intestinal paresis were persisted. Credible USS signs were determined for all identified intra-abdominal complications. According to the USS in 5 patients with progression of the peritonitis from the first day free fluid in the abdominal cavity was identified as anechogenic interlayer in two or more anatomical regions. In 4 patients with early adhesive intestinal obstruction, the extension of small bowel loops limited in length (more than 30 mm) against the background of intestinal wall thickening often accompanied by its layering with the pendulum movement of inhomogeneous intestinal content, was identified on USS. Identified in 3 patients inflammatory infiltrates of abdomen cavity were defined as different sized homogeneous foci without liquid component and were, as a rule, with increased echogenicity involving changes (thickening and extension) of small bowel loops. The USS

acquired great importance after identifying intra-abdominal abscesses in 7 patients. Abdominal abscesses were characterized by the formation of non-pulsating and non-peristaltic abdominal fluid formations of various sizes and configurations, with clear contours and anechogenic or heterogenic content.

Conclusions. Ultrasonography scanning of the abdomen cavity in patients with GP in early postoperative period allows to evaluate objectively its condition, to diagnose timely the development of intra-abdominal inflammatory complications.

Zamyatin D.P.

MODERN DIAGNOSTICS CARDIO-RESPIRATORY DYSFUNCTION IN CARDIAC CONTUSION IN PATIENTS WITH CLOSED CHEST INJURY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of surgery №1

Introduction. Investigations of external respiration function (ERF) with using computer cardio spirography is of particular importance in the diagnosis of pleural and cardio-respiratory complications in patients with closed chest injury and cardiac contusion, which radiography is sometimes limited or contraindicated, as well as for dynamic monitoring of such affected

Aim: Improving diagnostic cardiorespiratory dysfunction by analyzing of the heart rate variability (HRV) and intraventricular conduction disturbances, as well as evaluating the effectiveness and efficiency of the surgical treatment of patients with cardiac contusion and closed chest injury according to external respiration function.

Materials and methods. In the department of traumatic shock SI "Institute of General and Emergency Surgery them. V.T. Zaitseva NAMS of Ukraine "is a clinical base of the Department of Surgery №1 HNMU, were examined 63 patients with cardiac contusion with closed chest injury at (subgroups A and B) using the method developed by computer spirography - study of external respiration using spirographic complex" Spirokom "(Ukraine, Kharkiv) . Statistical conclusions are based on data obtained using standard statistical methods and applications R, SPSS, version 8.02 for Windows, Microsoft Excel 2000 and STATISTICA 6.0 on a PC IBM Pentium IV. The significance of differences in the groups was determined by Student's test and its level of significance (P). To select the most informative indicators used correlation, system and multivariate regression analysis.

Results. In the analysis of the ECG is most common in patients with closed chest injury in cardiac contusion, was conduction disturbances infarction, detected in 40% of all observations. Of these, 21 (33%) affected by the use of the developed method diagnose disorders of intraventricular conduction (VZHP), 2 (3%) of the cases combined with atrioventricular block in 1 (2%) - with intra-arterial blockade. Detected changes in the distribution of the subgroups should be noted that the affected subgroup A VZHP violation was detected in 28% of cases, while in class B - 45% of affected. During the dynamic examination of patients with myocardial contusion was found that VZHP can be intermittent and vary depending on the condition of the affected and conducted intensive therapy. After treatment in violation VZHP subgroup A re-identified in 23% of cases, and in the subgroup B - only 10% of the affected.

Conclusions. Application has reduced the number of X-ray examinations; reduce radiation exposure, to determine further treatment and prevention. In connection with the computer cardio spirography harmless way it can be used in patients with isolated and combined in order to closed chest injury topical diagnosis, differential diagnosis of hemothorax, pneumothorax, or combinations thereof, as well as cardiac contusion, in which usually are violations of ERF. .

OBSTETRICS AND GYNECOLOGY

Adeem Farked Yousif

INFECTION ASPECTS OF ENDOMETRIAL HYPERPLASIA

Kharkiv national medical university, Kharkiv, Ukraine
Department of obstetrics and gynecology N1

Introduction: endometrial hyperplasia (EG) occupy a special place among gynecologic pathology, the frequency of which increases significantly in age hormonal rearrangements. With varying degrees of development, recurrent hyperplastic processes are often favorable background for the emergence of precancer and then endometrial cancer, which for decades represents an important medical and social problem. The frequency of malignancy of endometrial hyperplasia varies within wide limits (0.25 - 50%) and depends on many factors. Wired role in the genesis of the EG plays an increased concentration of estrogen, proliferation and apoptosis as well take part in the cyclic changes in the endometrium. Well-known role of HPV in the development of cervical cancer pathology, and some authors believe that the presence of human papillomavirus infection affects the development of adenocarcinoma of the endometrium.

Aim: Study of the role of sexually transmitted infections and the role of human papillomavirus infection in the development of endometrial hyperplasia.

Material and methods: A retrospective analysis of 32 case histories of patients with EG in age from 47 to 52 years. Evaluated the objective status, ultrasound, histological examination of scrapings of the endometrium. To identify HPV polymerase chain reaction was used. Material for the study was used aspirate from the uterine cavity, and the method of enzyme immunoassay used for the detection of infectious agents. Just held bacterioscopic and bacteriological examination of vaginal discharge.

Results: Among the patients of the main group the level of pathogens sexually transmissible infections was significantly elevated. The largest values were Herpes simplex virus I in 42% of women, Candida albicans - 36%, Micoplasma hominis, Chlamidia trachomatis 32,4 and 28,6%, respectively. Value of HPV in women with EG was significantly increased to 15.8% of the patients. We studied four women revealed atypical complex EG that according to various authors has a high risk of malignancy.

Conclusions. Taking into account the results of the study should be noted that the sexually-transmitted infections and HPV play an important role in the development of the EG, suggesting the need for screening and appointment causal antibacterial and antiviral therapy followed by control studies.

Adeyemi A.A., Yousif N.

ILLICIT DRUG USE DURING PREGNANCY: PREDISPOSING FACTORS IN WOMEN; EFFECTS ON FETAL GROWTH AND MATERNAL PHYSIO-PSYCHO-SOCIAL SYSTEMS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics and gynecology N2

Aim: To determine the effects of illicit drug use on pregnant women and their fetus's. To determine psychosocial factors responsible for illicit drug use. To enlighten the public

about the hazards of illicit drug use especially during pregnancy. To determine ways of preventing future pregnant women from the use of illicit drugs.

Materials and methods: 22 adult women of child bearing age with a history of illicit drug use during pregnancy were selected randomly and studied in collaboration with the neurological department of the state hospital in city "K". The substances used by women in the main group included marijuana, "ecstasy" (3,4-methylenedioxy-methamphetamine), alcohol, dihydrodesoxymorphine ("krokodil" is the street name), and tobacco. As a control group, 22 healthy pregnant women were randomly selected and studied. Blood and Urine samples were taken from the main group and determination of the illicit drug was made. Also, a life history was obtained from both groups.

Results: From the main group, 2 women tested positive for marijuana use, 5 women tested positive for 3,4-methylenedioxy-methamphetamine, 7 women tested positive for alcohol, 4 women tested positive for tobacco, 4 women tested positive for dihydrodesoxymorphine. The women in the control group had negative test results for illicit drugs, alcohol, and tobacco. Upon analysis of the anamnesis vitae of the main group, it was determined that 20 women had some form of psychosocial trauma earlier in their life, 2 women revealed that their drug use was as a result of peer pressure when they were younger. Further analysis of the anamnesis of the 20 women with psychosocial trauma revealed that 8 women had current physical abuse; 5 women had current sexual abuse; 6 women had childhood physical abuse; 1 woman had childhood sexual abuse.

Conclusions. The rate of consumption of narcotics and harmful medication, in Ukraine, other developing countries and even developed nations is of great concern due to the psychosocial issues that these women may have faced during their lifetime. Thus, we hope that the information contained in the abstract above will be useful for medical students and professionals alike.

Adeyemi A.A., Parashuk V.U., Mayorova M.V., Soe T., Kraskovskaya T.Y.

CHRONIC SALPINGO-OOPHORITIS, AS REASON OF IMMUNOLOGICAL STERILITY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of obstetrics and gynecology 2

Introduction. Chronic salpingo-oophoritis is the most widespread disease of women's sexual system, which includes characteristics such as: loss of physiological functions of uterine tube's mucous and muscular covers, development of connecting tissue, sclerous processes, formation of the peritubarian and preiovarial adhesions, and as result - sterility. So far, mechanisms of chronic inflammatory process in uterine appendages are not studied enough. Determination of the efficiency of the immune response and character of development inflammatory process in an organism depends on the cytokines, which coordinate the action of the immune cells.

Aim: Identification of quality and quantitative changes of the immune and cytokine status in cases of chronic salping-oophoritis.

Materials and methods. 68 women (main group) aged from 28 till 40 years with infertility against a background of chronic salpingo-oophoritis and 20 women (group of comparison) with infertility due to uterine and endocrine disorders were examined.

Determination of subpopulations of T-and B-lymphocytes in peripheral blood was made by reaction of an immunofluorescence (RIF).

Results. For all patients with the salpingo-oophoritis, there was a decrease of all subpopulations of T-lymphocytes with markers of differentiation of CD3+, CD4+, CD8+. The ratio of CD4+/CD8+ and quantity of B-lymphocytes is also decreased. A signicant increase of the concentration of IL-1β, IL-6 and TNF-α in comparison with the control group was noted, and the level of anti-inflammatory interleukin IL-4 was significantly decreased.

Conclusions. As a result of the research quantitative and quality change of the immune and cytokine status was revealed, and this may indicate a secondary cytokine-dependent immunosuppression.

Alaya Lamia

SEXUAL DYSFUNCTION IN WOMEN WITH GENITAL PROLAPSE IN PERIMENOPAUSE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of obstetrics and gynecology 1

Introduction. Women's sexual health, which entered into during the perimenopause, is an important aspect of her personal life, has diverse effects on the physical and psychological well-being in marriage. Female sexual dysfunction is currently considered as a psychosocial problem. Urogenital symptoms among the most significant effect on the appearance of the female sexual dysfunction female sexual function, have diseases such as genital prolapse and stress incontinence. Female Sexual Dysfunction - a disorder of sexual desire, arousal or orgasm, as well as pelvic pain directly related to sexuality (Barnett A, 2000). Such multivariate sexual disorders in perimenopausal due to different reasons: psychological state, different variants of depression, hormonal disorders. In the case of estrogen deficiency on the foreground, dryness of the vagina, dyspareunia, vasomotor reactions that violate sexual intercourse.

The aim of the study was to evaluate the functional state of the nervous system and psychosomatic status in patients perimenopausal with sexual dysfunction.

Material and methods. We have analyzed the functional state of the nervous system by the method of AM Wayne (1998) and studied the emotional and personal characteristics on the scale of personal and reactive anxiety Spielberger-Hanin (1976) 15 perimenopausal women with sexual dysfunction on the background of genital prolapse.

Results. The results showed a statistically significant predominance of vegetative dystonia over vegetative balance. Plutonium normally of initial autonomic tone was detected in 2(13,3%),and in 13 (86.7%) women showed signs of autonomic disorders . A study of personal anxiety and psycho-emotional lability showed the presence of anxiety in 4 (26.7%) women, moderate anxiety – in 7 (46.6%) and high anxiety - in 4 (26.7%) patients .

Thus, the patient during moderate and high trait anxiety, accompanied by dyspareunia (12 (80.0%) patients), fear of loss of urine during intercourse, avoid intimacy. Repetition of episodes of pain, urinary incontinence results in reduced craving and the appearance of a violation of orgasm - anorgasmia. In identifying the survey expressed changes in the psycho-emotional status of patients sent for consultation to the psychotherapist, sexologist for medical correction.

Conclusions. Thus, diagnosis, severity, timely correction of psychological status,

using specialized forms (questionnaires), must take its place in the complex diagnosis with sexual dysfunction.

Aralova V.O.

THE EFFECTIVENESS OF METHODS FOR EXPECTED FETAL WEIGHT DETERMINATION

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of obstetrics and gynecology 1

Introduction. The accuracy of expected fetal weight determination is of great importance in assessing the prognosis of perinatal risk for mother and fetus, as well as for choosing the method and time of delivery. Unfortunately, the large errors in these antenatal indicators have been recorded in the world literature that led us to assess the effectiveness of various methods for expected fetal weight determination and to identify the most preferable for practical use.

Materials and methods. We analyzed 48 labor records. The sampling included pregnant at the term between 37-42 weeks. There was one main criterion for selection: the period between external obstetric examination or phetometry and the birth should not been exceeded 7 days. The circumference of the abdomen at the navel (in cm) was measured with measuring tape. The fundal height of the uterus was measured from the upper edge of pubic symphysis to the uterine fundus (in cm). We estimated fetal weight according to the formula of the product of the height of the uterine fundus standing to the abdominal circumference (HUF×AC). We assessed the findings of the ultrasound phetometry which was performed on the device Medison 8000 SE, following which, we calculated estimated fetal weight by standard methods based on Hadlock and Shephard formulas. Then the results were compared with actual birth weight.

Results. The maximum error, according to HUF×AC formula, comprised 1600g, 800g by Shepard formula, and 700g by Hadlock. It was found that 31 % of patients have an error of less than 200g between measured and real results, according to HUF×AC formula, according to Shepard this number accounted to 52 %, Hadlock 56 %. The discrepancy between the masses of more than 300g by HUF×AC formula was observed in 46 % of examined pregnant, whereas 35% by Shepard, 33% by Hadlock. The accuracy of more than 400g by HUF×AC formula was in 46%, 21% by Shepard and Hadlock. It was found out that there were 31% of patients with an accuracy of more than 500g by HUF×AC formula, 13% by Shepard and Hadlock. Discrepancy of more than 600g was observed in 23% of pregnant, measured by HUF×AC formula, 4% by Shepard and Hadlock. There were 17% of patients with an accuracy of more than 700g by HUF×AC formula, according to Shepard 2%, while the results by Hadlock formula were not found to have such errors. Patients with an accuracy of more than 800g accounted for 13% by HUF×AC formula, whereas the findings obtained by Shepard and Hadlock formulas did not show such errors. Errors of more than 1200 g according to HUF×AC formula were estimated in 8%, 1300g - 6 %, 1400g - 4 %, 1600g - 2 %. According to HUF×AC formula the average error value amounted to 447g, to 254g by Shepard, to 248g by Hadlow. According to the literature, the average error according to Hadlock formula is 307.4g.

Conclusions. It can be concluded that ultrasonic methods minimize measurement errors in the assessment of fetal weight. Among them, the Hadlock formula is the most preferred. Our study gives an opportunity to recommend it for practical application.

Chernushova L.A., Novikova A.A., Kozyr O.V., Kamardina K.O., Pshikun Yu.M.

UTERINE BLEEDING AT PUBERTY (CASE REPORT)

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics, gynecology and pediatric gynecology
Scientific supervisor: professor Tuchkina I.A.

Introduction. The problem of uterine bleeding at puberty currently remains a challenge because of its relatively high incidence among gynecological diseases (from 10% to 37% of cases). Pubertal uterine bleeding is a clinical condition that reflects the instability of reproductive system during its maturation (N.M.Veselova, 2007).

Results. Clinical Case. A 15-year-old patient K. was urgently admitted to gynecology department of Kharkiv City Maternity Hospital No.1 on 10/11/14 presenting with profuse bleeding from the genital tract. History of the disease: menstrual cycle disruption from August 2014 as scanty bloody discharge. Life history: according to information provided by the patient, she has not had tuberculosis, venereal diseases, infectious hepatitis. Past history includes ARVI. Allergic history is not compromised. She has not undergone any surgical operations. Gynecological history: menarche at 13, menstrual cycle is not regular, lasting for 7 days, mild, painless. Last menstrual period began on 11/03/14 and still continues. The patient is not sexually active. On examination: general state is of moderate severity. Skin, visible mucous membranes are clean and pale. The tongue is moist, with white coat. The body temperature is 36,3 ° C. Auscultation of the lungs: vesicular breathing, no wheezing. Heart: clear, rhythmic tones; pulse: 90 beats per minute; blood pressure: 110/70 mmHg. The abdomen is soft and painless. The liver and spleen are not enlarged. Pasternatsky's symptom is negative on both sides. Stool is normal. Diuresis is sufficient. Gynecologic status: external genitalia are normally developed, pubic hair distribution is of female pattern. Discharge is profuse and blood-tinged. Hymen is intact and prolapsing. Per rectum: the uterus is in retroflexio versio, slightly enlarged, painless. Blood with clots is discharged at vaginal examination. Right adnexa are not detectable, left adnexa are tender. Laboratory and instrumental studies: clinical blood essay determined a decrease in hemoglobin to 88 g/l, a decrease in red blood cells to $2.9x10^{12}$/l and a decrease in hematocrit to 0.30. Biochemical blood assay and coagulation are within norm. Pelvic ultrasound: the uterus is in retroflexio, 62×47×56mm, margins are clear with homogeneous myometrium, M-ECHO 16mm, heterogeneous structure, cervix 24×20mm, fallopian tubes are not visualized. Conclusion: Metrorrhagia. Consultation with a neurologist, diagnosis: vegetative-vascular dystonia of puberty. Treatment plan: Regulon 1 tablet 4 times a day (hereinafter according to the scheme), oxytocin 1.0 +0.9% sodium chloride 200.0 +5% intravenous drip, Tranexam 1 tablet 3 times a day, Sorbifer 1 tablet 2 times a day, Ascorutin 1 tablet 3 times a day. The patient was discharged from gynecological department on 21/11/14 with the improved condition for out-patient care.

Conclusions: Thus, comprehensive, personalized therapy helps to control pubertal uterine bleeding and reduce the risk of relapses.

Dudnichenko N.A., Pirozhenko Yu. S., Kolisnyk A. I., Fesenko E.A.

CLINICAL DIAGNOSTIC PECULIARITIES OF ENDOMETRIAL HYPERPLASIA ACCOMPANIED BY HYSTEROMYOMA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics, gynecology and pediatric gynecology
Scientific supervisor: professor Tuchkina I. A.

Introduction. Hysteromyoma has traditionally been viewed as a benign tumor of female genitalia, accompanied, as well as proliferative processes in the endometrium, by a number of endocrine and metabolic changes, with a peak in its incidence occurring in perimenopausal age. Endometrial hyperplasia (EH) accompanied by hysteromyoma in women is associated with an increase in the frequency of dysfunctional uterine bleeding. A combination of such factors as endometrial hyperplasia and hysteromyoma increases the risk of endometrial cancer twofold. Thus, combination of EH with hysteromyoma is a common pathology of female reproductive system. The study of myometrial comorbidity is of interest not only in terms of identifying possible common pathogenic factors, but also in terms of objective cancer risk criteria identification in patients with overlapping myometrial disorder.

Aim. To identify clinical and diagnostic peculiarities of endometrial hyperplasia associated with hysteromyoma.

Materials and methods. Thirty female patients with EH aged from 35 to 45 were admitted to Kharkiv Maternity Hospital No.1. The main (1^{st}) group involved 15 patients with EH accompanied by hysteromyoma. Second (comparison) group included 15 women with EH but without hysteromyoma. In order to diagnose hyperplasia and hysteromyoma the women were administered complete clinical examination, taking medical history, pelvic examination, ultrasound examination of pelvic organs using ultrasound device Medison 6000CMT (South Korea). All the patients filled in questionnaire forms. Statistical processing of the results was performed using software Microsoft Exel, Statistika 6.0.

Results. The main manifestations of EH accompanied by hysteromyoma included acyclic uterine bleeding (60%), heavy menstruation (38%), prolonged menstruation (41.4%), severe dysmenorrhea (26.3%). Women with EH but without hysteromyoma in history developed such major clinical manifestations as ovarian-menstrual cycle disruption (24.8%), acyclic uterine bleeding (20.7%). Histological examination of endometrial scrapings in women with EH accompanied by hysteromyoma showed the presence of atypical cells in 1.3%, while examination of endometrial scrapings in women with EH but without hysteromyoma did not detect atypical cells.

Conclusions. The study suggests mutual aggravated impact of EH and hysteromyoma. Clinical symptoms are more severe in patients with endometrial hyperplasia accompanied by hysteromyoma.

Dynnik O.O.

THE ROLE OF SEX STEROID-BINDING GLOBULIN IN ABNORMAL UTERINE BLEEDING AT PUBERTY

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of obstetrics and gynecology N1

Introduction. The course of puberty in girls is a predictor of the organism physical readiness to the realization of reproductive function in the future. Menstrual disorders are

one of clinical manifestations of the pathology at puberty, and the most common form of the reproductive system dysfunction in puberty is abnormal uterine bleeding (AUB).

The aim of our study was estimation of the peculiarities in the content of steroid hormones and sex steroid-binding globulin (SSBH) in patients with AUB and different body weight in the period of puberty.

Materials and methods. A complex clinical and laboratory investigation was carried out in 142 adolescent girls with AUB, aged 11-17 years. The patients were divided into three groups basing on the body mass index (BMI). The first group comprised 72 patients with BMI physiological parameters, group 2 included 54 patients with overweight, and 30 patients with underweight formed the third group. Total levels of blood serum T, E_2, insulin (IRI) and SSBG were measured in all the patients. HOMA-IR and free androgen (FA) indices were estimated in the study.

Results. It has been revealed that the average level of SSBG in gr. I and gr. III patients does not differ from this in the control group, and it is significantly lower in the patients from gr. II than in the adolescents of the other two groups and the control findings. Most frequent normative SSBG changes have been registered in the patients of gr. III (63.6 %), and less frequent they have been revealed in the patients of the second group (36.8%; $\rho_{1,2} < 0.02$). A significantly lower level of SSBG has been established also in the patients of the latter group (50 %; $\rho_{1,2} < 0.04$). There are references in the literature that hyperglycemia has an impact on the SSBG level. It decreases in the presence of insulin resistance (IR) or hyperinsulinemia. Having performed the analysis in each of the groups separately, we have not revealed any relationships of SSBG with the level of the immunoreactive insulin and IR. Its dependence only on the BMI has been registered in our study. Taking into consideration that the main effect in the organism is produced by free androgen fractions, we have calculated the FA index. Its significant increase has been observed in the patients of gr. II. Androgenic dermopathy manifestations (hypertrichosis, hirsutism, seborrhea oleosa, acnae vulgaris and striae) are also more frequent in the patients of this group. It should be noted that the proportion of patients with androgen-related dermopathy (ARD) grows with an increase in the FA index in the patients of the first and second groups. Various manifestations of ARD were 14.1% at the reference values of the FAI, they increased convincingly (up to 47.7%) when the index values were above 75 percentile, and reached 51.6% with the FAI values above 90 percentile. The most pronounced increase in the proportion of patients with ARD against a rise in the FA index occurred in adolescents with overweight (ρ <0,001). Such a regularity has not been registered at the body weight deficiency. With an increase in the FAI, the number of patients with various ARD manifestations decreased significantly, and when FAI value exceeded 75 percentile, ARD has not been recorded at all. The degree of ARD does not always correlate with the degree of androgen excess. Particularly high sensitive to androgens is pilose-sebaceous cover of the skin, where under the influence of the 5-alpha reductase T is transformed into dehydrotestosterone. Some disorders, related with specific receptors, involved in androgen stimulation of hair follicles, take place in patients with body weight deficiency. Thus, hormonal background in the patients with AUB is dependent to a considerable extent on the BMI, against which the uterine bleeding is formed.

Conclusions. 1. The level of SSDG in patients with AUB at puberty depends on the body weight, against which the bleeding is being formed. A reliable decrease in this globulin has been registered in patients with overweight. 2. Despite the fact that the level of

total testosterone in most of our patients remains within the reference range, the FA index corresponds with normative parameters in half of the cases. In a third of the patients from gr. I and in half of the patients from gr. II its values exceed the norm and are associated with androgen dermopathy. Almost in a third of patients of the third group, on the contrary, the FAI value is reduced.

Fedkovich L. A., Epshtein M. M., Piloyan A. Zh., Sheyko A. I.

STRUCTURAL ABNORMALITY OF FEMALE GENITALIA (CASE REPORT)

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics, gynecology and pediatric gynecology
Scientific supervisor: professor Tuchkina I.A.

Material and methods. A 13-yer-old patient D. was admitted to Kharkiv Regional Children Clinical Hospital No. 1 presenting with menstrual cycle disorder in the form of bleeding lasting from May 2014.

Results. History of the disease: the disorder has been bothering her since May 2014, when the first signs of menstrual disorder appeared. From 23/05/14 to 27/05/14 she underwent in-patient treatment for juvenile uterine bleeding. Examination revealed absence of the right kidney. On 06.06.14 she was found to have discharge with blood clots following which there was a "dry period" from 01.07 to 02.07.14 and from 03.07 to 08.07.14 she developed profuse discharge with blood clots. On 26.06.14 she underwent examination at Alchevsk Children Hospital. Diagnosis: Malformations of internal genitalia. Dimetria. Endometrial polyp of the right uterus. Aplasia of the right kidney. She was referred to in-patient department for complete examination. On 08.12.14 she was admitted to Kharkiv Regional Children Clinical Hospital No. 1 for diagnosis specification. Life history: according to information provided by the patient, she has not had tuberculosis, infectious hepatitis, sexually transmitted diseases, traumas, surgical operations, gynecological diseases. Her past history includes chicken pox, ARVI. Menstrual function: menarche at 12; regular, moderate, painless menstruation lasting for 5 days, in 25 days. Somatic status: general condition is relatively satisfactory. Skin and visible mucosa are of normal color, clean. Her tongue is moist, clean. Lungs: vesicular breathing. Heart: clear, rhythmic tones. Pulse is 70 beats/min, blood pressure is 110/70 mmHg. The abdomen is soft, painless on palpation. The liver and spleen are not enlarged. St.genitalis: slightly atypical structure of the external genitalia. Labia majora are hypoplastic. Labia minora are significantly hypertrophic, resembling wing-shaped scrotal tissue. Clitoris is hypoplastic, located atypically high. Vulva is funnel-shaped. Hymen is ring-shaped and intact. On rectoabdominal examination: uterus is enlarged, irregular and painless. Right adnexa are not detectable, with lower pole of soft elastic mass highly detectable on the left (described at ultrasound examination as hematosalpinx).

Clinical examination: clinical blood essay: erythrocytes - $4,7x10^{12}$ g/l, hemoglobin - 138 g/l, hematocrit - 41%, platelets - 250 thousand, leukocytes - $9,5x10^{9}$, eosinophils - 1%, basophils - 1%, stabs - 1% segmented - 65%, lymphocytes - 27%, monocytes - 5%, ESR-3mm/h. Coagulogram: prothrombin time - 14.3 sec., fibrinogen - 2.8 g/l, thrombin time - 16.3 sec., ethanol test - negative. Hormonal profile: testosterone - 0.057 ng/ml (1.4-0.9), FSH - 5.56 ng/ml, LH - 6.44 ng/ml, prolactin - 18.43 ng/ml, estradiol - 16.56 ng/ml, progesterone 0.371 ng/ml, cortisol - 509.7 nmol/l. Ultrasound examination of kidneys:

bladder is not full. Right kidney is not visualized. Left kidney is 101×49 mm due to compensatory enlargement, pyelocaliceal system is not enlarged. Pelvic ultrasound: developmental abnormalities of the uterus and cervix; dimetria, incomplete duplication of cervix with possible atresia of cervical canal of the right cervix. Vaginoscopy: vaginal mucosa all over the surface is not changed, profuse discharge of white color makes it difficult to perform the examination. Cylindrical cervix with intact epithelium and pointed orifice is visualized at the distance of 8-10 cm from the vaginal opening. The cervix is turned to the left by 90^0. The second cervix is visualized above the described cervix and is closely adjacent to it from above and to the right. Vaginal mucosa slightly prolapses above the left cervix, located slightly to the left. Examination is problematic due to very high location of the two described cervices.

Conclusion: The findings obtained following physical, instrumental and ultrasound examination suggest that the patient has structural abnormality of external and internal genitalia, namely dimetria. Given the absence of one kidney and abnormal development of the urogenital system, she should be referred to karyotyping analysis, hormonal profile assessment and diagnostic laparoscopy to specify the nature of internal genitalia abnormalities.

Gradil O.G.

THE ROLE OF OVARIAN RESERVE IN ART PROGRAMS

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of obstetrics and gynecology N1

Introduction. Improvement of assisted reproductive technology is relevant, because present growth of female infertility and worsening demographics. Ovarian reserve is functional ovarian cell-pool, which determines its ability to develop healthy follicle with a full egg and high response to ovarian stimulation. The most important factor is the physiological age of the woman, but it is not always an absolute criterion that affects the outcome. According to recent studies during the maturation of eggs in the follicular fluid oxidative activation. It is now known that oxidative stress (OS) has cytotoxic effect and activates apoptosis. OS is well known marker 8-isoprostan that produce oxygen radicals in the oxidation of phospholipids tissues. For evaluation of antioxidant systems use a variety of criteria, the most interest is the study of melatonin levels in serum and follicular fluid. Melatonin (MLT) is actively exploring in a direct inhibitor of free radicals, which is useful for the physiology of the reproductive system. During ovarian stimulation melatonin content in follicular fluid several times higher than in serum, it provides a protective effect on the egg, which matures in the ovary.

Materials and methods. The study involved 96 women of reproductive age. 66 of peritoneal infertility were basic group, they were divided equally two groups with different therapeutic regimens. 30 healthy female donors were the control group. Patients received the II group (33 woman) preventive hormone therapy: MLT 3mg tablets, the scheme 1.5 mg in the morning and in the evening 3 mg for 4 weeks prior to the start of stimulation. All the patients were determined level MLT and 8-isoprostan in serum and follicular fluid.

Results. MLT levels in follicular fluid had a strong inverse correlation with levels of 8-isoprostan in follicular fluid that were in the I group of 363 ± 64,38 pg / ml in the II group 318,98 ± 83,17 pg / ml, control group 188,01 ± 10,5 pg / ml. After ovarian stimulation the number of eggs in the "poor responders" in the I group (1,85 ± 0,44) was 2.7

times lower than in patients who received preventive therapy melatonin (5,15 ± 0,67), and 9,7 times lower than the control group (18,06 ± 1,66), p <0,001.

Conclusions. Using ant- HtRH and agonists HtRH the purpose of superovulation induction leads to increased oxidative stress processes in follicular fluid that detrimentally affecting the egg, thereby reducing the effectiveness of IVF. 8-isoprostan reliable indicator of oxidative stress and antioxidant system works, its content is dependent inverse correlation with levels of MLT and the number of oocytes obtained after ovarian stimulation. MLT has a strong antioxidant effect, thereby increasing the number of oocytes obtained in patients with reduced ovarian reserve parameters. It may be considered appropriate designation of melatonin antioxidant protective purposes in conjunction with preparation measures for the IVF.

Khan Aqeel Aftab, Taiwo Toyeeb

EARLY DIAGNOSIS OF PRETERM LABOR

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of Obstetrics and Gynecology N1

Introduction. Preterm labor is the actual problem of modern obstetrics. The use of the diagnostic capabilities of the various methods of research and medical technology may contribute to early prediction of preterm labor and timely correction of this complication. Disorder of immunoreactivity of the organism is the cause of miscarriage in 40% of cases, up to 30% of preterm labor make to the development of infection, 15% - preeclampsia, 10-15% - cervical incompetence and other complications. Therefore, in parallel with the definition of the role of infection are extremely interesting study pathogenesis significance of disorder of the cytokine profile in the mechanisms of preterm labor.

The aim and problems of work - the definition of non-specific markers for early diagnosis of preterm labor.

Material and methods. We study of the cytokine profile in 32 pregnant women, who were divided into two clinical groups: basic group - 16 patients in whom preterm labor occurred in the period 22-27 weeks, the control group - 16 women with normal pregnancy at term 22-27 weeks. Material for the study served as a blood serum. The content of interleukin (IL) IL-1β, IL-2, IL-6, IL-8 were determined by enzyme-linked immunosorbent assay (ELISA) in the complex echographic study included fetometry, placentometry, tservikometriya and ultrasonic Doppler examination. The data obtained by sonographic study compared with normative indicators developed for the corresponding period of pregnancy.

Results. The study found that the level of cytokines IL-1 β, IL-2, IL-6, IL-8 in the group of women with preterm labor at different levels in the normal pregnancy period of 22-27 weeks. The level of IL-8 in the main group 30,0 ± 3,6 pg / ml was much higher than in the control group 2,0 ± 0,1 pg / ml (p <0,001). Similar trends were observed in the level of IL-2. In the basic group, IL-2 correspond to the index 20,0 ± 2,2 pg / ml, and much higher than 0,06 ± 0,001pg / ml (p <0,001). A significant increase in IL-8 and IL-2 for preterm labor indicates denote that these index may serve as predictor of pregnancy outcome. These cytokines play a activate role in the mechanism of delivery. In little degree change the number of IL-1β, IL-6. In the postpartum period in the blood serum was observed slight

increase in IL-1β and IL-6, as in the basic group (2,0 ± 0,03 pg / ml) and in control - 1,0 ± 0,02 pg / ml (P> 0.05).

Conclusions. These data suggest that the premature labor content in blood serum cytokines vary in different directions. No significant difference in the concentrations of IL-1β, IL-6 levels in pregnant women with primary group definition were identified elevated levels of IL-8, IL-2 in peripheral blood can be used as non-specific markers for early detection of preterm labor. The method has high sensitivity, specificity, and safe for mother and fetus.

Korolevych R.R

COURSE OF PREGNANCY AND CHILDBIRTH WITH COAGULOPATHY

Odessa State Medical University, Odessa, Ukraine
Department of Obstetrics and Gynecology

Introduction. In violation of blood coagulation can meet the doctor in the practice of any profession, but even hematologist sometimes feels some difficults in identifying the real reason, and in the choice of adequate therapy. This abnormality is found in 14-18% of pregnant women and growing every year, and is on the third leading cause of mother mortality.

Aim: to identify the impact of coagulopathy on the course of pregnancy and childbirth.

Results. The investigation was conducted at the maternity house №2 m. Odessa. We was parsing 90 women from 20 to 35 years. It was created 2 groups of observation, the first included 60 women with coagulopathy, the second - 30 healthy (control group). All patients were comprehensively examined. The results of special studies: D-dimers - 400, fibrinogen - 15 g / l in 2 semester, prothrombin index - 200% in 3 trimester ,platelet aggregation - 80%). Among the study group, mild preeclampsia at 50 people, placental dysfunction in 40, mild anemia at 55, polyhydramnios in 30 ,early postpartum hemorrhage in 35 people.

Conclusions. After analyzing the results it must be concluded that the presence of coagulopathy complicating pregnancy and childbirth, so you need to allocate women with this pathology at risk of obstetric complications and thoroughly diagnose coagulopathy

Litvinova A.V.

CHANGE UTERINE BLOOD FLOW BEFORE LABOR

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of obstetrics and gynecology N1

Introduction. Readiness to leave the pregnant women for childbirth has great practical significance; it allows the possibility predicted by anomalies of labor activity. At the present time, no data of research on the hemodynamic of the cervix before labor and during labor.

The aim - the study of a blood flow of the uterus on the eve of physiological labor.

Material and methods. The study included 30 pregnant women between the ages of 18 to 24 years in terms of 37-42 weeks of gestation, which was determined by Doppler blood flow in the general uterine artery, in its ascending and descending branches, arteries and veins in the stroma of the cervix, in the descending branch of the uterine artery at the level of projection of the isthmus. During the study calculated the peak systolic velocity of blood flow (PSV), end diastolic velocity (EDV), resistance index (RI) and systolic-diastolic ratio (SDR). The studies were conducted in the dynamics, 3-5 and 1-2 days prior to delivery. For statistical analysis used Student's t-test .

Results. The results of our study revealed a number of characteristic changes in uterine blood flow on the eve of physiological labor. As we approach the date of birth recorded a decrease in peripheral resistance index (RI and SDR) in the uplink and in the descending branch of the uterine artery. And in the descending branch of these processes in recent weeks gestation are more active. Five days before the birth of SDR in the ascending branch of the uterine artery is reduced from 1,88 ± 0,11 to 1,71 ± 0,03 conventional units (c.u.) (P <0.05), with RI with 0,45 ± 0,03 to 0,40 ± 0,01 c.u. (P <0.05), indicating that the increase in blood flow and decrease in peripheral vascular resistance of the uterus on average 7-8%. At the same time, the blood flow in the descending branch of the uterine artery is increased by 20-25%, as evidenced by a decrease in SDR with 1,86 ± 0,12 to 1,63 ± 0,16 c.u. (P <0.05), and IR with 0,44 ± 0,01 to 0,38 ± 0,09 c.u. (P <0.05). Such changes in the blood supply to the uterus leads to a substantial redistribution of the total uterine blood flow in favor of the descending branch of the uterine artery responsible for the blood supply to the cervix. Another feature of the uterine perfusion before labor is the restructuring of the cervical hemodynamic. Against the background of coordinated contractions of the myometrium as they approach the due date marked increase in the absolute values of the velocity of blood flow in all areas of the cervix. In the last two weeks of gestation in the arterial blood flow velocity and peripheral stomas areas is increased by 30-35%, in the central zone of 16-20%. 3 days before labor in the peripheral zone IR is 0,65 ± 0,06 c.u.; SDR 3,31 ± 0,59 c.u., in stomas zone IR is 0,63 ± 0,06 c.u., SDR 2,78 ± 0,41 c.u., but for 1-2 days before delivery IR and SDR are reduced by 15-18% and equal in the peripheral zone IR 0,59 ± 0,01 c.u., SDR 2,68 ± 0,14 c.u.; in the area of SDR stomas 0,56 ± 0,01 c.u., SDR and 2,45 ± 0,10 c.u. (P <0.05).

Conclusions. Blood supply to the uterus before birth leads to a substantial redistribution of the total uterine blood flow. During 5 days before perfusion is enhanced cervix while reducing peripheral resistance index (RI and SDR) in the uplink and in the downlink branch of the uterine artery. Blood flow in the descending branch of the uterine artery is increased by 20-25%. As we approach the date of birth is marked increase in the absolute values of the velocity of blood flow in all areas of the cervix. Further examination of issues hemodynamic uterus and cervix eve of childbirth will predict the possible development of abnormalities of labor and optimize tactics of patients in labor.

Liubomudrova K.S., Parashchuk V.Y., Serdiuk V.V.

MODERN APPROACH TO THE PROBLEM OF OVARIAN HYPERSTIMULATION SYNDROME

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of obstetrics and gynecology N2

Introduction. The emergence of the ovarian hyperstimulation syndrome (OHSS) is associated with the stimulation of ovulation in the treatment of infertility. Hyperstimulation syndrome manifests in cystic transformation of the ovaries, increasing their sizes, and output of the liquid portion of blood from the vascular bed into the abdominal, pleural cavity and pericardium. This is due to the increase in ovarian neo-angiogenesis against the background of excessive response for induction of ovulation or controlled stimulation of the ovulation.

The aim of this work was to study the effect of various risk factors for the development of OHSS.

Material and methods. Different risk factors were studied: anamnesis dates, data of laboratory researches, data of objective status of patients. Patients were divided into 2 groups. Group I (n = 50) patients with a history of polycystic ovary syndrome, OHSS, and also - availability of more than 14 follicles in both ovaries. In this group of patients are revealed a high level of antimyuller hormone. Group II (n = 50) patients do not have the factors in the anamnesis above.

Results. After carrying out controlled ovarian stimulation in group I, OHSS developed in: 12 patients (in 24% cases): in 10 patients - mild degree; in 2 - average and heavy degree. In group II patients, this syndrome has developed in 7 (in 14% cases), of these, one was of the average severity. Given the risk factors for the emergence of OHSS, prophylactic measures can be conducted for these patients, but it is not always possible be forehand to predict this syndrome. In some cases OHSS can develop in patients, which don't have significant risk and in whom primary prophylactic measures were carried out.

Conclusions. In this way, it he prevalence of OHSS in the clinic of assisted reproductive technologies and its serious implications for the patients' health should be noted.

Lutsky A.S.

PREGNANCY RATES AFTER TRANSFER OF CRYOPRESERVED EMBRYOS VITRIFICATION METHOD

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics and gynecology N2

Introduction. IVF mission is to provide the couple with one healthy baby after one course of treatment. According to WHO, the incidence of multiple pregnancies has dramatically increased. That is a complication of IVF program and increases the risk of an adverse outcome of the pregnancy. In this regard, there is a need for selective transfer of a limited number of embryos.One blastocyst transfer minimizes the chance of multiple pregnancy. The problem of storage of so-called "surplus embryos" becomes obvious . The search for methods of cryopreservation of embryos continues to ensure maximum safety after heating and the ability to further develop in vitro and in vivo conditions.

Aim. In this research we have analyzed the pregnancy rate after transfer embryos cryopreserved by vitrification method into the uterus.

Material and methods. Married couples were treated by IVF in V.I.Grischenko Clinic.The patients who received more than 10 mature oocytes were included in the study group. After 3-day cultivation the transfer of 2 embryos into the uterus of the patient was carried out. The rest embryos were left to the 5 day cultivation. The resulting blastocysts were cryopreserved by vitrification mathod. In the cycle of treatment pregnancy did not occur.

Results. After a few cycles the transfer of cryopreserved embryos in the natural cycle was carried out. 1 or 2 blastocysts were transferred into the uterine cavity. The analysis of 30 stimulated and 30 criocycles was made. Implantation rate in stimulated cycles was 35% and in cycles with transfer vitrified blastocysts resulted in 50%.

Conclusions. Blastocysts, cryopreserved by vitrification method, have the potential for further development and allow to achieve pregnancy in subsequent cycles without hormonal stress to the woman's body.

Marakushina E.A., Vygovskaya L. A., Pokryshko S.V.

RETROSPECTIVE ASSESSMENT OF GESTATIONAL PYELONEPHRITIS FACTORS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of Obstetrics, Gynecology and Pediatric Gynecology
Scientific supervisor: professor Tuchkina I.A.

Introduction. There has recently been a significant exacerbation in the problem of gestational pyelonephritis in modern obstetrics. According to the Ministry of Health data, its incidence in pregnant women increased by 3.6 times from 2005 to 2014. In most cases, women tend to develop pyelonephritis at the age of up to 40 years, usually during pregnancy. This limits their reproductive function, can cause premature birth, resulting in the birth of children, prone to kidney disease. Gestational pyelonephritis has a negative impact on the course of pregnancy and the health of fetus.

Aim. To provide retrospective identification of gestational pyelonephritis risk factors.

Materials and methods. The study was performed at Kharkiv City Maternity Hospital No.1. The study included 60 pregnant women at 30-40 weeks of gestation. All the women were divided into 3 clinical groups. Group I comprised women with gestational pyelonephritis, who underwent surgical intervention (stenting), group II involved women with gestational pyelonephritis without surgical intervention, group III included women with physiological pregnancy. The study implied retrospective analysis of delivery records (form 096/o), prenatal records of pregnant women (form 113/o) for the period of 2012-2014.

Results. Retrospective analysis of the delivery and prenatal records showed that group I included 13 patients (65%) under investigation whose mothers had gestational pyelonephritis, as for groups II and III, there were 9 (45%) and 2 (10%) of such patients, respectively. Common infectious diseases shortly before pregnancy occurred in 14 (70%) of group I patients and 8 (40%) of group II patients, and 4 (20%) of group III women. Ten (50%) pregnant women in group I had a history of inflammatory genital diseases and there were 8 (40%) and 3 (15%) of such patients in group II and III, respectively. Nine (45%) pregnant women in group I, 6 (30%) and 3 (15%) in group II and III, respectively, had kidney diseases before pregnancy (chronic pyelonephritis, urolithiasis).

Conclusions. Gestational pyelonephritis is a polymorphically mediated disease. Family history, reproductive system diseases and infectious factor affected by the pregnancy, play an important role in its development. Consideration of all these factors when planning pregnancy can substantially reduce the risk of gestational pyelonephritis and thus prevent complications of childbirth and adverse consequences for the unborn child.

Mu'awya Salem Nasr Almaradat

COMPARATIVE ANALYSIS OF DIFFERENT METHODS OF CORRECTION CERVICAL INCOMPETENCE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of obstetrics and gynecology 1

Introduction. Cervical incompetence (CIN) is a factor in premature termination of pregnancy. For the treatment of CIN are surgical used methods and non operative. They all have a common purpose - to prevent the cervical dilatation as a factor of preterm labor. However, many of the methods of treatment of CIN was complicated. The surgical

correction of CIN by imposing circular seam during pregnancy, there is bleeding, necrosis and sometimes formed eruption of cervical tissue thread (polyester). When using plastic pessaries often have difficulties in applying them, due to the increased rigidity of the medical device, develop complications from compression of tissues. Pregnant women sometimes rupture of amniotic membranes, spontaneous abortion, chorioamnionitis, and other complications Development and implementation of new methods of correction CIN is an urgent problem of modern obstetrics.

The aim and problems of work. Advance analysis of treatments for CIN: circular weld overlay, vaginal pessary on the cervix uterus and biorevitalisation cervix.

Material and methods. The study involved 80 women with CIN and of miscarriage in anamnesis, which were divided, depending on the method of treatment in 3 groups. The I group consisted of 40 women, who underwent surgical correction of CIN by imposing circular seam on the cervix. The II group consisted of 40 pregnant women, who carry out correction of CIN using vaginal pessary. In the III group included 40 women pregravid correction CIN which was carried out by use of fillers . Correction of CIN was term in 15-20 weeks of gestation. Obstetric pessary was applied to the cervix. With using a plastic pessary often had difficulties when applying associated with increased rigidity of the medical device and tissue compression. It's bad of standard pessary, due to the wrong and chooses the size is not the appropriate form of the cause acute vaginitis.

A correction method of CIN by biorevitalisation is the use of fillers, the main component of which is a hyaluronic acid, to link binding tissue water and hydrated polymers (HP) of high density. The method comprises introduction biorevitalisation of fillers by chipping the internal part of cervical canal. The preference of this method is consist in that it can be used before pregnancy in women with CIN and of miscarriage in anamnesis. Numerical score of CIN was carried out on a scale Shtember. Biometric analysis was performed using the package STATISTICA-6.

Results. In the I group of women, who performed correction CIN by imposing circular seam on the cervix every second woman had in anamnesis of artificial abortion, every sixth patient - spontaneous abortions in different stages of pregnancy, 5(12,5%) - preterm labor. Leading position in the structure gynecological diseases identified in anamnesis or pregravid stage of the survey held bacterial vaginosis 14(35,9%) and acute vaginitis 7 (18,8%). In the II group of women, who performed correction CIN vaginal pessaries, disorder of placental be found in 9 (22,5%) of pregnant women, the risk of spontaneous abortion in the II trimester was observed in 12 (30%) patients. Preterm labor occurred in terms of 30-36 weeks of pregnancy in 13 women (32,5%). Vginal birth were 31 (77,5%) women, cesarean section was made 9 (22,5%) patients. When using biorevitalisation cervix in all surveyed patients observed physiology during pregnancy. Inpatient treatment took only 2 pregnant women (5%) due to the threat of interruption. In 4 (10%) pregnancies occurred preterm birth 34-36 weeks. In 38 (95%) of female births ended natural maternal tract, In 2(5%) pregnant was made cesarean section: 1 due to malposition, 2 for severe preeclampsia.

After correction method biorevitalisation CIN cervix uterus was born 40 children, from them - 4 (10%) of premature newborn. Acidents of mortinatality or deaths of children in the first 27 days after birth, using the method of correction CIN biorevitalisation cervix was not.

Conclusions. Pregravid CIN correction by applying fillers has significant advantages over the use for these purposes vaginal pessary.

Palamarchuk V. V., Vygivska L.A., Blagoveshchensky E. V., Rogachova N.Sh.

CLINICAL PATHOGENETIC CHARACTERISTICS OF HORMONAL HOMEOSTASIS IN WOMEN WITH ARTERIAL HYPERTENSION FOLLOWING SURGICAL MENOPAUSE

Kharkiv National Medical University, Kharkiv, Ukraine,
Department of obstetrics, gynecology and pediatric gynecology
Scientific supervisor: professor Tuchkina I. A.

Introduction. Arterial hypertension (AH) is one of the most important factors that result in the development of ischemic heart disease, stroke and premature death. After menopause, women account for the majority of patients with hypertension.

Aim. To determine characteristics of hormonal homeostasis in women with hypertension following surgical menopause for further elaboration and improvement of therapeutic regimens.

Materials and methods. The study involved examination of 90 women. The first group included 30 women following total oophorectomy with AH. The second group consisted of 30 women following total oophorectomy with normal blood pressure. The third group involved 30 women with physiological menopause and AH. All the women underwent taking history and physical examination. The level of hormones in blood was determined by radioimmunoassay. Blood pressure and heart rate were monitored on daily basis. Results of the study were processed by methods of variation statistics using up-to-date computer programs.

Results. Sex hormones performance analysis showed that the level of estradiol in the first group was significantly lower than in patients with physiological menopause (15.8±0.9 pg/ml and 31.6±3.7 pg/ml, respectively; $p<0.05$). Progesterone levels did not significantly differ between the groups ($p> 0.05$). Testosterone levels were significantly higher in women of the first group in comparison to the women of the second group (0.62 ± 0.08 ng/ml and 0.42±0.08 ng/ml, respectively; $p<0.05$) and had no reliable difference in comparison with the third group. Prolactin levels had no significant differences between the groups ($p> 0.05$). Luteinizing hormone levels in the first group were significantly higher compared with the third group (41.3±3.5 IU/l and 32.4±2.1 IU/l, respectively; $p <0.05$). The lowest value of hyperandrogenemia was determined in comparison with the second and third groups (54.7±8.0; 133.1±37.9 and 153±34.1, respectively; $p <0.05$).

Conclusions. Arterial hypertension in women of reproductive age following total oophorectomy was found to be characterized by relative hypertestosteronemia and decreased estradiol levels.

Palamarchuk V. V., Vygivska L.A., Blagoveshchensky E. V., Rogachova N.Sh.

PSYCHOLOGICAL ASPECTS OF MENOPAUSAL SYNDROME SECONDARY TO UTERINE LEIOMYOMA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics, gynecology and pediatric gynecology
Scientific supervisor: professor Tuchkina I. A.

Introduction. High incidence of early menopausal disorders varies, according to different authors, from 25 to 90%, and increased incidence of uterine leiomyoma (UL) with morbidity ranging from 25 to 84%, determine the relevance of studying the peculiarities of menopause in women with UL (V.P. Smetnyk, V.I. Kulakov, 2013; J.B. Spies, 2010; T.K.

Helmberher, 2004). Psychopathological and vegetovascular disorders, which are usually combined in the term "menopausal syndrome" (MS), result in a significant reduction in the quality of life and working capacity of women at the age of their highest professional and social activity (N. Albery, 2008; E. Qvisgstad, 2006).

Aim. To determine psychological aspects of menopausal syndrome in women with uterine leiomyoma for further improvement of its prevention and treatment.

Materials and methods. Sixty women in the perimenopausal period aged from 45 to 55 were examined at Regional Clinical Hospital "Emergency Care Center and Medicine of Catastrophes". The first group comprised 30 women with MS secondary to UL. The second group comprised 30 women with MS but without UL. In order to diagnose UL the women underwent clinical examination which included gynecological examination and sonographic examination of the pelvic organs using a vaginal transducer, calculation of uterus and fibromatous nodes volume according to the formula developed by G.B. Haely (1989). The study also implied calculation of Kuperman index (KI) and menopausal index (MPI) according to E.V. Uvarova and V.P. Smetnyk, self-study assessment according to Dembo-Rubinstein adapted by T. M. Gabriyal (1972), determination of anxiety level according to Spielberger scale adapted by Yu.A. Khanin (1978), as well as evaluation of the quality of life by "SF-36 Health Status Survey" scale (1993). Research data were processed by variation statistics methods using up-to-date standard software.

Results. Psychiatric component of MS was found to be predominant in women with UL, whereas patients without gynecological diseases were found to have vegetative-vascular components (86.7% vs. 60.0%, $p < 0.05$) and the average MPI in respect of such disorders ($12{,}06 \pm 0{,}8$ vs $4{,}6 \pm 0{,}5$ points; $p < 0.05$ respectively). The structure of psycho-emotional disorders in MS secondary to UL predominantly included such manifestations as general fatigue (63.3%), lower working capacity (46.7%), irritability (56.7%), memory impairment (43.3%), inattentiveness (36.7%) and oncophobia (73.3%), vegetative-vascular manifestations of MS. The questionnaire survey among patients with MS and UL revealed the largest ratio (73.3%) of women with oncophobia and fear of hysterectomy (HT) in view of a possible tumor growth. This had a negative effect on the attitude of patients to treatment and formed their prejudice against HT. The analysis of quality of life according to SF-36 scale revealed significantly lower rates of patients with MS and UL (320.5 ± 25.5 points) as compared to women diagnosed with separate MS (452.5 ± 20.5 points; $p < 0.05$). At that the study showed lower quality of life both regarding physical sensations and specific psycho-emotional characteristics.

Conclusions. The study is indicative of mutual aggravated impact of menopausal syndrome and uterine leiomyoma. Manifestations of menopausal disorders both in pre- and postmenopausal period are more severe in patients with symptomatic course of uterine leiomyoma.

Prudivus A. A., Chumak A. M., Buravel B. O.

METHODS OF CERVICAL INCOMPETENCE CORRECTION IN PREGNANT

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics, gynecology and pediatric gynecology
Scientific supervisor: professor Tuchkina I. A.

Introduction. The problem of miscarriage is one of the current challenges in obstetrics, as it not only results in disruption of women's reproductive function, but also has a negative effect on birth rate, causing a significant increase in perinatal mortality and

morbidity of infants in early neonatal period. Despite the multifactorial etiology of miscarriage, cervical incompetence (CI) is one of the leading causes of spontaneous abortion in the second trimester. The incidence of this condition varies from 0.2 to 65%. Terms of abortion with CI range from 10 to 28 weeks, predominantly in 16-20 weeks.

Aim. To evaluate different methods of cervical incompetence correction.

Materials and methods. The study was performed at the Department of Obstetrics, Gynecology and Pediatric Gynecology of KhNMU at Kharkiv City Maternity Hospital No.1. The research implied a retrospective analysis of 60 case histories of CI patients.

Results. Patients were divided into 2 groups depending on the form of CI. The first group included 30 patients with anatomic type of CI conditioned by the development of scar tissue after intrauterine interventions, accompanied by instrumental cervical dilatation or after the rupture of the cervix during labor. The second group included 30 patients with established dishormonal disorders. CI correction for all of the patients was carried out in hospital environment. CI correction during pregnancy was performed by conservative and surgical methods. Conservative methods included bed regimen, application of rings, administration of obstetric pessary, hormonal and tocolytic therapy. Surgical correction of CI implied suturing of cervix, performed in 24 (40%) pregnant patients. Six patients underwent elective suturing of the cervix due to a history of three or more late spontaneous abortions. Thirty (50%) patients underwent application of obstetric pessary. Terms of pessary introduction and most cases of cerclage depended on the time of CI progression. Major complications after correction of cervical incompetence included colpitis, which was detected in 5 (16%) patients after administration of obstetric pessary. Suturing was complicated by their eruption in 2 (8%) patients in the period of 35-37 weeks; deformation of the cervix, which resulted in the impossibility of vaginal delivery, was detected in 1 (4%) patient. Delivery at term was observed in 25 (85%) patients who had undergone surgical correction of CI. Five (15%) patients underwent preterm delivery between 22 and 37 weeks of pregnancy. Twenty two (73.5%) patients who were administered non-surgical correction of CI underwent term delivery. Four (7.5%) patients had premature birth, two (9.5%) patients suffered from late spontaneous abortions at the term of 19-20 and 20-21 weeks. Two patients (9.5%) underwent additional suturing of the cervix due to CI progression. Noteworthy is the fact that most of the adverse outcomes of pregnancy in non-surgical correction were observed in the groups where pessary was administered in the early stages of gestation.

Conclusions. Differentiated approach to CI correction in patients with organic and dysfunctional form of cervical incompetence helps to avoid unnecessary surgical interventions, reduce the number of late spontaneous abortions and preterm delivery fourfold.

Pylypenko N.S., Reznik M. A., Rakityansky I.Yu., Rubinskaya A. N.

EXPERIENCE INDOLE-3-CARBINOL IN THE TREATMENT OF RETENTION CYSTS (CASE REPORT)

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics, gynecology and pediatric gynecology
Scientific supervisors: professor Tuchkina I. A., PhD Vygovskaya L.A.

Introduction. In the structure of gynecological morbidity among all tumors of female genital organs, ovarian tumors are the second (6-8%). Benign forms are found in 75-80% of all true ovarian tumors, of which 34% - a tumor-like processes.

Materials and methods. Patient B., 16 years old was examined and treated in RPCH №1. Complaints on admission: the menstrual cycle disorder by amenorrhea's type. An ultrasound study was found a left paraovarial cyst 3,10x2,88 cm. Indole-3-carbinol was appointed: 1 capsule 1 p / day course of 14 months. Second ultrasonic research brush size decreased to 25x18 cm, and therefore it was decided to extend the treatment to 2 months.

Results. On ultrasound examination control after 2 months was not detected the volume formations in the pelvic cavity. The mechanism of drug action is inhibition of estrogen receptors in target tissues, reduction in the activity of cyclooxygenase-2, with subsequent synthesis's blockade of prostaglandin E2 and selective induction of proliferating cells's apoptosis by inhibition of expression of anti-apoptotic protein Bax activation and BC1 genes.

Conclusions. Thus, indole-3-carbinol has corrective receptor, anti-estrogen, anti-inflammatory and apoptosis-inducing actions that affect the formation of the main pathogenetic links retention ovarian cysts. The high therapeutic efficacy of the drug-containing indole-3-carbinol in the treatment of ovarian cysts retention shows.

Reznik M. A., Rakityansky I.Yu., Rubinskaya A. N., Dyakova I.V.

ULTRASOUND INDICES OF OVARIAN ENDOMETRIOSIS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics, gynecology and pediatric gynecology
Scientific supervisors: professor Tuchkina I. A., PhD Vygovskaya L.A.

Introduction. Endometriosis is a disease accompanied by the growth of endometrioid tissue outside the uterus, associated with chronic inflammatory response (L.V. Adamyan, 2011; M.N. Bulanov, 2010), mainly affecting women of reproductive age, regardless of affiliation to a particular ethnic or social group. The incidence of endometriosis is observed around the world with a negative trend to "rejuvenation" of the disease. Abnormal condition of ovaries among all sites of disease localization ranks second in incidence after endometriosis of uterine body.

Aim. To determine sonographic signs of ovarian endometriosis in patients of reproductive age.

Materials and methods. The research involved comprehensive examination of 125 patients aged from 18 to 25 with varying degrees of endometrioid ovarian lesions severity. All women underwent complete clinical and laboratory examination, including transabdominal and transvaginal sonography of pelvic organs using ultrasound scanner Medison 6000 CMT (South Korea). Results of the study were processed using computer software application package "Statistica for Windows v. 7.0 ".

Results. Ultrasound examination of pelvic organs showed the following sonographic parameters: dorsal echo enhancement symptom (38%), unilateral ovarian lesion (24%), bilateral lesion (39%), cyst margin duplication (62%), cyst contents in the form of homogeneous echogenic matter (99%), vascularization along cyst circumference (34%), vascularization in the area of ovarian hilum (66%), highly echogenic parietal inclusion (94%), pain during transvaginal examination (89%), absence of regression over time (100%).

Conclusions. The study allowed the authors to establish ultrasound indices of endometrioid ovarian lesions, such as homogeneous echogenic matter, highly echogenic parietal inclusion, pain during transvaginal examination, absence of regression over time.

Riabushko I.R., Mikhanovskiy A.A.

THE ANALYSIS OF 5-YEAR TREATMENT OUTCOME OF PATIENTS WITH CANCER OF VULVA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of oncology

Introduction. Vulvar cancer (VC) is a rare malignant tumor of the female genital organs. Currently in Ukraine, as in Europe, VC ranks 4th in morbidity and accounts for 1% of all oncological diseases. The peak incidence occurs between the ages of 66 - 70 years. Despite the timely diagnosis of VC, more than half of the patients arrives for treatment with significant local-regional spread of the tumor that infiltrates adjacent organs and early metastasizes to the regional lymphatic nodes. Aggressive clinical current of VC advanced age of most patients and uncompensated related diseases create serious difficulties for the choice of adequate treatment and its implementation. In Ukraine the overall 5-year survival of patients with VC is 54,9%: at I stage – 81,4%, at II – 56,6%, at III – 37,6%, at IV – 14,6%. In Europe, according to the FIGO classification (1988) among 588 patients with VC 5-year survival rate was 98 %, 85 %, 74 % and 31 % respectively at I - IV stages of the disease. In patients who have 3 or more affected unilateral lymphatic nodes or 2 or more affected bilateral lymphatic nodes, the overall 5-year survival rate was 29 %; with the involvement of pelvic lymphatic nodes is 10-15 % (Emma J., 2009). The most effective method of treatment of patients with VC is surgical. Depending on the stage of the disease it is used alone or in combination with radiation therapy and chemotherapy. The most important factor for reducing mortality from VC is adequate lymphadenectomy. However significant complications (wound infection, lymphatic cysts, lymphedema) are frequent and only in 30% of cases after dissection of lymphatic nodes lesions is revealed. Cause of this currently there is a trend to shift from radical surgery to the individual approaches in the treatment of patients which take into account the size and location of the tumor. However the most important principle remains adequate surgical treatment («clean» margins of the resection) and inguinal lymphadenectomy. The feasibility of lymphadenectomy is founded by early lymphogenous metastasis, the inability of the clinical diagnosis of micrometastases of cancer and a significant detection rate of metastases in clinically unaugmented lymphatic nodes.

Aim. Research of surgical, combined and complex treatment outcome of vulvar I – IV stage cancer pacients.

Materials and methods. Materials of examination and treatment of 34 VC pacients in I – IV stage at the age from 54 to 81 year, which treated at the oncogynecology department of Institute for Medical Radiology, Kharkiv. The most of VC patients udergone combined and complex treatment. Surgical treatment provided in volume of extended Bochman vulvectomy. In patients with VC T1N0M0 combined treatment started with surgical intervention with adjuvant distanced radiotherapy course on the vulva region (ROKUS-M). Total irradiation dose was 40 Gr. VC T2-3N0-1M0-1 patients before operation had neoadjuvant radiotherapy course on the vulva region with total irradiation dose 40 Gr with 100mg cisplatin modification (once a week). Adjuvant radiotherapy course continiued in 2–3 weeks after surgery up 45-50 Gr. VC T1-3N1M0 patients had additional irradioation course on inguinal lymphatic nodes region with total radiation dose 40 Gr, and 4–6 cycles of the adjuvant chemotherapy: cisplatin, cyclophosphan, vincristine.

Results. Overall recurrence-free and 5-year survival rate was 79,4% and 91,2% respectively. Recurrences and metastasis occurred in 7 (20,6 %) of patients with VC. The majority of patients (33,3%) have III-rd stage of the disease. Recurrences and metastases were identified in 7 patients (71,4%) during the first year after treatment.

Conclusions. The majority of patients with newly diagnosed VC have II-d or III-rd stage of disease that testifies to late diagnostic. Recurrences of the disease occured most frequently in patients with III-rd stage of VC during the first year after treatment. Due to the high risk of local recurrences and metastasis to regional lymphatic nodes the main method of treatment of patients with VC: 1) for T1N0M0 VC best is combined method that includes radical vulvectomy with inguinofemoral lymphadenectomy; 2) for T2-3N0-M VC is a complex one with a preoperative course of radiochemotherapy and conduct 4 - 6 cycles of adjuvant chemotherapy.

Saytarly D. P., Demidenko O.D., Rubinska T. V., Merenkova I. M.

MENSTRUAL FUNCTION PECULIARITIES IN REPRODUCTIVE AGE WOMEN WITH SIGNS OF CONNECTIVE TISSUE DYSPLASIA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics, gynecology and pediatric gynecology
Scientific supervisor: professor Tuchkina I. A.

Introduction. An increase in gynecological morbidity with menstrual dysfunction prevalence has been recently observed in women of reproductive age, the incidence of this condition is about 15% (O.Ya.Grechanina, 2014; I.A.Zhadan, 2008).

Aim. To determine menstrual cycle characteristics in women of reproductive age with signs of connective tissue dysplasia (CTD).

Materials and methods. Fifty nulliparas at the age 20-28 were examined at Kharkiv Maternity Hospital No.1, and divided into two groups: 30 young women (main group) with clinical manifestations of CTD, 25 women with no signs of CTD were included the control group. Examination of women included assessment of clinical and anamnestic data; general clinical examination, purposeful determination of connective tissue dysplasia signs according to the scale developed by S. N. Buyanova et al., ultrasound examination of pelvic organs.

Results. The examination revealed that the average age of main group patients comprised 23.5 ± 2.5 years, control group – 22.5 ± 2.5 years. The signs of connective tissue dysplasia detected in patients of the main group included asthenic type of constitution and weight loss (78.9%) and 6.1% in the control group. The main group patients were found to have such signs as hypermobility of joints and tendency to hyperextension of ligaments (16.4%), which were not observed in the control group. The signs in 8.8% of main group women included varicose veins of the lower extremities and small pelvis, with absence of such evidence in the control group data. The main group patients were more frequently diagnosed with menstrual cycle disruptions: cycle of less than 24 days was reported by 25% patients, more than 24 days in 26.8%, and 10.0% and 6.7% in the control group respectively. Secondary amenorrhea was reported by 12.4% of main group patients and 3.0% of patients in the control group. Dysmenorrhea was a typical clinical sign in patients of the main group. Painful menstruation was observed in 70.2% of cases, which is 2 times more than in the control group (35.7%).

Conclusions. The data suggest that the clinical manifestations of connective tissue dysplasia differed significantly groups under investigation. CTD is one of the risk factors for the development of menstrual cycle disruption in women of reproductive age.

Skibina K.P.

ROLE OF CONNECTIVE TISSUE DYSPLASIA IN THE FORMATION OF NEONATAL PATHOLOGY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics and gynecology N1

Introduction. Causes of neonatal birth trauma is most often caused by premature infants due to premature birth or immaturity due to the delay of intrauterine development. In cases of various central nervous system (CNS) lesions in term infants often focuses on a belated diagnosis intrapartum distress or gross mismanagement on the management of labor, as the main causes of disease.

The aim was to determine the role of undifferentiated forms of connective tissue dysplasia (CTD) in the formation of pathological states of the newborn.

Material and methods. In this paper we studied 25 cases of pathological early neonatal period the newborn. In the structure of pathology in the first place were CNS injury of varying severity, accompanied by convulsive syndrome, intraventricular hemorrhage, melena, pulmonary hemorrhage, and others. The features of physical history, reproductive health of pregnant women, the flow of this pregnancy, childbirth, postpartum and early neonatal period.

Results. As a result of work revealed that in 18 cases the mothers existed in varying degrees of severity diagnostic features of CTD in the form of neurological disorders, asthenic syndrome, valve or arrhythmic syndrome, idiopathic arterial hypotension, torakodiafragmal syndrome or syndrome hypermobility of the joints, as well as the pathology of the vision syndrome. Undifferentiated CTD may be not only genetically determined, but also develop as a result of different mutagenic effects of environmental conditions on pregnancy. This pathology is formed starting from the embryonic period. The special features of CTD is the absence or weak expression of phenotypic traits dysplasia at birth, even in cases of differentiated forms. In children with a genetically determined condition dysplasia markers appear gradually over a lifetime. External signs are divided into the bone and skeletal, skin, joints and minor anomalies of development. The internal features include dysplastic changes in the nervous system, the visual analyzer, cardiovascular, respiratory, abdominal cavity. CTD may show a high risk of a thrombotic and hemorrhagic complications, which increase during pregnancy, childbirth and the postpartum period. In this pathology physiological stress during labor can become extremely high and cause birth defects and poor adaptation to moderate hypoxia. At the same diagnosis of undifferentiated forms of CTD as causes neonatal pathology difficult and, as a rule, remains unaddressed.

Conclusions. Thus, it can be argued that the development of algorithms for the early diagnosis of CTD is an important factor in predicting the possible occurrence of perinatal complications, developing approaches to the management of pregnancy and delivery methods.

Skorbach O.I., Al-Karawi Ahmed Shakir

THE DYNAMICS OF METABOLIC DISORDERS IN WOMEN AFTER HYSTERECTOMY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics and gynecology N1

Introduction. Hysterectomy, even with preservation of ovarian tissue, is often accompanied by the appearance of neuro-vegetative and metabolic-endocrine disorders. Several authors explain the adverse long-term consequences of hysterectomy by intraoperative ligation of the ovarian branches of the uterine arteries that reduces blood flow to the ovaries, leading to changes in the steroidogenesis and, as result, to estrogen deficiency. According to the modern ideas, estrogen deficiency plays a significant role in the genesis of metabolic disorders.

The aim of our study was to investigate dynamics of psycho-emotional and metabolic disorders in women after hysterectomy**.**

Materials and methods. The study included 58 women of reproductive age who were divided into the following clinical groups: I gr. consisted of 20 healthy women with preserved menstrual function; II gr. included 38 women after hysterectomy without removal of both ovaries. Patients were divided into 2 subgroups depending on the time that has elapsed after hysterectomy: IIa gr. consisted of women who had undergone surgery 1 year ago (n = 30), IIb gr. - 28 women that have been operated 3 years ago. All women underwent clinical examination. Also measuring of body weight (BW) and height were carried, and the body mass index (BMI) were calculated. The questionnaire "Questionnaire for signs of autonomic changes" (O. M. Wayne, 1998) was used for the diagnosis of the syndrome of vegetative dystonia. Assessment of emotional state on the level of anxiety was determined by the CH.D. Spielberger's test (State-Trate-Anxiety-Inventory), adapted by Y. Khanin (1978). Determination of the concentration of total cholesterol, triglycerides (TG), high-density lipoprotein (HDL) was determined by enzymatic colorimetric method in the blood serum using test systems from Roche Diagnostics (Switzerland) on an automatic biochemical analyzer Cobas 6000 (module 501). Low-density lipoprotein (LDL) were calculated by formula W.T. Friedewald (1972).

Results. The high levels of State and Trait anxiety were registered in the majority of women. Their intensity decreased with increasing duration of the postoperative period. Syndrome of vegetative dystonia were observed in 76.3 % of the women. Metabolic disorders included increase of BW and changes in lipid metabolism. 21 (55.2%) patients have noted an increase BW during the first 12 months after surgery. Significantly ($p<0.05$) increase of BMI has registered in both subgroups after hysterectomy. The studying of lipid metabolism in II gr. showed a significant increase in total cholesterol, LDL and TG, comparing to women of I gr. ($p<0.05$). We noted a significantly higher level of LDL, total cholesterol and TG in women IIb gr. comparing to the IIa gr. ($p <0.05$).

Conclusions. Thus, we can conclude that in women after hysterectomy in the first year neuro, psycho-emotional and subsequently of metabolic disorders start to develop. It could lead to the formation of the metabolic syndrome, which correlate with the term of postoperative period.

Soe T., Adeyemi A.A., Zaytseva O.V.

MOST FREQUENT PLACE OF LOCALIZATION AND FACTORS AFFECTING THE ECTOPIC PREGNANCY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics and gynecology N2

Introduction. An ectopic pregnancy is an abnormal implantation of the embryo outside the uterus. Other parts of the female reproductive tract are not adapted for reception of implantation, thus ultimately resulting in the death of the fetus. This situation is also dangerous for the mother, as ectopic implantation can lead to many complications and life-threatening conditions. In fact, ectopic pregnancy is the leading cause of maternal death in early pregnancy. Perhaps pathophysiological occurrence of ectopic pregnancy lies in alteration of tubal transport from damaged ciliated endosalpinx from infections such as chlamydia and gonorrhea; delayed fertilization, transmigration of the oocyte to the contralateral tube; and slowed tubal transport. In vitro fertilization and other assisted pregnancy can significantly increase the chance of ectopic pregnancy and can change the ectopic locations and their frequencies. The key to successful management of ectopic pregnancy is early diagnosis to prevent complications.

Aim. To compare the localization of ectopic pregnancy and etiologic risk factors

Materials and methods. Literary statistics over the last 5 years.

Results. The frequencies of localization of ectopic pregnancy are as follows: Ampullary - 80% isthmic - 12% fimbrial - 5% corneal / Interstitial - 2%, 1.4% abdominal, ovarian, 0.2% at the neck – 0.2%. Statistics risk factors and infectious factors of ectopic pregnancy are as follows: PID (pelvic inflammatory disease) - after the first episode - 13% after the second episode - 35%, and after the third episode - 75%; Smoking increases 1.6 - 3.5 times; history of previous ectopic pregnancy - 10-25%; IUD (intrauterine device) use - 1 in 1000 over a 5-year period, In vitro fertilisation (IVF) or Gamete Intra-fallopian transfer (GIFT) - a 4.5%; Increasing age of 35-44 years - 3-4 times more compared to age 15 - 24 years.

Conclusions. The study showed that the most frequent localization of ectopic pregnancy is the fallopian tube and is 80%; the least frequent locations are ovaries and cervix. Risk factors and etiologic factors contribute to the development of ectopic pregnancy at varying level.

Tarawneh D.Sh.

CHARACTERISTICS OF FAMILY ANAMNESIS OF INFERTILE WOMEN WITH UNSUCCESSFUL ATTEMPTS OF ASSISTED REPRODUCTIVE TECHNOLOGIES PROGRAMS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics and gynecology N1

Introduction. Stimulation of superovulation during the assisted reproductive technologies (ART) program is a factor of activation of microthrombosis, but to implement it, as a rule, there must be aggravating factors. These factors include inherited or acquired predisposition to thrombosis. The inefficiency attempts of ART programs may be associated with disturbance of microcirculation and formation of blood clots in the endometrium and

chorion in the early stages of pregnancy. One of the clinical guidelines that allow to identify hereditary defects of hemostasis is the study of thrombotic anamnesis of family.

Aim. Optimization of preparation of patients in ART programs in order to increase efficiency and reduce complications during superovulation and the further course of the pregnancy.

Materials and methods. Were examined 60 women with unsuccessful attempts of ART in the anamnesis, control group was consisted of 30 healthy women. The clinical examination included a detailed study of a family anamnesis of thrombosis. All patients were examined for the presence of antiphospholipid syndrome (acquired thrombocytopathy) and hereditary forms thrombocytopathy.

Results. The higher percentage of encumbered thrombotic anamnesis - 33%, against 10% in the control group was found in patients with infertility and unsuccessful attempts of ART programs. The structure of thrombotic anamnesis of a family: myocardial infarction - 30%, hemorrhagic stroke or ischemic stroke - 28%, pulmonary thromboembolism - 10%, varicose disease and venous thrombosis - 32%. Increased level of antiphospholipid antibodies in women with failed ART cycles in anamnesis was diagnosed in 24 (40%) patients in main group; 2 (6%) – in the control group. The hereditary forms of thrombocytopathy was found in 6 (12%) in the main group. The hereditary forms of thrombocytopathy was absent in the control group.

Conclusions. In order to increase the effectiveness of ART programs and reduce the risk of thrombotic complication recommended a thorough study of family anamnesis of thrombosis with subsequent diagnosis of hereditary and acquired forms of thrombophilia.

Tertyshnyk A.O.

ANTIBIOTIC RESISTANCE OF MICROORGANISMS IN PATIENTS WITH SALPINGITIS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics and gynecology N2

Introduction: development of inflammatory diseases of organs of women comes against the backdrop of the balance of microflora urethra, posterior vaginal vault and cervix, as the result of an imbalance defenses and potential pathogenic bacteria. It is known that the microflora in salpingitis determined by a combination of several microorganisms in a single ecosystem, which requires the appointment of a comprehensive treatment of the light sensitivity of pathogens.

Aim: determine the sensitivity and antibiotic resistance in pathogens salpingitis.

Materials and methods: the study evaluated the sensitivity and antibiotic resistance of pathogens in vaginal secretions in 70 patients aged 25 to 39 years of salpingoophoritis compared with the control group (n=35). Research groups distributed as follows: 1st group - patients with salpingoophoritis up to 10 years; 2nd group - with a duration of 10 years; 3rd group - the control group. Identification of microorganisms and sensitivity to drugs by conventional microbiological schemes. Determination of resistance to antimicrobial agents insulators using microplate with semi registration data.

Results: The study found that the most commonly sown in patients with salpingoophoritis (Staphylococci, Streptococci, Enterobacteria and Obligate Anaerobes) and the incidence of resistance to antimicrobial agents aureus isolates varied greatly and depended on the duration of the process. Staphylococci isolates were characterized by variable sensitivity to drugs studied. Most resistant to antimicrobial drugs strains of

Staphylococci were removed from patients 1 and 2 groups. With regard to penicillin, the percentage of resistant strains in 2 groups of patients was 97.2%; Most cephalosporins - from 2.0% to 11.1%. In general, most isolates of Staphylococcus aureus was multiresistant. Among Enterobacteriaceae that removed from patients studied groups, the percentage of resistant strains was high in all groups of the study. By cephalosporin resistant strains percentage was higher for Enterobacteriaceae isolates from patients of group 1 - 9.3 to 16.7%. The highest percentage of resistance strains of obligate anaerobes was removed from the 2 groups of patients where none of antibiotics is not inhibited all strains of microorganisms studied in while in group 3 - there were 2 (imipenem, amoxicillin), group 1 - 1 (amoxicillin) in the control group - 3 (imipenem, amoxicillin, clindamycin).

Determination of resistance to antimicrobial agents insulators using microplate showed that all strains were variable to antimicrobial drugs, and most strains were resistant to ampicillin and doxycycline and moderately resistant to gentamicin.

Conclusions. Inflammatory processes in microbial etiology salpingitis that lead to complications requiring targeted therapy of complex direction. As strengthening chronic inflammation in the fallopian tubes, as a result of chronic bacterial infection, attracts antimicrobial therapy.At the same time, uncontrolled appointment antimicrobial agents threatens the development of resistant forms of microorganisms, dysbiosis, which affects the course of the process, as evidenced by the analysis of the obtained data that allowed to establish that all isolates had multiple antibiotic resistance. Therefore, the appointment of antimicrobials should be integrated with a clear view of species of microorganisms and pathogens sensitivity to drugs that will reduce the percentage of chronic inflammatory process, and improve the reproductive health of women.

Teryanik A.V., Dusmatova A. K., Sayenko V. P.

TREATMENT OF VULVOVAGINAL INFECTIONS IN ADOLESCENTS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics, gynecology and pediatric gynecology
Scientific supervisor: professor Tuchkina I. A.

Introduction. Pathology of the reproductive system organs observed in adult women often results from gynecological diseases developed in childhood or adolescence. Vulvovaginal infections rank first among urogenital system disorders in children and adolescents, according to various researchers, accounting from 70% to 93% of gynecological pathology of childhood and adolescence.

Aim. To determine the efficiency of Vagisan in treatment of vulvovaginal infections in adolescent girls.

Materials and methods. The study was performed at the Department of Obstetrics, Gynecology and Pediatric Gynecology at Kharkiv Regional Children Clinical Hospital No.1. The study involved examination and treatment of 60 adolescent girls. Vulvovaginitis was diagnosed on the basis of complete clinical and microbiological examination of vaginal content using complex quantitative polymerase chain reaction (PCR). The control group included 30 adolescent girls with vulvovaginitis receiving standard antibacterial therapy and the main group involved 30 adolescent girls whose treatment regime additionally included 2 capsules of Vagisan per day for one week.

Results. The patients of the main group observed a decrease in vaginal inflammation severity and a decrease in discharge intensity after the first two days of treatment, while

adolescent girls in the control group reported an improvement on the 5th day of treatment. All symptoms (leucorrhea, pain, inflammation) typical for vulvovaginal diagnosed prior to treatment were observed only in 2 (6.7%) adolescents in the main group following treatment and their intensity was significantly less expressed than in the control group (9 (30%)). According to complex quantitative PCR data, normalization of vaginal microbiocenosis occurred in the majority of patients - 24 (80%) in the main group and 18 (60%) in the control group.

Conclusions. Administration of Vagisan in treatment of vulvovaginal infections is considered to be effective, resulting in the fast regeneration of vaginal microbiocenosis.

Tysyachka G.M., Semenchenko L.A., Mironchuk E.I., Solyanik V.Yu.

ENDOTHELIAL DYSFUNCTION DIAGNOSIS IN CHILDREN AND ADOLESCENTS WITH INFLAMMATORY DISEASES IN GYNECOLOGICAL PRACTICE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of obstetrics, gynecology and pediatric gynecology
Scientific supervisor: professor Tuchkina I. A.

Introduction. Every year more and more efforts are made to improve children and adolescent gynecological care. The main objectives are prevention, early detection and timely treatment of reproductive system diseases, necessary to maintain and strengthen reproductive health of prospective mothers. Inflammatory conditions are considered to be the most common gynecological diseases in childhood and adolescence.

Aim. To determine endothelial dysfunction during development and course of inflammatory diseases of the reproductive system in children and adolescents.

Materials and methods. Enzyme immunoassay was the main method, used as the basis for the assessment of endothelin-1 level in children and adolescents with inflammatory gynecological diseases. The study involved 43 girls aged from 11 to 17, divided into main and control groups. The main group included 8 girls aged 11-14 (I group) and 15 girls aged 15-17 (group II), hospitalized for evaluation and treatment of inflammatory diseases of the reproductive system. The control group comprised 20 girls without gynecological diseases. All the patients underwent follow-up assessment of somatic and gynecological status.

Results. The study implied determination of endothelin-1 level to assess the state of endothelium in pathogenic mechanisms onset in inflammatory diseases of the reproductive system in children and adolescents. The majority of patients were found to have a significant increase in the level of endothelin-1 (57.4 ± 20.8; 57.02 ± 8.8 in groups I and II, respectively, and 16.4 ± 3.6 ng/ml in the control group - ($p_{1,2} < 0.05$)), indicative of endothelial dysfunction.

Conclusions. Clinical course of inflammatory diseases in children and adolescents is accompanied by a threefold increase in endothelin-1 level, indicating the development of endothelial dysfunction.

PEDIATRICS AND MEDICAL GENETICS

Amash A.G.

CORRELATION OF CALCIUM - MAGNESIUM PROFILE IN INFANTS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of Propedeutic Pediatrics No.1

Introduction. In the breast mother's milk the ratio of macro and micronutrients are relevant to the needs of the infant, as opposed to standardized consist of artificial formula for feeding infants. One of the most important correlation of elemental profile in children - is to determine the ratio of calcium to magnesium. It is known that magnesium is an antagonist of calcium, which in turn impairs the absorption of the final.

Material and methods. It was studied macro and microelement profile by hair's spectrogram of 50 children, aged 5 months, that living in different parts of the city - Kharkiv. The children were divided into groups: group 1 - 20 children who are breastfed, group 2 - 15 children in mixed feeding and group 3 - 15 children who received only artificial formula.

Results. The study determined that children who are breastfed average ratio of calcium - 49 ± 3% and magnesium - 0,03 ± 0,02%. In the second control group the range of Ca 49 - 65% and Mg 0,02 - 0,036%. In the third group - 37 - 69% for Ca and 0.018 - 0.035% for Mg, that reflects the violation of element profile.

Conclusion. It is possible to make a conclusion, that children who get mixed and artificial feeding have different value ratio of calcium and magnesium profile to children who receive breast milk.

Chernenko L.N., Avdieichyk E.V.

THE LEVEL OF IL-1ß AND TNF-α IN CHILDREN WITH BRONCHOPULMONARY DYSPLASIA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics 1 and neonatology

Introduction. With the development of technology nursing and respiratory support in preterm infants simultaneously with a reduction in mortality observed increase in the development of bronchopulmonary dysplasia (BPD). The disease is a variant of chronic inflammation on the background of morphologically altered structures of the bronchopulmonary system. A key role in the development of the inflammatory response are interleukin-1β, tumor necrosis factor-α. However, the data for the level of these cytokines in induced sputum, given the postnatal development of the bronchopulmonary system, are absent. In addition, long-term circulation and cytokine hyperproduction has adverse prognostic significance.

Aim. To assess the level of IL-1ß and TNF-α in induced sputum in children with bronchopulmonary dysplasia.

Material and methods. The study involved 68 children from 1 month to 3 years, including 33 patients diagnosed with the classical form of the disease (group 1-a), 18 - a new form of (2-a group), 17 - BPD term (third group). The control group comprised 19 apparently healthy children. Sampling of 0.5 ml of induced sputum was performed in all patients with BPD on an empty stomach after inhalation of saline outside the main activity of the disease. Statistical analysis was

performed using statistical package «EXCELL FOR WINDOWS» and «STATISTICA 7.0. FOR WINDOWS». The results were considered statistically significant at $p < 0.05$.

Results. During the analysis of variance Kraskla-Wallis statistical characteristics of these cytokines in the surveyed children was found that the criterion Kraskla-Wallis test is significant for both levels of interleukin-1β (H=22,62; p=0,000), and for the level of TNF-α (H=29,02; p=0,000). In assessing the pairwise comparison - U-Mann-Whitney non-significant (IL-1ß: p_{1-2}=0,700 , p_{1-3}= 0,196, p_{2-3}=0,655; TNF-α: p_{1-2}=0,334, p_{1-3}=0,454, p_{2-3}=0,165). This entitles you to claim that the statistical characteristics of indicators of various groups was not statistically different among themselves, and the level of activity of the investigated pro-inflammatory cytokines was significantly increased compared with the control group and did not depend on the affiliation of the child with BPD to a particular group. The lack of statistically significant differences of levels IL-1ß and TNF-α in children with various forms of BPD emphasizes that the disease is chronic in nature, due to morphological changes in the bronchopulmonary system are superimposed chronic inflammatory process. An integral part of the biological action of IL-1ß is its stimulating effect on the metabolism of connective tissue, which is due to the proliferation of fibroblasts, increased synthesis of both collagen and collagenase, proteinase different actions. It was therefore analyzed the nature of proinflammatory cytokines correlations with some indicators of proteinase-proteinase inhibitor, in which were found probable negative correlation between the level of IL-1ß and tonin ($r = - 0,22$, $p = 0.05$) and kalpayiniv activity ($r = - 0,22$, $p = 0.05$). This entitles suggest that elevated levels of proinflammatory cytokines in this case is protective reaction of the vasoconstrictive activity of proteases and apoptogenic action. Proof of this is likely a positive correlation between the level of IL-1ß and activity of α-2-MG ($r = + 0,32$, $p = 0.004$), as the main proteinase inhibitor indicated. Likely found a positive correlation between the level of TNF-α and total activity of proteases ($r = + 0,21$, $p = 0.05$) and a negative correlation between the level of TNF-α and elastase-inhibitory activity of α-1- FE in serum ($r = - 0,21$, $p = 0.05$).

Conclusions. In children with bronchopulmonary dysplasia is a significant increase in the levels of proinflammatory cytokines in induced sputum, indicating a chronic inflammatory airway disease, regardless of form.

Chernenko L.M., Mayorova M.V.

THE STATE OF THE DIGESTIVE SYSTEM IN CHILDREN WITH BRONCHOPULMONARY DYSPLASIA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics 1 and neonatology

Introduction. Development of perinatal medicine, the further improvement of methods of care for newborns, respiratory support and intensive care, the use of surfactant replacement therapy not only have allowed significant improvement in survival of premature newborns but also have set neonatologists new challenges, including bronchopulmonary dysplasia (BPD). One of objective and informative criteria of health and age norms of the child's organism development is physical development. Like all biological processes in the child's organism, physical development follows the sequence of uneven growth and development. Therefore, assessment of physical development as an integral indicator of nutrition adequacy is an essential element in examining the child patient with bronchopulmonary dysplasia.

Materials and methods. The study involved 83 children aged from 1 month to 3 years with bronchopulmonary dysplasia. BPD diagnosis was made according to the International Classification of Diseases, 10th revision. Statistical analysis was performed using statistical package «EXCELL FOR WINDOWS» and «STATISTICA 7.0. FOR WINDOWS». The results were considered statistically significant at $p < 0.05$.

Results. Indicators of physical development of children with BPD are important in assessment of both the severity and prognosis of the disease. The analysis of anthropometric indices revealed that 89.2±3.4% of children with BPD had disharmonious physical development ($F = 134.8$; $p<0.001$). Of them, 60.2±5.4% of children (overwhelming majority, $F=20.7$; $p<0.001$) had disharmonious physical development due to low or very low body weight; in 3.6 ± 2.1% due to great body length. Objective examination of the digestive system demonstrated in the vast majority of children with BPD (97.6±1.6%; $F=263.3$, $p<0.001$) hepatomegaly and in 9 (10.8±3.4%) children splenomegaly. Fifteen (18.1±4.2%) children had predisposition to constipation, most probably of central origin. Diagnostic measures in children with BPD revealed certain changes in the laboratory findings. The changes in coprogram were detected in the majority of children, i.e. 71 (85.5 ± 3.9%; $F = 103.5$, $p <0.001$), of them 45.8% demonstrated undigested or digested fiber, 22.9 % steatorrhea, 21.7% amylorrhea, 9.6% creatorrhea. In our study 11 (13.3 ± 3.7%) children had marked increase in β-lipoprotein (62.0 (59.0; 68.0) c. u.), 2 (2.4±1. 6%) children increased cholesterol level (7.6 (7.5; 7.7) mmol/l). Fifteen (18.1±4.2%) children had reduction in β-lipoprotein level (28.0 (23.0. 29.0) c.u.) and 14 (16.9±4.1 %) patients increased cholesterol level (2.545 (2.4; 2.7) mmol/l). The increase in alkaline phosphatase (8400.0 (7600.0. 11000.0) nmol/s*l) was noted in 15 (18.1±4.2%) children. Increased transaminases level was observed in 8 (9.6±3.2%) children, alanine aminotrasferase (0.810 (0.69; 1.04) mmol/l·h) and aspartate aminotransferase (0.910 (0.560; 1.25) mmol/l·h) being equally increased. Changes in proteinogram were noticed in 37 (44.6±5.4%) children with BPD. Of them hypoproteinemia was observed in 28.9±5.0% of children, dysproteinemia in 22.9±4.6% of patients. To clarify these issues tetrachoric indicator was used to analyze the relationship between qualitative criteria: presence or absence of hypoproteinemia and pathological changes in coprogram (amylorrhea. steatorrhea. creatorrhea) in children with BPD. The above calculations led to the conclusion that the level of protein in the serum of children with BPD depends on the digestive function of the gastrointestinal tract ($\chi 2 = 4.08$; $p=0.043$), disorders of which may be inherent to preterm infants due to immaturity of enzyme systems the gastrointestinal tract.

Conclusion. 1. The vast majority of children with bronchopulmonary dysplasia ($F=20.7$; $p<0.001$) were characterized by disharmonious physical development due to low or very low body weight, which requires increased calorie intake with sufficient protein content. 2. Blood serum protein level of children with bronchopulmonary dysplasia depends on the digestive function of the gastrointestinal tract, the disorders of which are inherent in preterm infants due to immaturity of the enzyme system of the gastrointestinal tract.

Chernenko L.N., Pasichnyk V.V.

STATE OF THE LEFT VENTRICULAR FUNCTION IN CHILDREN WITH BRONCHOPULMONARY DYSPLASIA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics 1 and neonatology

Introduction. With the development of the technologies in special care nursery and respiratory support of premature newborns there has been noted a reduction in mortality along with an increase in frequency of bronchopulmonary dysplasia (BPD) in children. Today we know that children with diseases of the respiratory system on a par with the overload of the right ventricle of the heart activity changes occur in diastole left chambers of the heart. Diastolic dysfunction is often preceded by reducing the pumping function and can lead to the formation of left ventricular heart failure in children with respiratory diseases.

Material and methods. The study was performed by Pediatrics and Neonatology Department No. 1 of KhNMU (Head of Department doctor of medical science, professor G.S.Senatorova) at Regional Centre for Diagnosis and Treatment of Bronchopulmonary Dysplasia in Children of Kharkiv Regional Children's Hospital (chief doctor – candidate of medical sciences, associate professor G.R. Muratov, director of the center - candidate of medical sciences O.L. Logvinova). The study involved 83 children aged from 1 month to 3 years with bronchopulmonary dysplasia. BPD diagnosis was made according to the International Classification of Diseases, 10^{th} revision. Informed consent was signed by the parents prior to the study. Assessment of diastolic function and measurement of pulmonary artery pressure was carried out with the help of all surveyed Dopplerechocardiography «AU 3 Partner» company «EsaoteBiomedica» (Italy).

The aim was to improve the diagnosis of diastolic dysfunction of the ventricles of the heart in children with bronchopulmonary dysplasia by determining its type on the basis of analysis of the parameters of transmitral and transtricuspid flow.

Results. In the study of diastolic function of the heart in children surveyed were analyzed maximum speed peak early (E), the maximum speed of atrial systole (A), the ratio (E / A), deceleration time of E peak time and isovolumetric reduction (IVRT). In the first year of life in children with bronchopulmonary dysplasia isovolumetric relaxation time was significantly less than standard indicators and IVRT in children and the comparison group ($p < 0.01$). Accelerated isovolumetric relaxation correlated with a high heart rate, characteristic of children with BPD ($r = 0,675$, $p < 0.01$). Maximum velocity of early filling (peak E) was significantly decreased compared with normal ($p < 0.01$). While the rate of atrial contraction tended to decrease. The median ratio E / A was higher than unity (1.29 units.) And the results of the study E / A in the comparison group ($p < 0.01$). Thus, in children with BPD in the first year of life is more likely pseudonormal type of diastolic dysfunction as type of diastolic dysfunction with chronic energy deficiency, hypoxia and cardiac morphological changes characteristic of patients with BPD. In 1/3 patients had impaired relaxation spectrum of the left ventricle, indicating that the early stage of diastolic dysfunction. In these patients the peak E was reduced, the peak A and DT - increased against the background of overtime isovolumetric relaxation. Infants with BPD frequently detected type pseudonormal transmitral diastolic range ($p < 0.01$), which can be seen as the next stage of diastolic dysfunction by reducing the compliance of the left ventricular wall.

Conclusions. For children with bronchopulmonary dysplasia characterized pseudonormal type of diastolic dysfunction ($p < 0.01$) and a violation of relaxation ($p < 0.01$).

Most often in children with bronchopulmonary dysplasia in mitral spectrum detected pseudonormal type ($p < 0.01$). Perspective is to continue the study of diastolic function of the left heart in children with bronchopulmonary dysplasia, the contribution of volatile and nonvolatile relaxation mechanisms, identification of risk factors for diastolic dysfunction and methods of prevention.

Dryl I.S., Petrenko L.K., Zabashta I.V.

ASSESSMENT OF MENTAL STRESS IN CHILDREN'S LIFE WITH CHRONIC KIDNEY DISEASES

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics and neonatology

Introduction. Today the numerous scientific studies demonstrate the presence of the influence of psychological factors such as anxiety, depression, aggression and anger on the development and course of systemic diseases that primarily affect the cardiovascular system. Firstly, changes in mental state lead to the development of hypertension, coronary heart diseases and cardiac arrhythmias.

Aim: To evaluate the effect of mental stress on changes children's heart rhythm with chronic kidney diseases (CKD).

Materials and methods: A total of 49 children 6 - 17 years (mean age 12,7 ± 3,1y.o.). Most were girls: 37 (75,5 ± 6,2%) compared to 12 (24,4 ± 6,2%) boys. The mean duration of disease was 4,5 ± 3,5 years. All children held jade-urological examination, assessment of cardiac function (based on echoscopy and electrocardiography (ECG)), with an additional questioning on children to determine the level of mental stress (questionnaire Beck Youth - in translation).

Results: In analyzing the questionnaires revealed that half of children 23 (51,1 ± 7,5%) had self-employment rates in the range of average values, a significant reduction in self-employment was found in 11 children (24,4 ± 6,4%), the average age of which accounted for 15,0 ± 1,8 years. From 75,6 ± 6,7% to 91,1 ± 4,2% of the children had moderate levels of anxiety, depression, anger, and aggression. Have been rare case of a significant increase in levels of depression and anger, only 1 case (2,2 ± 2,2%). Significantly increased levels of aggression had 4 children (9,7 ± 4,6%). Analyzing the results, the normal characteristics of the ECG had only 9 children (18,3 ± 5,5%), the majority were children with different disabilities. Cardiac arrhythmias such us sinus bradyarrhythmias were 15 children (30,6 ± 6,6%), 5 (10,2 ± 4,3%) children had sinus tachyarrhythmia. Violation of intraventricular conduction with shortening of the interval PQ (<0.1 s) was detected in 1 child (2,0 ± 2,0%), its elongation (> 0,20s) in 5 children (10,2 ± 4,3%). One child has arrythmia. In 14 children (28,5 ± 6,5%) revealed violations of repolarization different nature.

Conclusions: Number of children (48,8 ± 7,0%) with higher rates of anxiety, anger and aggression to coincide with the number of children (40,8 ± 7,0%), which had a variety of cardiac arrhythmias. Thus, with different types of cardiac abnormalities in chronic renal diseases and timely provision of psychological assistance to children.

Dubinin S., Molchanyuk D., Dmitrenko A.

FEATURES OF BUDD-CHIARI SYNDROME (CLINICAL CASE)

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics 1 and neonatology
Scientific supervisor: PhD., assoc. prof. Omelchenko E.V.

Introduction Budd-Chiari syndrome is disease characterized by obstruction of venous blood outflow from the liver, usually in association with thrombosis of several major hepatic veins with increasing the propensity to thrombosis. The incidence of Budd-Chiari syndrome – 1per 100 000 people.

The aim of the study was to explore the features of display Budd-Chiari syndrome and problems of its differential diagnosis.

Materials and methods. Clinical case of Budd-Chiari syndrome.

Results. Our own observation: Girl S., 16, has been under surveillance since 2000 in Gastroenterological Center Regional Children's Hospital. From the history of the disease we know that the child is sick from 18th months age when an abruptly increased stomach, swelling of the anterior abdominal wall and limbs were noted for the first time. At the hospital the presence of tumors of the liver was suspected, due to which, the child was hospitalized in July 2000 to the surgical department of the Regional Children's Hospital number 1 in Kharkiv. Over there puncture biopsy of the liver and abdominal drainage were performed. The child has been exposed to medical genetic counseling, put on the list in the regional Medical Genetics Center Kharkov with a diagnosis "Tyrosinemia". At the age of 4 years she was examined in Institute of Pediatrics, Obstetrics and Gynecology of NAMS of Ukraine. After surveys the child was diagnosed with "Type IV glycogenosis (Ander's disease): liver cirrhosis. exchange, micronodular, formed, with portal hypertension, esophageal varices, violation of protein-synthetic liver function; ascites". During the all time of observation the child had maintained severe ascites, that was resistant to diuretic therapy and was increasing over time. Due to the deterioration in May 2014 child had got liver transplantation from father (II - III segments) in the clinic "St. Luke" (Belgium). Based on Doppler's investigation of liver's blood vessels from 04.18.13 (common hepatic vein expanded to 12.2 mm, unsatisfactory blood circulation, max. velocity of blood flow - 14.5 cm / s (lowered)) ,conducted a biopsy of the liver (hepatocyte atrophy in center zone of lobular, venous stasis, thrombosis in the hepatic terminal venules), the differential diagnosis with the Ander's disease, the patient was diagnosed with the Budd - Chiari syndrome, secondary liver cirrhosis, portal hypertension. The patient's condition after liver transplantation is characterized by medium severity. Treatment recommendations: 1). Diet - with exception of spicy, fatty, fried foods, coffee, chocolate, smoked products. 2) To continue the treatment: Prograf: 7.00 - 2.5 mg, 19.00 - 3.0 mg - protractedly; Medrol: 7.00 - 4 mg - protractedly; bicarbonate 1 g x 2/day. - protractedly, Ursohol (Ukrliv, Ursofalk) 250 mg x 2/day –- protractedly.

Conclusion. On the example of the clinical case, we examined the manifestations and course of a rare syndrome - Budd-Chiari, difficulties in the differential diagnosis with other diseases of the liver.

Duru A., Pever T., Adogba O., Onuchukwu C.V., Lupaltsova O.S.

THE EFFECT OF BREAST FEEDING AND MATERNAL POSTNATAL ANXIETY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of propedeutic pediatrics №2

Introduction. One of the problems of medicine is the maternal postnatal depression, which can affect women after childbirth and can have negative effects on early infant growth. Postpartum depression occurs in women after they have carried a child, usually in the first few months, and may last up to several months or even a year. It is important that post-natal depression is recognised and treated effectively as it may impair bonding between mother and child and enjoyment of an important period in the relationship. Expectant mothers are informed with information about the benefits of breastfeeding for their babies but are often poorly informed about the consequences breastfeeding has for their own mental health.

The aim was to measure the occurrence of maternal, postnatal anxiety and depression after childbirth in different types of the feeding.

Material and methods. The 35 patients were recruited from Regional Children Clinical Hospital №1, Kharkiv, Ukrainian. Mothers after childbirth were asked to complete the postnatal anxiety scale by Norakidze. Validated scores of 40 - 50 are used to identify mothers at risk of a very high level of anxiety, 25 - 40 are used to identify at risk of a high level of anxiety; 15 - 25 are used to identify at medium risk with a tendency to a high level, 5 - 15 points – medium risk with a tendency to a low level of anxiety and 0 - 5 points are used to identify at risk of low anxiety level. Women with breastfeeding (n = 16; 45,7 ± 8,5%) served as group 1, women with mixed feeding (n = 9; 25,7 ± 7,4%) served as group 2, women with mixed feeding (n = 9; 25,7 ± 7,4%) served as group 3.

Results. We found that 28,0±11,1% of mothers in the group 1, 33,3±15,7% of mothers in the group 2, 11,1±11,1% of mothers in the group 3 had a higher level of anxiety. In patients of group 1, the medium risk of anxiety with a tendency to a high level, were in 25,0±11,1%; in patients of group 2 were in 44,4±16,4%; in patients of group 3 were in 77,8±14,6%. In mothers of group 1, medium risk with a tendency to a low anxiety level, were in 50,0±12,9%; in patients of group 2 were in 44,4±16,4%; in patients of group 3 were in 22,2±13,8%.

Conclusion. Breastfeeding significantly reduces anxiety levels of mothers and normalizes mental state of women in the postpartum period.

Ekpo Mbuotidem Emmanuel, Golovko T.

THE PARTICULARITIES OF INTERVENTRICULAR COOPERATION OF HEART VENTRICLES IN CHILDREN WITH MYOCARDIUM PATHOLOGY

V.N. Karazin National Medical University, Kharkiv, Ukraine
Department of Pediatrics

Aim – study of particularities of interventricular cooperation of heart ventricles in children with noninflammatory myocardium pathology.

Material and methods. The index group compiled 115 children with noninflammatory myocardium pathology (MP) 11-18 years old, control group compiled 41 apparently healthy their peers. The method used to study: echocardiography in M- and B-

regime on the SA-8000 Live apparatus with analysis of ejection fraction (EF) left and right ventricles.

Results. In the index group functional capacity of left ventricles (LV) was authentically below, than in children from control group (EFlv 64,18±8,07%, opposite 69,69±5,00%, p<0,001) with the tendency for lowering of functional capacity of right ventricles (RV) (EFrv 59,54±10,81%, opposite 60,46±10,28%, p<0,1). Depending on MP children of index group were dividing on three groups: first group compiled 32 children with dysplastic cardiomyopathy (DC), second group – 33 children with rhythm disturbance (RD), third group – 50 children with secondary cardiomyopathy (SC). Functional capacity of left ventricles was authentically below, than in children from control group in all of studying groups (I group EFlv 64,59±7,08%, opposite 69,69±5,00%, p<0,001; II group EFlv 63,25±8,06%, opposite 69,69±5,00%, p<0,001; III group EFlv 64,09±8,72%, opposite 69,69±5,00%, p<0,001). Functional capacity of right ventricles in examined groups varied differently. In first group registered the tendency for lowering of functional capacity of right ventricles (EFrv 56,83±9,94 %, opposite 60,46±10,28%, p<0,1). In children's group with RD group registered the tendency for elevation of functional capacity this chamber (EFrv 63,06±10,88 %, opposite 60,46±10,28%, p<0,1). In children with SC of functional capacity of right ventricles was below, than in children from control group (EFrv 58,48±11,11%, opposite 60,46±10,28, p<0,1).

Conclusion. Therefore, in children with myocardium pathology registered the lowering of functional capacity as a left ventricles so and a right ventricles, but predominant in heart work stay the left ventricles in patient with different myocardium pathology.

Golovachova V., Chernyh A., Odinets P.

THE STUDY OF THE SCHOOLCHILDREN HEALTH CONDITION IN A BIG INDUSTRIAL CITY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics №2

Introduction: According to the Ukrainian scientists' data, a part of healthy children in basic schools during the schoolyear has decreased from 27.2% to 18.8%, but the number of the children with chronic pathology has increased from 26.1 % to 53.6%.

Aim: to study the health state of the schoolchildren of the 8-11th forms in the of Kharkiv.

Material and methods: 851 children aged from 13 to 17 years who studied in secondary schools №23, №38, №49, №61, №70, №72, №111, №119 were under the supervision in the of Kharkiv. Among of the examined children pupils of the 9th form aged from 14 to 15 (42.5%), females (53.2%) prevailed. The children's condition of health in both groups was studied with the help of the medical card of an ambulance patient (form №025/o) in the policlinics at place of residence.

Results: while appraising the state of health of the questioning schoolchildren, depending on the sex, it was noted that under cardiologist dispensary supervision trustworthily (p<0.05) there are more boys from the 10th form (28.6%) in comparison with the girls of the same form. More often the children are under cardiologit's supervision because of secondary cardiomyopathy (anomalous chorda of the left ventricle, prolapse of the mitral valve and others). 2 children suffer from congenital heart disease (ventricular septal defect), 1 girl was operated in 2002 due to coarctation of aorta. Children of the 9th-

11th forms more often due to bronchial asthma are under pulmonologist's supervision. With the pathology of the gastrointestinal tract predominantly ($p<0.05$) boys of the 8th form (5.6%), girls of the 9th form (7.2%) and the 10th form (8.4%) are under supervision of gastroenterologist (due to chronic gastritis, chronic gastroduodenitis, ulcer of the stomach and duodenum). More often ($p<0.05$) girls (21.2%) in comparison with boys (2.6%) of the 9th form are under supervision of neurologist, mainly due to vegetovascular dysfunction. 1 girl from the 10th form has got epilepsy, 8 boys and 5 girls have intracranial hypertension. Pathology of kidneys has been revealed more often in girls ($p<0.05$) in all examined forms. Both girls and boys of the 9th form (0.6% and 1.0% correspondingly) have got caries. There are no children under dentist's supervision, probably, due to defects of examination. There are more boys of the 8th and 10th forms ($p<0.05$) and girls of the 9th and 11th forms under ENT-doctor supervision. The ENT pathology is mainly represented with chronic tonsillitis. 4 schoolchildren have got curvature of the nasal membrane, 1 girl has got adenoids' vegetation, 1 boy has got deafness. The schoolchildren of the 9th and 11th forms, mainly girls from the 9th form (1.2%) are under allergologist's supervision because of the allergic reactions. The great majority of children (more than 10%) are under orthopedist's supervision due to scoliosis, flatfoot and the deformation of the chest. 2 children suffered from reactive arthritis. Girls of the 9th and 11th forms and boys of the 8th form suffer from orthopedic pathology trustworthily ($p<0.05$) more often. There are about 10-20% of boys and girls under ophthalmologist's supervision due to myopia, strabismus (1 boy) and cataract (1 boy). The girls of the 9th, 10th and 11th forms are treated by a gynecologist because of dysmenorrhea, chronic salpingoophoritis. 1 girl of the 10th form has got a cyst of the right ovary. Girls of the 9th and 11th forms (about 3-7%) and boys of the 8th form (5.6%) more often ($p<0.05$) complain of endocrine pathology (goiter, obesity, hypothalamic dysfunction). There are 3.6% of the 9th form boys, 1.2% of the 11th form girls and 1.5% of the 9th form boys under surgeon's supervision due to inguinal and umbilical hernia.

Conclusions. The carried out examination showed the necessity of early prophylactic system providing in childhood for prevention of chronic diseases development.

Grishchenko S.A., Dolzhko N.V., Solyanik A.O.

RISK STRATIFICATION OF CARDIOVASCULAR PATHOLOGIES IN NEWBORNS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics 1 and neonatology

Introduction. For decades, the problem of cardiovascular disease in the newborn remains relevant in terms of identifying the risk factors affecting the development of congenital abnormalities of the cardiovascular system.

The purpose of this study is to identify the most significant risk factors in newborns, which may influence the development of cardiovascular events.

Materials and methods. We examined 48 mothers and 53 children in gestational age 37,4±1,2 week. To determine the risk factors for disease cardiovascular used questionnaires family history cardiology, quality of life was assessed by mothers Quality of Life Questionnaire SF-36. The control group - 20 healthy newborns, without morphological and functional deviations from the cardiovascular system, without burdened history cardiology, the average age of parents - 24,7 ± 2,9 years.

Results. Among the respondents prevailed mother newborn girls (54.7%). The average age of the majority of pregnant women was 27,9±4,5 years. Born from the first pregnancy - 73.6% of children (p≤0,05), from the second pregnancy - 15.1% and 11.3% - on the third and subsequent. Registration of pregnancy up to 12 weeks of steel 70.9% (p≤0.05) of women up to 22 weeks - 27.1%, after 30 weeks of pregnancy - one woman. Screening ultrasound examination was performed in all of the women during pregnancy on average 2-3 times. Pregnancy complications occurred in 33.9% of women. 50.9% (p≤0.05) mothers had various chronic diseases (chronic pyelonephritis, obesity, hypertension, gastric ulcer or duodenal ulcer, cholelithiasis, primary hypothyroidism (medication compensated), varicose veins of the lower extremities, epilepsy, vegetative-vascular dysfunction). Their health during pregnancy as a good estimate of 89.6% (p≤0.05) women satisfactory - 8.3%, poor - one woman. Most of the children were born in a satisfactory condition, of which 86.9% (p≤0.05) had Apgar score of 8-10 points, 9.4% - 7-8 points and only 3.7% - 4-6 points . 84.9% (p≤0.05) were healthy children, 15.1% had a morphofunctional deviations from the cardiovascular system in the form of heart rhythm disturbances (1 child), diabetic cardiomyopathy (2), atrial septal aneurysm and wide open oval window (3), congenital heart disease (2). We examined with morphological and functional characteristics of the cardiovascular system, as described above, the average age of parents was 32,8±3,8 years (p≤0.05). Weighed down by history diseases of the cardiovascular system was detected in 50% (p≤0.05) surveyed; 62.5% (p≤0.05) of women had somatic pathology (diabetes mellitus type I, autoimmune thyroiditis, hypertension, chronic pyelonephritis), 25% (r≥0,05) mothers suffered acute respiratory infection in the second trimester pregnancy, 25% (r≥0,05) revealed herpes and chlamydia infection. SF-36 has 8 scales which evaluate: general health, physical functioning, role-playing activities, the intensity of pain, vitality, social functioning, emotional state and mental health. It was found that 37.5% (p≤0.05) of mothers of newborns with abnormal cardiovascular physical and mental health components have been reduced.

Conclusions. Thus, the most significant risk factors for cardiac disease in the newborn are: parental age after 30 years, the presence of severe somatic diseases in mothers, family history of cardiology. Identification of morphological and functional disorders of the cardiovascular system in 15.1% of infants dictates the need to continue the search for risk factors for the formation of cardiac pathology among the pediatric population, since the neonatal period.

Karpushenko J.V., Hewlett F.

THE STATE OF UPPER DIGESTIVE SYSTEM MUCUS IN CHILDREN WITH ALLERGIC DISEASES

Kharkiv National Medical University, Kharkiv, Ukraine
Department of Propedeutic Pediatrics №2

Introduction. The diseases of organs of digestive system in childhood are an important medical and social problem. The fact of connection between digestive system diseases and allergic diseases are currently well known. The high frequency of their connection is shown by epidemiological researches. Mechanisms of formation of allergies on the background of gastroenterological pathologies are recognized. Also, effects of biologically active substances and mediators of allergy which can cause an inflammation of digestive system are also well known.

Aim. To study condition of upper digestive tract according to endoscopic investigation data for improvement of quality of medical treatment of children with allergic pathology.

Material and methods. 61 endoscopic investigation of children with allergic diseases aged 6months to 17 years were analysed. Results proceed with methods of variable statistics.

Results. 61 children were examined, 67% are boys. Approximate average of patients was 10 years. 43% of children with combined allergic diseases, 31% children with allergic rhinitis, 18% with bronchial asthma and 8% with angioedema are in the structure of allergic diseases. Endoscopic picture characterizes by unchanged mucus of esophagus was in 85% of children, stomach 33%, duodenum – 39%. Destructive changes were found in 23% of patients. Destruction of all parts of digestive system was frequently found in children with bronchial asthma. 31% of children with combined etiology had destruction of duodenum. Erythematic changes of the stomach mucosa was found in 91% of patients with bronchial asthma and 85% of patients with combined allergic diseases. Erythematic injuries of duodenum was present in 82% of patients with bronchial asthma and in 58% of patients with combined allergic diseases. Erythematic affection of esophagus was discovered in 27% of patients with bronchial asthma and 20% of children with angioedema. Lymphatic hyperplasia of the mucus of different parts of digestive system was found in32.8% of patients. Duodenal stomach reflux was diagnosed in 44.2% of patients. Hyperplasia changes of mucus of esophagus and stomach polyp were found in two examined patients.

Conclusions. 1. There is affection of organs of digestive system in children with allergic diseases. They are: esophagus - 15% of cases. Affection of the stomach - 67% of cases; duodenum - 60% of cases and was more typical for combined allergic diseases, allergic rhinitis and bronchial asthma. 2. Destructive forms are presented by erosions and occurred in 23% of cases. 3. The worst allergic pathology for development of destructive and erythematic forms of affection of digestive system is bronchial asthma and its combinations. 4. There is lymphatic hyperplasia of different parts of digestive system mucosa and this occurred in 33% of cases. 5. Disorders of motility of digestive system, such as duodenal stomach reflux was found in 44.2% of patients.

Koval V.A., Loskutov O.V.

INCIDENT OF DISORDERS OF SULFUR AMINO ACID METABOLISM, HYPERHOMOCYSTEINEMIA, COBALAMIN DEFICIENCY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics 1 and neonatology
Supervisor: associate professor Omelchenko E. V.

Introduction. Clinical supervision of the child B. aged 11 months is presented. At the time of admission mother complained of dyspnoea, noisy, periodically grunting breathing, productive cough, increase of body temperature to 38.2 0 C, an adynamia, single vomiting. As for anamnesis, cephalhaematoma had been existed at neonatal period, a child has been holding the head since 4 months, has been sitting since 8 months. Episodes of swallowing disorders have been noticed since 5 months of life. A child has had acute virus respiratory infection twice and has had bronchitis 3 times. Child's phenotype features were hydrocephalus head shape, high forehead, flattened occiput, notches on left ear, cutis

marmorata, foot isodactylism. While hospitalization an acetone smell from a mouth attracted attention. During Percussion of the thorax a drum-like sound was indicated. During auscultation harsh respiration, dry rales, small bubbling rales ware indicated. In the neurologic status lack of productive contact with people around, poor emotionality, noisy "groaning" breath, muscular dystonia of hypertensive type, the extensor hypertonia, tube feeding was indicated. In dynamics the increase in the sizes of a liver to 7 cm lower than edge of a costal arch, augmenting of neurologic symptoms such as myoclonic convulsion of face, the trembling hyperkinesis, klonus of feet, a large-swinging tremor of the upper and lower extremities, small-swinging tremor of hands, concomitant strabismus, a inconstant anisocoria was noted. Additional methods of examination indicated anemia of the II degree, leukocytosis, neutrocytosis; hypoproteinemia, hypogammaglobulinemia; decompensated metabolic acidosis, hypokaliemia. EEG: gross violations of a pattern of EEG, signs of the expressed decrease in level of bioelectric activity in frontal and right temporal assignments. Brain NMR tomography: moderate diffusion thinning of a calloused body, hypotrophic changes of cortical parts of both gemisfer, most expressed in a zone of frontal and temporal lobes.

Results. Examination in the conditions of medicogenetic center was conducted. Increase of the lactate level to 2,44 mm mmol/l (N 0,56 – 1,67), homocysteine –more than 50,0 mmol/l (N 6,26 – 15,07) was indicated. The genotype is established: MTHFR 677 CT (heterozygote), MTRR 66 GG (pathological homozygote), MTR 2756 AG (heterozygote). The obtained results of an additional examination allowed to establish the final diagnosis: Hereditary metabolic disorders: disorders in metabolism of folate and methionine cycle, disorders of remethylation of homocysteine to methionine, deficiency of cobalamin (methylmalonic aciduria with homocystinuria). Neurodegenerative disease (leukodystrophy). Immunodeficiency on humoral type (deficiency of the subclasses Ig G). Deficiency anemia of the mixed genesis, moderate severity. A child received following treatment: feeding by «Humana HN mit MCT», intravenous drip-feed: L-lysine, "Bioven mono", intravenous: 5% vitamin B6, Cefepimum, Amikacinum, Fluconazolum, Vancomycinum, inside Ambroxolum, Linex, BioGaia, Agvantar, Kudesan, Stomach support, Carbamazepinum, Mydocalm, Levetiracetamum, folic acid, Ventolin.

Conclusion. On the background the therapy the child's condition has improved: the body temperature returned to normal, dyspnoea, noisy grunting breathing, reduced the size of the liver, hyperkinesis, tremor of limbs, klonus of feet, anisocoria, strabismus disappeared. Follow-up examination at the clinic is recommended in 1 month.

Kravtsova G.D., Ovcharenko S.S., Koval A.V.

FORMATION OF THE SYSTEMIC INFLAMMATION RESPONSE OF NEWBORNS, SUFFERED FROM HEAVY ASPHYXIA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatric surgery and pediatric anesthesiology

Introduction. Most research of the problem of systemic inflammation response is devoted to inflammatory diseases. The study of the pathogenesis of systemic inflammation response allowed to suspect its presence at neonates undergoing heavy asphyxia at birth.

Aim. To determine the possibility of development of the systemic inflammation response of newborns, suffered from heavy asphyxia at birth.

Materials and methods. 26 newborns infants undergoing severe birth asphyxia were examined, 8 of them died. The control group consisted of 17 healthy newborns. All patients

were initially in critical condition due to acute respiratory and cerebral insufficiency without areas of inflammation. Maintenance of external respiration function by means of invasive artificial lung ventilation was performed with modern respirators from the first minutes of life. As inflammation markers there were studied the levels of proinflammatory cytokines (interleukin-1, tumor necrosis factor, interleukin-6), a proinflammatory cytokine interleukin-4. To evaluate the functional status of endothelium the nitrites were explored. All studies were conducted at 3rd and 7th days of life of the newborns. The results were processed using the software package Statistic Windows version 6.0 and methods of nonparametric statistics.

Results. The results of biochemical studies showed that on the third day of life the differences appeared between the indices of healthy and sick children, that is: the levels of interleukin-6 and interleukin-4 of newborns, suffered from heavy birth asphyxia, were significantly higher, and the level of nitrites was lower ($p < 0.05$). To evaluate the course of systemic inflammatory response the same parameters were studied in the groups of dead and survived newborns on the 3rd and 7th days, revealing that in the group of dead children the level of interleukin-4 was significantly higher, and nitrite level was lower. The results of study on the 7th day of life showed the inclusion of interleukin-1 and tumor necrosis factor into the biochemical picture.

Conclusion. The systemic inflammation response is developed on the 3rd day of life of the newborns undergoing heavy birth asphyxia and progresses to the 7th day.

Markevych M.A., Kalyuzhka V.Yu.

UNPRODUCTIVE COPING-STYLES AS A FACTOR IN THE DEVELOPMENT OF DISEASES IN SCHOOLCHILDREN

Kharkiv National Medical University, Kharkiv, Ukraine
Department of propedeutic pediatrics 1

Introduction. All people are constantly exposed to stress factors. Chronic stress is often becomes the cause of serious diseases. therefore early diagnosis of various disease entities is very important. It is known that the nervous system plays a key role in the formation of pathologies. Neuro-humoral regulation of the body is underdeveloped in childhood. This leads to poor adaptation to various stress factors. Therefore, the study of children's reactions to stress is the most interesting and priority.

The aim of our work was to study the dependence of the stress level and manifestations of the early signs of disease of school age children.

Material and methods. For this purpose was developed a special questionnaire on the basis of the inquirer (Lazarus, Folkman). Survey was carried out among 158 students in grades 7-9 schools in the city of Kharkiv. Survey results were processed with the statistical t-test. The significance level was 95%.

Results. According to the results of questioning all the students were divided into three groups: low, sufficient and elevated physical activity. Studies have revealed the following patterns. Most complaints were expressed by honors pupils and pupils who are studying at "satisfactory". In addition, it was found that students who belong to the group with low physical activity were presented the greatest number of complaints compared to other groups of students. Pupils with sufficient physical activity were almost without complaints. A group of students with increased physical activity were presented mainly specific complaints directly related to one or another sport.

The results can be to try to explain on the basis of the doctrine about coping systems. In the behavior of students who was submitted the highest number of complaints dominate directed to appeal to others coping style. In the behavior of students who are almost without complaints, there was dominated a productive coping style. Also, there have been cases of non-productive coping style in the behavior of pupils. Separately, it is necessary to select a group of students with increased physical activity. Despite the fact that they presented quite a large number complaints, in their behavior was dominated productive coping style. Such complaints can be explained by enhanced athletic exercises.

Conclusion. According to the study were given assessment to lifestyle of pupils and tips that can increase stress resistance

Mustafa M. Alhaad

INFANT MORTALITY IN THREE DIFFERENT SOCIETIES

Kharkiv National Medical University, Kharkiv, Ukraine

Introduction: The first year of life is the most dangerous period of childhood and globally 40% of under-five deaths occur in the neonatal period. Infant mortality and the rate of under-five mortality is a closely monitored indicator of health and development. Infant mortality can be divided into neonatal mortality, deaths up to 28 days after live births, and post-neonatal mortality, deaths from 29 days but under one year. International comparisons of infant mortality, including neonatal mortality, are difficult and subject to caveats.

Aim: To assess infant mortality and its causes and conduct United Kingdom, Ukraine and Kenya Comparison.

Material and methods: Despite steady mortality declines, in 2013 in the UK over 3,000 babies died before their first birthday Infant mortality rates for England and Wales and for the UK as a whole has been declining steadily for many years, with occasional exceptions. Of all deaths in childhood in the UK (ages 0–14), 73% occur within the first year of life, 50% within the first month and 38% within the first week. Low birth weight, preterm birth, and neonatal and infant mortality are associated, so it is not surprising that the UK has higher rates of all these measures than the Nordic countries, but lower than many other European countries.

Results. The burden of mortality in children in poor countries is extraordinary. In Kenya alone Over 7 million children under-5 years of age dies each year mainly from preventable and treatable conditions. Pneumonia, diarrhoea and malaria remain the leading cause of child mortality, and under nutrition contribute to more than 1/3 of all deaths. Kenya is not on track to meet MDG 4 to reduce the under-5 mortality by two thirds between 1990 and 2015. Nearly 35% of under-5 deaths occurred during the neonatal period; 1/3 of all neonatal deaths are due to severe infections, followed by birth asphyxia, preterm births and congenital anomalies. Two-thirds of under-5 deaths are post-neonatal and leading causes of these deaths are pneumonia and diarrhea. According to UNO data, in 2012 Ukraine was one of the countries with the extremely high infant mortality. This value was 2 times higher than the average over Europe. Premature infant's problem is very acute for Ukraine. Thousands premature babies approximately are born in Ukraine annually – and only 50% of them survive. The leading causes of infant death under 1 year of age were: certain conditions arising in the perinatal period; congenital malformations, deformations and chromosomal abnormalities (congenital abnormalities); external death causes; some infectious and parasitic diseases; diseases of the nervous system; diseases of blood circulatory system;

diseases of the respiratory system. There remains a significant part of infants whose death cause has not been determined by medical personnel – 4, 3%.

Conclusion: As in the resource rich world, the consequences of prematurity and low birth weight are important causes of neonatal deaths, in resource limited countries but infections are also important. The causes, associations, and risk factors for infant mortality outlined highlight that social disadvantage are important, this and many other problems contributing to deaths in early life are amenable to interventions in practice and policy. The high risks related to underlying poverty are exacerbated by the lack of services.

Panko N.O., Abiodun M.A., Adegoke E.A.,

DIFFERENCES OF CYTOKINES RESPONSE BETWEEN JUVENILE IDIOPATHIC ARTHRITIS AND REACTIVE ARTHRITIS ON EARLY STAGE OF DISEASE DEVELOPMENT

V.N. Karazin National Medical University, Kharkiv, Ukraine
Department of Pediatrics

Introduction. Though the symptoms of juvenile idiopathic arthritis (JIA) and reactive arthritis (ReA) are seems similar during the early stages of diseases development. Reactive arthritis is an infectious disease. A healthy but genetically predisposed individual develops it after a suitable triggering infection. JIA on the other hand is the most common chronic rheumatologic disease in children and the etiology is uknown. Most authors believe that important role in the pathogenesis of JIA pertain to genetically determined imbalance of cellular immunity and cytokines.

The aim of our research is to deepen knowledge about differences in IL1β, IL6 and TNF-α in patients with JIA and ReA during early stage of disease development.

Materias and methods. The study involved 78 children within 2-18 years with arthritis, who were hospitalized in the clinic of SE 'Institute for children and adolescents health care of NAMS Ukraine' and 34 healthy children for control group. The main group consisted of 32 persons with JIA, the comparison group had 46 patients with ReA. For the diagnosis we are guided by the international classification of Diseases X, ILAR classification criteria of JIA. Interleukins content (IL1β, IL6, TNF-α) was studied by ELISA. For the statistic processing of the material Stagraphics 3.0, parametric and non-parametric criteria were used.

Results. Detailed analysis had enabled us to diagnose polyarticular lesions more frequency (62,50 %, $p < 0,001$) in children with JIA, oligoarticular – in children wirh ReA (82,61 %, $p < 0,001$). Girls predominated in both groups. As regards patients age it was more common within 2 to 10 among children with JIA (84,38 %, $p < 0,001$) and 11 to 14 – among persons with ReA (23,91 %, $p < 0,001$), 15-18 years old patients were present equally in both groups. Increased level of IL1β was found rarely if ever in patients of both groups. Level of TNF-α was increased in 29,63 % of persons with JIA and 15,38 % - with ReA. Increased IL6 level most frequently in children with JIA (57,69 %, $p < 0,05$) is become apparent. Among patients with ReA increased level IL6 was indicated the most often in persons with polyarthritis (83,33 %, $p < 0,001$). The changes of mean levels of IL1β and TNF-α were not different for patients of all studied forms comparative with control group. The mean IL6 level in patient with JIA was higher than with ReA patients ((36,78 ± 29,14) pg/ml and (7,19 ± 5,05) pg/ml, $p < 0,05$) and control group ($p < 0,05$). It

should be added that the mean IL6 level in patients with polyarticular JIA and ReA was higher in comparison with oligoarticular JIA and ReA ($p < 0,05$).

Conclusion. From the results, it can be deducted that among patients with JIA and ReA changes of cytokines levels had similar character. JIA had a significant increase of IL6 compared to ReA. Increased IL6 level depended on form of arthritis. The highest mean IL6 level was found in patients with polyarticular JIA and ReA.

Plyekhova O.A, KalyuzhkaV.Yu.

REPRODUCTIVE HEALTH OF MODERN GIRLS: PROBLEMS AND PROSPECTS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of propedeutic pediatrics 1
Scientific supervisor - Assoc . prof. Atamanova O.V.

Introduction: During puberty young girl wants to look especially graceful and beautiful. Often in this case they are employing different measures that lead to significant weight loss.

Aim: 1) to find the dependence of the menstrual cycle, its characteristics and frequency of meals in female adolescents; 2) to find differences between nutrition and menstruation for girls who live in the city (Kharkiv, gymnasium No. 23) and countryside (village Pavlivka); 3) to determine the effect of diet on the development of the reproductive function of women; 4) to determine the causes of a delay or absence of the menstrual cycle.

Material and methods: During the work, a questionnaire was developed on the basis of nutrition, physical development, physiological characteristics and lifestyle of teenagers. The study involved students of 8, 9, 10 and 11 forms. The examined people were aged from 13 to 17 years. 126 questionnaires were processed. The observation, comparison, experiment, survey, survey methods, theoretical analysis, literature study.

Results: Analysis of the survey showed that the majority of menarche in most girls (87 %) began at the age of 13 years, and before 15 years 97 % of women had menstruations. The duration of menarche ranged from 2 to 7 days, but often it could last for 2 weeks or more (13.2 % in girls). In addition, it was found that the first three years after the onset of menstruation cycles lasted longer than 28-35 days, but with age they became shorter and more regular. Analysis of medical and social factors for teenage girls showed that their menstrual cycle disorders were caused by underweight, obesity, stress factors, malnutrition. The value of obesity in countryside schools is by 38 % more than in the city due to nutrition of girls and their lifestyle. 22 % of girls from Kharkiv go in for sports, 15 % sometimes attend sports groups and gyms. In countryside this figure does not reach 10 %. It is noteworthy that more than 50 % of urban girls feel constant stress and are often in the state of depression, in the countryside this figure is less than 30 %. Despite these results, the levels of oligo- and dysmenorrhea are almost identical. This can be explained by the fact that the cycle disorders are caused by malnutrition as well as irregular diet and stress.

Conclusions: More than 70 % of girls reveal regular delays of menstrual cycle and its painfulness, chiefly as result of malnutrition and constant stress. Hence girls at an early age have to revise their lifestyle, be more attentive to their health and reproductive system in particular, because the main role of women on earth is to give birth to healthy offsprings.

Podgalaya E.V.

CLINICAL «MASKS» OF CYSTIC FIBROSIS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics 1 and neonatology

Introduction. Cystic fibrosis (CF) is the most common hereditary disease with autosomal recessive type of inheritance and universal exocrinopathy. The main manifestations of CF include: chronic respiratory obstruction; digestive disorders with deficiency of exocrine function of pancreas; increased level of electrolytes in sweat fluid.

The frequency of CF is 1: 2500-1: 3000 among white race and is 1: 2300 among newborns in Ukraine. The average life expectancy of patients Ukrainian half compared with the corresponding rate in the developed countries. Until the present objective difficulties of early diagnosis of diseases still exist and they are associated with genetic heterogeneity of the main defect in the CFTR gene (regulator protein cystic fibrosis transmembrane conductance), with the prevalence of most low frequency mutations, finding them mainly in compound states. Genetic polymorphism of the disease, along with the influence of modifier genes, environmental factors, such as medications, pollutants, smoking, etc., causes marked phenotypic variety of CF from subclinical to severe.

Materials and methods. The child Yuri Z., who was born in 1997 have been under the supervision. The typical feature of a child was preschool-age deficit of statural-weight value. Since adolescence weakness, underweight when a saved appetite, frequent acute respiratory infections, tonsillitis, sinusitis, bronchitis took place. Due to treatment on an outpatient basis, radiographic images of the chest were rare. In 2011 and 2012 he suffered from pneumonia. In 2014 he entered the Regional Children's Hospital towards the District Military Commissariat for deciding on the suitability for military service. After a detailed examination cystic fibrosis, mixed form, severe degree was diagnosed.

Results. To verify the diagnosis, clinical analysis of blood, urine, sputum, coprogram, biochemical blood tests, chest X-ray, sweat test (pilocarpic test), genetics consultation have been held. In the clinical analysis of blood was mild anemia, leukocytosis with a shift to the left; Urinalysis in the normal range; koprogramma- moderate amount of undigested fat, trypsin stool is normal. Clinical analysis of sputum: character-purulent, yellow, leykotcytes- 25 in the field of view at the expense of neutrophils. In the biochemical analysis of blood: decreased level of serum iron, calcium, cholesterol, urea, increased levels of uric acid, total protein and amylase; glucose, triglycerides, AST, ALT, bilirubin, creatinine, alkaline phosphatase, creatine phosphokinase, LDH, albumin in the normal range. Ultrasound examination of the abdominal cavity: echo signs on a background of diffuse hepatomegaly change and the depletion of vascular pattern, echo signs of diffuse changes in the pancreatic parenchyma with transverse striations in the tail. With twice the holding sweat test results- obtained 145.5 and 131.4 mmol/l of sweat. X-ray of the chest determined decrease in the transparency of both lung fields of low intensity on the background of widespread pulmonary fibrosis. Genetic research determined variant of mutation del F508 / unknow.

Conclusion. Thus, the clinical "masks" of cystic fibrosis in this patient, which increased the time interval between the manifestation of the disease and diagnosis were: physical and sexual retardation, long low-intensity sinusitis, asthenic syndrome, frequent acute respiratory infections, bronchitis, later - repeated pneumonia.

Potikhenska K.

THE FEATURES OF ANEMIAS IN CHILDREN

Kharkiv National Medical University, Kharkiv, Ukraine
Department of Pediatrics №2
Scientific supervisor: Ass. professor Piddubna I.N.

Introduction. The problem of anaemias remains actual both for highly developed and for developing countries. From data of WHO anemias in children are most widespread in the world, affecting up to the 60% of children population. But in a number of situations diagnosis of anaemia is symptomatic, masking the main disease.

The aim of our work was tracing of transformation of initial diagnosis of anaemia in children to its final variant.

Material and methods: 5 case history abstracts of children with diagnosis of different severity degrees anemia at admittance to the hospital are presented.

Results: thorough history taking, extensive clinical-laboratory and instrumental examination as well as carrying out differential diagnosis allowed determining the true inwardness of the disease.

Conclusions: carrying out the differential diagnosis is a complex intellectual process simplification of which leads to diagnostic mistakes. Therapy of the disease and its outcomes depend a lot upon knowledge, experience – and not least – upon attentiveness of a doctor.

Pugacheva E.

DIFFERENTIAL DIAGNOSIS OF REACTIVE ARTHRITIS AT CHILDREN

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics 1 and neonatology

Introduction. Articular syndrome is one of the most common pathological conditions occurring both within the group of rheumatic diseases, as well as outside it. Reactive arthritis (ReA) is an important medical and social problem due to the high prevalence and the largest (53,7%) proportion in the structure of joints' pathology in children. Traditionally, radiography of joints is used as a visualization method. However this method couldn't assess the severity of inflammatory changes. In the initial stages of chronic inflammatory joints' diseases radiological signs are absent or minimal. Method that expands the diagnostic capabilities of assess joints' changes in children is ultrasonography. Misdiagnosis or absence of treatment associated with invalidization and reduced quality of life. Because timely verification of joints' pathology could improve outcomes, it is important to identify and evaluate informative methods to enhance early detection.

The aim of the investigation was to improve differential diagnosis between reactive arthritis and juvenile arthritis (JRA).

Material and methods. 25 children aged 2 to 16 years with joint syndrome were examined by complex clinical-laboratory investigation. In addition, the examination has included ultrasonography of joints. The criteria for exclusion from the study: psoriatic arthritis, lupus erythematosis and juvenile spondyloarthritis.

Results. Among 25 examined children with articular syndrome 17 (68%) were female, 8 (32%) - male. Patients have been devided into 2 groups. I group consist of 12 patients with reactive arthritis, II group consist of 13 children with juvenile rheumatoid arthritis. Average age I group's patients is 11 years old, at II group - 7 years old. Girls prevailed at both groups. Fever was observed at 5 (41,7%±14,9) children of I group and at 9 (69,2±13,3%) patients of II group. Morning stiffness was present only at II group 12

examined (92,3±7,7%). Number of affected joints in children with reactive arthritis averaged 2, whereas in children with JRA – 5 joints. It is noteworthy, there was prevalent asymmetric involvement of the joints of the lower extremities at children with ReA, and symmetric affection of upper extremities' joints at II group. Onset of the disease was associated with a trigger in 7 (58,3±14,8%) cases at I group and in 11 (84,6±10,4%) cases in second. Complete blood count demonstrated increased erythrocyte sedimentation rate (ESR) in both groups. However, in the II group noted ESR level was higher – 29,8±13,2 mm/h. Average ESR level at I group was 19,1±11,8 mm/h. Furthermore, 10 (76,9±12,2%) patients of II group have had anemia. Increase of acute phase indicators, such as C-reactive protein, haptoglobin have been reported in both groups of patients.

Imaging methods were selected X-ray examination of joints, as well as the ultrasonography of joints. Radiological examination has found changes at 3 (25±13%) patients of I group. It showed a compaction of periarticular soft tissues. 3 (23,1±12,1%) patients with JRA have had narrowing of the joint spaces, 2 (15,4±10,4%) - osteoporosis and 4 (30,8±13,3%) - increase of periarticular soft tissues by X-ray. Ultrasonography has detected changes in joints in 100% of cases at both groups. There were synovitis, thickening of the synovial membrane, expansion of joint space, tendinitis at children with ReA. At the II group synovitis, proliferation and hypervascularization, expansion/narrowing of joint space of the synovial membrane, tendinitis, bursitis were detected by ultrasonography.

Conclusion. Thus, ultrasonography of joints is non-invasive, low cost, sensitive method that enables to identify changes in the joints at children with articular syndrome. This method can be used as one of the differential diagnostic methods of ReA and JRA at children.

Rybka O.

DIETARY PATTERN AND ANTHROPOMETRIC PARAMETERS OF OBESE ADOLESCENTS AND THEIR MOTHERS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics 1 and neonatology

Introduction. Childhood obesity is recognized as one of the most serious global problems in the health system for the 21st century. According to the official websites of the WHO, to be overweight from 20 to 40% of a children's world's population. In Ukraine, registered annually 18-20 thousand new cases of obesity in children and adolescents. Overweight is associated with the development of chronic cardiovascular problems in adults.

Aim: The identify the relationship between anthropometric parameters and dietary pattern of obese adolescents and their mothers.

Material and methods: It is examined the 20th adolescents aged from 10 to 17 y.o. We studied patients' history and dietary patterns by original questionary. All adolescents and their mothers was evaluated anthropometric parameters: body height, weight, body mass index, waist circumference, hip circumference, waist-to-hip ratio. To assess overweight or obesity body mass index (BMI) was calculated. BMI within 50-85 was estimated as normal, 85-97th percentile as overweight, and more than 97 as obesity.

Results: It was found that most of the families did not keep the healthy diet. Regular meals was (with a some regimen were present) in 60% of patients, while breakfast was present in 40% of patients, lunch at 58%, dinner and late dinner (after 21 hours) at 100%. About half of children and their families were prone to a lot of consume sweets and bakery

between main meals. 90% had the experience of visiting various fast-food establishments more than three times a week. 100% of the patients regularly consumed various sweet beverages. It is revealed that the parents supported this style diet. Dietary pattern of parents in relation to the main meals and snacks was to the style of children. When conducting interviews it was found that parents didn't have a clear idea about dietary healthy diet, and tend to exceed the portion of serving meals. Children regularly had a snacks while playing on the computer or watching TV. It was regularly accompanied by the late going to bed and difficult morning awakening. Mothers of examined children revealed abdominal obesity, combination obesity with hypertension it was also found the presence in 30% of them. Of type 1 and 2 diabetes in 25% of family members.

Conclusions: 1. Dietary patterns of obese adolescents and their mothers were similar without keeping principles of healthy diet. 2. Maternal obesity is present in majority of cases and was combined in 30% with hypertension. 3. It is necessary to conduct some trainings concerning diet healthy for families with an overweight as obese members.

Shkilniuk Maryna

IMPACT OF MOBILE COMMUNICATION ON SOCIAL AND MEDICAL ASPECTS OF PUPILS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of propedeutic pediatrics 1

Introduction. The threat excessive use of mobile communication (MC) in recent years gets great relevance. The visual surroundings of the modern student in recent years undergo significant changes due to the "information revolution" which is associated with high popularity of electronic entertainment. According to statistical data, MC is used by 80% of children aged 6-13 years. The deviant behavior of pupils under the influence of MC and the decrease of communicative skills, as well as the negative impact of MC in the development of creative abilities of pupils is a focal problem in our society.

Aim. Assess the impact of MC on the functional status of pupils and identify social and medical aspects of the topic.

Materials and methods. The study involved 59 pupils of Kharkiv Lyceum No.89 aged 9-12 years (35 girls and 25 boys). Medical cards of pupils were analyzed, and specially designed questionnaires were processed.

Results. According to the questionnaires, cell phones have 85% of children. On average, children commit 5 calls per day. In addition to calls, pupils send SMS messages (12%), use the Internet (55%), play games (88%), use the calculator (50%), use the recorder (5%), take a photo (80%), and listen to music (2%). There are some gender features in use the mobile phones: boys often play games, use the Internet and calculator. Girls are more likely to speak over the phone, send SMS messages, take a photo ($p < 0.001$). Analysis of the medical aspects of the use of MC showed, that 80% of children appear anxious, if there is no mobile phone near with them, 65% became irritable, if they interfere with play or send SMS message, 30% complained on frequent headaches and 22% - on sleep disorders. Dryness and itching eyes from frequent use of the MC noted 25% of pupils. Recurrent problems with memory have 60 % of children.

Conclusions. Modern pupils use mobile phones every day and it is a compulsory subject of a daily life. MC is one of the influential sources of aggression, violation of the functional state of a child and his individual peculiarities, which reduces the moral and

ethical level of the individual, leading to loss of mental balance. We believe that the modern teenager should monitor their health, rarely use a mobile phone, and improve their personal and intellectual level. The class teacher should convey information to parents regarding to use of MC by their children; tell them about the influence of mobile phones on children's health and jointly create the recommendations on the safe use of this type of communication. In addition, the teacher can discuss with the pupils the pros and cons of using MC, hold a conversation in order to form correct cultural behavior of phone owners in the modern community.

Shokry S., Chirochirwa L., Panko N.

CLINICAL AND LABORATORY FINDINGS IN PERSONS WITH OLIGOARTICULAR AND POLYARTICULAR FORMS OF JUVENILE IDIOPATHIC ARTHRITIS

V.N. Karazin National Medical University, Kharkiv, Ukraine

Introductin. Juvenile idiopathic arthritis (JIA) is a chronic and socially significant disease as it leads to quick disability in childhood. Due to non-specific clinical manifestation of the disease at early stage, it has similarities with other rheumatic diseases. Specific markers, such as rheumatoid factor (RF) and antibodies to cyclic citrullinated peptide (a-CCP), demonstrate a high sensitivity and specificity for diagnosis of rheumatoid arthritis in adult and correlate with the progression of the destructive changes in joints. RF has low sensitivity (8-9 %) in children. The role of a-CCP for diagnosis of JIA data is too inconsistent.

Aim. The researches goal was to ascertain the frequency of detection of a-CCP in patients that have oligoarticular and polyarticular forms of JIA and estimating features of clinical and laboratory parameters in positive for this marker patients.

Materials and methods. The study involved 76 patients with JIA within 2-18 years old and 34 healthy children for control group. A-CCP has been determined by the method of ECL. Interleukins content (IL1β, IL6, TNF-α) was studied by ELISA. For the statistic processing of the material Statgraphics 3.0, parametric and non-parametric criteria were used.

Results. A-CCP were positive in 15,79 % of patients, who are formed I group. Patients with JIA, who were negative for a-CCP, are formed group II (84,21 %). A-CCP positive persons had polyarticular lesions more frequency (91,67 %, $p < 0,001$) then a-CCP negative patients (54,69 %). Girls predominated in both groups. As regards patients age it was more common within 2 to 10 among children from II group (79,69 %, $p < 0,001$) and 15 to 18 – among a-CCP positive persons (58,33 %, $p < 0,001$). The most of a-CCP negative patients with oligoarticular JIA were male (51,72 %, $p < 0,01$), with poliarticular – female (74,29 %, $p < 0,01$). Positive RF is indicated more frequency in children from I group (25,00 %, $p < 0,05$), all of them had polyarticular lesions. Increased level of IL1β was found rarely if ever (3,70 %) only in patients from II group. Level of TNF-α was increased in 20,00 % of a-CCP positive persons and 11,32 % of a-CCP negative. Increased IL6 level more frequency in a-CCP positive children (75,00 %, $p < 0,01$) is become apparent. The mean level of IL1β and TNF-α were not difference for patients of all studied forms comparative with control group. The mean IL6 level in patient with JIA from both studying groups was higher than in the healthy children ($p < 0,05$). It should be added that the mean

IL6 level in patient with a-CCP negative polyarticular JIA was higher in comparison with oligoarticular ((37,38±27,94) pg/ml and (6,53±4,26) pg/ml, $p < 0,05$) and control group ((37,38±27,94) pg/ml and (2,37±0,69) pg/ml, $p < 0,01$).

Conclusions. A-CCP positive patients with JIA were older (15-18 years old) than the a-CCP negative, most of them had poliarticular lesions and positive RF is indicated more frequency in their group. A-CCP positive and a-CCP negative children had gender difference. Frequency of increased IL6 level was higher in a-CCP positive patients, but mean level of IL 6 was highest in a-CCP negative children with polyarticular lesions.

Strelkova M.I., Yermolayeva M.M., Kotelevs`ka V.I.

CLINICAL OBSERVATIONS OF AUTOIMMUNE POLYGLANDURAL SYNDROME OF THE I TYPE IN A 15-YEAR CHILD

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics 1 and neonatology
Scientific supervisor: PhD., Assoc. prof. Omelchenko E.V.

The purpose of research is to improve the diagnosis of autoimmune multiple endocrine disease of the I type.

Results. The autoimmune polyglandular syndrome of the I type(APS I) is characterized by multi-organ failure. The 15-year patient admitted to the hospital with complaints of tonic-clonic paroxysms in anamnesis; decreasing of sensitivity in the lower limbs, which becomes worse after physical exertion; dryness and flaking of the skin, brittle nails; recurrent conjunctivis; discoloration and separation of the nail plate from the nail bed;absence of menstruation; vomiting. The clinical laboratory and instrumental examination found: onychomycosis, hypoparathyroidism (convulsions, low levels of parathyroid hormone and serum ionized calcium), diffuse goiter of the I degree, autoimmune hepatitis with moderate activity(increasing of transaminases activity, dysproteinemia, hypergammaglobulinemia, increasing of titers of the antinuclear antibodies), delaying of the rates of sexual development, reducing of ovaries and uterus sizes on ultrasound of the pelvic organs), primary amenorrhea, cider of elongated QT.

Conclusion. Syndrome (APS I) is rare for children, has a severe course, leads to disability. Early diagnosis of APS I requires a multidisciplinary approach and monitoring by the specialists all components of the pathological process.

Tikhonova O.O.

CAPILLAROTROPHIC VIOLATIONS AND THEIR CORRECTION IN PATIENTS WITH ACUTE LEUKEMIA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics №2

Introduction. Modern therapy of acute leukemias (AL) according to BFM protocols contributed to the achievement of remission in 80 - 90% of patients. The use of high-dose, multi-component, prolonged polychemotherapy (PCT) is accompanied by numerous complications that aggravate the prognosis of the disease.

The aim of this work is to determine the value of thrombocytopenia in the development of microvascular disorders and complications of PCT, and the role of replacement therapy with donor thrombocyte concentrate (TC) in the prevention and treatment of complications of chemotherapy in children with AL.

Results. In all patients under study was observed a decrease in the concentration of platelets in the blood. The level of platelets in patients with ALL (AL lymphoblastic) averaged 46 ± 17,7*10 9/l, in patients with AML (AL myeloid) averaged 55,3 ± 7,4*10 9/l. During prolonged severe thrombocytopenia the trophic of the capillaries disrupts , swelling and dysfunction of the endothelium occur. At this stage, the clinical manifestations are absent, but laboratory researches detect the increased capillary permeability for water. Then there is the syndrome of infiltration of capillaries, extravasation of fluid, electrolytes and protein into the interstitial space. In patients are registered positive water balance during infusion therapy performing , the relative oliguria, weight gain, puffiness of the tissues, violated capillary permeability to protein, progresseve hypoproteinemia. Reduction of blood volume, anemia worsen tissue perfusion and oxygen delivery, organ failure occur: swelling of the interstitium of tissues, internal organs, hypoxia, acidosis. Clinically this is clearly manifested in the formation of lung respiratory distress-syndrome and in the digestive tract - stomatogastric, edema, ischemia of the intestinal wall, activation of the intestinal microflora, diarrhea. Substitution therapy with donor thrombocyte concentrate (TC) demonstrates high efficacy in the treatment of complications of chemotherapy in patients with myelodepression, reduces the frequency and severity of symptoms.

Conclusion. To prevent the onset and severe complications in patients with critical level of platelets is shown to be a preventative to the development of bleeding and capillarotrophic violations the TC substitution therapy .

Tsymbal V.M.

NOVEL MARKERS OF DIABETIC NEPHROPATHY IN CHILDREN

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics №2

Introduction. Serum vitamin D (sVD) deficiency may contribute to the development and progression of diabetic nephropathy (DN). Research has shown urinary vitamin D binding protein (uVDBP) excretion is increased after renal injury, and is associated with tubulointerstitial damage. Animal studies suggested that sVD deficiency may be associated with urine loss due to kidney damage. The aim was to test associations of sVD with levels of uVDBP, urinary vitamin D (uVD).

Material and methods. 42 children aged 6-17 with type 1 diabetes were examined: 24 nornoalbuminuric patients (1st group) and 18 microalbuminuric (2nd group). 15 healthy children were included in controls. We measured serum and urine 25 (OH) D levels, uVDBP concentrations and tested their correlations. Serum 25 (OH) D levels were measured by 25(OH) vitamin D ELISA assay kit (Eagle Biosciences, Inc, catalog #VID31-K01, USA) according to the manufacturer's instructions. sVD levels were characterized as <20 ng/ml – VD deficiency, 20 to 29 ng/ml – VD insufficiency, and > or =30 ng/ml – normal VD. uVDBP was measured with a commercially available sandwich ELISA (Immundiagnostik, catalog # K2314, Bensheim, Germany), according to the manufacturer's instructions. Statistical analyses were performed with StatSoft STATISTICA Version 8 (Tulsa, OK). Non-parametric variables are given as median (interquartile range). Differences between groups were tested using Mann-Whitney test. Logistic regressions were performed to address the independent relationship between VD status and DN.

Results. sVD levels were decreased in the patients of the 1st and 2nd groups, compared with controls ((22.03 (17.23; 24.44) and 14.42 (12.02; 19.63), compared with 30.65 (28.45; 35.05) ng/ml, respectively) ($p<0.001$)). uVDBP levels were elevated in the patients of the 1st and 2nd groups, compared with controls ((179.5 (174.0; 189.0) and 219.0 (216.0; 222.0), compared with 125.0 (116.5;136.0) ng/mg, respectively) ($p<0.001$)). uVD levels were increased in the patients of the 1st and 2nd groups, compared with control ((3.2 (2.9; 3.3) and 3.9 (3.7; 4.1), compared with 2.2 (2.1;2.6) ng/mg, respectively) ($p<0.001$)). The correlations between the levels of sVD and uVD ($r=-0,74$, $p<0,01$), sVD and uVDBP (($r=-0,64$, $p<0,01$) were determined.

Conclusions. Using logistic regression modeling, the study demonstrates an association between VD deficiency and VD insufficiency with DN in children. Children with TD1 exhibit altered catabolism and concentrations of uVDBP. There is an important impact of their underlying disease. The level of uVDBP increased with increasing severity of renal damage. uVDBP excretion is increased early after renal injury, and is associated with tubulointerstitial damage. These data suggest that, theoretically, one of the causes of VD deficiency in patients with DN is a urine loss.

Tsyura O. N.

STRATIFICATION OF CARDIOVASCULAR RISK IN CHILDREN WITH BRONCHOPULMONARY PATHOLOGY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics 1 and neonatology

Introduction. Wherefore do you need stratification of cardiovascular risk? The same disease can have different courses depending on the individual child. According to a multicenter researches, the stratification of risk the development any pathological processes affect on the duration, estimate potential of held therapy and rational choice of medicines. That is helping us to do the treatment more personality and "treat not disease, but patient".

Aim. Aim is evaluation the risk development of cardiovascular disorders in children with respiratory diseases.

Material and methods. The 20 children from 3 - 17 years (boys - 52%; girls - 48%) who had bronchopulmonary pathology were observed. All children performed a survey with the aim of finding risk factors, pulmonological examination, and determination of cardiac activity (Rufue-test, electrocardiography and ultrasonography of heart).

Results. 30 % children of all examinated had bronchopulmonary pathology in the family anamnesis, 20 % children – had cardiovascular pathology in the family anamnesis. 65 % children had at least one family member who smoked. 35 % children in the anamnesis survey mentioned pain in the heart area or felt heart beating. Depending on the type of disease the examined were divided into two groups. The first group included 11 children with acute bronchopulmonary pathology, the second one – 9 children with chronic and recurrent diseases of the lung. According to Rufue-test 80 % of children from the first group had indexes which were evaluated as good and excellent, 20 % had satisfactorying indexes. 55 % of the children from the second group had unsutisfactorying and law indexes, the rest 45 % of the children from that group had Rufue-test satisfactorying indexes. At electrocardiography examination heart rate and rhythm of the heartbeat, T wave, segment ST were analyzed. 45 % of children had rhythm disorder found out. From these children 80 % had sinus bradycardia and 20 % had sinus tachycardia. One of the indexes oxygen

supplying of miocard and methabolism of the heart muscle is segment ST and T wave. 25 % of the children had changes of segment ST and T wave. Having done ultrosonography of heart, 45 % of the children had minor structure anomalies reveal. They didn't have violation of hemodynamic revealed.

Conclusions. Functional condition of the cardiovascular system depends on type and severety of bronchopulmonary pathology: having chronical and severe duration, children's tolerance to physical activities significantly decreases, and the risk of cardiovascular disorders development increases, that are necessary to be taken on account treating such children.

Tsyura O.N., Popova T.O., Kvasova P.A.

RUFFIER- TEST AS METHOD OF EVALUATION THE RISK OF CARDIOVASCULAR COMPLICATION IN CHILDREN WITH BRONCHOPULMONARY PATHOLOGY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatrics and neonatology

Introduction. In the structure of paediatric morbidity diseases of the respiratory system take one of the first places. Changes of the cardiovascular system under conditions of the bronchopulmonary pathology develop slowly and for a long time have an obliterated character. Quite admissible is that a moderate, but lingering hypercapnia and hypoxaemia induce also a myocardial hypoxia. Cardiovascular aberrations in BPP are potentially inversive in childhood what demands their early detection and elimination. The functional condition of cardiovascular system is possible to evaluate by making use of the functional tests. One of them is The Ruffier test, which in simple way and with sufficient rate of reliability sets the functional state of the cardiovascular system and readiness of organism for load.

Aim. Study of the condition of cardiovascular system in children with respiratory system diseases.

Material and methods. We examined 17 children that were treated in the pulmonary department of Kharkov Regional Children Clinical Hospital, in the age of 5 to 17 years. The examination involved questionnaire survey, assessment of the objective status with carrying out of Ruffier- test, electrocardiography (ECG) and heart ultrasonography.

Results. Out of the examined in 58 % of children we fixed an acute disease, in 42 % – a chronic pathology. The anamnesis on the bronchopulmonary pathology was burdened in 30 % children, in 17.8 % – on the cardiovascular system. The Ruffier test indices in the investigated are: good and excellent – in 40 %, satisfactory – in 33.4 %, weak and unsatisfactory – in 26.6 %; herewith, they are significantly worse in children with a chronic the bronchopulmonary pathology. On ECG in 45.5 % of children we detected aberrations of the rhythm, out of them in 80 % there was sinoatrial brachycardia, in 20 % – tachycardia which could arise in consequence of a long-term hypoxia. At heart USI small structural anomalies were detected in 45.5 % of children.

Conclusions. Ruffier- test is indicative for the assessment of the functional condition of cardiovascular system and must be used for all pupils to control the degree of physical activity in schools. But if children have acute or chronic pulmonary disease, results can be considerably worsen, that necessary bear in mind.

Zimnytska T.V., Rabin Basnet

ASSESSMENT OF COLON ELECTRIC ACTIVITY IN CHILDREN WITH DOLICHOSYGMA

V.N. Karazin National Medical University, Kharkiv, Ukraine
Department of pediatrics

Introduction: Dolichosygma is the most common defect (40-50%) among congenital anomaly of large intestine in children. The formation of 2 or 3 additional curves of sigmoid colon usually found in x-ray (irrigography). This anomaly accompanied with delay of stool, abdominal pain, intoxication, inflammatory colon mucus membrane (found in endoscopy). Morphological changes: edema of connective tissue of colon, lymphocytic infiltration, mucus epithelium dystrophy, myofibrosis leads to decrease of muscular layer, disorders of electrophysiologic process in colon wall and decrease colon contractility property.

Aim: Studying of colon electrical activity in children with dolichosygma.

Material and methods: 154 children with dolichosygma age 6-14 years (basic group) was investigated. Relative healthy 30 children included in control group. The diagnosis of dolichosygma in children was confirmed by irrigography. Investigation of colon electric activity was carried out by electroenterocolography. The degree of gastrocolitic reflex which shows general colon motility activity was studied. The summary colon electric activity was measured before (basal) and after (postprandial) meals. The colon motility function was determined by ratio of basal and postprandial summary colon electric activity.

Results: The most of children (115;74%) has lower colon motility activity. Among them 77 children (67%) had less basal summary colon electric activity (0,020±0,002; $p<0,001$) in compared to control group (0,045±0,004) and less colon motility function (1,10±0,01;$p<0,001$) in compared to control group (1,60±0,02). This type of colon electric activity was found in children with subcompensated and decompensate form of diseases. 38 children (33%) had basal summary colon electric activity (0,090±0,004; $p<0,001$) higher to compared control group and colon motility function (0,70±0,01;$p<0,001$) less to compared control group. This electric status of colon can explain by individual features of enteric nervous system and neurohormonal regulation.

Conclusions: 1)The most of children with dolichosygma had lower colon motility function; 2) Different values of basal summary colon electric activity needs different treatments of motility disorders. 3) Children with higher basal colon summary electric activity is not recommended to use of electrostimulatory procedure.

Zolotaryova T. U., Kovalchuk E. A., Malko T. G., Serebryakova N. Y.

RESEARCH OF THE EFFECTIVENESS SPECIALIZED NUTRITION FOR CHILDREN WITH METABOLIC DISEASE – LEUCINOSIS

Kharkiv National Medical University, Kharkiv, Ukraine
Kharkiv Specialized medical-genetics center, Kharkiv, Ukraine

Introduction: In our time there are many hereditary metabolic disorders in which the main treatment is diet. Diet based on the principle of exception from a ration of the food factor, which can't normally assimilate in the organism, due to genetics defect of ferments' systems. Timely correction of nutrition reduces the symptoms of the disease and reduces the risk of serious complications. During the diet quality of the pations life significantly improved and they can once again live a full life, also possible to achieve long-term remission.

Aim: Explore the clinical manifestations of inherited disorders of amino acid metabolism of branched-chain and assess the impact of pathogenetic treatment of specialized diets.

Material and methods: Research performed in HSMGTS, which annually surveyed from 6 to 11 thousand patients with surmise hereditary metabolic disorders, including in 2014 were able to identify two cases of leucinosis disease.

Results: We have studied two case histories of children with inherited metabolic disorders of leucine, isoleucine and valine – leucinosis.Diagnose in both childrene qually, but the difference was identified clinical manifestations. In the 1st pation - in hibition of sucking and swallowing reflexes , and lack of response to pain, visual, auditory irritants. And 2nd - Cramps in the form of stretching the lower limbs, malnutrition. This difference is explained by clinical polymorphism, which occurs in a variety of disorders including hereditary. Both children have found high levels of leucine, confirming the diagnosis, but the second child has additional features as traces of glucose and lactose in the urine. Diagnostically effective research is not only tandem mass spectrometry, but also basic research, including HPLC.MRI of the brain at the 1st child was revealed degeneration of the white matter of both hemispheres, at 2nd child neurosonography showed pronounced swelling of the brain, CT of the brain - subtotal leukomalacia. Besides specialized nutrition, 2nd patient were further assigned vitamin B1 betargin, L-carnitine.Analysis of these research shows the individuality of the disease, but the prescribed treatment gave both children a positive effect.

Conclusion: Many hereditary metabolic diseases currently treated with diet therapy. Nutrition can be a regulator of metabolism in the organism, and individual products input(or excluded) in the daily diet can cause a stable remission. As show our research there is the effectiveness of specialized nutrition for children with metabolic diseases, namely leucinosis. Following the appointment of diet condition of children has stabilized and noted positive changes. Timely diagnosis and appointment of special nutrition through which were excluded provoking products from the nutrition, prevent the development of severe mental retardation and death. Properly organized nutritional therapy promotes the adaptation of the child with inherited metabolic disorders to normal life and improves quality of life.

NEUROSCIENCES

Adeyemi A. A. [1], Novohatskii M. S. [1], Salum I. S. [1], Shevchenko I. G. [2]

AMYOTROPHIC LATERAL SCLEROSIS: A CASE STUDY

Kharkiv National Medical University, Kharkiv, Ukraine [1]
Volgograd State Medical University, Volgograd, Russia [2]

Introduction: Amyotrophic lateral sclerosis (ALS), often referred to as "Lou Gehrig's Disease," is a rare progressive neurodegenerative disease that affects nerve cells in the brain and the spinal cord. Motor neurons reach from the brain to the spinal cord and from the spinal cord to the muscles throughout the body. The progressive degeneration of the motor neurons in ALS eventually leads to their death. When the motor neurons die, the ability of the brain to initiate and control muscle movement is lost. With voluntary muscle action progressively affected, patients in the later stages of the disease may become totally paralyzed.

Results: Patient C, Male, 56 years old presented to the neurological department of Kharkiv state regional hospital with complaints about marked weakness in the lower limbs, difficulty in walking (moves with a cane and the help of others), muscle twitching, recurrent headaches. From his anamnesis morbi, he started feeling sick 5 months prior to his admission date, when after exercise there was a slight pain in the spine. He obtained treatment in a community hospital. Two months after the onset, the condition was aggravated: weakened lower limbs, muscle twitching appeared. He was again treated in community hospital, and referred to our neurological department and scheduled for examination and treatment. Several expert neurologists examined the patient and proposed a preliminary diagnosis of ALS. His somatic status exam revealed that his overall condition is relatively satisfactory, correct posture. Skin was flesh-colored, clean. Pulse 72 beats / min. Blood pressure of 120/80 mm Hg Cardiac sounds sonorous, rhythmic. Light vesicular breathing. Abdominal palpation soft, painless. The liver is not increased. No peripheral edema. Stool and urine normal.

Neurological status. Consciousness is clear. Eye slits D=S. Pupils D=S. The reaction of pupils to light was normal. Corneal reflexes saved. Movement of the eyeballs in full. Sensitivity on the face is preserved. Trigeminal point painless. Symmetrical face. Tongue position was midline. Fibrillation of the muscles of the tongue. Tendon reflexes of the upper extremities D=S, normal; with lower limb D=S, animated, Achilles - low; abdominal reflexes D=S, normal. Pathological reflexes are absent. Several reduced muscle tone in the lower extremities. Wasting of the feet muscles. Muscle strength in the lower extremities 2 points, in the feet extensors 0 points. Coordination tests (finger-nose test, knee-heel test) were performed confidently. Romberg test was negative. No sensory disturbances. Generalized muscle fasciculation’s. Other instrumental investigations were performed, and the final diagnosis of ALS was confirmed. The patient was started on symptomatic therapy drugs Neostigmine, vitakson, dialipon turbo and the following recommendations were given: Clinical supervision by a neurologist at the place of residence; Consultation with a neurologist in the "Institute of Neurology, Psychiatry and Addiction" Ukraine; Borizol 50 mg 2 times daily - Long-term.

Conclusion: We hope that the published data on ALS and data from our own practice will be interesting and useful to students and teachers of medical schools and doctors of various fields for early diagnosis and therapy.

Anoop Vasu, Kufterina N.S.

MITOCHONDRIAL ENCEPHALOMYOPATHY LACTIC ACIDOSIS AND STROKE-LIKE EPISODES

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1

Introduction: Mitochondrial myopathy, encephalopathy, lactic acidosis, and stroke (MELAS) syndrome is a progressive neurodegenerative disorder. A feature of these diseases is that they are caused by defects in the mitochondrial genome which is inherited purely from the female parent. The typical presentation of patients with MELAS syndrome includes mitochondrial encephalomyopathy, lactic acidosis, and stroke like episodes.

Aim: To study the epidemiological, clinical characteristics and treatment of MELAS syndrome

Materials and methods: 5 patients with diagnosis of MELAS syndrome was studied and examined to study the characteristics of disease. On examination were used clinic-neurological, instrumental and statistical methods of investigations

Results: On account of my studies, around 40% of MELAS syndrome's signs and symptoms appear in childhood following a period of normal development. Early symptoms may include muscle weakness and pain, recurrent headaches, loss of appetite, vomiting, and seizures. Most affected individuals experience stroke-like episodes beginning before age 40. These episodes often involve temporary muscle weakness on one side of the body (hemiparesis), altered consciousness, vision abnormalities, seizures, and severe headaches resembling migraines. There is no known treatment for the underlying disease, which is progressive and fatal. Patients are managed according to what areas of the body are affected at a particular time. Enzymes, amino acids, antioxidants and vitamins have been used

Conclusion: Most of the affected families are from Northern Europe, Finland. MELAS in most cases is characterized by muscle weakness and pain, recurrent headaches, loss of appetite, vomiting, and seizures. As there is no specific treatment, it is necessary to find a specific treatment for MELAS syndrome.

Anto Darrel, Kufterina N.S.

CLINICAL-DIAGNOSTICAL FEATURES OF VERTEBRAL AND MUSCULAR TONIC SYNDROME

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1

Introduction. Vertebral and muscular tonic disorders arising from disorders in cerebral neurons due to degenerative diseases of spine is one of the leading cause of neurological dis-adaptation in patients.

Aim: of the research was to investigate the early clinical-diagnostical features of patients with muscular and vertebral tonic syndrome

Material and methods. A group of 30 patients with complains of nagging pain that spread to large areas of the patient's body, with difficulty in sleeping were admitted to neurological department. For all patients was provided clinical, neurological, neuropsycological and instrumental examination involving

MRI, computer topography, x-ray examination. Methods of treatment is based after correct diagnosis of patient which involves muscle relaxants and non-steroidal anti-inflammatory drugs to relieve pain and any inflamations.

Results. According to clinical-neurological examination of patients were founded spasmic pains and depressive symptoms . With instrumental examination of spine with x-ray showed degenerative disease of bones with displacement of vertebrae. By neuropsychological investigation was established the disorders of attention. Predominant reason for attention reducing was pain at the neck region. After the treatment muscle relaxants was decreased the contractile force of muscles. After using the non-steroidal anti-inflammatory drugs pain relieved.

Conclusion. Thus the findings shows us that pain syndromes are intergral part in clinical picture of patients with muscle and vertebral spasm syndrome and thus the diagnostics and therapeutics tactics are relevant for early diagnosis and prevention of severe neurological dis-adaptation in patients

Chernyak A.V., Kokhan O.M., Riznychenko O.K.

THE EFFICACY OF THE SELECTIVE SEROTONIN REUPTAKE INHIBITORS AND THE NOREPINEPHRINE IN THE TREATMENT OF THE NEUROPATHIC PAIN

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1

Introduction: The exact pathogenesis mechanisms of the persistent pain conditions are not fully known, but there is an increased awareness that braking and imbalance of serotonin and norepinephrine in the relevant pain inhibitory pathways could contribute to persistent pain. A large amount of studies confirmed the role of monoamine neurotransmitters, serotonin and norepinephrine in the pain modulation. Serotonin and noradrenaline selective reuptake inhibitors (SNRIs) showed themselves as a useful tool in the arsenal of the clinician (mostly because opioids, non-specific anti-inflammatory, anti-seizure drugs are limited in use due to side effects, intolerance, and addiction). The drugs from the serotonin reuptake inhibitors group are used to treat the patients with neuropathic pain, which have, in addition, the ability to inhibit the reuptake of norepinephrine (venlafaxine). Venlafaxine has its own analgesic activity that is not related to its antidepressant properties. Furthermore, there is analgesic effect at lower doses of the drug than those that could cause the antidepressant effect. Venlafaxine selectively blocks the reuptake of serotonin and norepinephrine with no action on other receptors. The use of SNRI leads to a more rapid adaptation of receptors, therefore the clinical effect is faster than the TCAs and SSRIs. Venlafaxine exceed their effectiveness on depressive and somatic symptoms. However, when applying there is a higher risk of high blood pressure.

Aim: The aim of our study was to evaluate the efficacy of selective serotonin reuptake inhibitors and norepinephrine in the treatment of neuropathic pain.

Materials and methods: We observed 23 patients aged from 32 to 76 years, including 14 women and 9 men, who were suffering from chronic neuropathic pain for 2 years or more. Among these, 9 complained about cervicocranialgia, 7 patients - about sciatica, 7- about mixed types of chronic neuropathic pain. Venlafaxine (Venlaksor) with initial daily dose of 75 mg, divided into 2 doses was assignet to all patients. In 15 cases to achieve a therapeutic effect, the dose was increased to 150 mg after 2 weeks and divided

into 2 doses. Patients aged from 56 to 72 were appointed with the drug at a dose of 37,5 mg 1 time per day after meals to prevent possible side effects.

Results: persistent pain decrease was reported by all patients after 1 month of the treatment. Sustained analgesic effect has been lasted for more than 3 months. Patients had felt better, cheered up, anxiety appearance reduced as well. No side effects were noted.

Conclusions: Despite the fact that by far the most extensive data on the use of antidepressants in patients with neuropathic pain gained when using tricyclic antidepressants, research results suggest sufficient efficiency and other drugs from the group of antidepressants, particularly in venlafaxine, but there is a need for further study of the feasibility of its application and development of the indications for use in this group of patients. The good tolerability of venlafaxine and low number of clinically significant side effects even when high doses are used are extremely important.

Clio Jis Francis, Nekrasova N.A.

VERTEBRAL ARTERY SYNDROME IN PATHOGENESIS OF TRANSIENT ISCHEMIC ATTACK

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №2

Introduction: Vertebro-basilar insufficiency is becoming one of the leading causes of transient ischemic attack (TIA). It is caused by occlusion or stenosis of the vertebral artery in associated with certain head movements and neck procedures. The compromised blood flow is usually conditional upon an isolated posterior circulation with a hypo plastic, stenosis, or occluded contralateral vertebral artery.

Aim: of the investigation is determine the association between head position and vertebral artery flow changes, which eventually decrease the circulation through vertebro-basilar artery and lead to TIA.

Material and methods: 20 patients were chosen as a control group who has a good health record over one year. Likewise, 50 patients were chosen with one year history of transient ischemic attack in vertebra-basilar system. X-ray, CT scan of cervical part of vertebral column, Functional Doppler test on vertebral arteries was done.

Results: The leading cause for vertebra-basilar TIA was instability of vertebra in the cervical region (C5-C6) amongst 58.4% of the patients and unconvertible osteoarthritis amongst 48.9%. Herniated disc also played a major role in causing TIA in 41.2% of the patients. On the base of analysis of the linear velocity of blood flow in the vertebral arteries, asymmetrical resonance (25-30%) in 83.3% patients was registered. Vasospasm, of one or both vertebral arteries, was noted in patients who performed continuous yoga (especially “sirsana” position or chiropractic procedures. The ratios between the vasospasm of arteries were 68.7% and 48.7% respectively. Hypo-perfusion of vertebral arteries was observed in 20.8% of the cases and spasm of the basilar artery in 52.3% of the patients.

Conclusion: Various head movements and neck procedures lead to the occlusion of vertebra- basilar arteries and eventually lead to TIA. Usage a functional Doppler tests is a way to model the failure of blood circulation in the vertebra-basilar basin.

Denisenko I.V., Zelentsova A.S.

PHARMACOLOGICAL CHARACTERISTICS OF CITICOLINE AND IT'S ROLE IN THE TREATMENT OF ISCHEMIC STROKE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1

Introduction: Cerebral stroke is a serious disease that annually affects about 100 – 120.000 citizens of Ukraine, and about 80 – 100.00 this pathology has ischemic genesis. Prognosis in patients with cerebral stroke is extremely unfavorable and forcing the search for new treatments based on theneuroprotection and neuroreplete– processes , that are key to a full recovery such patients; underlying functional recovery of patients.

Aim: Determine the efficacy of citicoline in the treatment of ischemic stroke based on its pharmacological properties.

Materials and methods. Processing, analysis of clinical and experimental research publications.

Results. Citicolinenootropic agent, being the precursor of vitamin B group of choline, which is formed from phospholipids (the main structural component of cell membranes) and neurotransmitter acetylcholine has a number of pharmacological effects: prevents apoptosis during ischemia, the cell membrane restores, enhances the synthesis of RNA in cell damage, stimulates cholinergic neurotransmission.

Conclusions. Use of drugs citicoline reduces the degree of disability - the most important indicator ofthe effectiveness of thearapyfor stroke.

Don Philip, Kufterina N.S.

CURRENT ASPECTS OF TREATMENT OF EPILEPSY

Kharkiv National Medical University, Kharkiv, Ukraine
India

Introduction. Epilepsy which is defined by the recurrence of spontaneous seizures constitutes a vast ensemble of diverse clinical situations which differ by age of onset, type of seizures, aetiological background, resulting handicap, prognosis and response to treatment. The mainstay treatment of epilepsy is anticonvulsant medications, possibly for the person's entire life. The choice of anticonvulsant is based on seizure type, epilepsy syndrome, other medications used, other health problems, and the person's age and lifestyle. Epilepsy surgery may be an option for people with partial seizures that remain a problem despite other treatments. These other treatments include at least a trial of two or three medications. Common procedures include cutting out the hippocampus via an anterior temporal lobe resection, removal of tumors, and removing parts of the neocortex.

Aim: To investigate the current aspects of epilepsy treatment.

Material and methods. We've analised the specificity of clinical trials in epilepsy. Was studied the results of Add-on studies, Monotherapy studies, European Recommendations for use as initial monotherapy and Evidence-based AED efficacy and effectiveness recommendations.

Results. Medical therapy is the mainstay for epilepsy, with most patients well controlled on a single antiepileptic drug (AED). The initial evaluation process for a new antiepileptic drug involves determination of its efficacy in reducing the frequency of seizures in patients who continue to have seizures despite therapy with an adequate dosage of appropriate drug. Add-on studies however do not allow the full assessment of the anti-

epileptic effect of a new compound. Interferences between the concomitant anti-epileptic products and the test product are common in add-on studies for various reasons. The interaction potential should be taken into account regarding both directions, concomitant treatment versus test drug and test drug versus concomitant, pre-existing AED treatment. Therefore add-on trials should be conducted optimally in the presence of only one or two pre-existing AEDs, which plasma levels are kept stable within appropriate limits**.** Preferably monotherapy studies should be started as early as the development of the medicinal product allows, in order to avoid an excessive delay in obtaining a marketing authorisation for monotherapy. Evidence-based AED efficacy and effectiveness recommendations for a specific seizure are divided into five categories . If no AED for a specific seizure met criteria for either of the top two levels of evidence, then the entry in this category would be "No first-line monotherapy candidates exist at this time."Because multiple AED-specific factors affect the selection of initial monotherapy, for each first-line and alternative first-line candidate AED identified by this method, consideration must be given to the other AED-, patient-, and nation-specific variables. Approximately 30% of patients with partial epilepsy and 25% of patients with generalized epilepsy are not well controlled on medications. These patients are often receiving multiple AEDs, with disabling seizures and side effects. Although second-generation AEDs are safer and better tolerated than the older AEDs, there are scant data to support significant advantages in efficacy. In studies with older AEDS, therapy with two AEDs improved seizure control in 40% of patients but seizure freedom was achieved in only 9%. A meta-analysis of the second-generation AEDs used as adjunctive therapies shows that 12% to 29% of patients had a 50% or greater reduction in seizure frequency. Surgery and the vagus nerve stimulator provide important therapeutic options in patients whose seizures are not controlled by AEDs. Special considerations about epilepsy care must be made in pediatric populations, those with developmental delays, women, and the elderly.

Conclusion: An add-on indication may be granted on the basis of positive results of the confirmatory add-on trials. However the clinical development plan of an anti-epileptic agent is not considered complete in the absence of efficacy studies in monotherapy. The monotherapy indication will be granted when the efficacy and safety of the test drug has been proven in newly or recently diagnosed patients.

Eugenia Mawutor Edjameh, Kufterina N.S.

CURRENT ASPECTS OF THE LUMBOISHALGIA MANAGEMENT

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1

Introduction. Lumboischalgia is pain associated with lumbago and sciatica. Lumbago is defined as mild to severe pain or discomfort in the area of the lower back. Sciatica is pain radiating along the sciatic nerve which runs down one or both legs from the lower back. It is important to know that typically are stabbing back pain in the lumbar region, radiating over the leg to the foot. Additionally, affected persons experience limited mobility and numbness and possibly a paralysis. The intensity and range of the pain depends on the degree of nerve inflammation. In addition, it becomes difficult for the person affected to turn the upper body and to stand upright. High-grade lesions of the nerve root lead to the weakening of the associated reflex arc.

Aim: to investigate the contemporary efficient management or treatment of vertebral pain syndrome in lumboischalgia.

Results. Causes of back pain include mechanical back pain, degenerative discs and facet,joints, prolapsed discs, spinal stenosis, referred pain, psychogenic pain and miscellaneous causes. The treatment for vertebral pain syndrome depends on the severity of the pain and how it affects the general well-being of the patient. Initially the pain will be relieved with a conservative treatment that will also help to reduce inflammation and relax the back muscles. A raised leg position with hip and knee joints bent 90°, lessens the pain in the nerve root. The patient should avoid prolonged bed rest and remain mobile. Pain relievers such as paracetamoland anti-inflammatory agents including non steroidal anti-inflammatory drugs such as ibuprofen, diclofenac, naproxen, etc help to relieve the discomfort. Again the use of a combination drug such as athrotec (diclofenac and misoprostol) for patients with risk of developing stomach ulcers. Using of mild opiods such as tramadol is recommended if patient is not responding to other treatment options. Physiotherapy, massage, cryotherapy and back training support this process and prevent a recurrence of the lumboischialgia. If these measures do not help, or if additionally, a numbness and / or paralysis occur, surgical procedures are to be considered.

Conclusion: It can hence be concluded that vertebral pain syndrome in lumboischalgia is pain located in the lumbar region which radiates through the leg and sometimes to the foot. This can be managed and treated very well using pain relievers, anti-inflammatory agents including NSAIDs, mild opiods like tramadol. Pain relief can also be attained from physiotherapy, massage and back training to improve mobility. If all these are not effective then surgery may be applied.

Feldman D.A., Mykhaylov V.B.

STUDY OF PSYCHO-EMOTIONAL DISORDERS IN PEOPLE AND DISPLACED RESIDENTS FROM ATO ZONE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of psychiatry, narcology and medical psychology
Scientific supervisor: professor Kozhyna A.M.

Introduction. Still several years ago Ukrainian school-children, students, majority of Ukraine's citizens knew about war only from books, films and reciting's of the older generation. Nobody could even think that in XXI century any war might come into our house and that we would get known about armed hostilities firsthand. As of today some new single population is continuously appearing and these people are affected by psychogenic factors that contribute to development of such mental disorders in them, as posttraumatic stress disorder and adjustment disorder which, in accordance with statistical data, develop in 25.0 to 80.0 % individuals harmed as a result of those or other emergency situations. As far as is known the spectrum of potential mental disorders connected with their experience of life-threatening situations is rather big. For rendering of psychological and psychiatrical help to people and displaced residents from ATO (anti-terrorist operation) zone an important thing is knowledge about consequences of armed hostilities on the state of mental health that is an actuality of this investigation.

Aim: To study developmental peculiarities of psycho-emotional disorders in individuals of the displaced residents from ATO zone.

Materials and methods. With the help of clinical and psycho-diagnostic (Hamilton Depression Rating Scale, State-Trait Anxiety Inventory, life quality scale) methods, 30 persons (15 men and 15 women) were investigated.

Results. Principal patho-psychological syndromes diagnosed in the persons of displaced residents from ATO zone: astheno-depressive (75.9 %), astheno-distressing (82.5 %), astheno-phobic (13.2 %), astheno-hypochondriacal (3.3 %). Results of the psycho-diagnostic investigations showed up that in men the indices of a reactive alarm (average score – 37.7 ± 3.0) were higher than the indices of a trait anxiety (average score – 32.6 ± 2.9). In women the indices of a trait anxiety (average score – 38.6 ± 2.9) were higher than the indices of a reactive alarm (average score – 34.7 ± 3.0). An average score on the Hamilton Anxiety Rating Scale in men: 17.0 ± 2.3 points, in women: 18.0 ± 2.3 points. On the life quality scale, investigation of the individuals did not reveal any substantial differences among men and women. In the lowest level the scales were evaluated as follows: 'Psychoemotional State', 'Interpersonal Interaction' and 'Overall Comprehension of the Life Quality'.

Conclusion. Therefore in the majority of people having left ATO zone one can observe psychoemotional disorders of various expression grades which need further correction in conditions of specialized medical institutions.

Gasan A.A., Batalina E.A.

CADASIL SYNDROME DIAGNOSTIC CRITERIA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1

Introduction: Cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy – CADASIL syndrome – is a genetically determined disease, which is characterized by recurrent subcortical ischemic stroke, migraine with aura, subcortical dementia, mood disorders such as depression and anxiety. The cause of CADASIL syndrome is suspected mutation in Notch3 gene on the 19^{th} chromosome, which induced the development of arteriopathy with progressive occlusion of small perforating vessels of brain white matter and chronic hypoperfusion. Currently there is no single point of view on the pathogenesis of CADASIL. Therefore, the diagnosis of this pathology is based only on the already acquired knowledge and assumptions.

Aim: To identify the criteria for diagnosis of CADASIL syndrome.

Materials and methods. A review and analysis of publications and scientific literature in this area.

Results. In order to establish a definite diagnosis the conform to the requirements of probable CADASIL and identification of genetic mutations and/or arteriopathy with typical granular osmiophilic inclusions in biopsy of the skin/muscle/peripheral nerves are required. Diagnostic criteria for probable CADASIL are the disease onset age younger than 50 years old and at least 2 of the following clinical symptoms: severe migraine attacks (often hemiplegic and basilar); "silent" heart attacks and subcortical strokes; subcortical dementia; slowly rising asthenic and depressive syndromes; absence of cardiovascular risk factors; evidence of autosomal dominant inheritance; atypical lesion of cerebral hemispheres white matter and absence of cortical infarcts on MRI. Confirmation of CADASIL syndrome is finding Notch3 gene on chromosome 19g12 regulating angiogenesis. A simpler method is a

skin biopsy. Electron microscopy reveals specific granular osmiophilic inclusions among degenerated smooth muscle cells of dermal arterioles walls. Composition of osmiophilic granular inclusions is unknown; it is assumed that the Notch3 protein is one of its components. The described pathomorphological signs appear early and may be determined by biopsy before the patient's age of 20. Electron microscopy has high specificity but has low sensitivity, so the authors recommend repeated biopsies from different areas of the body. Minimal asymptomatic specific changes are defined in the medium and small arteries and veins in almost all organs as well as aorta. Histological studies indicate that the wall of leptomeningeal and penetrating cerebral arteries is considerably thickened, largely due to the accumulation of extracellular matrix proteins including the various types of collagen and laminin. The presence of granular inclusions distinguishes this disease from other vasculopathies.

Conclusions. Thus, according to the proposed diagnostic criteria the CADASIL diagnosis includes an analysis of family history (although a cases of mutations *de novo* were described) and base symptomatic followed by genetic testing, electron microscopy and/or immunohistochemistry of skin or muscle tissue biopsies, brain MRI. Many questions of diagnostics remain open due to obvious deficiency of theoretical and clinical knowledge in this area. Further study of CADASIL syndrome pathogenesis will significantly facilitate the diagnosis and treatment of this disease.

Hmain S.

EFFECTIVENESS OF ART THERAPY IN TREATMENT OF PATIENTS WITH DEPRESSIVE RECURRENT DISORDER

Kharkiv National Medical University, Kharkiv, Ukraine
Department of Psychiatry, Narcology and Medical Psychology

Introduction: Recurrent depression disorder (RDD) is a common disease that occurs in 15-25% of women and 12.6% men.

Aim: Evaluating the effectiveness of art therapy in the treatment of patients with depressive recurrent disorder.

Material and methods: The study involved 150 patients of both genders (87 women, 63 men) aged 18 to 55 years old RDD with current mild depressive episode (90 patients); recurrent episodes of moderate severity (45 patients) and current severe episode without psychotic symptoms (15 patients). Patients were randomized into 2 groups: group study №1 (GR 1) and study group 2 (GR 2). Research Group №1 received standard therapy (100 patients), while the study group №2 (50 patients) received art therapy in a complex standard treatment. Methods: 1- clinico-psychopathological; 2- psychodiagnostic questionnaire MMPI; 3- psychometric method using clinical scales of anxiety and Hamilton Depression (HDRS) and the scale of determining the level of anhedonia (SHARPS). We have used several types of drawing techniques: drawing on free topics; drawing technique "My illness"; drawing by the method of "Mandala"; the techniques of "Five Senses"; "Creating stories in Pictures" and "Daubster pictures."

Results: The study revealed that 70% of patients had reduced level of anxiety; 75% of patients showed improvement in mood between sessions; 77% of patients improved self-esteem, 80% of patients had stable remission; 68% - had a positive outlook for the future; 65% - decreased levels of anhedonia and 80% of them marked regression of depressive symptoms.

Isaac Adaora

ETIOLOGY OF VIRAL ENCEPHALITIS

Kharkiv National Medical University, Kharkiv, Ukraine

Introduction: Encephalitis is inflammation of the brain. It is usually caused by a viral infection. An infection may result in one of two conditions affecting the brain:

Primary encephalitis occurs when a virus or other infectious agent directly infects the brain. The infection may be concentrated in one area or widespread. A primary infection may be a reactivation of a virus that had been inactive (latent) after a previous illness.

Secondary (postinfectious) encephalitis is a faulty immune system reaction in response to an infection elsewhere in the body. Instead of solely attacking the cells causing an infection, the immune system also mistakenly attacks healthy cells in the brain.

Common causes of encephalitis include: Herpes simplex virus. There are two types of herpes simplex virus (HSV). Either type can cause encephalitis. HSV type 1 (HSV-1) is usually responsible for cold sores or fever blisters around your mouth, and HSV type 2 (HSV-2) commonly causes genital herpes. Other herpes viruses that may cause encephalitis include the Epstein-Barr virus, which commonly causes infectious mononucleosis, and the varicella-zoster virus, which commonly causes chickenpox and shingles. Enteroviruses. These viruses include the poliovirus and the coxsackievirus, which usually cause an illness with flu-like symptoms, eye inflammation and abdominal pain. Mosquito-borne viruses. Arboviruses, are transmitted by mosquitoes or other blood-sucking insects. Mosquito-borne viruses can cause infections that include West Nile, La Crosse, St. Louis, western equine and eastern equine encephalitis. Tick-borne viruses. The Powassan virus is a well-known tick-transmitted virus that causes encephalitis in the U.S. and Canada. Rabies virus. Infection with the rabies virus, which is usually transmitted by a bite from an infected animal, causes a rapid progression to encephalitis once symptoms begin.

Childhood infections. Common childhood infections — such as measles (rubeola), mumps and German measles (rubella) — used to be fairly common causes of secondary encephalitis.

Conclusion: The exact cause of encephalitis is often unknown, but the most commonly diagnosed cause is a viral infection. Bacterial infections and non-infectious inflammatory conditions also may cause encephalitis.

KashyrinaA.

EFFECTIVENESS OF CALCIUM HOPANTENATE PREPARATIONS IN TREATMENT OF COGNITIVE IMPAIRMENTS AT EPILEPSY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1

Introduction. Epilepsy is a disease, which requires a long-termed use of anticonvulsants. Such preparations have an oppressive effect on the central nervous system. As a result of which the cognitive impairments appear.

Aim: To research effectiveness of calcium hopantenate (CH) in treatment of cognitive impairments.

Materials and methods. There are 35 patients with diagnosis: Epilepsy with generalized tonic-clonic seizuresunder observation. The frequency of seizures amount 1

time in 1-2 months. The age of the patients is 18-27 (19 males, 16 females). All patients got anticonvulsant therapy more than 5 years.

Results. In our research the psychodiagnostic test was used and as a result of which all patients got 21,7± 2,8 points before treatment in accordance to the MMSE scale (Mini-mental State Examination). Together with anticonvulsant therapy CH was included in treatment structure. CH has nootropic and anticonvulsant effect, raises brain persistence to hypoxia, stimulates processes of anabolism in neurons, reduces motor excitability. Patients were prescribed to get CH in a dose of 500mg 3 times a day after meal during 6 months. After the course of CH treatment all patients passed the MMSE-scale test. All patients have improved results to 23-27 points.

Conclusion. Based on result wecanconcludethat CH using is certainly required for patients with epilepsy for improvement of cognitive sphere. The prescription of CH need to be individual.

Koshman S., Shportko O.

THE MODERN ASPECTS OF STIGMATIZATION IN PATIENTS WITH SCHIZOPHRENIA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of psychiatry, narcology and medical psychology
Scientific supervisor - associate professor Strelnikova I.

Introduction: Schizophrenia is ranked third among all disabling diseases (WHO, 2001). The rate of schizophrenia in the overall structure of disability mental illness is 36.5% and in the structure of primary disability is 26.1%. (Z. Kekelidze, J. Pasynkova and etc., 2009). The mere fact of presence of the disease is a powerful stigmatizing and maladaptive component for this category of patients, leading to increased introversion and development of depression. Based on this study the features of the stigmatization of patients with schizophrenia in medical university students determines the main directions in the process of rehabilitation, resocialization, psychoeducation and further adaptation of schizophrenic patients in a society, optimizing system of doctor-patient relationship.

Aim: Study the effect of the basic knowledge gained by medical students during the course of psychiatry to the questions of stigmatization of patients with schizophrenia.

Material and methods: Among the 50 students of the 4th year of studying in KhNMU (35 girls and 15 boys, mean age 21 ±2 years), past or held at the moment of the survey cycle "Psychiatry", and 50 3rd year students (37 girls and 13 boys, mean age 20 ±2 years) was conducted a survey, using a specially designed questionnaire. The questionnaire included questions allowing to estimate various aspects of the relationship with schizophrenic patients and understanding of this pathology by medical students.

Results: After analyzing the data it was revealed that 82% of students in the 4th year and only 32% of 3rd year students demonstrated an impartial and compassionate attitude to people with schizophrenia. In turn, 68% of 3rd year students showed the presence of a psychological barrier for mental patients (questions of friendship, marriage and other social interactions), the lack of professional knowledge in this pathology.

Conclusion: The above data define main guidelines for optimization the system of doctor-patient relationship and direction to destigmatize people with schizophrenia by medical university students.

Leshchyna I.V.

THE ROLE OF ART THERAPY IN REHABILITATION PATIENTS WITH MENTAL DISORDERS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of psychiatry, narcology and medical psychology

Introduction: Treatment of patients with mental disorderscannot be limited use of only drug therapy. Along with the biological treatment are widely used various methods of psychosocial rehabilitation to restore the disturbed mental functions, improve the quality of life and social functioning in patients with mental disorders.

Aim of our study is to evaluate the effectiveness of art therapy in rehabilitation of patients with mental disorders.

Material and methods: In this study the following methods were used: clinical-anamnestic, clinical-psychopathological, psychodiagnosticaland methods of statistical analysis. 46 female patients were inspected with a diagnosis of schizophrenia, paranoid type at the stage of development of remission with the duration of disease at least 5 years at the time of the research. Middle age was 32,0 ± 8,06 years. The frequency of treatment in the hospital during the disease was 5 ± 3,8 times. Diagnosis of all patients was established according to the criteria of ICD-10. The first group consisted of 24 patients, who received complex treatment with a combination of psychopharmatherapyaccording to clinical protocols of health care of Ukraine and art therapy, second group - patients who treated only standard therapy (22 people). The study used a group art therapy with a thematic approach. Art-therapy sessions were conducted in groups of 10-14 peoplelasting 60 minutes with a frequency of 2 times per week for 3 months. Art-therapy using the methods of drawing, sculpting, making collages with elements of music therapy.

Results: In patients of the group receiving complex treatment in the form of a combination drug therapy and art therapy, compared with the control group, noted a significant decrease in anxiety and emotional tension (75,0 and 54,4%), improvement in cognition (66,6 and 45,5%), improving communication skills and social functioning (87,5 and 40,9%), the formation of adequate self-esteem and self-confidence (79,1 and 59,5%). Art therapy classes contributed to the development of adequate patient attitude to his disease and formation of willingness to continue treatment on an outpatient conditions. The study identified significantly larger increases in general perception of quality of life in patients of the main group than the control ($p < 0.01$), the most positive changes were observed in areas: socio-emotional support, physical well-being and performance, interpersonal interaction.

Conclusion: Art therapy of patients with paranoid schizophrenia is an important means in psychosocial rehabilitation that promotes formation of willingness for further treatment and better quality of remission, normalization emotional state, reducing cognitive deficits, improving communication possibilities, personal experience of effective social interaction, achieves a higher level of quality of life and social functioning.

Levchenko A.L.

PREVENTION OF DRUG ABUSE AMONG TEENAGERS BY TIMELY DETECTING DEPRESSION

School of Medicine of V.N. Karazin Kharkiv National University, Kharkiv, Ukraine
Department of psychiatry, narcology, neurology and medical psychology
Scientific adviser: PhD, Associate professor Vovk V.I.

Introduction: Today, Ukraine occupies a leading position in Europe in terms of addiction, and every year a growing number of drug addicts. Teenagers account for about a third of the total number. Depression is one of the main causes of adolescent drug use.

Aim: Show the need for the diagnosis of depression in adolescents to prevent drug abuse

Results. Adolescents with depression become irritable, appears anhedonia, sadness and gloom, sensitivity to criticism, increases the frequency of quarrels with parents about common problems. Very characteristic sudden "bouts of tears", occurring for no apparent reason or completely insignificant matter. When a teenager depressed, sad, crying, depression, or a manifestation of the strong desire (to smoke a cigarette, take alcohol or drugs, and so on) can suddenly embrace the whole of his mental activity. Also characterized by fatigue, various autonomic manifestations (sleep disorders, eating disorders, tachycardia, fluctuations in blood pressure, difficulty concentrating, etc.), thoughts of suicide. The teenager does not understand that he sick**.** And often, in order to escape from reality, begins to take drugs. So, family physicians, pediatricians and school psychologists should be able to notice the signs of depression in adolescents, and together with parents should to apply measures to eliminate the disease. Also, family physicians, pediatricians and psychologists should have systematically explanatory conversations with parents in order to prevent depression and, as its corollary, drug addiction, as most parents tend to attribute the symptoms of depression to temporary factors inherent in adolescence. Psychologists must maintain the closest possible contact with the students and conduct psychological testing to identify depression. Unfortunately, depression among adolescents often go unnoticed by family physicians, pediatricians and school psychologists, which leads to tragic consequences: increased drug use among adolescents and suicide.

Conclusion:. Given the above, we can conclude that the family doctor, pediatrician or school psychologist, knowing the symptoms of depression can quickly identify her adolescent. Doctors and psychologists should conduct outreach with parents, it is very important. This package of measures will help to reduce the growth of drug use among adolescents and prevent many tragedies, that at the moment is very relevant problem.

Lychko V., Malakhov V., Arkhypova K.

MICROWAVE WAVEGUIDE-BASED DIELECTROMETRY FOR THE MONITORING ERYTHROCYTES' BETA-RECEPTORS ACTIVITY IN PATIENTS WITH ISCHEMIC STROKE

Sumy State University. Sumy, Ukraine
Department of neurosurgery and neurology

Introduction: Scientists currently believe that cellular malfunctions provide the basis of most common diseases. One of the possible ways to evaluate functional cellular state is to monitor their membrane-receptor activity in the case-control study. In this work,

we have focused on the research of erythrocyte membranes activity in patients with ischemic stroke (IS) as well as in health individuals.

Aim: is beta-receptor (beta-AR) sensitivity because of its direct involvement in cardio-vascular system and neurological outcome.

Material and methods: We propose a new integrated approach to the characterization of erythrocytes' beta-ARs activity. It includes label-free microwave dielectrometry and the modified osmotic fragility methods. Both techniques monitor variation of the parameters been studied in response to the beta-blocker propranolol. Our investigation has focused on: (1) dielectric behavior of erythrocytes in the case-control study; (2) beta-blocker induced changes in complex permittivity of erythrocytes of stroke patients within the first 24 hours and on the tenth day of admission; and (3) evaluating beta-ARs of erythrocyte sensitivity to beta-blocker in patients during the course of therapy. We tested the hypothesis whether the values obtained by the two different methods were correlate. Measurements were performed using erythrocytes extracted from venous blood of the patients with IS (n=29, average age is 65.4±6.3 years) as well as from health volunteers (n=24, average age is 58.0±11.3 years) who were in the control group. Clotting was prevented by the addition of heparin solution (0.1 ml of 5000 USP units/ml) for dielectric study, and ethylene diamine-tetracetic acid, or EDTA (0.1 ml of 0.5 M EDTA per 5 ml of whole blood) for assessing beta-ARM index. To characterize erythrocyte beta-ARs activity the cells were expose to beta-blocker propranolol (7.5 g/l) for 30 min. All manipulations with blood were conduct during 3 hours since its sampling.

Results. The first step was to observe the dielectric behavior of erythrocytes before and after the exposure to beta-blocker in health and disease. After exposure to beta-blocker, permittivity of erythrocytes in the control group tends to increase (pvalue=0.04) while in the stroke group it does not change (pvalues are not significant – NS). This finding should be interpreting as a lack of cell response to beta-blocker. It can be explained by the fact that drug does not interact with erythrocytes' beta-ARs because of their decreased sensitivity to beta-blocker caused by the disease. These data are in reasonable agreement with the results of the osmotic fragility testing. It has been shown that a degree of adrenergic activity of erythrocytes in patients with IS significantly reduced compared with ones in the control group; since the values exceeded reference ranges of 2-20 units correspond to a low levels beta-receptors activity. Indeed we observed highly significant (p-value<0.001) distinction between healthy and diseased groups. The next step was to characterize the erythrocyte beta-ARs activity during therapy. Thus, we repeated study on the tenth day of hospitalization. In stroke patients group, we observed a decrease in the beta-ARM index by 30 % (pvalue<0.03), which indicates normalization of membranes activity and successful therapeutic outcome; while in the control group this indicator remained almost unchanged. The permittivity behavior was also improved; the significant differences (p-value<0.05) in complex permittivity ($\Delta\varepsilon'$ and $\Delta\varepsilon''$) of erythrocytes after exposure to beta-blocker were increased in 70 % cases, i.e. cell sensitivity to in vitro action of the beta-blockers increased. This result confirms that the values obtained by the two different methods are correlate.

Conclusion: We imply that proposed approach may be useful in medical applications for diagnostic purposes. It is intend to supplement current cellular analysis used for healthcare, which will allow obtaining more information about health status of the patients at the cellular level.

Markovska O.V., Awodunmila O.E., Nekrasova N.A.

MORPHOLOGICAL PECULIARITIES OF PERIPHERAL NERVOUS SYSTEM IN MULTIPLE SCLEROSIS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №2

Introduction: Multiple sclerosis also known as Disseminated sclerosis, is an inflammatory diseases causing structural changes in both the Central Nervous System (CNS) and the Peripheral Nervous System (PNS). Cyclooxygenase-2 (Cox-2) expression, endothelia and inducible No-synthase (eNOS and iNOS) in peripheral nerves and vessels of skin in patients with MS was the main aim for research to reveal their peculiarities.

Materials and methods: Skin biopsies from 22 patients with MS (4 - secondary progressive, 18 - relapsing -remitting) and 5 volunteers were investigated.

Results: On Microscopic examination of the skin biopsy, signs of demyelination of nerve fibers, swelling of uneven impregnation appearance of beaded extensions and clavate blisters were observed. Myelin sheaths and axons with inconsistent focal fragmentation and extensions like aneurisms, moderate perivascular and perineural lymphohistiocytic infiltration were observed after Spielmeyer's method of coloring was used.

Detection of positively stained uniform increased expression of COX-2 and iNOS enzymes in the cytoplasm of Schwann cells, vascular endothelium and granules of cellular structures. A spreading zone of positive eNOS activity far from vessels was revealed but it was less compared to the vessel walls and perivascular spaces.

Conclusions: According to the degenerative and inflammatory changes observed in the Peripheral Nervous System they are associated with endothelial dysfunction in perineural and perivascular spaces.

Molchanyuk D.

THE DIAGNOSTIC CAPABILITIES OF PSYCHODIAGNOSTIC METHODS OF IDENTIFYING THE EFFECTS OF STRESS AND POST-TRAUMATIC STRESS DISORDER

Kharkiv National Medical University, Kharkiv, Ukraine
Department of psychiatry, narcology and medical psychology

Introduction: The research relevance is caused by modern importance of posttraumatic stress disorders and by number of unresolved diagnostic issues that create a background for many diagnostic errors and discrepancies, interferes the adequate, timely initiated, differentiated treatment and prevention.

Material and methods: Based on examination of 90 persons of both sexes, aged 18-55 years (demobilized combatants, released from captivity, family members of persons affected by the fighting, refugees) using complex of psychodiagnostic methods there were defined their diagnostic capabilities of individuals affected by stress in war conflict. Impact of Event Scale-Revised (IES-R). The questionnaire reveals which symptoms dominate - intrusion, avoidance, increased excitability. Test for wide use, was used to study effects of various traumatic factors (loss of loved ones, a car accident, military events).

Clinical-administrated PTSD scale (CAPS). It allows to estimate the frequency and intensity of identifying the individual disorder symptoms, and the extent of their impact on the patient's social activity. The study of each symptom manifestations is 1 month. Thus it can diagnose disorders caused by recent injuries and dynamics of the patient's condition in

case of repeated testing. Mississippi rating scale post-traumatic reactions. Civilian and military options were used. Allows you to evaluate the severity of posttraumatic reactions. Unlike (CAPS) these scales can diagnose late posttraumatic disorders. The results allow to make a differential diagnosis of adjustment disorder.

Symptom Check List-90-revised (SCL-90-R). The technique allows to assess the psychological symptomatic status of both general type patients and persons with mental disorders. Scale of depression. Assessment of depressive symptoms of patients in the present. The disadvantage is the inability to diagnose the presence of depressive symptoms in the past, immediately after the traumatic event, if some time has passed after its inception. Advantages of use were founded: (IES-R) - for initial screening; (CAPS) - for assessing the condition dynamics; - for the diagnosis and differential diagnosis of PTSD during hospital and posthospital stages; (SCL-90-R) to clarify patient management (psychologist or psychiatrist);scale of depression is appropriate only for verification of the patient condition dynamics during antidepressant therapy.

Conclusion: Thus, the results showed the feasibility of using these techniques as complementary diagnostic tools, there were defined the benefits of several methods to solve specific diagnostic tasks.

Nana Ama Christian, Kufterina N.S.

CLINICAL FEATURES OF MOYA-MOYA DISEASE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1

Introduction: Moya-Moya disease is a progressive, occlusive disease of the cerebral vasculature with particular involvement of the circle of Willis and the arteries that feed it. It is more common in women than in men, although about a third of those affected are male. It is necessary to know the clinical picture of this rare condition.

Aim: Clinical features of Moya-Moya disease studying.

Results: Moya-Moya disease mainly affects children, but adults may have the condition. Children may have hemiparesis, monoparesis, sensory impairment, involuntary movements, headaches, dizziness, or seizures. Mental retardation or persistent neurologic deficits may be present.Severe immediate problems include the risk of transient ischemic attack (TIA or “mini-stroke”), in which the blood flow to the brain is temporarily completely blocked; stroke, in which the blockage is sustained; or intracranial hemorrhage, bleeding in the brain. On cerebral angiography there will be there will be stenosis in the terminal portion of the internal carotid artery or the proximal portion of the anterior or middle cerebral arteries. There is also tangled appearance of blood vessels (puffed smoke appearance) on MRI and CT) due neovascularization. Adults may have symptoms and signs similar to those in children, but intraventricular, subarachnoid, or intracerebral hemorrhage of sudden onset is more common in adults.

Conclusion: Moya-Moya disease is a rare disease that causes stroke in young people but may also be present in some adults. Once major stroke or bleeding take place, even with treatment, the patient may be left with permanent loss of function so it is very important to treat this condition promptly. Therefore early detection the clinical manifestation will help to commence treatment early as prognosis is favorable.

Nefedov A.A., Khomiak O.V., Kovalenko E.Y

EXPERIMENTAL ANALYSIS OF NEUROPROTECTIVE AGENT IN COGNITIVE DEFICIENCY DEVELOPMENT IN THE MODELING OF MULTIPLE SCLEROSIS

SE "Dnipropetrovsk Medical Academy of Health Ministry of Ukraine", Dnipropetrovsk, Ukraine
Department of pharmacology and clinical pharmacology

Introduction: Diagnostics of cognitive, emotional, and other varied psychopathological disorders that develop in multiple sclerosis (MS) is required at the early stages of the disease. Modern trends of psychopathological disorders correction, along with traditional - psychotherapy and antidepressants, include neuroprotective therapy.

Aim: was to explore the effect of citicoline (500 mg / kg) on the processes of learning and consolidation of memory trace in the test of the passive avoidance (PA) in experimental allergic encephalomyelitis (EAE).

Results: The results of the studies indicate that on the 10th day of drug administration after a single subcutaneous inoculation of encephalitogenic mixture in complete Freund's adjuvant latent period (LP1). It is shown that in the group of passive control (intact) 12 day of study recorded a significant increase in the latent period (LP2), 8 times ($p < 0.05$) higher than initial rate that testified the effectiveness of learning in this group. In rodents with experimental equivalent of multiple sclerosis (active control) indicator of LP2 was 38% ($p < 0.05$) significantly lower compared to the group of passive control, and the number of animals without formed avoidance reflex was 80%. Course administration of neuroprotective therapy in rats with EAE promoted significant increase in the time of passive-defensive reflex on the 12th and 20th day of study. Thus, citicoline (500 mg / kg) promoted increase of the latent period, by 49% ($p < 0.05$) and 63% ($p < 0.05$) exceeding this index of the active control group on 12th and 20th day of passive-defensive skills testing respectively. Percentage of animals with skill acquisition or retention by 55% and 30% exceeded values in the active control group at appropriate intervals, which confirms the high nootropic potential of citicoline in rats with EAE. It should be mentioned, that the drug reduced lack of spatial memory: under the influence of citicoline coefficient of secure compartment advantages in animals with lost skills in experimental demyelinating disease of the CNS significantly increased 5 times ($p < 0.05$).

Conclusion: Thus, the course administration of citicoline slows down the development of learning disorders and memory consolidation engrams. In addition, citicoline reduces spatial memory deficiency what is relevant in the use of neuroprotective agents in complex treatment of patients with multiple sclerosis.

Nesteruk A.V.

POTENTIAL FOR USE A TRANSPLANTATION OF EMBRYONIC NEURAL TISSUE IN LENNOX-GASTAUT SYNDROME

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1
Supervisor: Associate professor Reznichenko E.K.

Introduction: Currently, the search for effective treatments for Lennox-Gastaut syndrome (LGS) plays an important role in the structure of children epileptology. LGS is a severe epileptic encephalopathy of childhood, which is characterized by polymorphic

seizures, cognitive dysfunction and specific changes of EEG. Syndrome affects 5-10% of children with epileptic seizures. 5% of patients die, 80-90% go into adulthood with uncontrolled seizures. In this case, the low levels of diagnosis of the disease as well as a narrow range in treatment options do issue of LGS topical. Note that in the absence to date the developed international recommendations for the treatment of LGS as well as the insufficient number of serious researches the LGS therapy is based on clinical experience and observations.

Aim: To evaluate the potential for use a transplantation of embryonic neural tissue (TENT) in Lennox-Gastaut syndrome.

Materials and methods: A review and analysis of current scientific literature in the field of alternative LGS therapies.

Results: The indications for TENT in LGS, which are the low efficiency of pharmacotherapy, were clarified. The analysis of the results of patient's examination after TENT was carried out: there are the gradual normalization of the amplitude of the bioelectric activity, the reduction of epileptiform activity and the number of generalized outbreaks as well as the normalization of the alpha rhythm. Improvement of the cognitive functions and efficacy of pharmacotherapy on the background of TENT were observed. It is necessary to remember that embryonic stem cells induce low rejection, because the proteins of major complex of histocompatibility class I and II are low expressed in I and II trimesters of pregnancy.

Conclusion: The efficiency of TENT in complex therapy of LGS was established, which makes it possible for clinical application on an equal basis or in combination with traditional medication.

Olefir A.S.,Telsenko O.A.

BRAIN DEFEAT IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1

Introduction: It is widely known that chronic obstructive pulmonary disease (COPD) lead to the defeat of the nervous system due to the occurrence of a violation of ventilation, hypoxia, hypercapnia, difficulty of venous out flow from the cranial cavity and reduce regional cerebral blood flow. The most frequent syndrome include a wide range of pseudo neurotic disorders, especially depression (25.6% of cases), discirculatory venous encephalopathy and dementia. Less common COPD complicated benign in tracranial hypertension, radiculopathy or myelopathy thoracic localization betalepsiey and piknolepsiey. In case sofs evere and prolonged decompensation of COPD can lead to venous strokes with the presence of cerebral symptoms in 50% of patients and poor regression of focal neurological symptoms that depend on the affected vascular beds.

Material and methods: On the basis of KRC we have examined 20 patients with a diagnosis of the pulmonary profile of COPD. In the picture of neurological disorders in the examined patients can identify a number of major syndromes - atenichesky, vestibular-atactic, pseudobulbar, pyramidal disorders and amiostatiche skieviolations. The most frequently diagnose dcirculatory hypoxicencephalopathy I-II degree. Encephalopathy - is a chronic brain disease man if estedby progressive multifocal disorder of its functions due to

cerebrovascular insufficiency. Allpatients were examinedby a neurologist, resulting identified the following bjective changes of neurological status: anizorefleksiya, vestibular-atactic disorders, oculomotor disturbances, symptoms of oral automatism, lack of facial and hypoglossalnerves, lungs oculomotor disturbances, pyramidal insufficiency, paroxysmal vegetative state.

Results: Patients diagnosed with circulatory encephalopathy, depending on the stage of the disease: pay attention to the following complaints, which are the initial man if estations of cerebrovascular in sufficiency: a feeling of heaviness in the head, weakness, fatigue, emotionall ability, memory loss, attention, dizziness, unsteadiness when walking, sleep disorders, increase memory disorders, disability, dizziness, unsteadiness when walking. In the complex treatment of patients surveyed were included drugs that improve the trophism of the brain such as Aktovegil, Mexicor, Tserakson.

Conclusion: Thus, in conditions of chronic progressive air flow obstruction and ventilatory insufficiency results in dysfunction of the central and peripheral parts of the nervous system. One of the main mechanisms for the formation of neurological symptoms in patients with COPD is a chronic brain ischemia and respiratory muscle failure.

Nekrasova N., Oluwayemi Moses, Akinkugbe Ayobola

THE MEASUREMENT OF HEART RATE VARIABILITY IN ASSESSMENT OF THE AUTONOMIC PROVIDING IN YOUNG PATIENTS WITH VERTEBROBASILAR INSUFFICIENCY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №2

Introduction: Vertebrobasilar insufficiency (VBI) refers to a condition in which blood flow to the vertebral and basilar arteries are restricted or impaired, thereby causing transient insufficient blood flow to the posterior portions of the brain. The effects of VBI cannot be overlooked since they are varied and many researches have not been crowned with complete success and this became the basis for further researches in the field.

Aim: to estimate the dependency of ANS dysfunction on the changes of circulation in vertebra-basilar system in young patients.

Materials and methods: 89 patients aged from 18 to 44 years with clinical picture of spondylogenic vertebra-basilar insufficiency (SVBD)

3 groups were formed: 1group: 39 patients with angiodystonic stage of SVBD, 2 group: 26 patients with angiodystonic-ischemic stage of SVBD, 3 group: 24 patients with ischemic stage of SVBD.

Results: The study of the HRV, obtained during De Kleyn Test were characterized by increasing power of spectrum in the area of very lower frequency (VLF) especially in 1 group (in 53,8±7,9% patients), that reflects activating of sympathetic part of the ANS, providing realization of ergotropic activity. Overstrain of trophotropic activity in 3 group (in 75,0±8,8% patients) were characterized by increasing power of spectrum in the area of high frequency (HF), that reflects activating of compensatory mechanism of ANS, directed to normalization of autonomic imbalance.

Conclusion: The power spectrum changes in HRV measurement ($p<0.05$) observed during the comparison of the groups, depicts how influential VBS insufficiency is on the ANS, this helps to improve treatment and prognosis of this category of patients.

Platynyuk O.B.

CLINICAL FEATURES OF FORMATION OF PTSD IN THE COMBATANTS WHO WERE INJURED

Kharkiv National Medical University, Kharkiv, Ukraine
Department of psychiatry, narcology and medical psychology

Introduction: The study of post-traumatic stress disorder combatants who injured an important medical and social problem.

Aim: to study features of formation of PTSD in the combatants who were injured and to develop a model of treatment and prevention of these disorders. To address this goal we have with the principles of bioethics and ethics conducted a comprehensive survey of 100 combatants who were injured.

Material and methods: clinical, psychodiagnostical using a scale assessing the severity of the impact of traumatic events (Impact of Event Scale-Revised, IOES-R); Misisipies scale for assessing posttraumatic reactions in war. In 68% of patients found psychogenic disorders of varying degrees of severity (by IOES-R). Symptoms of PTSD (by Misisipies scale) observed in 12% of the wounded. Features of combat trauma in soldiers who have suffered physically in the fighting, defined by the following characteristics injury, degree of disability, disability, distorted appearance. Among the clinical variants of posttraumatic stress disorder in this category is dominated by combatants depression, hypochondria, addictive.

Conclusion: Based on the results in the course of the model of posttraumatic stress disorder diagnosis as combatants and psychotherapeutic component of comprehensive rehabilitation of this population. Optimization of complex treatment and psychosocial rehabilitation of combatants with injuries and PTSD in inpatient and outpatient practice is to use a multidisciplinary approach, medical and psychological support at all stages of treatment and rehabilitation.

Samoilova H., Jacobs Yvonne

CLINICAL CASE OF COMPLICATED COURSE OF GENERALIZED MYASTHENIA GRAVIS WITH THYMOMA AFTER SURGICAL TREATMENT

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №2

Material and methods: Patient K. 57 years old, was admitted to the Department of Thoracic Surgery, SI " V.T. Zaytsev Institute of General and Emergency Surgery of NAMS of Ukraine" with complaints of periodically weakness in the muscles of the shoulder, double vision, fatigue. These complaints were noted over the past year, increasing after physical activity and stressful situation. The patient was examined and treated by a neurologist on a residence, took metabolic therapy, which provided a temporary positive effect. When conducting electroneuromyographic (ENMG), information about violation of neuromuscular transmission has not been identified. After CT scan of mediastinum thymoma was found (dimensions 25 x 49 x 50 mm).

Results. Clinical neurological examination of the patient revealed a transient diplopia, diffuses decrease in the muscle tone, more pronounced in the upper extremities, and reduced muscle strength in the upper extremities to 3.5-4 points, in the lower extremities - to 4 points, corresponding to II functional class according to the classification

of The Myasthenia Gravis Foundation of America (MGFA, 2001). The test with neostigmine methylsulfate was weakly positive. Was decided to hold the surgical treatment.

The result of immunological examination of the patient before surgery: lymphocytopenia, violation of the ratio of subpopulations of immune cells, which was confirmed by increased levels of CD2 in combination with a reduction in the subpopulation of T-helper lymphocytes CD4 and immunoregulatory index (IRI). Also was noted violation of phagocytic function according to the decrease in the phagocytic number (PN) and index of completeness of phagocytosis (ICP). Was performed thymthymomectomy and symptomatic treatment - neostigmine 1.0 ml intramuscularly 4 times a day. In the 1st day after the operation the patient noted the absence of diplopia. However, muscle weakness remained at the same level (II functional class according to the classification MGFA). On the 2nd day after surgery was developed myasthenic crisis (V functional class according to the classification MGFA). The patient was transferred to the artificial lung ventilation.

Immunological study of blood after surgery: lymphopenia, reduced subpopulations CD2 by 24.2%, CD3 by 13.3%, CD8 by55%, increased levels of CD4 by 20% and IRI by 2.6 times in comparison with those prior to surgery. There was a sharp increase compared with those before surgery phagocytic index by 1.9 times and the PN by 3.3 times at less significant increase in the ICP, whose figure remained below the reference values. The patient received 3 courses of exchange plasmapheresis, dexamethasone, kalimin. Condition improved after 2 weeks. In good condition the patient was discharged from the hospital (muscle strength was 4.5 points).

Conclusion Taking into account our findings, further detailed study of the clinical and immunological correlations in various forms of myasthenia gravis and pathology of the thymus will identify new ways of interaction of pathological processes, improve the outcome of surgical treatment of myasthenia gravis and.

Savchenko A.G.

DIAGNOSTIC CRITERIA FOR MOYAMOYA DISEASE IN NEUROLOGIST'S MEDICAL PRACTICE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1
Supervisor: Associate professor Reznichenko E.K

Introduction: Moyamoya a rare and progressive disease associated with impaired brain blood supply due to the segmental stenosis or occlusion of the terminal ends of the internal carotid arteries with the development of a network of small vascular anastomoses (Adams D et al., 1997). Originally moyamoya was described in people of Asian descent. Now it is widely distributed in individuals of different ethnic groups, including Americans and Europeans. The peak of incidence occurs in children around the age of 5 years and adults from 40 to 50 years. Women suffer in 2 times more often than men.

Aim: To determine the optimal differential diagnostic criteria of moyamoya disease.

Materials and methods: analysis and data processing of scientific publications.

Results: The results of the study. Rapidly increasing neurological symptoms or unexplained symptoms of cerebral ischemia (especially in children) are considered as signs of disease. Although the differential diagnosis of these symptoms is extensive, the availability of moyamoya disease can be quickly confirmed by the radiographic studies. CT detects small foci of reducing the density of brain tissue that suggest the possibility of

hemorrhage or stroke in the cortical watershed, basal ganglia, deep in the white matter or periventricular areas. However, CT can be normal, especially, in patients with transient ischemic attacks. CT-angiography can detect intracranial stenosis. This method may be useful if MRI is not available. Angiography should cover 5-6 vessels including external carotid arteries, both internal carotid arteries and 1-2 vertebral arteries depending on visible collateral vessels. Other studies with moyamoya disease may include EEG, cerebral blood flow study. Specific changes in the EEG, which most often seen in children, consists of a back or centrotemporal delay or diffuse pattern of hyperventilation-induced slow waves.

Techniques such as transcranial Doppler, MRI with the accumulation of xenon, positron emission tomography, magnetic resonance imaging and single-photon emission CT with acetazolamide also used in the diagnosis of moyamoya disease. They can help to quantify blood flow, are the basis for deciding on treatment. (Panuntsev V.S. Neurosurgery. 2001; Rolak L.A. Child neurol 1986).

Conclusions. Thus, the gold standard for diagnosis of moyamoya disease is the endovascular cerebral selective angiography – highly informative and accessible method. For accurate diagnosis is necessary to perform angiography of internal and external carotid arteries on both sides and one of the vertebral arteries.

Subba Sanjay Kumar, Kufterina N.S.

EPIDEMIOLOGICAL DATA OF TRAUMATIC BRAIN INJURY AND POST-TRAUMATIC EPILEPSY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1

Introduction: According to modern literature the risk of seizures after traumatic brain injury is highly significant (As high as 53 percent after war injuries and ranges from 1.8 to 5.0 percent in civilian populations) A tremendous amount of researches were carried out in order to identify those characteristics of brain injuries that are associated with the development of seizures. Objectives of this study were to determine the current status in the characteristics of brain injuries and post traumatic brain injury seizures

Aim: To investigate the current state on post traumatic brain injury seizures.

Material and methods: This study provides an analysis of the current scientific and practical medical literature clinical experience diagnosing of post traumatic brain injury seizures.

Results. The Prevalence of Epilepsy and Association with Traumatic Brain Injury in Veterans of the Afghanistan and Iraq Wars (A total 256 284 OEF/OIF Veterans who received inpatient and outpatient care in the Veterans Health Administration in fiscal years 2009-2010). Increased incidence and impact of nonconvulsive and convulsive seizures after traumatic brain injury as detected by continuous electroencephalographic monitoring study carried out in Ninety-four patients with moderate-to-severe brain injuries underwent continuous EEG monitoring beginning at admission to the ICU (mean delay 9.6 ± 5.4 hours) and extending up to 14 days post injury). The studies and research were carried out On Population Based Study of Seizures after Traumatic Brain Injuries –Where 4541 children and adults with traumatic brain injury <characterized by loss of consciousness, post-traumatic amnesia, or skull fracture> in Olmsted County, Minnesota, during the period from 1935 through 1984). The risks of epilepsy after traumatic brain injury study carried by John

F Annegers, Sharon Pasternak Coan, The University of Texas Health Science Center at Houston, School of Public Health, USAwere studied and analyzed. Were identified 5984 episodes of TBI (loss of consciousness, post-traumatic amnesia, or skull fracture) in Olmsted County, Minnesota.After going through more than 20 sources and research work. The selected sources describe separate clinical cases of post traumatic brain injury seizures.Analysis of researches showed that there are statistically significant associations between epilepsy and prior TBI diagnosis. However it depends on theseverity of the injury location of injury and the time since the injuryrisk of posttraumatic seizures after severe injury was 7.1% within 1 year and 11.5% in 5 years, after moderate injury the risk was 0.7 and 1.6%, and after mild injury the risk was 0.1 and 0.6%. The incidence of seizures after mild head injuries was not significantly greater than in the general population.

Conclusion: The increased risk of seizures after traumatic brain injury varies greatly according to the severity of the injury and the time since the injury. TBI is a major public health problem and contributes to the occurrence of seizures and epilepsy.

Tikhonova O.

CHRONIC NASOPHARYNX DISEASES AS THE CAUSE OF CRANIOCERVICALGIA IN PATIENTS OF YOUNG AGE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1

Introduction. The problem of craniocervicalgia in patients of young age at the present time is extremely important, as it significantly reduces the quality of life and ability to work.

Aim: To study the prevalence of craniocervicalgia among young patients who have chronic diseases of the nasopharynx.

Material and methods: Topographic anatomy of the cranial nerves clearly demonstrates the immediate proximity and therefore the contact of the mucous membranes of the nasopharynx, pharynx, larynx, oral cavity mucosa with nerve trunks and their branches. Coming out of the spine, spinal nerves, passing close to the mucous membrane, come into direct contact with it, and in case of presence of any inflammatory processes in the mucosa nerves are involved in the process. In neuralgia pathogenesis mechanical, vasomotor, and, primarily, infectious and toxic factors are important. In patients with chronic diseases of the nasopharynx is often observed cephalgia due to intracranial venous hypertension or intracranial hypotension, asthenic conditions with symptoms of hypochondria, anxiety, depression.

Results: 30 patients aged from 18 to 35 years with chronic diseases of nasopharynx, such as otitis media, sinusitis, laryngopharyngitis and tonsillitis, were examined, and in 83% of patients neurological disorders (neuralgia of the trigeminal nerve (I, II and III branches)-43%, neuropathy of the facial nerve-37%, neuralgia of major and minor occipital nerves-8%, malor auricular nerve neuralgia -7%, cervical neuralgia-5%) were discovered.

Conclusions Thus, the necessary level of craniocervicalgia therapy in patients in the age group of 18 to 35 years is the treatment of chronic nasopharynx diseases.

Tverezovska I.I., Kauk O.I.

APPEARANCE AND DEVELOPMENT OF HYPERKINETIC DISORDERS IN TENDER AGE CHILDREN

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №2

Introduction: Hyperkinesis disorders problem in children has got its great actuality for last 10 years. According to the researches increasing of children morbidity is connected with fetal hypoxia, bilirubin increasing for incorrect diet in first 3 years, educational disorders from their early childhood. In Ukraine there are increase of hyperkinetic morbidity of children. However diagnostics in early stages has a lot of complications because of general symptoms of disease which can be confused with different diseases, as organic lesions of CNS or comorbid psychosis and so treated incorrectly.

So the **aim** of our research is to study the main trigger factors leading to hyperkinetic disorders in tender age children manifestation.

Materials and methods. We processed medical histories and extracts of child development histories of 21 children of several rehabilitation groups of Regional children hospital №3 of Kharkov.

Results. As the results we've got such data. Among 21 children there are 11 males and 10 females. Average age for boys is 4 years and 2 months, for girls – 2 years and 10 months. According to the extracts we have 6 children born with body weight less than 3 kg, 5 children were born before 38 weeks, 8 children with 8-9 points of Apgar scale, 6 children – 7-8 points, less than 7 points – 3 children. Among the past history: hypoxic damage of CNS – 9, liquorodynamic disorders 5, metabolic disorders – 2, and frequent ARI cases – 3 children. Positive dynamics after treatment in rehabilitation center was observed almost in every child (20 of 21 sick ones). This includes increasing of communicative skills – 20 children, increasing of educability level 17 children, improving of verbal function – 15 children.

Conclusion Based on our research data we can make such a decision, that the development of hyperkinetic disorders in children is influenced by many factors, which are course of pregnancy, birth and afterbirth anamnesis, especially psychomotor development of child to one year, because in this period it is very important to diagnose timely the beginning of disease with its effective educational and speech therapy. Important fact is the presence of hypoxic and liquorodynamic disorders of CNS and transferred infection and allergic diseases.

Voloshin-Gaponov I.K.

FEATURES OF THE BIOLOGICAL AGE IN PEOPLE WITH KONOVALOV-VILSON'S DISEASE

GE «Institute of neurology, psychiatry and narcology NAMS of Ukraine», Kharkiv, Ukraine

Introduction. Vilson's disease (VD) is a serious, hereditary, autosomal recessive disorder, which is based on a violation of copper metabolism. Development of the disease determines ATP7B gene, which is located on the long arm of chromosome 13 and encodes a transmembrane protein P-type ATP-ase molecule, that integrates into the apo-copper and ceruloplasmin performs allocation of copper into the bile. As is well known, chromatin can

be submitted to a decondensed functionally active form euchromatin or heterochromatin functionally inactive form. The ratio of these forms depends on the functional state of the cell. Chromatin state may vary upon action of various external factors. Recent data show that the problem of age chromatin condensation is extremely important for understanding the key mechanisms of aging at the cellular level.

Material and methods. To determine the effect of hypercopperosis in patients with VD general processes of aging we have examined 32 patients, including 11 women and 21 men. For the period of the survey the average age of patients was 31,7 ± 8,43 years. The age range of the patients was 20 years and 50 years. 12 patients were examined in the dynamics. The age of patients in the appearance of the first symptoms of the disease averaged 26,0 ± 7,12 years. Varying from 15 to 49 years. Time from onset of symptoms to definitive diagnosis and, consequently, the beginning of etiopathogenic therapy was on average 2.8 years and ranged from 1 to 7 years. The disease duration was from 1 year to 15 years and averaged 9,2 ± 2,3 years. The diagnosis was confirmed by VD was placed in the clinic or institution based on the presence of rings Kayser - Fleischer, reduction of serum ceruloplasmin below 20 mg / dL and an increase in copper excretion in the urine of more than 100 mg / day. The control group was composed of 24 patients who had no symptoms associated with damage to the central nervous system. Age of the control group was within 20-42 years and averaged 31,1 ± 3,12 years. The content of heterochromatin granules (CHG) in the nuclei of buccal epithelium cells was determined by Yu.G. Shkorbatov (2001).

Results. The results of these studies have shown that patients with VD have a significant ($p < 0,05$) reduction of the content of heterochromatin granules (CHG). Gender analysis of the data showed that in healthy men have a tendency to higher content of heterochromatin granules in the nuclei of buccal epithelium than in healthy women. Patients with VD gender differences in the content of functionally inactive condensed chromatin were found. It was also not observed and the relationship between the form and the content of VD heterochromatin in the nuclei of the buccal epithelium.

Conclusions. Thus, our data may indicate, that when a certain period of VD and development of disease is inhibition on the growth and proliferation of cells of buccal, and on the contrary the stimulation of these processes. Since copper is one of the most important essential trace elements necessary for human life, and hence its part in many metabolic processes, we can assume, that with VD hypercopperosis occurs (a gradual increase in the body of toxic free copper). Therefore, in various systems and structures of the human body can not be the same as on the severity and direction of pathological and physiological effects of copper ions. Perhaps, this can be explained by the variety of manifestations of VD, the frequent lack of parallelism severity of hepatic and neurological manifestations of the disease, as well as a large latent period of clinical manifestations.

Yeromenko A.

PATHOGENIC ASPECTS OF CARDIOGENIC CEREBRAL EMBOLISM

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1

Introduction: Ischemic stroke is one of the major causes of disabilities and death in the adult population. Among pathogenic mechanisms of sharp anomaly of cerebral circulation cardial anomaly takes the lead. Cardial causes of brain ischemic abnormalities are

characterized by a hidden flow and often lead to undesirable complications. It is established that ischemic cardiovascular disease develop according to the cardiac cerebral embolism.

The aim of this work is definition of cardiac stroke pathological mechanisms.

Materials and methods for studies. A 38 patient-desease-analysis took place. There were 22 men and 16 women, aged 54-67, who had cardiogenic stroke in the middle cerebral artery. The studied patients were conducted such studies as: biochemical blood analysis, electrocardiography, ultrasound, the Holter ambulatory monitoring, magnetic resonance imaging, spiral computed angiography.

Results: During the study, it was found that 40% of patients the cause of ischemic stroke was myocardial infarction, 33% - cardiac fibrillation, 20% - left ventricular aneurysm, and only 7% - rheumatic heart disease, complicated with mitral stenosis. These pathological conditions can occur at the time of the lack of subjective or objective examination of cardiac disorders.

Conclusion. Thus, the specification of pathogenic subtype has already happened or future ischemic stroke is a prerequisite for the effectiveness of primary and secondary prevention of vascular events, and prevention of cardiogenic ischemic stroke is one of the most important and promising areas of preventive cardio-neuroscience.

Zagora O.O., Riznychenko O.K.

THE USE OF STATINS IN A PREVENTION OF CEREBROVASCULAR PATHOLOGY – THE DILEMMA OF MODERN MEDICINE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of neurology №1

Introduction: According to World Health Organization materials, mortality from stroke is about 12% of all deaths. It allows strokes to be the second most common cause of death in the world. The annual incidence of new cases in different countries varies from 1.27 to 7.4 per 1000 population. Therefore, the stroke can be called a global pandemic in the modern society.

Numerous clinical studies provedthat the effectiveness ofuse of statin in the stroke prevention. This is caused by the action mechanism of the drug on the inhibition of cholesterol synthesis in the liver. Also, a number of studies have demonstrated that statins possess many additional effects and may have neuroprotective effects. Experts of the American Heart Association and American Stroke Association recommend intensive statin therapy for secondary prevention of stroke in patients who have had a stroke, which based on the data obtained.

Aim: The purpose of the work is to determine the dependencyof the risk increasing in arising of hemorrhagic strokes and cancer pathology from the use of high doses of statins.

Material and methods:the processing, analysis of clinical and experimental research publications.

Results of the study. The contradictions in the evidence base were discovered - so the effectiveness of prevention of ischemic stroke and transient ischemic attack is correlated with a tendency to increase the risk of hemorrhagic stroke in the patients receiving statins.These data are also resemble with the results of several studies, that pointing to the risk of hemorrhagic stroke dependence on the level of blood lipids - the lower content of low density lipoprotein (LDL) cholesterol, the higher risk of the hemorrhagic stroke.Moreover a meta-analysis conducted by Alawi Al Sheikh-Ali and Richard Karas

(Tufts University School of Medicine, Boston 2007) showed that there is exist a connection between low levels of LDL cholesterol and an increased risk of malignant tumors.Journal of the American College of Cardiology in 2007 published a result of the research, which revealed a connection between the use of high-dose of statins and an increased risk of oncological diseases.

Conclusion: the analysis of foreign literature has showed that the question of the positive influence of statin therapy on the human body is ambiguous and requires the depth scientific research.

Zavgorodnia N.

DIAGNOSIS AND PSYCHOTHERAPEUTIC CORRECTION OF ADAPTATION DISORDER IN WOMEN DELIVERED A PREMATURE INFANT

Kharkiv National Medical University, Kharkiv, Ukraine
Department of psychiatry, narcology and medical psychology

Introduction: The birth of a premature baby is a situation, which is a prerequisite for the development of clinically significant adaptation disorder in women.

Material and methods: Based on a systematic approach to assessing the results of a comprehensive clinical and psychopathological, clinical-anamnestic, psychodiagnostic methods survey of 150 women delivered a premature infant were made. Prolonged depressive reaction (F 43.21) - 33,30% , adaptation disorder with prevalence of disorders of other emotions (F 43.23) - 20,90% and mixed anxiety and depressive reaction (F 43.22) – 19, 70% were identified. By means of forecasting methods (classification tree construction) made the prediction capabilities of adaptation disorder in women delivered a premature infant. Proved factors that may cause the development of this disease are: visiting a woman during pregnancy school for parents; general living conditions of women; seeking medical care during pregnancy; level of education; place of residence. Lack of reliable information on the reasons for the onset of preterm delivery and premature baby features of the structure of classes of schools parents is seen as a potential risk factor of adaptation disorder, which necessitates correction lessons and topics include specified information to plan lessons for the prevention of these states.

Results: Proved, developed and implemented a complex system of short-term psychocorrection work, which included a module of psychoeducation and four-phased model of psychological therapy, allowing for the stay of women in neonatology department. The main topics that were highlighted during the psychoeducation process were topics related to the special needs of the child and elimination of the deficit of medical information that was offered in the most accessible and understandable form.

Zelenska K.

BASIC MECHANISMS OF THE SUICIDAL BEHAVIOR FORMATION IN YOUNG PEOPLE WITH PSYCHOGENIC DEPRESSION

Kharkiv National Medical University, Kharkiv, Ukraine
Department of psychiatry, narcology and medical psychology

Introduction. The progressive increase of cases of suicides in the world needs to be studied in terms of its pathogenesis as the most topical problem of scientific researches. A person suffering from depression is 35 times more likely to commit suicide than a healthy individual (from 45 to 60% of all suicides in the world make depressed patients).

Aim. The aim of our study was to investigate the basic mechanisms of formation of suicidal behavior in young patients with psychogenic depression.

Materials and methods. We have carried out a comprehensive survey of 96 patients of both sexes, aged 18 - 35 years with depressive disorders (F41.2, F43.21), with various forms of suicidal behavior. The control group consisted of 40 patients with similar forms of pathology at the age of 18 - 35 years without any signs of suicidal behavior. We used the following methods: clinical, psychopathological, clinical and anamnestic, psychodiagnostic, determination of serotonin and melatonin in the blood, the study of gene polymorphism and LRRTM4 and ACP1.

Results. Analyzing the metabolic abnormalities in the biogenic amine groups belonging to different nosological manifestations and varying the intensity of the depression we determined that both group of patients characterized by specific symptoms. Patients with suicidal behavior, which was caused by an acute reaction to stress, there was a decrease in the excretion of adrenaline and noradrenaline night period during the day. Enhancement of serotonin and melatonin decrease blood concentration in this group was less pronounced in comparison with others. In individuals with high result values on the Hamilton scale of depression and other depression scales to determine shown the greatest increase in the concentration of serotonin in the blood and the lowest levels of melatonin in the blood plasma.

Conclusion. Obtained data allowed us to develop a comprehensive system of pathogenetically substantiated correction of suicidal behavior within the acute stress response, including the combined use of pharmacological and psychotherapeutic influence, as well as psychoeducational programs.

OPHTALMOLOGY

Duras A.

IRIS CONFIGURATION IN ACCOMMODATION IN PIGMENT DISPERSION SYNDROME

Kharkiv National Medical University, Kharkiv, Ukraine
Department of ophthalmology

Introduction. Pigment dispersion syndrome (PDS) is a condition of the anterior segment of the eye characterised by pigment deposition on a number of ocular structures. The condition is usually bilateral but most commonly asymmetric. The free pigment particles spread throughout various structures of both anterior and posterior chambers including the zonules, the anterior and posterior surfaces of the lens, the iris, the cornea and more importantly the trabecular meshwork. In itself, the condition does not represent any problems for the patient, but pigment deposition in the trabecular meshwork may interfere with drainage of the anterior chamber fluid and cause pigmentary glaucoma (PG).

Aim. This study was conducted in order to investigate the effect of accommodation on the iris morphology and iridolenticular contact, in eyes with PDS and Pigmentary Glaucoma (PG), using high-resolution ultrasound. Iris concavity has been noted in pigment dispersion syndrome, and could have a role in producing iris-zonule contact. Iris concavity is most likely caused by a relative increase in anterior chamber pressure.

Material and methods. We performed a prospective observational study, examining a group of 18 PDS and PG patients (36 eyes) and group of normal patients (10 eyes). All patients underwent ultrasound biomicroscopy, before and during accommodation. Examinations were conducted using the commercial version of Ultrasound Biomicroscopy (SONOMED VuMax USA) using a 50 MHz frequency transducer, with the patient in supine position. At the first scanning examination, patients were asked to fixate with their fellow eye on a target 3 metres away (accommodation relaxed). During the second examination (accommodation induced), the patient's fellow eye fixated at a print target at 30 cm distance. We first scanned the meridians at 3 o'clock, then continued clockwise at 6, 9 and 12 o'clock.

Results. The iris profile before accommodation was found convex in 51,5%, flat in 18,7% and concave in 29,8%. Following accommodation the iris configuration increased in concavity in 28,3%.

Conclusion. The effect of accommodation on iris configuration and accommodation is variable. Accommodation increases iris concavity in some patients with pigment dispersion syndrome. The most likely explanation is an accommodation-induced relative increase in anterior chamber pressure secondary to anterior movement of the lens surface. Iridotomy prevents change in the iris profile with accommodation.

Gulida A., Gaber D.I.

DETERMINATION OF THE LOCATION OF THE LAMINA CRIBROSA WITH APPLICATION OF THE DEVELOPED CRITERABASED ON OPTICAL COHERENCE TOMOGRAPHY DATA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of ophthalmology

Aim: myopia is a global public health problem leading to visual impairment.

Myopia common disease leading to disability in sight. Progression of myopia is caused by the extension of the eyeball due to stretching of the sclera and increased anteroposterior segment of the eye. In the exit of the optic nerve in the posterior pole of the eye locates the lamina cribrosa (LC). Through which bundles of retinal ganglion cell (RGC) axons and the retinal blood vessels pass. But nowadays, its role not yet fully understood. There are imaging methods that can determine its location and characteristics of its structure. And the purpose is to analyze the results of the research of LC using optical coherence tomography (OCT).

Materials and methods: under supervision were 60 person with myopia and 12 practically healthy person (control group) . All patients were screened using the method of optical coherence tomography by RTVue-100 Fourier-Domain Optical Coherence Tomography. Based on work of Sung Chul Park and co-authors "Horizontal Central Ridge of the Lamina Cribrosa and Regional Differences in Laminar Insertion in Healthy Subjects" was determined the arithmetic mean of the number of points that define the location of the RP. Following parameters were taken into account : two edges of Bruch's membrane, max depth of RP, RP insertion depth, length of two edges of insertion of RP. According to the data, these parameters are main markers that indicates the location of RP.

Results: According to the OCT two edges of Bruch's membrane are determined in 94,4% ± 2,7 cases (68 patients) . Max depth of RP determined in 75% ± 5,10 cases (54 patients). The depth of insertion of RP can be defined in 83,33 % ± 4,39 cases (60 patients). The length of two edges of insertion of RP is determined in 75% ± 5,10 cases (54 patients).

Conclusion: Exist imaging methods in Ukraine that can determine location and characteristics of the lamina cribrosa structure, which will help further clarify the mechanism of pathogenesis of myopia violation of visual functions in this group of patients and serve as a basis for the development of methods of prevention and treatment of blindness in people suffering from myopia.

Honchar O.M., Tikhonova O.O., Sarkisian G.S., Khatsenko I.O., Kazaryan L.V.

DEPENDENCE ON THE RETINAL GANGLION CELLS COMPLEX THINNING FROM THE VISUAL ACUITY IN PATIENTS WITH PRIMARY OPEN-ANGLE GLAUCOMA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of ophthalmology
Scientific advisor: professor Bezdetko P.A.

Introduction. Glaucoma is an important issue of ophthalmology, due to the increasing incidence of resulting blindness. More than 15,0% of blind patients who are blind due to glaucoma (Strahov V.V. et al., 2012; Mochetova L.K. et al., 2007). In Ukraine, among the causes of disability-free glaucoma is the second (Grebenik I.M. et al., 2013; Goncharova N.A. et al., 2012). Our studies show the dependence of the retinal ganglion cells complex thickness from the stage of primary open-angle glaucoma.

Aim: To investigate the dependence of the retinal ganglion cells complex thinning from the visual acuity in patients with primary open-angle glaucoma.

Material and methods: We examined 64 eyes of 34 patients (13 men, 21 women) with primary open-angle glaucoma, after ruling out the other possible causes of decreased visual acuity.

Exclusion criteria for this study were as follows: presence of age-related macular degeneration and the chorioretinal scars, initial cataract, corneal opacity and vitreous, a history of circulatory disorders in the great vessels of the retina and surgical interventions on the eyeball, presence of amblyopia, high myopia and astigmatism. Furthermore, this study did not include patients with diabetes, connective tissue diseases and non-compensated hypertension.

Results: Decrease in visual acuity was diagnosed in cases of visual acuity lower than 0.95 (after correction). Visual acuity of 0.95 - 1.0 (after correction) was considered normal.

The value of the median, lower and upper quartile (Me, LQ, UQ) of the retinal ganglion cells complex thickness in the eyes of patients with decreased visual acuity was 55,0 (52,0, 57,0) μm and was significantly lower (p = 0,0021) in comparison with that in the eyes with normal visual acuity (68,0, (64,0, 71,0) μm). Thus, our results show that the eyes of patients with reduced visual acuity due to glaucoma are characterized by significantly lower (19,1%) retinal ganglion cells complex thickness.

Conclusions: Patients with reduced visual acuity due to glaucoma have significantly reduced retinal ganglion cells complex thickness.

Ivzhenko L.I., Sheremeta I.A.

IMPROVING THE PROCESS OF MEIDOGRAPHY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of ophthalmology

Introduction: Meibomian gland dysfunction (MGD) is one of the most common abnormalities in ophthalmic practice. MGD is a chronic, diffuse abnormality of the meibomian glands, commonly characterized by terminal duct obstruction and/or qualitative/quantitative changes in the glandular secretion. This may result in alteration of the tear film, symptoms of eye irritation, clinically apparent inflammation, and ocular surface disease. Meibography is a well-known option in the assessment of meibomian gland morphology and the diagnoses of MGD. Over the past 40 years, meidography has undergone significant development regarding its application to research and clinical practice. Implementation of meibography in the daily routine should be considered because of its high specificity and sensitivity in the diagnoses of MGD and dry eye.

Aim: to improve the technology of meidography for assessment of meibomian gland morphology and the diagnoses of MGD.

Material and methods. Thirty-five patients were recruited in this study (12 males and 23 females) from 20 to 70 years old. Meidography; meibomian gland changes were described, using a Pflugfelder scale.

Results. The study of MG disfunctions was conducted using three types of light rays (green, blue and white). Meibomian glands changes were identified in 19 (55 %) patients with the help of green light transillumination, 12 (35%) – blue light, 4 (10%) – white light.

Conclusions. The use of different light spectrum (green, blue and white) in transillumanating the MG, helps to evaluate the quantity and the morphology of meibomian glands. Based on our research, the use of green light spectrum is the most informative and credible in the diagnosis of meibomian glands changes.

Lytvyshchenko A.V., Samofalova M.M., Kazaryan L.V., Sarkisian G.S., Friantseva M.V., Khatsenko I.O.

METHOTREXATE IN POSTSURGICAL PERIOD IN PATIENTS WITH PERIPHERAL UVEITIS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of ophthalmology
Scientific advisor: professor Panchenko M.V.

Introduction. The problem of peripheral uveitis in developed countries has social and economic meaning in connection with the defeat of people of the working age, asymptomatic flow, late diagnostic and as a consequence – ill-timed treatment and severe complications, which in some cases lead to blindness. First information about the application of Methotrexate in ophtalmology is dated to 1965 (Wong V.et al.). Application of Methotrexate in patients with uveitis contributed to the regression of inflammatory process in terms of treatment up to 6 months (Gangaputra S. et al., 2009).

Aim: study of the efficiency of Methotrexate in postsurgical period in patients with peripheral uveitis

Material and methods: 3 patients (aged 10, 14 and 32 years) with peripheral uveitis and pseudoafakiya (as a result of uveal cataracta) were monitored. Postoperative treatment period amounted 4 - 8 months. In addition to the conventional examination all patients had the ultrasound biomicroscopy by the apparatus ‘‘VuMax-II’’ (Sonomed) with the sensor with the frequency of 50 MHz. Methotrexate was prescribed as an alternative to systemic corticosteroids to achieve the remission of uveitis before surgery (during 6 month) and to prevent its aggravation in the postsurgical period .

Results: As a result of the use of methotrexate in the postsurgical period in pseudoafak eyes the recurrences of uveitis have not been revealed. The remission period lasted 4 - 8 months. Currently, the patients are being monitored.

Conclusion: Methotrexate is an effective treatment in the postsurgical period in patients with peripheral uveitis. Its usage contributes to the achievement of the long-term remission of the inflammatory process.

Miroshnichenko Y.N., Pakhomova A.V.

CONTACT LENS CORRECTION FOR PRESBYOPIA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of ophthalmology

Introduction. Sociomedical and economical significance of restorative vision correction with presbyopia is certain in consideration of high frequency of this pathology occur in working age people of 40 years and upwards. Significant near vision disability is experienced by 410 million people on the world. The ageing population highlights the need to provide effective optical solutions for presbyopic contact lens wearers. Tendency of medical preference of presbyopia using multifocal soft silicone hydrogel contact lens as the first choice.

The aim of the study is to expose peculiarities of selection of soft silicone hydrogel contact lens for active lifestyle patients with presbyopia.

Material and methods. Age of examined patients was in the range of 42-50 years, women were in the majority (81% of cases). All the patients had executive

ophthalmological checkup to expose associated ocular pathology and contradictions to this type of contact lens vision correction. Selected multifocal contact lens had silicone hydrogel structure and had one month of wearing. The size of addition (ADD) power was chosen according to the charts of soft contact lens provider.

Results. A significant increase in the quality of vision and subjective satisfaction of our patients in the process of the use of these lenses, observed in more significant cases with small ADD power and for users who applied a progressive spectacle correction before. Multifocal contact lenses offer the best of both worlds: no glasses, along with good near and distance vision. We determined the criteria of exception for the selection of multifocal soft contact lenses: dry eye syndrome, developing in the setting of changes of endocrine profile in women during menopause, in the presence of hypomyotonia, elasticity of eyelids skin, gapping of eyelids to the eyeball, pupil's rigidity, joint stiffness that resulted in limitation at manipulations with lenses.

Conclusion. Selection of soft contact lenses to the patients above 40 years, requires special attention and great volume of examination, including assessment of the eyelids, condition of layers of tears, lens, retina, measuring of intraocular pressure, finding out of general anamnesis and selection of adequate ADD power.

Rozhdestvenskaia A.A.

MYOPIC TRACTION MACULOPATHY: CLINICAL FEATURES, PATHOGENESIS AND PROSPECTS FOR TREATMENT

Kharkiv National Medical University, Kharkiv, Ukraine
Department of ophthalmology
Scientific adviser: professor Bezdetko P.A.

Introduction*:* The prevalence of myopia is about 25 to 50 percent in modern practice of European countries. The high myopia with complex of macular damage such as central retinoschisis, macular hole, shallow detachment is of particular concern. G. Panozzo and A. Mercanti, 2004 were the first to suggest merging all changes of macular area in eyes with high myopia. They introduced the term «Myopic traction maculopathy» (MTM) that describe the complexity of emerging changes. Detection of MTM is possible due to the optical coherence tomography (OCT) which can identify macular changes more successful than biomicroscopy, angiography and ultrasound. Early diagnosis and surgical treatment prevents serious consequences, the main one being irreversible loss of vision.

Aim: to define the features of MTM and assess the treatment prospects.

Material and methods: The research of frequency and features of macular pathology with high myopia by Giacomo Panozzo, Andrea Mercanti, 2004 was analyzed. There were 125 eyes with degree of myopia ranging from –8 to –26 spherical equivalent (mean ± SD, –16.93 ± 5.74). Mean ± SD axial length was 29.75 ± 2.12 mm.

Results: Epiretinal traction was noted in 58 eyes (46.4%) (The most frequent form of traction was epiretinal membrane (ERM), found in 31eyes (24.8%), 11 eyes (8.8%) had vitreomacular traction (VMT) alone, while a mixed form of tangential (ERM) and anteroposterior (VMT) traction was present in 16 eyes (12.8%). Retinal damage was present in 43 eyes (34.4%). Macular retinoschisis,isolated or associated with other lesions, was the most frequent form of damage,identified in 25 eyes (20.0%). Ten eyes (8.0%) had macular thickening, 6 eyes(4.8%) had a lamellar macular hole, and 2 eyes (1.6%) had an isolated shallowretinal detachment. In 53 (42.4%) of 125 eyes a staphyloma was present. Of 43 eyes

with a form of retinal damage, 36 eyes (83.7%) had an associated epiretinal traction, isolated or combined with staphyloma. Some patients with bilateral myopia who had a stablemacular retinoschisis in one eye and a macular hole with posterior retinaldetachment in the fellow eye, we can speculate that in degenerative myopia,macular holes and MTM could represent 2 possible evolutions of the same tractionaldisorder, depending on depth, width, and shape of staphyloma and degree oftangential or anteroposterior traction. In the presence of epiretinal traction, the posterior retina in degenerative myopia lies in a peculiar and unstable condition determined by two opposite forces: ERM and VM-adhesions generate an internal traction, while staphyloma and progressive scleral stretching generate an external force that greatly enhances the internal traction. In the case of symptomatic patients, vitrectomy and inner limiting membrane peeling may have a positive effect on vision by releasing this traction, stopping the progression of macular damage such as retinoschisis, and possiblyreducing or eliminating shallow posterior retinal detachment, but does not constitute a guarantee that MTM will be complete eradicate.

Conclusions: In this way, changes in the macular area of the retina in patients with high myopia is a frequent and severe complication of pathological processes. These pathological changes require early diagnosis and appropriate treatment to prevent irreversible loss of vision.

Samofalova M.M., Friantseva M.V., Khatsenko I.O., Sarkisian G.S., Kazaryan L.V.

PROGNOSTICALLY FAVORABLE AND PROGNOSTICALLY UNFAVORABLE FACTORS OF GOOD FUNCTIONAL OUTCOME OF TREATMENT OF PATIENTS WITH CHORIORETINITIS AND NEUROCHORIORETINITIS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of ophthalmology
Scientific advisor: professor Panchenko M.V.

Introduction: According to the WHO chorioretinitis and neurochorioretinitis are the essential reasons leading to blindness and low vision. Knowing the prognostically favorable and unfavorable factors of good functional treatment would let to prescribe the rational therapy for each patient.

Aim: To determine prognostically favorable and prognostically unfavorable factors of good functional outcome of treatment of patients with chorioretinitis and neurochorioretinitis.

Material and methods. We analyzed the results of examination and treatment of 55 patients (63 eyes) with chorioretinitis and neurochorioretinitis who were hospitalized in the ophthalmology department of Kharkov Regional Hospital in 1985-2007 or were examined as outpatients. Among them 21 males and 34 females. Patient age did not exceed 76 years. All patients, according to the tasks, were divided into 2 groups. The first group included 24 patients (28 eyes) who were treated from the chorioretinitis. The second group included 31 patients (35 eyes) who were treated from neurochorioretinitis. Statistical data processing was performed using Statistica, version 6.1.

Results: Based on the study of correlations of functional results of treatment (visual acuity) with clinical showings of patients' eyes before treatment revealed that noncentral localization of inflammatory focus and visual acuity before treatment not lower than 0.5 are favorable prognostic factors of chorioretinitis for good functional outcome (visual acuity of

0.7 and above). Prognostically unfavorable factors are central chorioretinal inflammatory focus localization and visual acuity before treatment 0.1 or less. Thus, visual acuity of such patients with chorioretinitis is usually below 0.3 when they are discharged. In patients with neurochorioretinitis, favorable prognostic factors of good functional outcome (visual acuity of 0.7 and above) are noncentral localization of chorioretinal inflammatory focus, peripheral form of optic nerve damage and visual acuity before treatment more than 0.45-0.5. Prognostically unfavorable factors are central localization of chorioretinal inflammatory focus, transversal and axial form of optic nerve damage and visual acuity before treatment less than 0.3. Thus, visual acuity of more than half of these patients with neurochorioretinitis is not higher than 0.3.

Conclusion: The favorable prognostic factors of good functional outcome of patients with chorioretinitis and neurochorioretinitis are noncentral chorioretinal inflammatory focus localization and high visual acuity before treatment and in patients with neurochorioretinitis - also the peripheral form of the optic nerve damage.

Sarkisian G.S., Honchar O.M., Friantseva M.V., Khatsenko I.O., Kazaryan L.V.

CHANGES BCL-2 IN GLAUCOMA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of ophthalmology
Scientific advisor: professor Panchenko M.V.

Introduction. The problem of glaucoma currently remains one of the most topical problems in modern ophthalmology. Until now, this disease is a cause of irreversible vision loss and occupies a leading position in the list of invalidity eye diseases. In this case, the majority of patients with a long history of primary open-angle glaucoma is a progressive deterioration of visual function with the transition of the disease in a more serious stage. According to some authors, compression of the axons of ganglion cells by curved laminar partitions with increase of intraocular pressure (IOP) decreases axoplasmatic current and causes a decrease in retrograde axonal transport. It's leads to a decrease in delivery of neurotrophic factors to the body of the retinal ganglion cells. Thus, the loss of retinal ganglion cells during glaucoma develops due to activation of apoptosis from insufficient trophic supply of cells (Minckler D.S. et al., 1977).

Aim. To study the changes of the antiapoptotic protein Bcl -2 with primary open-angle glaucoma from literature data.

Materials and methods: We carried out an analysis of the literature from 1993 to 2013.

Results: There are two major pathways of apoptosis which are described in the literature - mitochondrial-mediated or receptor-mediated pathways. Both pathways lead to caspase-3 activation and cell death. In the mitochondrial pathway, the Bcl-2 family of proapoptic (Bcl-x-s, Bax, Bad, Bag) and antiapoptotic (Bcl-2 и Bcl-x-l) proteins is the key regulator (Merry D.E. et al., 1996). Thus, Bcl-2 inhibits apoptosis by inhibiting cytochrome-c release and caspase activation, while Bax promotes apoptosis by inducing the release of cytochrome-c, which then triggers the downstream apoptosis event. From data of researches, expression of Bcl-2 prevents neuronal death in vitro (Allsopp T.E. et al., 1993; Zhong L.T. et al., 1993). Experimental studies in transgenic mice demonstate the influence of changing the ratio of Bcl-2/Bax protein on the survival of retinal cells. Thus, from a study using Bcl-2 deficient mice, the depletion of endogenous Bcl-2 expression can lead to

apoptosis in retina (Kotulska K. et al., 2003). Transgenic mice overexpressing the Bcl-2 gene displayed 13-fold higher retinal ganglion cell survival after 2 months of optic nerve transaction (Martinou J.C. et al., 1994). Studies in model of experimental glaucoma with animals confirm the role of antiapoptotic and proapoptotic factors in the pathogenesis of the disease. Coassin M. et al. (2008) on the model of experimental glaucoma in mice have established that the loss of retinal ganglion cells is accompanied by a decrease the ratio of Bcl-2/Bax, which according to the authors indicate overexpression of Bax.

Hani Levkovitch-Verbin et al. (2013) showed that the expression of Bcl-2 gene significantly decreased in the retina and optic nerve in experimental glaucoma caused by laser coagulation of collector channels. There was a significant negative correlation between peak and mean IOPs and Bcl-2 gene expression in the retina and optic nerve.

Conclusions: The analysis of literature shows the need for further study of the role of antiapoptotic Bcl-2 protein in the pathogenesis of primary open-angle glaucoma, as well as methods of its correction.

Stoliarova O.

BINOCULAR VISUAL FIELDAND QUALITY OF LIFE IN GLAUCOMA PATIENTS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of ophthalmology

Introduction: The diagnostics of glaucoma is one of the most important problems in ophthalmology because of its great medical and social role and vision loss as an outcome of the disease. The prevalence of glaucoma is constantly increasing. To detect the eye pathology we test the visual field of each eye separately. But our perception that influences the quality of life is determined by two eyes. Binocular visual field testing and the study of quality of life is needed for the better understanding of the influence of open-angle glaucoma on patients.

Aim: To test binocular vision field loss and quality of life in glaucoma patients.

Material and methods: We examined 32 patients (18 men, 14 women) with open-angle glaucoma. We performed visual acuity evaluation, biomicroscopy, tonometry, gonioscopy, perimetry. Binocular visual fiend was studied with Esterman that is based on the study of the function. The projection of normal boundaries of binocular visual field is divided into rectangles of different size, depending on how important they were functionally. The most important zones are in the middle and lower areas, because when performing work at close distance, they play a more significant role. Quality of life was tested with Visual Function-14, which has 14 questions about the complexity of visual tasks, 7 of these questions estimate the quality of life that depends on the binocular visual field.

Results: Up to 77% of binocular vision field was preserved even in patients with advanced open-angle glaucoma. Quality of life was higher than 74% and quality of life that depends on the binocular visual field was higher than 72%.

Conclusion: The comparison of monocular and binocular visual field tests and the evaluation of the quality of life in glaucoma patients helps to increase the efficiency of diagnostics of patients with glaucoma and receive more accurate data about the influence of the disease on visual functions and quality of life.

INFECTIOUS DISEASES

Adamsky M.A., Mironchenko A.A., Batovskaya A.O.

DIFFICULTIES IN DIAGNOSIS OF TUBERCULOUS MENINGITIS WITH AND WITHOUT HIV

Kharkiv National Medical University, Kharkiv, Ukraine
Department of phtisiatry

Introduction. Tuberculous meningitis (TBM) is arapidly progressing form of tuberculosis that has lethality rate 16-55%Right diagnosis set in time, proper drug combination and dosage are the basis of the successful treatment, preventing aggravations and disability.

Aim. Our scientific research set the aim to study differences in symptomatic and laboratory findings between tuberculous meningitis (TBM) with and without HIV.

Results. Outcome of TBM fully depends on the time that elapsed from the onset of disease symptoms to the beginning of the therapy. Diagnostic delay of at least 3 days increases risk of death in children and adults. The mortality rate is much higher among HIV infected people than among HIV-negative. Due to the research information, eight of 34 children in South Africa, co-infected with HIV died during treatment for TBM, while all 55 children without HIV survived. There are significant difficulties in diagnostic of TBM as there are poor findings in cerebrospinal fluid, especially in HIV-negative patients. CSF was the site of culture for *Mycobacterium tuberculosis* in 2% of the cases in patients without HIV infection, compared with 10% of patients with HIV infection. Prevalent laboratory findings are CSF pleocytosis, elevated protein levels and low glucose level. However, these findings can't exclude other types of meningitis and are nonspecific for TBM. An increased adenosine deaminase level has more than 90% sensitivity and specificity of diagnosing TBM. However this factor is relevant only for HIV-negative patients. CSF findings in HIV-infected adults have shown low specificity of adenosine deaminase. The clinical presentation of TBM includes altered level of consciousness, hydrocephalus. Instrumental findings show cerebrospinal infarctions, basal meningeal enhancement, cerebral edema, and nodular enhancing lesions. Thesesymptoms, especially altering of consciousness and cerebrospinal infarctions are more common in TBM with HIV co-infection.

Conclusion. In conclusion we want to say that correct and quick diagnostic of TBM is simply imperative as it lowers the risk of lethal outcome. This risk is much bigger in HIV-infected patients and increases as the count of CD4 cells decreases. Different laboratory findings usually don't provide full specificity and sensitivity. The only CSF finding that can confirm the tuberculous etiology of meningitis is the presence of mycobacterium tuberculosis. However this finding is rare in HIV-negative and more common in HIV-positive patients. In general, diagnostic of TBM in HIV infected patients is easier due to higher probability of exciter finding and better manifestation of clinical symptoms.

Adeem Farkad Yousif Alani

CLINICAL-PATHOMORPHOLOGIC ASPECTS OF HIV INFECTION WITH PJP

Kharkiv National Medical University, Kharkiv, Ukraine
Department of infectious diseases

Introduction: The discovery of the Human Immunodeficiency Virus (HIV) was led by the merge of clustered cases of Pneumocystis jirovecii Pneumonia (PCP) in otherwise healthy people in the early 80's. Respiratory diseases in patients with HIV infection presents a wide range of pathogens (bacterial pneumonia, viral lung disease caused by CMV, HSV and complicating lymphocytic interstitial pneumonia, fungal infections, Kaposi's sarcoma, lymphoma, lung cancer). Causes of pneumonia depend on the number of CD4 lymphocytes. Pneumocystis pneumonia (PJP) complicates the course of HIV infection at lower intensity of immunosuppression as compared with cytomegalovirus defeat.

Aim: To study the clinical course, pathological changes, particularly diagnostic of atypical pneumonia (due to PJP) in HIV-infected patients.

Material and methods. An analysis of autopsy results based on four protocol and the results regional hospital microscopy preparations, central research laboratory KhNMU where additional study was conducted pathological changes in the lungs and other organs when stained by the method of Romanowsky-Giemsa. In 4 patients who died on admission to hospital in 2009, diagnosed with HIV and clinical stage IV and pneumonia community acquire.

Results: Among the dead were 4 patients all women, average age 38 years, the average day of illness on admission - 26.2, the average number of patient days in hospital - 6.5. In a study of autopsy results - both lungs were heavy, a little air, or even dough like consistency. Microscopically observed in 1 case the presence of features characteristic for CMV lesions at different stages.

Conclusion. 1. Intravital diagnosis and differentiation of interstitial lung lesions of HIV-infected patients is difficult. 2. In evaluating the pathological changes in lung tissue microscopically were used indirect signs of pneumocystis pneumonia. 3. The complexity of the differentiation of pulmonary tuberculosis in patients with HIV infection with lymphocytic pneumonia and pneumocystis pneumonia often causes the therapy of »ex juvantibus».

Adeyemi A. A.[1], Shevchenko I. G.[2], Snyder D.[3], Snyder M.[3]

USE OF THE ZERO IN ON ZERO™ MODEL FOR TUNGIASIS PREVENTION AND CONTROL

1 - Kharkiv National Medical University, Kharkiv, Ukraine
2 - Volgograd State Medical University, Volgograd, Russia
3 – Orthopedic center of excellence, Good Samaritan Hospital, Ohio, Cincinnati, U.S.A

Introduction. Tungiasis, a neglected tropical disease (NTD) is a cutaneous parasitosis caused by the female sand flea Tungapenetrans (in English-speaking countries, it is known as jiggers, sand flea or chigoe). Confirmed tungiasis cases have been reported in Nigeria, Kenya and Tanzania. Different programs were developed for prevention and control of NTD, but they are not always effective.The zero in on zero™ model is a new technique created by Dr. Mark Snyder, a Stanford and Harvard University trained medical doctor aimed at the reduction of the rate of complications after surgical joint replacement to near zero. It involves identification of contributing factors before, during, and after surgery,

research and analysis of the highest level of evidence available, using data from randomized clinical trials, controlled clinical trials, meta-analyses, clinical practice guidelines, and Cochrane reviews and from these, developing of best practice proposals for the improvement targets.

Aim. The aim of the study was to prove effectiveness of the zero in on zero^{TM}model for prevention and control of tungiasis in Kenya village.

Materials and methods. The zero in on zero^{TM}model was used to obtain data from Kenya population and healthcare professionals about the problem, divide the data received into three periods (Before, During, and After) and create solutions to the three timeline periods.

Results: After a specific monitoring period, and strict compliance with the zero in on zero^{TM}model, the measures for tungiasis control were proposed to the three timeline periods. The most important among them were: before infestation – wearing close shoes, teaching hygiene in home, health education and soil conditions (moringa seed inoculation and composting); during infestation – physical removal of jiggers with sterile needles to avoid infection, apply topical appropriate medication, use of repellents, tetanus vaccination (since removal increase risk); after infestation – continued health education, poverty reduction, community health worker's surveillance of infested households. Implementation of above mentioned measures resulted in 30 times reduction of Tungiasis incidence rate in Kenya village.

Conclusion: The zero in on zero^{TM}model is a good preventive medicine tool that can be used for control and prevention of not only NTD but other infectious diseases in endemic regions which forms the basis of a successful eradication of NTD and others in future.

Ata M.A

THE ROLE OF TEMPERATURE MEASUREMENT AREA SELECTION IN THE HEARTH OF THE SKIN IN THE DIFFERENTIAL DIAGNOSIS OF LOCALIZED SCLERODERMA IN THE PERFORMANCE OF REMOTE THERMOGRAPHY

Kharkiv National University. VN Karazin, Kharkiv, Ukraine
Department of general and clinical pathology

Introduction. When performing remote thermography various body regions, having normal individual average temperature due to the existence of the features in the extent of their blood supply and innervations, show different capacity to adapt with localized scleroderma (LS). It is natural that the diagnostic stage presence of such features determines the need to study the temperature of the skin of the affected zones of different regional affiliation.

Aim. Improved Diagnostics localized scleroderma considering regional features of the human body temperature changes in response to the presence of lesion of skin disease.

Material and methods. Number of patients with localized scleroderma, is being treated at the clinic GU "IFES much" to "blind" sample held thermometric study. In the study group included 26 patients with localized scleroderma in age from 17 to 65 years, 24 of them (92.3%) - women, 2 (7.7%) - men. For remote thermography in the projection scleroderma lesions in 24 (92.3%) of patients surveyed group stage in edema and thickening of the skin were identified areas of hyperthermia, indicating the presence of inflammation in these lesions. Also in 2 (7.7%) patients in the stage of atrophy of the skin, in the projection of scleroderma lesion of scleroderma in the remote areas of thermography revealed hypothermia, which indicated the presence of processes sclerosis in these lesions. Used the

method of thermal imaging of the skin by using a matrix imager brand TK-1 (Kharkov, Ukraine) All data is processed by the application of parametric methods of statistical analysis, which is selected as a method of multiple pair wise comparisons of means using the criterion Newman-Keylsa - q.

Results. To test the assumption that there are individual differences in average temperatures of the investigated areas of the body with localized scleroderma, depending on their regional affiliation was a comparative analysis of intergroup, As before, it was preceded by conducting research groups on respect for equality of variances and their belonging to the normal type of distribution. According to data obtained by us in the course of thermal imaging survey of patients with LS parameters obtained using more accurate methods of comparative analysis between some intergroup Compares the identified significant differences, as evidenced by the high values of the coefficients obtained in excess of the level of the critical value q.

Conclusions. Therefore, differential diagnostic features are directly dependent on the LS selection of appropriate areas of research in the field of surface temperature scleroderma lesions, as average temperature change with the presence of portions of the body portions of different focal regional accessories in some cases significantly different from each other. Based on the study in the further statistical analysis of the results, it was decided to form a number of groups on the basis of the localization of damage to one of the anatomical and functional areas of the body, thus combining the appropriate groups in which these differences have been identified.

Berezhnoy B.Y., Gavrylov A.V., Sokhan A.V., Zoth Ya.V.

CLINICAL MANIFESTATIONS OF CEREBRAL TOXOPLASMOSIS AMONG HIV-INFECTED PERSONS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of infectious diseases

Introduction. The leading cause of severe neurological disorders among patients with advanced stages of HIV infection is cerebral toxoplasmosis. Third part of HIV-infected patients with CNS suffers from cerebral toxoplasmosis (34.7% of cases). Almost all cases of toxoplasmosis among HIV-infected persons are due to reactivation of latent infection and develop mainly in the form of CNS pathology in cases of reduced quantity of CD4 + cells down to 100 and less in 1 mkl.

Aim. The determination of clinical manifestations of cerebral toxoplasmosis among HIV-infected persons.

Material and methods. The clinical group consists of 33 HIV-infected patients with CNS injury T. gondii. The pathogens were identified by detecting T. gondii DNA in the CSF by PCR. The period of time between the diagnosis of HIV infection and the appearance of the first manifestations of T. gondii CNS averaged 2,2 ± 0,6 year.

Results. Studying the history of the disease, it was found that the disease began slowly, patients came to the hospital on average (88,0 ± 21,2) days from the onset of disease. Most came to the hospital in moderately serious condition - 69.7% of cases ($p < 0,01$). In serious condition - 24.3% of cases and in satisfactory condition - 6%. Patients coming into the hospital with intact consciousness 79% ($p < 0,001$), in a state of stupefaction - 12% and in a coma - 9% of patients. The gravity of the disease was caused not only by the intoxication and encephalitic syndromes, but also by the development of complications such

as ESB, which was the immediate cause of death. Mortality rate was 18.2%. Duration of hospital stay of patients averaged (32,0 ± 7,3) hospital-days. The disease took form of the encephalitis among 21 patients and - meningoencephalitis - 12 pations. Patients, who complained complex weakness - 87,9% (p <0,02), lack of appetite - 9,1% (p <0,001). Diffuse headache - in 81,8% (p <0,001) nausea - 9.1% and vomiting - 12.1%. Dizziness was observed among 75.8% patients (p <0,001). The body temperature remained normal among 51.5% patients (p <0,001). Seizures and hallucinations were present among 15.2% and 3% respectively. An objective examination of patients showed disorientation in place, time and recognizing individual among 27.3%, psychomotor agitation - 6.1%, disorders of higher integrative functions such as memory loss - 21.2% patients. Meningeal syndrome was defined by stiff neck among 39.4% of the patients, Brudzinsky symptoms - 3% and Kernig symptoms - 45.5%. The movement disorders such as hemiparesis, paraparesis and tetraparesis were present among 48.5% of the patiens, epileptiform syndrome - 27.3%. Pathological reflexes were found among 21.2% of the patients, Babinsky symptom - 15.2% and Openheym symptom - 6.1%. The impairments of the CN function were the result of the brain stem damage (II-VII, IX, XII): amaurosis - 3%, decrease in visual acuity - 21.2%, anisocoria - 24.2%, strabismus - 21.2%, ptosis - 30 3%, deviation of the tongue - 21.2%, smoothing nasolabial folds - 48.5%, head turning towards damage - 18.2% exophthalmos - 9.1% of patients. Vestibular-ataxic syndrome showed itself in the form of dizziness in 75.8% of the cases, the precariousness of moves - 66.7% and Romberg precariousness - 48.5%.

Conclusions. Thus, in case of T. gondii CNS injury among HIV-infected people, encephalitis develops in 64% of cases. Most patients arrive at the infectious hospital in moderately serious condition - 69.7%, consciousness remains clear in 79% of cases. The main complaints are weakness - 87.9%, moderate diffuse headache - 81.8%, nausea and vomiting - 9.1% and 12.1% respectively. An objective survey of patients most frequently shows weakness in the limbs, CN function insufficiency, epileptiform and vestibular-ataxic syndromes, disorders of higher integrative functions.

Boyarskiy A.A., Sukhomlin N.P., Tikhonova O.O., Shevchenko O.S.

MULTIDRUG RESISTANT TUBERCULOSIS: PROFILES OF RESISTANCE OF THE ISOLATED STRAINS OF MYCOBACTERIUM TUBERCULOSIS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of phthisiology and pulmonology

Introduction. Decrease the effectiveness of treatment of patients with tuberculosis is related to the spread of resistant Mycobacterium tuberculosis to antituberculosis drugs. Treatment of drug-resistant forms of the disease is partly complicated by the fact that it involves the use of expensive and toxic drugs. The frequency of resistance to first-line drugs and second-line little studied, especially in the Kharkov region of Ukraine, and is of great interest.

Material and methods We conducted a retrospective research of 445 MDR TB patients with pulmonary tuberculosis registered in the database of registration office and case management of chemoresistant tuberculosis during 2013-2014 in the Regional Tuberculosis Dispensary № 1 in Kharkov. Analyzing the registration teams (according to the order of Ministry of Health of Ukraine of 22. 10. 2008 № 600), according to the medical history of previous treatment, or, based on the results of previous treatment cohort analysis, the patients were as follows: in the first category – "new case" –151 patients registered (33,

9%), in the second category – "relapse TB" – 79 patients (17, 7%), in the third category – "interrupted treatment" – 50 patients (11, 2%), in the fourth category – "failure of the first course of chemotherapy" – 39 patients (8, 8%), in the fifth category – "repeated failure of chemotherapy" – 48 patients (10, 8%), the sixth category – "transferred" – 13 patients (2, 9 %), and in the seventh category – "the other" – 65 patients (14, 6%). All patients had bacterial excretion confirmed by culture sputum method. The obtained data were processed on a computer using the statistical program STATISTICA.

Results. Among 445 patients that were researched during 2013-2014 with multidrug-resistant (MDR) pulmonary tuberculosis strains resistant to drugs has been established: to amikacin (Am) - 19,7 6%; kanamycin (Km) – 33,2%; capreomycin (Cm) – 15,1%, to all injecting drugs simultaneously (AmKmCm) – 13,1%; fluoroquinolone – 15,1%. The total detection rate of strains resistant to prothionamide – 14,8%; to PAS – 8,2% of the cases. After analyzing, we can establish an unfavorable tendency of the total frequency of MBT drug resistance to increase and weighting of its structure. Over the period of 2011-2014, the total frequency of MBT resistance to anti-TB drugs in MDR TB patients increased: to streptomycin from 86, 8 to 91, 7%; to ethambutol from 55, 3% to 63, 8%. And, more often, the resistance to all first-line drugs (HRES) is diagnosed; whereas in 2011 the figure was 67, 5%, in 2014 – 72, 9% of all MDR TB cases. It is curious that in the study group, the patients co-infected with TB / HIV were registered 25 people (5, 6%), of those 96% showed strains resistant to 3 anti-tubercular drugs (HRS); cases of extensive drug-resistance to anti-tubercular drugs have not been identified.

Conclusions. Today, the majority of verified MDR TB patients are patients with newly diagnosed tuberculosis and recurrent tuberculosis, with primary resistance of MBT being 34, 2% of the cases. Of MDR TB patients, the most common are strains of MBT with the resistance to first-line drugs – followed by the sensitivity to second-line drugs, as well as with additional resistance to the different number of second-line anitubercular drugs.

Dhrubojyoti Basu

HIGH RISK OF MULTIDRUG-RESISTANCE TUBERCULOSIS IN PATIENTS OF KHARKOV REGION SCREENED BY GENE EXPERT MBT/RIF

Kharkiv National Medical University, Kharkiv, Ukraine
Department of phthisiology and pulmonology

Aim. To define group of patients at high risk of MDR TB Rif+ on the basis of the survey of patients using Gene Expert MBT/RIF to order to expand the indications for using this method.

Materials and methods- 50 Patients with tuberculosis were examined using Gene Expert MBT/RIF, 35 (70.0%) men, women-15 (30%) among them. The average age of the patient was (34.5 $\pm$ 2.2) years. Newly diagnosed tuberculosis was in 45 (90%) patients, relapse of tuberculosis – 3 (6%) patients, previously treated patients (treatment after interruption, treatment failure) were 2 (4%). 48 (96%) patients were sputum smear positive, the rest- negative. Sputum examination was performed on one sample using Gene Expert MBT/RIF and culture method with liquid medium in the automated microbiology system BACTEK-960. Testing drug susceptibility to anti-TB drugs of the I and II lines was also performed in the automated microbiology system BACTEK-960. The results of the MTB/Rif analysis were compared with the culture results and phenotypic methods for determining susceptibility to anti-TB drugs.

Results. Smear positive had positive results of PCR+ in 41(82%) cases, smear negative- in others. However, these patients showed rifampicin resistance Rif+ with the same frequency – in 27(55.2%) and 26(52.5%) of cases respectively ($p>0.05$). In most cases, resistance to Rif in Gene Expert test was associated with multidrug resistance— 42(83.3%) of cases, 1(4.8 %) -- with poly resistance, including resistance to Rif. Thus, Rif Resistance using Gene Expert was confirmed in 44(88.1%) patients. Among patients with PCR+/Rif 27 were new cases of TB 15(31.34%) of the total number of new cases), 23(47%) cases were relapses of TB, 27 (54.5%) patients had treatment failure.

Conclusions. In order to determine the most appropriate treatment regimen it is necessary to carry out Gene Expert MBT/RIF for all TB patients regardless of smear results and the case of disease due to high level of resistance to Rif.

Dhrubojyoti Basu

RATIONAL THERAPY OF SKIN AGING

Kharkiv National Medical University, Kharkiv, Ukraine
Department of cosmetology

Introduction. Aging is a natural biological process, no one has succeeded to avoid that yet. The main signs of aging are: reduction of skin elasticity and the formation of sagging skin around mouth, deep folds, wrinkles, leading to a total facial deformation. The process of skin aging associated with all its layers and reflects the aging in general. The factors that provoke the aging process are UV-rays, low humidity, strong wind, stress, smoking, alcoholic drinks. The most expressed transformations occur in the dermis. During physiological aging number and size of fibroblasts, histiocytes, mast cells decreases. Fibroblasts are the main skin cells. They synthesize collagen and elastin - the important proteins that make up the amorphous substance of connective tissue. Reducing of fibroblasts provokes the growth degenerative processes of the relevant areas of the skin.

Materials and methods. We observed 126 people from 30 to 65 years old who received injection of non-stabilized hyaluronic acid. We used papular and linear techniques of injecting.

Results. We performed procedures once in two weeks, on average, each person received from 3 to 6 procedures (according to treatment protocols). A significant effect was observed after the first procedure and was stable fixed after the second one. All subsequent administrations of the drug were conducted in order to maintain the result, which is reflected in a decreasing the number of small wrinkles, smoothing, improvement of color, increasing skin turgor. The older age group (from 45 to 65 years old) received support procedures after every 3 months 2-3 times. It is noteworthy, the procedures were well tolerated. Some patients noted such complications as spot-dotted hematoma, which disappeared after 4-5 days, swelling of the skin around the eyes for 2-3 days. 119 people were satisfied with the result of the conducted course of treatment and continued treatment after a certain period of time.

Conclusion- Redermalization technique with combined preparation non-stabilized hyaluronic acid is scientifically proven and convenient way to implement an anti-aging program, because it influences all links in the pathogenesis of skin aging. It is also possible to use for the prevention of photoaging and chronoaging of face and body.

Gololobova O.,Gololobova N., Liadova T., Sorokina O.

THE STATE OF IMMUNOREGULATION IN PATIENTS WITH HCV-INFECTION

V.N. Karazin Kharkiv National University, Kharkiv, Ukraine
Department of general and clinical immunology and allergology

Introduction. Infectious Hepatitis is a very serious problem which is still unsolved. The topicality of the HCV (Hepatitis C virus) – infection problem is characterized by the threat of chronization with the forming of chronic hepatitis, cirrhosis and in some cases the high prevalence of hepatocellular carcinoma. Most of researchers consider that cooperation of virus and human immune system is one of the basic factors which determine subsequent manifestation of HCV-infection. It is known that elimination of viruses from the human organism is provided by an adequate immune response and insufficient intensity of immune inflammation is leads to persistence of viral infection.

Aim: To make prognosis of chronization of process and control of efficiency of therapy in patients with acute and chronic HCV-infection on the basis of analysis of dynamics of indexes of cytokine regulation network. The tasks: To study the dynamics of regulatory cytokines and subpopulation of lymphocytes in peripheral blood and to evaluate their relation with the clinical manifestation of hepatitis. To explore the dynamics of indexes of immunological and cytokine statuses regarding genotypes and subtypes of Hepatitis C virus. To establish correlation between immunological indexes and results of clinical, biochemical, molecular examinations.

Materials and methods. We observed the group of 155 patients treated in Kharkiv Regional Clinical Infectious Hospital with the diagnose “acute (37) and chronic Hepatitis C ”(118) to conduct in dynamics the clinical examinations, laboratory blood and urine tests; biochemical indexes of blood; ultrasound of organs of abdominal region and liver puncture biopsy and some additional examinations. To research the properties of HCV-infection we used the following laboratory methods: IEA to identify specific markers of HCV (anti-HCV IgM, anti-HCV IgG, anti-HCVcore/NS-3, -4, -5) in blood, to identify HCV RNA. To determine genotypes of HCV – the method of direct sequencing and restriction analysis. To identify cytokins we used IEA. We investigated the level of subpopulation of lymphocytes in immunograms with monoclonal antibodies.

Clinical and pathogenical role of changes in immunoregulation in patients with hepatitis C has been studied. The role of integrated analysis of cell and secretory immunity indices, the role of immune response mediators changes in evaluation of corresponding organism reaction against HCV-infection, prognosis of severity and consequences of the disease have been shown. Immune status changes regarding virus genotype, course, replicative and biochemical activity have been analyzed. Criteria of course prognosis and outcomes of acute hepatitis C have been worked out.

Results. The presence in the peripheral blood of patients anti-HCV NS3 and absence of anti - HCV NS4, anti - HCV NS5 is an important diagnostic criterion of acute hepatitis C (AHC) . The presence in the peripheral blood of patients anti-HCV NS4, anti-HCV NS5 can be used as markers of chronic HCV infection (ChHC). Immune disorders in patients with AHC during the height of the disease characterized by an imbalance of cellular and humoral immuneregulation, manifested by decreasing of CD3 +, CD4 +, hyperproduction of CD16 +, CD20 +, CD25 + -lymphocytes, total IgM. At the same time there are changes in cytokine status, characterized by increasing TNF-α, IFN-γ, IL-2, IL-4 and IL-10. The period of clinical and biochemical remission compared with the height of the AHC in most

patients is characterized by a decrease of CD16 + - lymphocytes, decrease of the concentration of Ig M (which is high compared to rates in the control group), and the increasing of Ig G, combined with increase TNF-α, IFN -γ, IL-2, IL-4 and IL-10. In patients with chronic hepatitis C shifting the balance of Th1 / Th2 towards subpopulation Th2, that shows a decrease in the level of CD3 +, CD4 +, CD25 +, CD16 + -lymphocytes, IL-2 and IFN-γ (cellular immune factors) with activation and hyperproduction CD20 + - lymphocytes, Ig M, G and TNF-α and IL-4, IL-10 (humoral immune factors). The immune status of patients with chronic hepatitis C with replicative activity of the pathogen, confirmed the detection of HCV-RNA in the blood characterized by decreasing of levels of IFN-γ, IL-2, which is accompanied by a significant increasing of the TNF- α, IL-4 and IL-10. In patients with acute and chronic hepatitis C with HCV genotype 3a advantage observed cellular immune factors, and with genotype 1b - humoral.

Conclusion. 1. The specific immune response to antigenic determinants of HCV depends on the form of the disease. 2. The state of immune regulation in patients with HCV infection depends on replicative virus activity, its genotype and biochemical activity of hepatitis C.

Kerbazh N.R.

LEPTOSPIROSIS, "UNDER RECOGNIOZED THREAT TO PUBLIC HEALTH": PROBLEMS AND SOLUTIONS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of Epidemiology
Scientific supervisor – assistant Makarova V.I.

Introduction: Nowadays Leptospirosis is a prevalent zoonotic disease of modern society. It causes morbidity and mortality all over the world in consequence of impaction its main reservoirs, i.e. rodents, cattle, horses and dogs. Humans can be infected through direct contact with urine of infected animals or with a urine-contaminated environment. Leptospira, a genus of bacteria that cause Leptospirosis, has an ability to enter the body through lesions on the skin or through mucous membranes of uncovered parts of human organism. Although it is endemic in various rural and urban communities and can also cause sporadic occurrences, little is actually known about the true disease burden and consequently, the disease has been neglected. Epidemiological surveillance is constantly carried out in Ukraine. It includes registration of all cases of human infections, veterinary surveillance and preventive measures. Vaccination against Leptospirosis in livestock (cattle, horses) and domestic (dogs) animals is carried out in Ukraine, too.

The aim of this work is to estimate the disease burden and to outline modern principles of solving this problem.

Materials and methods: Sources of contemporary literature covering this issue. We also performed a retrospective epidemiological analysis of Leptospirosis morbidity in Ukraine in 2012-2013.

Results: Leptospirosis is a widespread disease that affects not only rural or undeveloped counties, but also highly developed ones. For example around 600 cases are diagnosed every year in France, it is also estimated that 100-200 Leptospirosis cases are identified annually in the United States. Furthermore a worse situation is observed in countries of the third world: last year 141 cases of Leptospirosis with 6 deaths were

suspected only in one Kenyan school; a surveillance conducted in Pakistan in 2013 showed that about 44 % of dwellers were positive for Leptospirosis. Ukraine does not stand out of other countries by the level of the incidence of Leptospirosis with it's annual results of 1,5 cases per 100000 (under-recognition is not excluded). A retrospective analysis of Leptospirosis morbidity that was performed by us showed that Leptospirosis morbidity in Ukraine was 0,70 per 100000 in 2012 (317 cases) and 0,79 per 100000 in 2013 (358 cases). We also have Leptospirosis morbidity data in Kharkiv region that refers to natural foci zones. In 2012 3 people were infected (intensive index is 0,11 per 100 000 population) and only 2 cases of Leptospirosis in human were detected in this region in 2013 (intensive index is 0,07 per 100 000 population). Such unpromising results basically may be due to the lack of awareness of significance of the problem. In 2010 the World Health Organization (WHO) established the Leptospirosis Burden Epidemiology Reference Group (LERG). The main aim of LERG is to provide the necessary disease burden data that is essential for the design of appropriate policy targeted towards decreasing the burden of Leptospirosis. According to WHO Leptospirosis can become a preventable disease when: risk factors are appropriately identified and managed, interventions are targeted risks at individual and community levels; all relevant sectors collaborate and coordinate prevention and control measures.

Conclusions: Due to under-recognition, nowadays not much is known about the actual impact of Leptospirosis on people. Some efforts from individuals and communities need to be made to prevent disease burden.

Khristenko N.Ye., Antsyferova N.V., Mohylenets O.I., Solomennyk G.O.

POSSIBILITIES OF LIVER FIBROSIS STAGES DIAGNOSTICS IN PATIENTS WITH CHRONIC HCV-INFECTION

Kharkiv National Medical University, Kharkiv, Ukraine
Department of infectious diseases
Scientific adviser – prof. Kozko V.M.

Introduction. Currently problem of chronic HCV-infection remains actual. It is related with considerable amount of the infected persons (more than 200 million population of the Earth) and with high inclination to chronic forms with next transformation to cirrhosis and primary liver cancer in 20-40 % of cases. One of the most important part of the process, that takes place under the action of virus, there is liver fibrosis. Nowadays different invasive and noninvasive diagnostics methods are used, but all of them has disadvantages.

Aim – to improve efficiency of liver fibrosis diagnostics in patients with HCV-infection.

Materials and methods. Group of supervision included 102 patients with HCV-infection. From them 29,6% were men and 70,4% were women. Middle age of patients was 43 years old. Etiology of disease was confirmed by immunofermental analysis (anti-HCV IgG, anti-HCV core IgG, anti-HCV NS-3,-4,-5 IgG, anti-HCV IgM) and polymerase chain reaction (HCV RNA). Stages of liver fibrosis were estimated by FibroMax. Content of serum transforming growth factor beta 1 (TGF-β1), matrix metalloproteinase-1 (MMP-1) and haptoglobin was examined as a potential liver fibrosis biochemical markers. Results of research were calculated by traditional statistical methods.

Results. Decreased level serum MMP-1 and haptoglobin and increased level of serum of TGF-β 1 were revealed. We conducted a correlation between the content of serum MMP-1, TGF-β1, haptoglobin with the stages of fibrosis determined by FibroMax and

revealed the presence of next links: between MMP-1 and the stage of fibrosis - reverse strong, between haptoglobin and stage of fibrosis - reverse moderate, between TGF-β1 and the stage of fibrosis - direct strong connection. On the basis of this correlation we calculated "diagnostic fibrosis index" (DFI) by formula: DFI = MMP-1 / TGF-β1 × haptoglobin. According to our data fibrosis stage 0 (F 0) could be diagnosed if DFI>10; F 1 – 4< DFI <9; F 2 – 3< DFI <4; F 3 –1< DFI <3; F 4 – DFI <1. For verification of sensitiveness of this method we compared results which were obtained with usage of DFI with results of FibroMax in 31 patients with HCV-infection. Coincidence of fibrosis stages was 90,32 %.

Conclusions. 1 Increase serum content of TGF-ß 1 and reducing of MMP-1 and haptoglobin were found in patients with chronic hepatitis C. 2. A significant correlation between the presence of liver fibrosis stage according to FibroMax and content of serum TGF-ß 1, MMP-1, haptoglobin was revealed. 3 The proposed method of liver fibrosis stage diagnostics allows to differentiate the initial stages of fibrosis with moderate and severe. 4 The method has high sensitivity (90,32%) and can be used as a method of noninvasive diagnostics of liver fibrosis in patients with chronic HCV-infection.

Kotsar E.V., Turmanidze K.I.

THE COMBINED EFFECT OF LINCOMYCIN AND BENZOYL PEROXIDE AGAINST S.AUREUS STRAINS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of microbiology, virology, immunology

Introduction. Recently the growth of pyoinflammatory diseases of different localization, caused by opportunistic pathogens, has noticed. The most famous opportunistic pathogens include S.aureus, which can cause a wide range of pathological processes, including the skin and soft tissue (about 70%). The main method of combating staph infection is use of antibiotics. The effectiveness of treatment depends on the level of antibacterial activity of the drugs and combined use of them.

Results. We carried out a determination of the antibacterial activity of lincomycin and benzoyl peroxide (BP) against S.aureus strains in vitro. The research was carried by micromethod using 96-well flat-bottomed plate by method of double dilution. The effect of lincomycin and BP was studied by mean of checker-board. This method was as follows: lincomycin with higher concentration was applied into the first well with a consequent reduction of concentration in 11 well while BP with higher concentration was applied into the 11 well with consequent reduction towards 1 well (12 well – control of S.aureus, without antibiotics). This method allows to determine fractional inhibitory concentration index (FICI), by value of which we can view the effectiveness of combined use of the drugs. FICI = MIC (minimal inhibation concentration) (lincomycin + BP)/ MIC (lincomycin) + MIC (BP+lincomycin)/MIC (BP) if FICI < 0,5 – synergism, from 0,5-1,0 – additivity, from 1,0-4,0 – indifference, FICI > 0,5 – antagonism.

We have calculated MIC of lincomycin and BP separately that was 0,9μg/ml and 440μg/ml respectively. While combined effect МИК of lincomycin and BP was 0,2 and 175 μg/ml. By the formula above we have calculated the value of FICI. FICI=0,62, combined effect – additivity.

Conclusion. Thus we have proved the effectiveness of combined use of lincomycin and benzoyl peroxide in vitro against S.aureus strains due to their additive effect.

Lenskaya M.

PLASMOLIFTINGIN COSMETOLOGY

Kharkiv National Medical University, Kharkiv, Ukraine

Introduction. Today Plazmolifting method used in various fields of medicine: dentistry,trichology,orthopedics and traumatology,sports medicine, urology and gynecology, as well as cosmetics.This method makes it possible to restore the lost by the body due to the activation of its own hidden reserves of the human body. Plazmolifting - a method based on the introduction of a patient's blood plasma rich in platelets in the skin at different levels. The method has gained popularity due to the properties of the platelet plasma. Since platelets contain special proteins - growth factors enhancing the body's regeneration: IGF (insulin-like growth factor), PDGF (platelet-derived growth factor), EGF (epidermal growth factor), FGF (fibroblast growth factor), TGF-ß («family" transforming growth factor), PDAF (vascular endothelial growth factor), PLGF -1 / -2 (Placental growth factors) and thrombospondin, osteonectin. PDGF-activates the migration and proliferation of mesenchymal (osteogenic) cells and stimulates angiogenesis, IGF- stimulates differentiation of new cells, increases bone formation and synthesis of collagen. In this connection Plazmolifting used in cosmetics, including the purpose of correcting age changes.

Aim. To evaluate the effectiveness of the method Plazmolifting as monotherapy in the correction of age-related changes.

Material and methods. We observed 15 women aged 35-60 years. In a vacuum tube with the separating gel was conducted fence 20 - 100 ml of venous blood. Blood was centrifuged. The resulting plasma is injected enter the zone correction.

Results. As a result of the therapy showed improvement of facial skin color, skin elasticity, eliminate facial wrinkles, pigmentation partially.

Conclusions. In the injection sitesautoplasma stimulated the formation of new forms of fibroblasts. In turn, they stimulate the formation of collagen, elastin and hyaluronic acid, which change in skin texture, elasticity, wrinkles, normalizes the sebaceous glands. Convenience and ease of use, short period of rehabilitation after the procedure; biocompatibility, the possibility of combining with other therapies; and pronounced cosmetic effect Plazmolifting are reasonable for its application in cosmetic purposes. Plazmolifting - a convenient method for the correction of age-related skin changes, requires further in-depth study and implementation in practice.

Liashenko S.Y., Khatsenko I.O., Osovskiy I.K.

EPIDEMIOLOGICAL CHARACTERISTIC OF PERTUSSIS IN UKRAINE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of Epidemiology
Scientific leader – professorChumachenko T.O.

Introduction. According toWHO about 60 millions of children suffer from pertussis every year, one million of them die. Because of high contagiousness (till 90 %), severe clinical course and large amount of complications that may occur in affected children under one year, pertussis is an important medical and social problem. Immunization prevents illness, disability and death from pertussis and spreading disease.

Aim. To evaluate the dynamic of the incident of pertussis in Ukraine, in regions and in all age-groups.

Materials and methods. The official data about cases of pertussis from the sanitaryhygienicservice of Ukraine for the period since 2011 till 2015were analyzed.

Results. The morbidity of pertussisis characterized by cycling in Ukraine. The highest level of the incidence of pertussis (6.42 per 100 000 of population) was fixed in 2011. In 2013 the level of morbidity was the lowest for the last 10 years, it was 1.54 per 100000 of population. In 2014 the level of morbidity began to grow again, it was 3.24 per 100 000 of population. The cases of this diseasehave been reportedin all regions. In 2011-2013 the highest level was noticed in Ivano-Frankivsk region (since 3.85 till 20.64 per 10 000 of population), Ternopol region (since 4.36 till 11.38), Vinnitsa region (since 3.81 till 13.17), this fact is connected withthe failure of children's program of immunization against the pertussis. In 2014 the level of morbidity grew in Kharkov region (6.19 per 100 000 of population), Donetsk region (5.39), Luhansk region (4.31), that mainly is connected with migration of population and the damage of the health care structure because of the crisis in the East Ukraine. Mostly children suffered from pertussis – 98.4%. In 22 regions of Ukraine the disease have been reportedonly among children, thatmay be connected with the underdiagnosisof the pertussis of adults, which firstly were the sources of infection for children. The proportion of adults was since 2.4% till 6.3% in other regions (Donetsk region, Khmelnitsk region, Zaporozhye region, Kherson region). The highest level of morbidity was noticed among children under one year, in 2013 the incidence rate was 46.3 per 100 000 of children of this age-group, proportion was 34.2%. The morbidity of this age-group has not been reportedin Odesa region, Kherson region, Cherkasy region and Chernihiv region, the incidence ratewas 4.73 per 100 000 of people in Lugansk region; 6.66 per 100 000 of people in Zhytomyr region, about 158.0 per 100 000 of people in Vinnitsa region. The age-group since 1 till 4 years old takes the second place for the level of the morbidity, the incidence rate was 11.1 per 100 000 of children of this age-group, the proportion was 32.4%. The incidence rate of children of age-group since 5 till 9 years old was 8.05 per 100 000 of childrenof this age-group, the proportion was 24.5%. The children at the age of 15-17 years old suffered from pertussis the least, the proportion was 1.8% of all ill children, and proportion of adults - 1.6% of all ill people. We should notice that the number of cases of diseases amongurban children was 2.2 times higher than among rural children. We noted the low coverage of routine pertussis vaccination of children, in 2011 the immunization coverage was only 46%, in 2012 - 42%, in 2013 – 44.5%, in 2014 – 43.2% of children who should be vaccinated.

Conclusions. The unstable epidemic situation of pertussis in Ukraine was founded. This situation is connected with the failure of children's program of immunization against the pertussis the lowcoverage of routine pertussis vaccination of children, the crisis in Ukraine, increasing of migration of population inthe East parts of Ukraine. The groups of risk are mainly infants and young children.

Mayorova M.V., Korzhenko D.O., Zaytseva O.V.

BEHAVIOURAL GROUPS OF RISK AND HIV INFECTION EPIDEMIC IN UKRAINE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of epidemiology
Scientific supervisor - Chumachenko T.A.

Introduction. HIV continues to be a major global public health issue, having claimed more than 39 million lives so far. In 2013, 1.5 [1.4–1.7] million people died from

HIV-related causes globally. There were approximately 35.0 [33.2–37.2] million people living with HIV at the end of 2013 with 2.1 [1.9–2.4] million people becoming newly infected with HIV in 2013 globally. The Russian Federation and Ukraine, along with other countries in Eastern Europe and countries in central Asia, have the most rapidly expanding HIV epidemics. Individuals with risk behavior can have greater risk of contracting HIV. We can reduce the risk of HIV infection by limiting exposure to risk factors, so we need to know about main factors and groups of risk.

Aim. To describe and analyze current epidemic situation of HIV infection in Ukraine and estimate key groups of risk in Ukraine.

Material and methods. Epidemiological method of investigation was used for the data from Ministry of Health of Ukraine.

Results: During 1987 – 6 months 2014 among citizens of Ukraine 255 976 HIV-positive persons, 71 192 patients with AIDS and 33 662 dead from the diseases caused by AIDS were registered. In 2013 incidence of HIV infection was 47,6 per 100 000 population. From 1999 for 2006 the number of new cases of HIV infection among the injecting drug users (IDU) was increasing. Till 2008 HIV mainly was transmitted through injecting drug use. An epidemic of injecting drug use was fuelling the HIV epidemic. Then sexual transmission became the dominant route of transmission. The number of infections among men who have sex with men is increasing annually (from 94 in 2009 to 262 in 2013). In 2013 percentage of HIV cases among men who have sex with men was 5,9%. Since 2008 percentage of HIV cases among IDU is decreasing and in 2008 - 2009 proportion was 22,9%, in 2011 – 21,5%, in 2013 - 19,7%. Percentage of HIV cases among women - sex workers is decreasing from 12,9% in 2009 to 7,3% in 2013.

Conclusions. In Ukraine epidemic of HIV concentrated in groups of the behavior risk such as injecting drug users, women – sex workers and men who have sex with men. For decreasing of HIV-infection spreading it is necessary to use key approaches for HIV prevention among groups of behavior risk.

Ostropolets A.S., Solomennyk A.O., Bondar A.E., Mohylenets O.I., Iurko E.V., Antsyferova N.V.

DIAGNOSTIC VALUE OF GAMMA-GLUTAMYL TRANSPEPTIDASE LEVEL IN PATIENTS WITH CHRONIC HEPATITIS C

Kharkiv National Medical University, Kharkiv, Ukraine
Department of infectious diseases

Introduction. Chronic hepatitis C (CHC) is a common disease with a high risk of transition to cirrhosis and hepatocellular carcinoma. According to current data, 200 million people are infected with hepatitis C around the world. The adequate assessment of the hepatobiliary system, including the stage of fibrosis allows not only to predict the course of chronic HCV-infection, but also to prescribe etiotropic and pathogenetic treatment, to assess its effectiveness.

The purpose of the research was to evaluate the activity of gamma-glutamyl transferase (GGT) in the blood serum of the patients with CHC, depending on the degree of inflammatory and necrotic changes and fibrosis stage.

Material and methods. We observed 25 patients with CHC. There were 15 males (60%) and 10 women (40%). The average age of the patients was 41,16 ± 2,45 years. The level of GGT was evaluated in all patients using reagents firm «Roche» (France), as well as

the degree of inflammatory and necrotic changes and stage of liver fibrosis in the system FibroMax, which is now an alternative to puncture liver biopsy. Statistical processing of the data was performed using Student's t test for small samples and the correlation coefficient r.

Results. The average serum GGT level was 76,82 ± 12,98 IU / L, ALT - 82,5 ± 15,8 U / L, which was higher than in thecontrol group ($p < 0,05$). A0 was defined in 7 (28%) patients, A1 — in 5 (20%), A2 — in 4 (16%) and A3 - 9 (36%) patients. F0 was diagnosed in 7 (28%), F1 - 5 (20%), F2 - 5 (20%), F3 - 4 (16%) and F4 - 4 (16%) patients. There was strong correlation between the activity of GGT in examined patients serum and ALT level ($r = 0,81$; $p < 0,001$), the degree of inflammatory necrotic activity ($r = 0,82$; $p < 0,001$), the severity of liver fibrosis ($r = 0\ 81$; $p < 0,001$).

Conclusion. GGT activity in serum is directly dependent on the degree of inflammatory and necrotic changes and stage of liver fibrosis in patients with chronic hepatitis C, which gives us the reason to use this index as an additional criterion for the diagnosis of these morphological abnormalities.

Kovalenko T., Panich R.

THE CHANGE IN THE CONCENTRATION OF C3 FRAGMENT OF COMPLEMENT IN INFLAMMATION AND USE OF THE IMMUNOCORRECTION DRUG IN EXPERIMENTAL ANIMALS OF DIFFERENT AGES

Kharkiv National Medical University, Kharkiv, Ukraine
Department of microbiology, virology and immunology

Introduction. An important link between the formation of immune responses and specific adaptive immunity are proteins of the complement system. Threshold reactivity of young and old experimental animals can detect relevant changes of the primary humoral factor immunoresistance in response to infectious antigens and action of immunocorrection drug. The purpose of this study was to identify differences between the concentration of complement C3 fragment in experimental animals of different ages in the model of the inflammatory process, after the action of E. coli infectious antigens, and after administration of the immunocorrection drug MF.

Results. At the first stage in the experimental work 3-month rats and 22-month rats were used. Inflammation developed after a single intraperitoneal injection of 1.5 ml of Escherichia coli suspension in experimental animals. The immunnocorrection drug MF was injected in the second stage of the experiment to two age groups of animals with inflammation induced by E. coli antigen. The immunocorrection drug MF consists of amino acids, nucleotides, enzymes, and vitamins. This drug was administered per os 48 hours prior to infection in experimental animals, and for 24 hours after the inflammatory process. In experimental animals blood was taken. The serum is obtained by centrifugation from that blood. In serum activity of the complement system was discovered by using a photometric method. The concentration of the complement C3 fragment in young animal was small after the action of E. coli infectious antigens, but in older animals' concentration of C3 fragment of complement system proteins was higher than control values. The administering of immunocorrection drug MF to control animals led to decrease in the concentration of complement C3 fragment, both in young and old animals. The administering of immunocorrection drug MF before induction of inflammation led to increase of

concentration of complement C3 fragment in both groups of experimental animals. The administering of immunocorrection drug MF after induction of inflammation led to decrease in the concentration of complement C3 fragment only in young animals on the 7th day of the experiment.

Conclusions. The primary humoral immune response was observed only in young animals after induction of inflammation antigen E.coli. The administering of a immunocorrection drug MF before inflammation resulted in increase in the concentration of complement fragment C3 in young experimental animals. This indicates that resistance and reactivity during the presence of immunocorrection drug MF in young animals has interplay.

Osipenko T. S.

FEATURES TREATMENT EARLY FORMS OF SYPHILIS

Kharkiv city dermatovenerologic dispensary № 4 , Kharkiv, Ukraine

Aim: to examine the state of coagulation before and after specific treatment of patients with early forms of syphilis.

Materials and methods. A clinical and laboratory examination of 51 patients, including 26 patients with latent early syphilis and 25 patients with secondary syphilis. The studies were conducted in three representative groups of comparison. The main group (26 patients), the comparison group (25 patients) and control group - 15 healthy subjects matched for sex and age group of patients. With three basic coagulation tests (thrombin time, prothrombin time and activated partial thromboplastin time - APTT) can provide information on the status of all major units of blood coagulation.

In the serum of patients of all groups of hemostatic parameters were determined using reagents firms HUMAN (Germany) and TRINITY BIOTECH on selective coagulometer.

Results. Until developed complex treatment in group I thrombin time was 12.2 s (control group - 11.37 s), prothrombin time (prothrombin test for SWIR) - 78 (in the control group - 115), APTT - 35 (in the control group - 25.21 c); in group II - 12.7 s; And from 83.8 to 40.5. Upon completion of adjuvant therapy following results were obtained: in group I thrombin time was 11.7 seconds, prothrombin time - 63.46 seconds, aPTT - 37.97 s; in group II - 12.8 s; With 83.8 and 35.9 respectively.

Plotnikova V.V.

INTERLEUKIN 6 AND IP-10 IN THE PATHOGENESIS OF PSORIASIS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of dermatology, venerology and AIDS
Supervisior: Professor Dashchuk A.M.

Introduction. Psoriasis is a common, chronic skin disease, affecting approximately 2% of the population. Most scientific refers to the common clinical variant termed psoriasis vulgaris, which affects approximately 85 to 90% of all patients with the disease. Psoriasis is associated with a high degree of morbidity; patients are embarrassed about the appearance of their skin, and there are side effects of medications. In addition, patients with psoriasis like those with other major medical disorders, have reduced levels of employment and income as well as a decreased quality of life. The combined costs of long-term therapy and social costs of the disease have a major impact on health care systems and on society in general.

Aim. Analysis of the literature which is telling about of inflammatory mediators in the pathogenesis of psoriasis.

Results. Some authors says that Interleukin 6 is expressed in high levels in psoriatic skin and stimulates proliferation of cultured human keratinocytes .They found that the essential features of psoriasis are maintained in transplanted tissue, suggesting that local factors in a psoriatic plaque are sufficient for its maintenance. That's why they think that lL 6 enhances keratinocyte proliferation under appropriate experimental conditions raises the possibility that IL 6 may contribute to the epidermal hyperplasia seen in the psoriatic lesion [Racheil M. Grossman, James Krueger , Debra Yourish, Daniel P. Murphy].

Another point of view that the reason of inflammation in psoriatic plaques is an IP-10.It is a cytokine the expression of which is induced by γ-interferon, is a member of a family of soluble mediators with inflammatory and growth promoting activities. IP-10 protein was detected in keratinocytes and the dermal infiltrate from active psoriatic plaques using an affinity-purified rabbit anti-IP-10 antibody in immunoperoxidase studies. Successful treatment of active plaques decreased IP-10 expression in plaques [Ko-Jiun Liu].

Conclusion. The analysis of published data allows that there is no common oppinion in development of inflammatory and proliferative changes in psoriasis. Further study of the pathogenic mechanisms of psoriasis allows to get closer to finding the most appropriate method of treatment.

Povydysh O.S., Vinokurova O.M., Mohylenets O.I.

LIPID METABOLISM IN PATIENS WITH HEPATITIS B AND ITS CONSEQUENCES

Kharkiv National Medical University, Kharkiv, Ukraine
Department of infectious diseases

Introduction. Blood biochemical methods take particular importance in examining the patients with viral hepatitis. Fatty acids (FA) and prostaglandins (Pg), which are modulators of inflammation, play an important role in lipid metabolism. They are involved in all stages of its implementation and influence on immunogenesis, serve as connection between it and the non-specific resistance.

Aim: To study indicators of serum polyene fatty acids and eicosanoids in patients with acute hepatitis B, relapses and chronization of the process.

Material and methods: 51 patients with acute hepatitis B, 24 patients with disease relapses and 4 patients with chronic hepatitis B were observed. The diagnosis was confirmed by enzyme immunoassay and polymerase chain reaction. The method of gas-liquid chromatography was used to determine the content of FA and Pg in patients' serum.

Results: A significant decrease of linoleic, eykozatrienic, arachidonic and linolenic acids (in comparison with the control group) was found in the climax period of disease. These indices had tendency to further reduction in cases of disease relapses and chronization. Increase of T_xB_2, $PgF_{1\alpha}$, PgE_1,PgI_2 level was observed in the climax period of disease. Increase of PgE_2 and decrease of $PgE_1$was found in the case of relapses.

Conclusions: 1. A significant decrease of PgE2 amid falling PgE1 content can be used as an additional indicator that shows the development of hepatitis B relapses. 2. A significant decrease of linoleic and arachidonic acids in the midst of illness that persists in cases of disease relapses is a poor prognosis indicator for a chronization of the process.

Thurein Soe

THE BURDEN OF TUBERCULOSIS IN MYANMAR (BURMA)

Kharkiv National Medical University, Kharkiv, Ukraine
Department of epidemiology

Introduction. Tuberculosis (TB) remains one of the world's deadliest communicable diseases. In 2013, an estimated 9.0 million people developed TB and 1.5 million died from the disease, 360 000 of whom were HIV-positive. TB is slowly declining each year and it is estimated that 37 million lives were saved between 2000 and 2013 through effective diagnosis and treatment.

Aim. Describe and analyze current epidemic situation of tuberculosis in Myanmar and plan for Tuberculosis control.

Material and methods .Epidemiological method of investigation was used for the data from WHO reports: "Tuberculosis in Myanmar – Progress, Plans and Challenges" and 2013 report of Tuberculosis in Myanmar.

Results. Myanmar is one of the world's 22 high tuberculosis (TB) burden countries, with a TB prevalence rate three times higher than the global average and one of the highest in Asia. Prevalence is 473 cases per 100,000 population in 2013 compared with global average of 178 cases per 100,000. WHO estimates that 180,000 new TB cases emerge in the country each year, along with 9,000 MDR-TB cases and 20,000 cases co-infected by TB and HIV. The results of a nationwide TB prevalence survey in 2009-2010 showed that the prevalence of active TB is higher in urban areas than in rural, higher among men than among women, and higher among the elderly than among young adults. TB notification rates have increased sharply since the 1990s. In 2013, 142,162 cases were notified by the NTP (National Tuberculosis Program) (78% of notifications) and by private practitioners, NGOs (non-governmental organizations) and hospitals (22% of notifications). Treatment success rates of 89% for new cases registered in 2012, 70% for previously treated cases registered in 2012 and 71% for RR-/MDR-TB cases started on second-line treatment in 2011. In 2010, the NTP published a Five Year National Strategic Plan for Tuberculosis Control, 2011-2015. The NTP revised the plan in 2012 to improve the pace of scale-up of diagnosis, treatment and care for patients suffering from MDR-TB, and efforts to reduce the dual burden of TB and HIV/AIDS. Main challenge remains the financial support with about 50% funded by the international community, 15% funded domestically and 35% unfunded.

Conclusion. TB remains one of the two major burdens (other being HIV infection) of Myanmar and regardless of the NTP and international help, TB incidence and prevalence remain high. Two major factors are poverty and lack of sufficient funding.

Sukhorukova M.F., Popovich N.V., Anoshina A.S.

MORBIDITY OF HEMORRHAGIC FEVER WITH RENAL SYNDROME IN KHARKIV REGION

Kharkiv National Medical University, Kharkiv, Ukraine
Department of Epidemiology

Introduction. A natural focus of hemorrhagic fever with renal syndrome (HFRS) is defined in 13 districts of the Kharkiv region. In the epizootic process eight mammals included, the main source of infection was the bank vole.

Aim: To analyze the incidence and risk of infection with HFRS among population of Kharkov region.

Materials and methods: A retrospective epidemiological analysis of cases of HFRS according to official data from sanitary-epidemiological service of the Kharkiv region for the 1983-2014.

Results: During the period, in which the analysis was conducted, 47 cases have been reported, 44 (93.6%) of them were confirmed by laboratory tests. Severe course of the disease was observed in 70% cases. 6.4% of them were fatal, which were caused by acute renal failure and hemorrhagic lesions of the vital organs. Preliminary diagnosis of HFRS was made at 12.7% cases. The diagnosis according clinical signs was made at 46.8%. The reasons were a low level of knowledge of health workers and a low level diagnostics on this nosology. Summer-autumn seasonality (76.6%) is characterized by a high incidence. Routs of transmission were mostly contact, through contaminated food by rodent. In the spring, the way of transmission of the pathogen most often occurs through inhalation of dust. 76.6% of all cases were infected in nature (hunting, fishing, work in a wood). Four patients (8.5%) had household on the border of a natural focus. Two cases were infected during autumn rodents migration in the house.

Conclusions: It is concluded that the population of Kharkov region have got HFRS in natural focus with indirect contact with rodents. To control the epidemic process It is necessary to improve diagnostics, health education among the population and control of number of rodents.

Tertyshnyy V., Berezhna A., Bibik V., Iemets T.

ANALYSIS OF CLINICAL DATA, CLINICAL STATUS VALUES KEY PRO-INFLAMMATORY CYTOKINE IL-1β AND LEUKOCYTE INDEX OF INTOXICATION IN THE INITIAL PERIOD OF INFLUENZA AND OTHER RESPIRATORY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of infectious diseases

Introduction. Influenza a viruses are important human pathogens and cause recurrent annual epidemics and occasional pandemics. Innate defense factors are proteins - cytokines. IL-1β is a key proinflammatory cytokine. Endogenous intoxication (EI), often caused by infectious agents. For the initial phase of infection is characterized by the accumulation of toxic products in the tissue of the primary tumor. Found that the integral indicators of EI changes already in prenosological period or at the early stages of the disease, which allows to assess the dynamics of homeostasis and the effectiveness of the treatment. For the assessment of EI proposed scale and systems (SOFA, SAPS, APACHE and others). However, the extra definition of the indicators included in these systems are not always available in the clinic. The most informative indices to assess the degree of intoxication are LEAH Calf - Khalifa and its various modifications.

Aim. A study in comparative perspective clinical manifestations of influenza, viral infections and their complications, clinical significance of the status of the key proinflammatory cytokine IL-1β, and leukocyte index of intoxication observed in patients in the acute period of the disease.

Material and methods. Were studied clinical data, performance, instrumental and laboratory tests 16 patients hospitalized in OKIB the city of Kharkiv. The concentration of the cytokine IL-1β PG/ml in 13 patients was determined by ELISA using commercial kits in

a range of concentrations. All patients of group observations was calculated according to the first blood test in the hospital leukocyte index of intoxication (LII), which is equal to the average healthy individuals of 0.7. The optimal value of LEAH in the range of 0.50 to 0.75. Level LII less 0,32 is regarded as low. If the level LEAH more 0,92 - high level. To register the data used software Microsoft Excel for statistical analysis - criteria t-test.

Results. The study group comprised 16 patients. Among the patients of this group had 11 men and 5 women. The average age (M±M) 30.37 per ± 2,79 years. RNA influenza a(H1N1sw) PCR isolated from 13 patients, RNA of influenza virus In one patient, one case of influenza, severe, diagnosed clinically. Day of illness at admission (M±M) of 2.6±0,98, duration of hospital stay (M±M) of 10.5±1.3 days. In 8 cases (50%) influenza complicated community-acquired pneumonia. All patients of the first group received Tamiflu 150 mg/day. When analyzing the level of cytokines in the serum of patients revealed a decrease in the average level of IL-1 β when compared with control. In the control (M ± m) - 39,12 ± 3,38 PG/ml observed in the group of patients 34,63 ± a 4.83 PG/ml, respectively. Its content ranged from 5.7 to 74.5 PG/ml reduced Frequency indicators of IL-1 β when compared to the average performance of the control was 46,15%. At the same time 76,92 % of the surveyed value of IL-1 β does not exceed a 50.0 PG/ml, specified as the upper limit values. Slightly elevated level LEAH was determined in 3 (18,75) patients, elevated levels of LEAH and high level LII - 13 (82,15%). Interpreted the results of the study LII as an indication of the level of EI.

Conclusion. 1. Clinical manifestations of influenza a (H1N1) pandemic differed from those with other infections and seasonal flu. 2. When analyzing the level of the cytokine IL-1 β in the serum of patients at admission to hospital (day of illness (M±M) of 2.6±0,98), revealed a decrease in the average level of IL-1 β, which is characteristic of the acute phase of viral infection. 3. A comprehensive assessment of LEAH informative than learning simple hemogram and allows you to see the quantitative expression of the shift leukocyte towards neutrophils, allowing you to more clearly assess EI.

Yousif N.

OCULAR HEMORRHAGIC DISORDERSIN EBOLA VIRAL INFECTION CASES

Kharkiv National Medical University, Kharkiv, Ukraine
Department of infectious diseases

Introduction: Ebola (EBO) is a severe and often deadly disease caused by a virus(Ebola virus). Symptoms include fever, diarrhea, vomiting, bleeding, and often, death.Ebola can occur in humans and other primates (gorillas, monkeys, and chimpanzees).The 2014 Ebola outbreak in West Africa is the largest in history. About 70% of the people who have gotten Ebola in this outbreak have died. A small outbreak of twenty cases occurred in Nigeria and one case occurred in Senegal; both Nigeria and Senegal are now declared disease-free. The disease beginswith fever, asthenia, diarrhea, headaches, myalgia, arthralgia, vomiting, and abdominal pain. Early inconsistent signs and symptoms included conjunctivalinjections, sore throat, and rash. Overall, bleeding signs were observed in <45% of the cases.

Aim: To enlighten readers about the cognitive signs of Ebola especially with regards to the visual system.

Materials and methods: Literature from various sources, both online and offline articles.

Results: During the acute phase of EBO infection, Patients with EVD generally have abrupt onset of fever and symptoms typically 8 to12 days after exposure (incubation period for current outbreak has a mean of approximately 9 to 11 days). Initial signs and symptoms are nonspecific and may include elevated body temperature or subjective fever, chills, myalgia, and malaise several ocular manifestations have been observed in 70%. Patients can progress from the initial nonspecific symptoms after about 5 days to develop gastrointestinal symptoms such as severe watery diarrhea, nausea, vomiting, and abdominal pain. A conjunctivalinjection, a relatively early sign of EHF epidemics. Bilateral conjunctivitis during the acute phase of the epidemic was highly predictive for the diagnosis of an EBO infection; sub conjunctivalhemorrhages have also been reported and certain patients with EHF complained of blurred vision or blindness during the acute phase of their illness. The etiology of these ocular manifestations remains unclear because ophthalmologic examinations, were considered potentially risky procedures for health care workers as they may be infected by contact with an infectious person. EBO is typically a zoonosis and outbreaks with human-to-human transmission periodically occur. The severity of this disease with its high fatality rate and its awful hemorrhagic symptoms has been largely emphasized by mass media. The risk for EVD among ophthalmologists from Western countries is, therefore, minimal. However, it is not impossible that mild, asymptomatic, and convalescent EVD patients may seek ophthalmologic care. Proper anamnesis and physical examination are enough to distinguish between false alarms and potential Ebola virus carriers and, in the latter case, preventive measures are effective in minimizing the risk of transmission.

Conclusion: We hope that the published data on metastases to the skin and data from our own practice will be interesting and useful to students and teachers of medical schools and doctors of various fields.

Yurko K.V., Adeyemi A.A.

FEATURES OF DISORDERS OF MINERAL METABOLISM IN PATIENTS CO-INFECTED WITH HIV/HCV

Kharkiv National Medical University, Kharkiv, Ukraine
Department of infectious diseases

Introduction. HCV-infection and HIV are the two most serious and common viral diseases that are widespread and are characterized by the defeat of the working population. Co-infection with HIV/HCV is an important public health problem, since viruses, acting synergistically accelerate the progression of hepatitis C virus-induced liver disease. Trace elements have a significant impact on the metabolic processes in the body and have a close relationship with the enzymes, hormones, vitamins and other biologically active compounds. The content of trace elements in the blood is a valuable diagnostic feature in many pathological conditions. Insufficient knowledge of their content in patients co-infected with HIV/HCV proves the feasibility of studying their role in the pathogenesis of this disease.

Materials and methods. Our scientific work was carried out at the Department of Infectious Diseases Kharkiv National Medical University located at the Regional Clinical Hospital of Infectious Diseases of Kharkiv and Kharkiv regional center for prevention and control of AIDS. The content of trace elements (copper (Cu), iron (Fe) and zinc (Zn)) in

serum were determined by atomic absorption spectrophotometry in the central research laboratory Kharkiv National Medical University. A total of 99 patients were examined: chronic hepatitis C (CHC) – 32, HIV - 34 and co-infection with HIV/HCV - 33 patients. The age of patients ranged from 20 to 52 years old. The comparison group consisted of 32 healthy subjects. Blood samples were taken for the study after signing the informed consent of the patients.

Results. Comprehensive assessment of the degree of deviation from the control indices of the content of trace elements and proteins of the acute phase, depending on the type of disease. These charts indicate that the highest significance of deviations from the control group is characteristic of patients co-infected with HIV/HCV ($t = 10,3$; $p<0.001$). In general microelement disorder phenomenon occur in most patients co-infected with HIV/HCV, and to a lesser degree in CHC patients. From this it follows that HCV-infection potentiates microelement disorder manifestations in patients with HIV infection.

Conclusions. 1. Patients with CHC when compared to the control group, showed a reduction in the content of Zn, haptoglobin, increase Cu, Fe and ceruloplasmin. 2. In patients with HIV infection and co-infection with HIV/HCV a reduction of these trace elements and acute phase proteins was established. 3. In patients co-infected with HIV/HCV when compared with HIV infection only revealed a lower level of Zn ($p<0.001$), and lower content of ceruloplasmin and haptoglobin. Patients co-infected with HIV/HCV, compared with a group of chronic hepatitis C have lower values for all parameters ($p<0.001$). 4. Comprehensive assessment of the degree of deviation from the control indices of the content of trace elements and activity of metal dependent acute phase proteins showed that it was typical for patients co-infected with HIV/HCV, and also higher than that of HIV-infected patients with a factor of 1.2 and 2.2 times greater than levels in CHC patients.

PREVENTIVE MEDICINE

Ahmed Raliat Balogun, Salawu Khairat Titilope

COMPARATIVE STUDY OF HEALTHY LIFESTYLE OF STUDENTS IN MEDICVAL UNIVERSITY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of hygiene and ecology № 1

Introduction. Behavior directed at healthy lifestyle in the modern world became an actual theme for discussion, as society realized the importance of the idea, that any illness (physical, psychical or social) is more expedient to prevent, and to treat its consequences. Health is the first and major necessity of man that determines his capacity of labor and provides harmonious development of his personality. It is a major pre-condition to cognition of surrounding world, self-affirmation and man's happiness. The main factors of health include the behavior which is directed to saving, strengthening, improving and observing healthy lifestyle. The close intercommunication between health and the behavior directed on healthy lifestyle develops the potential of man. Living a healthy lifestyle is important in a student environment, as students are future graduates, specialists, and make up the public health total index of 10-30 years.

Aim. A comparative study of features of behavior directed on healthy lifestyle was conducted among third-year medical students in Kharkov with the purpose of detecting the main risk factors connected with way of life and to work out measures for its correction.

Material and methods. The questionnaire "Healthy life style" by Korobchanskiy V.O. adopted for foreign students was used. Its main constituent was: psychological microclimate, motor activity, mode of day, character of feeding and rules of the personal hygiene. 66 students were interrogated.

Results. It was discovered that index of psychological microclimate at school and in private life was highest in comparison with other indexes (57.3 % of the interrogated students, fell within the categories of «above average» and «high»). The rules of the personal hygiene and insusceptibility of harmful habits came in second with 54.1 % students in categories «above average» and «high». Observance of motor activity shows mainly below average (46 %) and average level (33.6 %). Alarming tendency was observed that majority of students showed their maintenance of day mode as "below average" (49.8 %) and "low" (14.3 %). The same tendency was observed when searching character of nutrition –quantitative and qualitative parameters of feeding of most medical students was "below average" (41.3 %) and "low" (19 %). None were in the category «high». We can conclude from the above results that there's a lack of free time for wholesome food regimen during working day.

Also, differences in behavior directed on healthy life for various groups of students were set. The largest representatives were third-year medical students from India and Nigeria, so we compared observance of the rules of healthy lifestyle for students from these countries and found some similarities and distinctions. We also carried out comparison of some features in violation of healthy lifestyle rules between boys and girls.

Conclusion. Founded features of behavior directed on living healthy allowed to determine that some favorable and unfavorable habits caused certain violations in healthy lifestyle for medical students.

Besh A., Semenova N.

ELECTROMAGNETIC FIELDS AS A PART OF THE COMPLEX OF FACTORS OF THE NEONATAL INTENSIVE-CARE UNITS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of hygiene and ecology № 2
Scientific advisor – professor Zavgorodnii I.V.

Introduction: Medical equipment's are largely used to preserve preterm and sick babies from postnatal stressors, but their motors produce high electromagnetic fields (EMFs). Newborns are chronically exposed to these EMFs, but no studies about their effects on the fragile developing neonatal structure exist. EMFs produced by incubators influence newborns' heart rate variability (HRV), showing an influence on their autonomous nervous system. More research is needed to assess possible long-term consequences, since premature newborns may be exposed to these high EMFs for months.

The aim of our study was to examine adverse effects of high levels of electromagnetic fields on the premature infants in the neonatal intensive care units.

Materials and methods. Hygienic assessment of the electromagnetic fields have been conducted by the hygienic methods BE-Метер-АТ-002 according to State Sanitary Rules and Norms 3.3.2.007 – 98 «Державні санітарні правила і норми роботи з візуальними дисплейними терміналами електронно-обчислювальних машин».

Results. This hygienic assessment have been conducted from monitors, apparatus from artificial lung ventilation, aspirators, infuzators, incubators, resuscitation systems, beds with overhead heating lamps, heated mattress. Increased levels of the electric component of EMFs with exceeding of 42.0 V/m and magnetic component of EMFs with exceeding of 29.0 nT were registered. The effects of EMFs of myocardial repolarization, brain development of premature newborns were studied. Damage of myocardial repolarization was observed in the 52.63 % of premature newborns, damage of brain development of premature newborns was observed in the 100 % of cases in the NICU N_0. 1. Damage of myocardial repolarization was observed in the 12.5 %, damage of brain development of premature newborns was observed in the 62.5 % of cases in the NICU N_0. 2.

Conclusions. The highest electric component of EMFs has been registered in the NICU N_0. 1 from incubator ISOLETTE, the magnetic component of EMFs – in the NICU N_0 2 from heated mattress Aquaterm Ginevri. The lowest levels of EMF have been registered in the NICU N_0 2. Therefore, organization of protective regimen is obligatory in the neonate intensive care unit. It is necessary to decrease light levels. Future medical equipment in the Neonatal intensive care units should be designed to minimize the EMFs exposure of the newborn. Currently, we will to continue to study the impact of EMFs on the development of preterm infants.

These observations suggest that newborns deserve in which a policy of prudent avoidance of an EMF is warranted, perhaps because no study has so far excluded the possibility of negative consequences of their chronic exposition to a high EMF in incubators. International recommendations and laws set levels to safeguard the health of

workers exposed to EMFs: newborns deserve similar protection, and next programs of premature infants should include the study of nervous system

Chehovskaya I. N., Mayorova M.V.

THE FEATURES OF NITROBENZENE TOXIC EFFECT ON THE LABORATORY ANIMALS ORGANISM'S IN THE COLD STRESS CONDITION

Kharkiv National Medical University, Kharkiv, Ukraine
Department of hygiene and ecology № 2
Scientific supervisor – as. prof. Bachynskij R.O.

Introduction: Nitrobenzene is a toxic organic substance from group of aromatic compounds. It is applied in chemical industry, oil industry, the cosmetic industry in perfumery, varnishes and paints production. In medicine it was applied at treatment of itch. It is the highly toxic substance and possesses property to get through the skin. The wide circulation of nitrobenzene does necessary studying of its influence on a human body.

Aim: to define the influence of nitrobenzene toxic effect on an laboratory animals's organism in the conditions of a cold stress.

Materials and methods: Researches were conducted on laboratory animals (the puberal rats males of the WAG line) in the conditions of subsharp toxicological experiment with 30-fold introduction of nitrobenzene to a stomach in a dose 1/10 LD50 (70 mg/kg) and an exposition of animals in two various thermal modes for 4 hours a day 5 times a week.

Results: Results of studying of toxic effect features of nitrobenzene in a combination to the reduced temperature testify to development in an experimental animals's organism the patognomonic for nitrobenzene effect shifts provided that at the combined effect of nitrobenzene and the reduced temperature strengthening of toxic effect takes place. Indicators of strengthening of toxic effect at the combined effect of nitrobenzene and the reduced temperature were: more considerable decrease of the general hemoglobin and the oxygemoglobin; decrease of erythrocytes number; metgemoglobinemya; sulfgemoglobinemya; increase of quantity Geynts bodies; reticulocytosis; change of mass coefficients of internals and somatic-threshold indicator. Morphological changes in seed plants structure at the combined effect of nitrobenzene and the reduced temperature were more expressed in comparison with nitrobenzene effect in the conditions of a temperature optimum, and were characterized by sharp thinning of a spermatogenical epithelium and degenerate changes of the sharing cells, a full devastation of seed tubules, growth of quantity of dead and pathological forms, reduction of time of mobility of spermatozoa. At the combined effect of nitrobenzene and the reduced temperature the morphological picture of internals of laboratory animals was characterized by more expressed dystrophic and necrotic changes in the liver and kidneys; exhaustion of a lymphoid component of a spleen; in adrenal glands – decrease of hormones of cortical substance production. In the period of an after-effect there was no restoration of morphological structure internals of animals which were affected by nitrobenzene in the conditions of a cold stress that confirms strengthening of its toxic action in the conditions of the combined action with cold factor.

Conclusions: Establishment of toxic influence of nitrobenzene on an organism in the conditions of the combined action with the reduced temperature criteria can give the chance to prove need, to develop and to recommend for introduction of action for prevention of a

possible adverse effect of chemical factors (on the example of nitrobenzene) at their action for an organism in the conditions of a cold stress.

Unaam Edidiong Akaninyene, Sesay-Tlahyomi Abdulai, Katelevskaya N. N.

ANALYSIS OF HEALTH RISKS OF WI-FI AND RADIO FREQUENCY RADIATION (RFR)

Kharkiv National Medical University, Kharkiv, Ukraine
Department of hygiene and ecology № 1

Introduction. Saturating of environment with WiFi adds adverse effects to the existing burden of radio frequency radiation (RFR). That burden, called electrosmog. It consists of long-term exposure to low-levels of nonionizing electromagnetic radiation in the radio frequency and microwave range from familiar sources like radio and TV broadcast signals, radar, and the ubiquitous cell phone. As scientists shows WiFi and other sourses of EMR can have a negative influence on human health. Researchs of many scientists of the World focuses on the effects of RFR in the range used by cell phones and other wireless technologies.

Aim: in the work we carried out the analysis and generalization of published data.

Results: The vast majority of people who use wireless routers set them up and never turn them off. This means that they are constantly generating a dangerous electromagnetic energy field 24 hours a day, 365 days a year. This makes wireless technology a very significant chronic health risk. Wi-Fi radiation dangers are ignored. Wi-Fi has invaded our lifes, without having to undergo any test or safety checks whatsoever. Since it's so recent, there hasn't been time to conduct studies on the long-term effects of RF radiation from Wi-Fi on our bodies. However, at this point, thousands of studies have been done on the effects of microwave radiation from cell phones and cell towers which is very similar to that coming from Wi-Fi, so much can be learned from looking at the literature on those subjects. 56% of different studies shows a biological or health effect from exposure to RFR. These effects include: cancer, genetic effects such as damage to DNA, cellular and molecular effects such as a reduction in enzymes critical to the central nervous system, changes in electrophysiology such as reduced activity between nerve cells and physiological and behavioral changes such as impairment of peripheral vision. According to the analysis of scientific data 47% of independently funded studies found cancer effects, 69% found effects on cell function, 77% found effects on electrical signaling in the body, and 83% found physiological and behavioral effects. Here are some of the most common symptoms which scientists connect with influence of radiation from cell phones and towers, Wi-Fi and different appliances: chronic headaches, memory problems, dizziness, depression, anxiety, sleep disturbances, tremors, chronic stress. In some cases scientists make correlation with variety of diseases, such as: autism, ADHD, High Blood Pressure, Diabetes, Fibromyalgia.

Conclusion. As our studies show, there are no studies on long-term Wi-Fi health effects on the human body, but it doesn't mean that Wi-Fi and other sources of RFR isn't a potentially dangerous carcinogen. Do we want to wait 20 years to find out how dangerous Wi-Fi is to our health? Most scientists agree on one thing - all EMF fields are compounding the negative impact of environmental risk factors. So even if your Wi-Fi is turned off, your health and well-being is still being affected by neighboring signals. We must be smart and try protecting yourself against Wi-Fi dangers as best and faster as you can.

Fom Mildred Noroh, Ohiri Akuyoma May, Katelevskaya N. N.

PREVENTION OF COMPUTER ADDICTION AMONG CHILDREN AND TEENAGERS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of hygiene and ecology № 1

Introduction: Computer addiction can be described as the excessive or compulsive use of the computer which persists despite serious negative consequences for personal, social, or occupational function. Although that term is used to describe addiction to substances, addiction can be used to describe pathological computer use. This phenomenon has become one of the biggest social problems in the world right now. But with it connected not only social problems. It characterize some medical and psychological problems too.

Aim: In the work we carried out the analysis and generalization of published data.

Results: Computer Addiction is determined if a person who is not a programmer or his work does not require it, spends more than 4 hours at a computer. Unfortunately, thousands of people spend from 10-12 to 16 hours during a day at a computer. Such long-term use computer causes a lot of physical and mental problems: malfunction of musculoskeletal apparatus, hematologic system, eating habits, digestion, develop chronic dehydration, low level of physical activity and other problems. The study found that people who are long-term play computer games increases levels of endorphins, oxytocin, serotonin, substances that give pleasure. As a result to presence of huge amount of these substances - they have accumulation in the brain glutamate (N-methyl-aspartate) and group of noradrenergic substances. A result is they start to suffer at computer refusal. But this is not all problems. Significant role played by the social consequences: loss of social ties; using the computer for pleasure, gratification or relief from stress; sensation of irritation and out of control or depressed when computer is not using; neglecting work, school or family obligations; lying about the amount of time spent on computer activities. Particular attention is drawn to the occurrence of computer addiction in children and teenagers. Because in this case, the negative effects are more significant in nature for further socialization and the formation of health of the younger generation. In some cases treatments of computer addiction is necessary. Most of the treatments can be used as a preventative measures. Traditionally used: Counseling and therapy – this may entail behavioral therapy such as CBT which will retrain the mind to perform different actions when it has certain thoughts. Counseling or therapy can also focus on treating underlying mental health conditions that caused the addiction such as anxiety, depression, social trauma or other conditions. Group Support – many different options for group or community support are available to assist those who are addicted to computers. Just getting out and interacting with others can be very rewarding to the computer addict. Changing Interests – one method of getting past a computer addiction is to focus on new interests. For instance, a computer user might take part in a new gym membership, spend time at the movies with friends or go out for a walk.

Conclusion: As we see computer addiction can be devastating to a person's life. Computer addiction can affect any person, regardless of social status, age, sex and degree of prosperity. As with any other type of addiction, prevention of computer addiction is the best medicine.

Basheer N. Younis

DETERMINATION OF STRESS ON TIBIA DURING STANDING IN THE FLATFOOT CASE

Kharkov National University of Construction and Architecture, Kharkiv, Ukraine

Introduction: Tibia is the larger and stronger of the two bones in the leg below the knee in vertebrates (the other being the fibula), and it connects the knee with the ankle bones. The tibia is found next to the fibula on the medial side of the leg, closer to centre-line. The tibia is connected to the fibula by the interosseous membrane of leg, forming a type of joint called a syndesmosis with very little movement. The eccentric force acting on the tibia bone cause of flattening foot considers most important reason for the increased stress on the tibia bone and these stresses may lead to fracture, the value of these stresses depending on concentrated load distance from the center of the tibia bone --- and this distance depends on the slop from the toe bone center.

Material and methods: The study is based on a 4- flat foot patients and with normal foot, the patients show that have increased stress on the tibia bone by varying the values of the angles ,the angles values were 10-12-15-20 respectively --the calculations depend on the assumption that tibia has a circular section 2.5 cm diameter and moment of inertia 30 cm4.

Results: Where the weights of the patients people from 80 -85-90-100 kg respectively, and the natural person 80 kg results of stress on tibia were for the normal foot 1,6 MPa , and for patient with 80 kg, minimum stress 1,25 MPa maximum stress 1,94Mpa,for patient with 85 kg , minimum stress 1,26 MPa maximum stress 2,14Mpa, for patient with 90 kg , minimum stress 1,13 MPa maximum stress 2,46Mpa.

Conclusion: Flatfoot is a well-recognized condition among health professionals who treat foot and ankle problems. It is characterized by rearfoot eversion and a reduction in the height of the medial longitudinal arch. Flatfoot can present in a rigid or flexible form, with the former being congenital and affecting less than 1% of the population. In contrast, a flexible flatfoot is an acquired deformity that affects up to 23% of the adult population. In this study we highlight on the stress which generated in the tibia cause of the eccentric force. This study verified that the maximum stress value measured is influenced by the mathematical model adopted for the calculation of aforesaid variable. Using the mathematical model of two points, both located in the foot, results in minimum and maximum values of stress for studies aimed at determining the stress of occurrence of the highest subtler production over the course of the stance phase, the use of both mathematical models is satisfactory. However, if the objective is to determine the magnitude of maximum subtalar pronation, a variable that significantly influences musculoarticular injuries in the ankle and knee region, the use of the four-point model is recommended due to the influence of tibial inclination.

Nagiyeva Aynur

OBESITY AS A PROBLEM OF CLINICAL MEDICINE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of Normal Human Anatomy

Introduction. The urgency of the fight against obesity is caused not only its high prevalence, but also the negative impact the quality of life of patients, and especially high risk difference development of various diseases, leading to early disability and a substantial reduction of life expectancy obese. It was found that the incidence of hypertension (AH) in

obesity is 75%, diabetes mellitus (DM) type 2 - 57%, coronary heart disease (CHD) - 20%, gallbladder disease and biliary tract - 30% of osteoarthritis - 14% of malignant tumors of the breast, uterus, and large intestine - 11%. It is estimated that the total economic damage associated with obesity, higher than that of cancer.

Aim of treatment of obesity - reducing the risk of associated diseases with obesity, and if present - to achieve control over them, maintaining MT achieved as possible for a longer time, improving the quality and increasing the life expectancy of patients.

Results. Research that is desirable to the sick with obesity for early detection of disease: weight determination, determination of blood pressure, ECG at rest, exercise with exercise, chest X-ray, ultrasound of the heart, liver, gallbladder, pancreas, clinical analysis of blood and urine tests, determination of blood lipid levels, uric acid, fasting glucose, oral glucose tolerance test, serological studies. The main treatments for obesity are herbal medicine, increasing physical activity, pharmacotherapy, and surgery.

Diet therapy. Fasting for the treatment of obesity is not currently used in connection with a high risk of various complications (mental disorders; hypovitaminosis with the development of peripheral neuritis, lesions of the skin, hair and nails; arrhythmias). As a rule, when power is restored, patients gain weight more rapidly than it had been before fasting. For a stable weight reduction diets are recommended with a deficit of 600 calories a day, or a diet restricted fat intake ("low-fat" diet). These diets allow patients to lose weight to 10% for 6 months (500 g per week). Such a rate of weight loss are considered optimal. Low calorie (1000-1600 kcal / d.), And very low calorie (less than 1000 kcal / day.) Diets are nutritionally unbalanced and should be used only under medical supervision.

Physical activity. Today, there are no clear data on the preferred type of physical activity for obese patients. Nevertheless, more physiological and effective in reducing weight are dynamic physical activities: walking, jogging at a moderate pace, swimming, skiing, cycling. Should be encouraged to physical exercise of moderate intensity for at least 30 minutes a day 5 times a week. Obese patients are also shown morning exercises and physiotherapy. When you assign any physical activity should take into account the physical capabilities of the patient and increase the load gradually, setting realistic milestones.

Surgical treatment. Bariatric treatment - a series of operations aimed at weight reduction. These operations can be divided into 2 groups: bariatric surgery without disrupting the function of digestion and metabolism of nutrients and transactions with controlled variation of normal digestion. The first type of surgery include an adjustable gastric banding, and various embodiments gastroplastical operations, which are based on formation of "small" gastric or stomach conversion into a narrow tube of not more than 200 ml by partial resection. The second group of surgical interventions include various bypass surgery. The average weight loss after these operations is 38-80% within 1.5-3 years.

Conclusion. Physicians should consider obesity as a disease and help obese patients by giving them adequate treatment. Treatment should be based on good clinical care and include interventions informed evidence-based medicine. In the treatment of obesity should focus on the real goals and remember that maintaining body weight - a lifelong process.

Onwujekwe Udodi Ebubechukwu, Ogunyemi Opeyemi Oluwafunmilayo, Bogachova O. S.

STRESS DISORDERS IN CHILDREN AND TEENAGERS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of hygiene and ecology № 1

Introduction. Modern life is full of hassles, deadlines, frustrations, and demands. For many people, stress is so commonplace that it has become a way of life. Stress isn't always bad. In small doses, it can help you perform under pressure and motivate you to do your best. But when you're constantly running in emergency mode, your mind and body pay the price. You can protect yourself by recognizing the signs and symptoms of stress and taking steps to reduce its harmful effects.

Results. It is possible to identify a number of signs and symptoms of stress in children: mood swings; sleep disorders; bedwetting; physical discomfort, including abdominal pain and headaches; attention problems, which dramatically reduces the performance; the child becomes withdrawn or spend too much time alone, avoids contact with peers as well as with relatives, including parents. Stress occurs under the influence of impacts that occur in the lives of both adults and children. Potential sources of stress in children include school and social problems, including: parting with close friends; relocation of the family; peer pressure; dramatic changes in the day regimen; beginning and end of the school year; training and examinations, interviews; overreliance on computer games, particularly aggressive games. In preschoolers even separation from parents (visiting nurseries or garden) can be a cause of stress and anxiety. Stress in parents, and especially mothers, have an influence on the child life in the family, his children's ideas about family life, family cohesion and model of his future family in adulthood. World news can cause stress. Children who see disturbing images on TV or hear talk of natural disasters, war and terrorism may worry about their own safety and that of the people they love. Children are particularly vulnerable to the impacts of climate change that negatively affect their health by increasing air pollution, sudden changes in weather conditions, fluctuations in temperature and atmospheric pressure, reduced water quality, lack of environmentally friendly food and strong exposure to toxins. As a result of environmental stresses children are at risk of infectious and allergic diseases, respiratory diseases, and stress-related disorders including development of mental stress, increased alertness and over control: excessive fear and worry over trifles, restlessness, feeling keyed up and staying on the verge of collapse; anxious expectations, fears, emotional lability; insomnia (difficulty falling asleep and fitful sleep); impaired concentration and memory impairment.

Conclusion. Stress is very important for survival. However, chronic stress is directly related to the onset and progression of many pathophysiological states. Conditions of prolonged stress factors induce development of endocrine, hormonal and autonomic in balance, which leads to dysadaptation, and stimulates the development of negative psychological and physical stress conditions. At present great attention is paid to activities and techniques designed to increase stress tolerance in children and teenagers. All forms of stress, "good" or "bad", affect the emotional and physical condition of the child, as well as determine the risk of development of chronic diseases in adult life. To develop therapeutic and prophylactic effects is to increase the adaptive features in childhood and adolescence, readapting the body's disturbed equilibrium with the environment and increasing stress tolerance of the child.

Zinchuk A.N., Siphesihle Mbuli, Zinchuk O.G.

DISTRIBUTION OF LUNG CANCER IN VARIOUS COUNTRIES OF THE WORLD AS COMPARED WITH UKRAINE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of social medicine, organizations and economic of the public health

Introduction: According to the National Cancer Registry Institute of Oncology, Ukraine, according to which, in our country the annually ill with cancer are more than 160 thousand people. The incidence of lung cancer amongst men is 16 183 cases per year (20.2% of all malignancies in men), women - 3344 cases per year (4% of all malignancies in women). In the structure of the male population, the incidence of lung cancer is consistently ranked first. Thus 60-70% of cases are diagnosed in III - IV stages. In Europe the situation is similar: each year 307000 men are registered with lung cancer (22% of all malignancies in men) and 70000 women (6% of all malignancies in women); annually deaths from this cancer include 266000 men and 64000 women.

Aim: To compare the prevalence of lung cancer in the population of Ukraine and the world.

Materials and methods: Our research was based on the statistical values of lung cancer in Kharkiv and its regions. The study of the prevalence of lung cancer among populations in Kharkiv started with the establishment of the population with lung cancer, which in 2001, 2006 and 2011 was in 1039, 1086 and 1118 patients respectively, and analysis of the age and sex structure of the population.

Results: In the study of the prevalence of lung cancer among residents of Kharkiv and its region, it was found that the growth rate is determined by morbidity. Thus, in 2001, incidence rate was equal to 44,4 in 2006 - 46,2, and in 2011 - 48,3. As confirmed by the data, the level of total morbidity in Ukraine in 2001 increased by 21% over the period, and this figure has grown substantially in Dnipropetrovsk, Vinnitsa, Kiev, Ternopil and a leading position in this list unfortunately is occupied by Kharkiv region. It was also found that it was a more common disease in men than in women. In 2001 - 81,8 - men, 14,3 - female, 2006 (81,6 and 17 3) in 2011 (84,1 and 19,1), respectively. The disease was most frequently found in the third stage of the disease, regardless of the year of observation. (All values were calculated per 100000 population). When comparing the incidence from ten random countries from selected continents using data from GLOBOCAN 2002 and IARC, we obtained the following values displayed here in the form Country (Number of cases in male population, ASR – Number of cases in female population, ASR): Canada (12,552, 62.6 – 8096, 34.8), United States (118,873, 69.2 – 86,024, 40.1), United Kingdom (24,300, 54.3 – 15,424, 27.8), Australia (5565, 44.5 – 2679, 18.8), Japan (47,564, 43.2 – 18,889, 13.8), Philippines (10,823, 55.8 – 3358, 15.0), South Africa (3043, 27.4 – 1203, 8.2), Zimbabwe (353, 13.8 – 195, 6.6), Mexico (5622, 19.2 – 2633, 7.6), Brazil (13,635, 24.0 – 5498, 7.9).

The values obtained are in the format (Number of deaths in male population, ASR – Number of deaths in female population, ASR): Canada (11,032, 54.7 – 6,808, 28.5), United States (94,640, 54.8 – 65,792, 30.0), United Kingdom (21,959, 48.6 – 13,390, 23.7), Australia (4936, 39.3 – 2246, 15.4), Japan (41,110, 36.9 – 15,257, 10.9), Philippines (10,064, 51.8 – 3120, 14.0), South Africa (2788, 25.2 – 1099, 7.6), Zimbabwe (344, 13.4 – 190, 6.5), Mexico (5477, 18.8 – 2567, 7.4), Brazil (12,728, 22.5 – 5524; 8.0).

Conclusion: The prevalence of lung cancer among adults increased from 2001 to 2011 from 44.4 to 48.3 per 100,000 relevant population and these changes are due to the increase in prevalence in the age group 51-70 years ($p < 0.001$). In the population of Kharkiv city and its regions, men are affected by lung cancer more than women (2001 - 81.8 for men and 14.3 for women; 2006 - 81.6 and 17.3 and 84.1 in 2011 and 19.1 respectively among male and female population) ($p < 0.001$). This data provides the necessary tool for targeted preventive and early diagnostic measures for lung cancer in Kharkiv and its regions.

DENTISTRY

Abdul Karim Zeiad M., Al-Mashhadani Ahmed Mohammed

MANUFACTURING TECHNOLOGY OF CAST METAL-PLASTIC DENTURES FROM METHOD OF LAYERING AND POLYMERIZATION FACING COATING

Kharkiv National Medical University, Kharkiv, Ukraine
Department of orthopedic dentistry
Scientific adviser: Breslavets N.M.

Introduction. In compiling the plan of treatment orthopedic patients the dentist have a choice of design of denture and a choice of material, which solves the problem of restoration of function and aesthetics. With the advent of acrylic polymers greatly enhance the functionality and availability of dentures. Significantly simplify the technology of manufacturing dentures, due to less hardness of facing acrylics have easily prepared and polished. Now you can create a more lightweight construction and consequently relieve periodontal tissue of antagonists and temporomandibular joint.

The purpose of this work is a new technological evaluation of facing material for cast fixed dentures "Sinma-M+V" JSC "Stoma", Kharkov

Material and methods. The plastic "Sinma-M+V" has hot-curing polymerization, which complete set has powders of enamel, dentin and cutting edge. Enamel and dentin are 9 colors on a scale Vita. Manufacturing technology of cast metal-plastic dentures with our method. Plastics "Sinma M+V" was prepared as follows: to liquid added powder and mixed in a glass container in a volume ratio of 2 : 3 (to saturation). After mixing, masses, immediately ready for uploading. Time of swelling of the 'Sinma-M+V" is 45 minutes, which creates for dental technician favorable conditions in the process of modeling facing coating. With spatula we applied acrylic mass "Sinma-M+V" on the previously prepared cast metal framework, with retention points and primed with top coat "Sinma-M+V". Mass applied to a framework in small portions, and giving of facing the necessary shape of the tooth. The ratio of layers the dentin : enamel : the cutting edge - 60:30:10 respectively. Each layer (dentin, enamel and cutting edge) sequentially polymerized in dental pnevmopolymerizator "Averon" (for 30 minutes at a temperature of 125°C and a pressure of 6 bar). To further enhance the colors technician used color concentrates (for cervical area).

Results. Due to the presence of plastic "Sinma-M+V" oligomer was able to increase the pot life of the masses in the plastic state, so you can in one stage upload the design of any length (plastic mixing small portions), drying mass on the modeled areas not observed (up to 1 hour). The results of these research indicate that the simplification process, reducing the time.

Conclusion. Plastic "Sinma-M+V" provides high aesthetic properties dentures due to the possibility of layered modeling of the prosthesis with masses of different colors.

Al Abed Nazem

RECEPTION APPARATUS PROTECTION OF THE TEETH USED TO SUPPORT NON-REMOVABLE DESIGN OF DENTURE BY PROPOSED METHOD

Kharkiv National Medical University, Kharkiv, Ukraine
Department of prosthetic Dentistry
Scientific adviser: Diudina I.L.

Introduction. There has been an increase of cases of tooth pulp removal in intact teeth supporting non-removable design of denture with the purpose of preventing possible complications following teeth hard tissues preparations that involve opening and possible damage of dentine tubules that results in disorder of hydrodynamic processes in odontoblast's processes. The possibility of compensatory mechanisms starting depends on the size of dentine layer taken off. But these protection mechanisms do not always start.

Therefore the stage of pulp removal in supporting teeth is brought to the forefront of the preparation for dental prosthetics. However, the research has proved that this manipulation decreases greatly the strength of dentine, this leading to a considerable frequency of crown's part of teeth damage after prosthesis, a decrease in strength and resistance to masticating pressure under functional load.

The purpose of our research was to develop a new method of stump protection of supporting teeth on the stage of treatment by non-removable design of denture.

Materials and methods: Clinical research involved 72 patients with 264 supporting vital teeth being examined. 15 patients out of them with 63 supporting teeth made up the control group; the test group to be made up by 57 patients with 201 supporting teeth being examined.

Results. Examination of the teeth pulp state before and after preparation was conducted by means of electroodontometrical (EO) and determination of masticatory load (ML) with the help of our method proposed (patent № 99095142 of 15.03.2001, bulletin. №2). The following method of protecting the stumps of teeth after preparation of hard tissues (patent № u 200605121 of 15.09.2006. bulletin. № 9) was used : the start of preparation by means of electroodontometros was preceded by measuring the initial sensitivity of tissues of the teeth to be used under supporting elements of non-removable denture. The rates of maximum masticatory load of teeth in position of central occlusion were determined by the method proposed. The injection infiltration anesthesia was conducted, followed by preparation of hard tissues of the teeth. After the preparation the finish of anesthesia effect was awaited and sensitivity of teeth measured again, the rates of maximum masticatory load were determined. Then, by means of etching gel the lubricate layer was removed from their surface. Then the gel was washed off by stream of water, the stumps were isolated by cotton rolls from mouth liquid and dried by warm stream of air. The antigomotoxic preparation “Traumel” was applied to the surface of stumps by applicator and spread evenly over the surface of stumps by warm stream of air. Then the new adhesive composition “Dentasiv” was applied. The remains were removed by warm stream of air and lighted during 20 seconds. To decrease the effect of environment on tissues of stumps of the teeth the temporary crowns were fixed which were manufactured before preparation with the help of GNJ Tempo lux company materials by standard method.

The measurement of the teeth sensitivity and determination of the rates of masticatory load were conducted for the second time in one month after preparation. The analysis of the rates was aimed at identification of the dynamics of rates (EO and ML)

which was to arise after the operation of preparation of hard tissues of the teeth, the efficiency of the proposed method with regard to control, and determination of the factors which could have effect on positive as well as negative alterations. For verification of the analysis data the method of dispersed analysis (ANOVA) was used which was implemented by program pack SAS. The findings show that in the group where our method of protection of the stumps of supporting teeth was used the data of EO and ML in more then 50% of cases remained on the same level after one month after the preparation and before the operation of preparation irrespective of anatomical shape of teeth. But in the control group where our method was not applied the same data showed a sharp increase in one month and the anatomical form of the tooth was significant. The most significant increase in rates was observed in incisors, then in canines, prevolar and the least one in molar.

Conclusion: on the basis of clinical research the positive effect of our method in protection of stumps of intact teeth after preparation on the stage of treatment by non-removable design of prosthesis is evident, thus enabling the method to be used widely in everyday practice of dentist- orthopedist.

Al Salihi Ahmed Ibrahim, Cherepynskaya Y.A.

EFFICIENCY IN NON-SURGICAL TREATMENT PHASE OF PATIENTS WITH SEVERE CHRONIC GENERALIZED PERIODONTITIS, A PRELIMINARY CLINICAL STUDY

Kharkiv National Medical University, Kharkiv, Ukraine
Therapeutic Dentistry Department

Introduction: The principal reason of the complex destruction of dental structure is the pathogenic flora of dental pellicle, bacteria of which cause immune and inflammatory processes in periodontal tissues (Carranza, 2009). Untreated inflammatory and degenerative periodontal diseases, chronic generalized periodontitis (CGP) is the most widespread among them, lead to considerable destructions of connective tissue structures of alveolar area and, consequently, result in loss of natural teeth. The most appropriate way to deal with supra- and subgingival pellicle is to remove it mechanically, that is the essential condition in achieving the positive results and preventing the complications of periodontal diseases (Goodson, 1994). The restoration of biocompatible root surface, required for healing of periodontal pockets, is obtained by scaling, smoothing the root surface of a tooth and curettage. Due to the fact that bacteria can re-inhabit the periodontal pockets for a few weeks after active treatment, the periodic mechanical removal of subgingival bacterial substrate is required to prevent any recurrence of inflammations (Sbordone L. et al., 1990). The number of therapeutic measures is determined by various factors, including the degree of motivation and the patient's facilities.

Aim: To determine the effectiveness of non-surgical (initial) stage during complex periodontal therapy in patients with chronic generalized severe periodontitis with a high level of motivation.

Materials and methods. The clinical study involved 10 patients (aged 45-55), non-smokers, with severe CGP and high level of motivation for treatment and carrying out the individual hygiene. Prior to treating, a periodontal card was made up, that included the local criteria of patients' selection: index PI (O'leary, 1972)> 25%, index BOP (Ainamo, Bay, 1975)> 40%, the average depth of periodontal pockets (PPD)> 5 mm, the average clinical

level of loss of epithelial attachment (CAL)> 5 mm. General criteria for selecting patients excluded antibiotics and oral antiseptics during the last three months, pregnancy, the presence of systemic diseases or the intake of medications that could affect the results of the clinical study. The protocol of management of periodontal pockets (PP) included: electromechanical removal of dental plaque, careful scaling and smoothing the root surface of a tooth, irrigation of PP (H2O2 3%, chlorhexidine 0,2%), processing of PP by laser radiation (diode laser 940 μm, 2W/CW), application of the chlorhexidine gel 0,5% for 5 min. The traumatic occlusion was eliminated and the splinting of abnormally mobile teeth was carried out. All patients were prescribed the conventional local anti-inflammatory therapy and were given the standard recommendations for oral care. Mechanical and antiseptic treatment of PP was performed four times at intervals of three months due to fill in the periodontal card repeatedly. The paraclinical criteria of the condition of periodontal tissues such as indices PI and BOP and indicators PPD and CAL, the percentage of teeth with a favorable, doubtful and hopeless prognosis before the treatment and in 12 months, became the parameters of assessment of initial phase of conducted treatment.

Results. Before treatment, the average index of BOP in patients was 79%, the average index of PI - 86%, the average indicator of PPD - 5,8 mm, the average index of CAL - 5,3 mm. In a year of the treatment the average BOP index has decreased by 3,3 times to 24%, the average PI index has decreased by 2,4 times (to 26%), the average PPD indicator – by 2,1 times (to 2,7 mm), the average CAL indicator – by 1,2 times to 4,5 mm. The analysis of results of paraclinical parameters of non-surgical phase of periodontal therapy in 12 months has showed that the number of teeth with hopeless periodontal prognosis has decreased by 4,5 times (26,9%) and the number of teeth with doubtful periodontal prognosis has increased by 1,5 times (23,1%), the number of teeth with a favorable prognosis has increased by 1,1 times (3,8%).

Conclusions. The results of preliminary clinical studies indicate that carrying out the non-surgical (initial) stage in the complex periodontal therapy of patients with severe degree of CGP is pathogenetically justified and appropriate. Carrying out the non-surgical stage four times a year at intervals of three months helps to normalize the average index of bleeding and reduces significantly the depth of periodontal pockets; it also increases the number of teeth with a favorable (3,8%) and doubtful (23,1%) prognosis as well as decreases the number of surgical intervention. The highest effectiveness of non-surgical phase of treatment is achieved in patients with a high level of motivation, and depends on the degree of local and general risk factors.

Alkarawi Manar Shakir

«ADENOID DISEASE» ACCORDING TO PEDIATRIC DENTISTRY SPECIALIST

Scientific supervisor: Nasaryan R.S., Golik N.V., Fomenko Y.V., Shyochenko M.G.
Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatric dentistry, pediatric maxillofacial surgery and implantology

Introduction: Adenoids - pathological hypertrophy of the lymphoid tissues of the pharynx - mainly nasopharyngeal and palatine tonsils, is more common in children aged 2 to 8 years. Contributing factors may include inflammatory diseases of the pharynx, various children's infectious diseases, endocrine disorders, hypovitaminosis, anomalies of the constitution, the adverse social and living conditions, and other effects that reduce the

reactivity of the organism. The modern interpretation of this disease allows us to introduce the term "adenoid disease." Adenoids form in most children adenoid type of face (habitus adenoideus): apathetic expression and facial pallor; half-open mouth; flatness of nasolabial folds; slight exophthalmos; sagging of the lower jaw. Disrupted the formation of facial bones, properly developed teeth-jaw system, particularly the alveolar bone of the upper jaw, with its wedge-shaped narrowing and positioning anteriorly; expressed narrowing and high standing of the palate (gothic palate or hypsistaphylia); upper teeth properly developed significantly protrude and are arranged randomly. Stigma - and Gothic Palate example of this - are small deformities.

Materials and methods. Surveyed by us 12 patients from the children's department KZOZ «ENT № 30» in age from 3 to 9 years allowed to fully confirm the causes and factors arising "adenoid disease." Dental aspects of the pathology indicated the direct and quick response of maxillofacial area vascularized bone on the violation of the functional features of its existence in the form of a Gothic palate, the uneven development of the jaws, dentition and tooth decay, the formation of open bite and extraoral symptoms. Examinations, medical history and examination of patients by routine methods revealed the following facts: none of the patients had been examined by a dentist - a pediatrician in connection with the main disease (adenoids II - III Art. Gravity). Frequency of specialists of this profile varied from 0 to 6 times during life because of carious pathology.

Results. CPU + kn ranges from 0 to 8. Examining patients immediately before surgery for adenoids or in the early postoperative periods were identified carious lesions nesanirovannye about which patients were not informed earlier. Only in 2 cases out of 12 parents of children aware of the need to monitor the dentist, pediatrician about the "Gothic Sky" and the possibility of orthodontic correction. Volume, severity and consequences formed maxillofacial pathology in children surveyed, as well as ways and tactics of its elimination in the remaining 10 cases was explained by our team (team) parents of patients for the first time. Discussion of the issues of oral health has attracted considerable interest in young patients and a desire to cooperate. Correction of oral hygiene was also performed by us in full for the first time in my life in 90% of patients.

Conclusions. Interest of parents and young patients in examinations and interviews conducted by our department clearly demonstrated the absence of a real working system for the long-term clinical observation of such kind ENT-pathology by pediatric dentists, and hence the low level of awareness about the effectiveness of dental aid on this disease entities, it’s terms and volumes. Early correction and professional dental aid for the pathology observed also was not proposed by ENT - colleagues as a mandatory component of rehabilitation, or was carried out formally. All surveyed were offered information support and targeted dental care at the Department of Pediatric Dentistry, Children's Maxillofacial Surgery and Implantology KNMU.

Barylyak A.Y., CherepynskaY.A.

USING THE Er:YAG LASER IN COMBINATION WITH PHOTODYNAMIC THERAPY FOR TREATMENT OF PERIIMPLANTITIS

Lviv National Medical University, Lviv, Ukraine
Kharkiv National Medical University, Kharkiv, Ukraine

Introduction The presence of bacteria on implant surfaces may lead to an inflammation of the periimplant mucosa. If this inflammation is left untreated, it spreads

apically, leading to bone resorption and to implant failure. To treat periimplantitis it is essential to remove the bacterial plaque and the contaminated tissues. Er:YAG laser is capable to remove only the infected soft and hard tissues around the contaminated implant surfaces. Also its specific wavelengths is poorly absorbed by titanium and temperature around the implant during irradiation does not increase significantly, therefore it leads to no thermal damages.

Aim: The aim of this study was to evaluate the efficacy of Er:YAG laser in the treatment of periimplantitis in combination with photodynamic therapy.

Materials and methods: We observed 25 patients with 42 implants. In all our patients was observed periimplantitis. We divided our patients on two groups. First group: 10 patients (15 implants) were treated with Er:YAG laser alone (160 mJ, 10 Hz), Hoya, WersaWave, 2940 nm. In second group: 15 patients (27 implants) post Er:YAG laser treatment was used photodynamic therapy (7.3 mW, 690-905 nm, 60s, in combination with toluidine blue), Hager Werken HF, 650 nm/100mW. PDT was used immidiatly after laser decontamination and removing granulommatose soft tissues. After that on implant surface a GBR was performed. Probing depth, clinical attachment levels and x-rays were assessed prior to treatment and once per month half a year .

Results In both groups treatment results were positive: reduction of pocket depths, gain of attachment and no bleeding in probing. In first group in 80% of patients complete positive result was evaluated at the period of 5-6 months. In comparison with second group complete positive result was evaluated in 93.3% patients at the period 4-5 months.

Conclusion Using of Er:YAG laser with combination of PDT suitable and convention for the treatment of periimplantitis with significant improvements of the clinical parameters.

Bilobrov R., Sydorova O., Kopitko M.

CLINICAL AND TECHNOLOGICAL ASSESSMENT OF THE QUALITY OF THE ASHLESS PLASTIC INSERTION PRODUCTION

Kharkiv National Medical University, Kharkiv, Ukraine
Department of orthopedic dentistry

Introduction. At the present time exist large variety of pins but the biggest use found three types: anchor, fiberglass standart pin systems and individual molten copings. To all of them handle dentists carefully. Anchor and fiberglass standart pins have these flaws: firstly, such microprosthetics due to design features put pressure on the root walls, that grows under the influence of chewing pressure and often leads to vertical fracture of the root. Secondly composite material modeling of stump past is necessary but if even it was ideally made it leads to strength reduction while cast strength is. Thirdly, standard systems is not always high-quality (due to material it was made of pin shape, etc.). Their only advantage over cast tabs is a time saving. The modeling technique of insertion is more reliable due to the absence of the above-mentioned drawbacks. As practice shows, such pins serve longer then anchor one, but only by entry requirements implementation. One of them – accurate modeling and high-quality molding. As a result – a high – accuracy.

The aim. An clinical assessement of use of an ashless plastic "Modeplast" in the insertion production by a direct method.

Materials and methods. In case of dental hard tissues destruction fill 75-100% in a frontal side the direct method was used. The modeling was made by modeling wax

"Lavaks" and ashless plastic "Modeplast". Control group – 16 patients in the age 35-57 years (8w/7m) with 4th class hard tissue defect by Black.

Results. In total 88 insertions were made to our patients, including 46 after ashless plastic Modeplast and 42 after wax "Lavaks" modeling. Their quality was evaluated t the fitting step. In the main group in all 46 cases (100%) in case of all modeling and molding rules abidance of "Modeplast" the step of cementation was without difficulties. In the second group we had to repeat the cast process of 7 insertions (17%) in the case of defects of wax modeliration.

Conclusions. Plastic material "Modeplast" is gives more accurate and high-quality results in case of the same time spent, better express prothetic area. That leads to improvement of the marginal adaptation, so as a result high-quality of dental design. Due to full burning – out of plastic and more accurate work on previous steps. The time for processing is shorted and the quality of cast dental design is refined. Pin lay can be modeled for the previously created crown. Improperly performance of the steps can leads to negative result and using of modern material will not give the expected results.

CherepynskaY.A., Volkova O.S., Dolya E.I.

APPLICATION OF GLUCOSAMINE SULFATE IN THE PHASE OF NON SURGICAL TREATMENT OF PATIENTS WITH CHRONIC GENERALIZED PERIODONTITIS

Kharkiv National Medical University, Kharkiv, Ukraine

Introduction: Periodontal complex is represented by different types of connective tissue, which, under inflammatory degenerative processes, are subjected to pathological changes, leading to the destruction of dentogingival and dentoalveolar junctions, causing the loss of osseous tissue and, consequently, the loss of teeth. The significant and relevant point in the process of treatment of this pathology is the prescription of drugs that, in addition to anti-inflammatory effects, would increase the regeneration. The basis of a wide spectrum of pharmacological activity of glucosamine is its protective properties, which are realized through the mechanisms of antioxidant and membrane stabilizing effect. Glucosamine is directly involved in the formation of collagen fibers and extracellular matrix, stimulates the proliferation of connective tissue cells, increases their biosynthetic activity, and improves vascular microcirculation in connective tissues.

Aim: To study the efficacy of glucosamine application in patients with generalized periodontitis in the phase of non-surgical treatment. To compare the clinical indicators of periodontal tissues of the examined group with the control group in different periods of observation.

Materials and methods: The study involved 52 patients at the age of 45-55 years (23 women and 29 men) with chronic generalized periodontitis of the second stage of severity. The patients with diseases of the endocrine, cardiovascular and other systems didn't take part in this research. The patients were divided into two groups (26 people in each group); A – the examination group, and B – the control group. The patients were motivated and trained in individual oral hygiene. The non-surgical phase of treatment in two groups (A and B) included: scaling, closed *curettage and* smoothing of the root surface using *Gracey curettes*, irrigation of periodontal pockets with 0,1% *chlorhexidine gluconate solution, de-epithelization* of marginal part of the gums by means of a diode laser (940 μm,

2W/CW), administration of local and general anti-inflammatory therapy, and splinting, if necessary. Patients in the group B were additionally administered 1500 mg of glucosamine sulfate (DONA «Rottapharm», Italy) once a day for 1 month to stimulate the reparative processes in the connective tissues of periodontal complex. The similar plan of treatment was repeated in both groups in 6 months. The indicators of hygiene and periodontal indices at baseline and in 6 and in 12 months after initiating the treatment were studied. The efficacy of treatment of all patients was evaluated in accordance with: the plaque index (PI), the bleeding index (BOP), the index of the depth of periodontal pockets (PD).

Results: In 6 months, in the group A the PI index decreased by 1,9 (46%), the index BOP – by 2,4 (59%), the DPP index – by 1,5 (32%). The results in the group B: the index PI decreased by 2,4 (50%), the BOP index – by 2,8 (64%), the DPP index – by 1,6 (36%).

In one year in the group A the PI index decreased by 2,3 (57%), the BOP index – by 3,9 (97%), the DPP index – by 1,6 (37%). In the group B the PI index decreased by 2,4 (58%), the BOP index – by 6,7 (98%), the DPP index – by 1,6 (39%).

Conclusions: In six months after starting the treatment in both groups, we observed the similar positive dynamics of clinical signs of inhibition of the inflammatory process showing the lack of hyperemia, edema, exudate release and reduction of tooth mobility. However, more positive dynamics was observed in patients from the group B, who had greater amount of periodontal pockets with the depth up to 3,5 mm; the BOP and PI indices were lower in this group. The further study of drugs stimulating the healing process is the matter of both scientific and practical interests. We consider that it is expedient and advisable to carry out a supplementary research of biochemical and immunological parameters of oral fluid to get additional results.

Cherepynskaya Y.A., Volkovitska T.A.

THE USE OF DIODE LASER 940 μm IN TREATMENT OF PATIENTS WITH SESERE CHRINIC GENERALIZED PERIODONTITIS, PRELIMINARY CLINICAL STUDY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of therapeutic dentistry

Introduction: The process of regeneration of periodontal tissues depends on the level of biologically active substances, microcirculation, and others. The more active metabolism is, the lower the levels of inflammatory mediators are, and the more balanced self-regulation is observed, the higher the rate of regeneration is. The use of laser technologies in case of periodontitis finds its justified application, both in the period of rehabilitation, and in the phase of supportive treatment in order to increase the duration of remission of the disease, and also helps to reduce the volume and terms of invasive procedures on the periodontal tissues with the lowest risk of complications due to its evident bactericidal, coagulative, anti-edematous, anti-inflammatory action of the laser beam.

Aim: To study the influence of the diode laser 940 μm on clinical parameters of periodontal pocket depth (PPD) and the degree of papilla bleeding (BOP) while treating the patients with chronic generalized periodontitis (CGP) of moderate severity.

Materials and methods: 16 patients (aged 35-45) with CGP of moderate severity participated in the study. A periodontal card was filled in before managing; it embraced the patients' selection by local criteria: index PI (O'leary, 1972) <25%, BOP (Ainamo, Bay, 1975)> 40%, the average depth of periodontal pockets (PPD) 3-5 mm. General criteria of

the patients' selection excluded: oral antibiotics and antiseptics during the last three months, pregnancy, the presence of systemic diseases influencing the results of a clinical study. The treatment protocol of the Ith (control) group included: supra-gingival scaling, sub-gingival irrigation of H2O2 3% and CHX 0.2%, sub-gingival scaling and smoothing of the root surface (SRP), application of CHX gel 0.5% - 5 min. The treatment protocol in the IInd (study) group included: supra-gingival scaling, sub-gingival irrigation of H2O2 3% and CHX 0.2%, SRP, a three-time laser irrigation (diode laser Epic - 10, 940 μm, BIOLASE®, USA) of periodontal pockets (uninitiated light, Ø 300 μm, 1W/CW), soft tissues laser curettage of periodontal pockets (initiated light guide Ø 300 μm, 2W/CW), application of CHX gel 0.5% - 5 min. All patients were given the standard recommendations for oral care and CHX 0.12% mouthwash for two weeks. In six weeks the periodontal card was filled in repeatedly.

Results: When analyzing the results received in 6 weeks after the treatment, we observed a similar positive dynamics of indicators PI, BOP and PPD in two groups. The results of indicators of PI did not significantly differ between the two groups, but the indices of BOP and PPD in the second group were considerably better with the statistical confidence ($p < 0.001$).

Conclusions: The use of the diode laser 940 μm in the integrated treatment of patients with CGP of moderate severity is an effective and clinically reasonable method. Further study of distant results of treatment will allow comparing the duration of remission in these groups.

El Mohdi Asmae

REMOVAL DEFECT to STABILIZATIONS FULL WITHDRAWABLE PROSTHETIC DEVICE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of prosthetic dentistry
Scientific adviser: Krichka N.V.

Introduction. Exactly origin base-alveolar (BA) of the effect and breaks the stabilization a prosthetic device, vastly worsens the rehabilitation broken function nibbles, chewing, swallowing, diction, as well as recovering the aesthetic rates of the smile and person. The Results of the studies anatomist-topographical particularities of the prosthetic field (PP) beside sick with full edentulous (the STEP), observation for fixation and stabilization full withdrawable prosthetic device (PSP) show that most often defect concerning their fixation and stabilizations are defined under such conditions: under unaccustomed unsatisfactory anatomist-topographical conditions PP; at discrepancy of the orientation prosthetic planes prosthetic device to surfaces PP beside borders of the lips, during central and эксцентрического of the correlations; under unsatisfactory congruence relief of the internal surfaces base PSP and PP, which appear during functional occlusions.

Aim. The Determination of the reasons destabilization PSP during functional occlusions and removal defect to their stabilizations on PP jaws.

Material and methods. In the second visit the clinic beside sick got the worker prints PP jaws by means of the individual impression spoon-base with restored on them occlusive platen. With their help defined the central correlation of the jaws sick. Beside that sick, in which was noted destabilizationPSP during functional occlusions, instead of the

individual spoon used their old prosthetic devices. For determination BA effect beside this groups sick, the artificial teeths PSP set after the manner up with conservation of the plural contact between them, both in central, and in functional and eccentric occlusion.

Results of the study have shown that thickness print between base prosthetic device and prosthetic loge PSP, which were made after the manner directed polymerization shrinkage, realistically alike on the whole surfaces PP, but at polymerization on generally accepted technology vastly and realistically differ. In some sections impression masses came short, but in other - reached 2,5 - 3,1 mm. Got data are indicative of that that as a result polymerization shrinkages and deformation base PSP during classical technology of the fabrication, appears the significant discrepancy micro- and macrorelief internal surfaces base to surface PP. Exactly so during functional occlusions appear the defect to stabilizations PSP.

Conclusion. Uuchshenie fixationPSP possible to reach by creation exact congruence base micro- and macrorelief PP jaws. Such condition were created by us, when polymerization base construction material realized in polymerizer under directed a pressure of the air.

German S.A.

LOCALIZATION AND STRUCTURE OF DENTITION DEFECTS IN PATIENTS OF UDC KHNMU

Kharkiv National Medical University, Kharkiv, Ukraine
Department of prosthetic dentistry
Scientific adviser: Yanishen I.V.

Introduction. According to scientific literature, dentition defects is found over 70% of the total population of Ukraine aged 18-85. Dental caries and it's complications, periodontal disease, surgery, trauma and negative factors at different stages of production prosthetics can lead to loss of teeth. Several studies have explored this problem, but extensive preventive measures and improvement of existing treatments didn't reduce the percentage of population with partial edentulism. A little is known about localization and structure of dentition defects in Kharkiv.

Aim. To identified the prevalence dentition defects, their localization and structure in patients of University Dental Centre of Kharkiv National Medical University.

Material and methods. The study was performed on 512 patients with dentition defects aged 18-77 by clinical examination and analysis their medical records (form 043) among 2008-2014 years. The patients were divided into eight groups accordance with methodical recommendations of the WHO experts. The minimum sample size for each age group was calculated by a special formula and amounted to 64 people.

Results. Defects of dentition were identified in 391 cases (83.5%). The prevalence of dentition defects increases with age. All patients after 46 years had dentition defects. The values of defects doubles in third group (26-30 years). Several defects in both jaws were determined in patients after 56 years. There were no defects in both jaws in first (16-20) and second (21-26) groups. In all age groups the prevalence of dentition defects was in the mandible (56,6%). Analysis of the structure revealed that the most frequent case was the loss of a single tooth (252). Most men after 22 lost three or more teeth. The patients after 60 had edentulism. Significant difference was observed between the total number of dentition defects women 427(58.1%) and males 308 (41.9%).

Conclusion. Our findings suggest that data of the prevalence, location, and structure of dentition defects determine indications of prosthetic treatment and substantiation of prosthesis design in the studied groups.

Goienko O., Cherepinska U., Volkova O.

SELECTED ASPECTS ON THE RELATIONSHIP BETWEEN PERIODONTITIS AND CARDIOVASCULAR DISEASES

Kharkiv National Medical University, Kharkiv, Ukraine
Department of therapeutic dentistry
Scientific adviser, professor Rjabokon E.

Introduction. The direct correlation of periodontal and cardiovascular diseases is conditioned by the community of the main links of their pathogenesis. There are, however, a lot of problems yet to be solved. The results of numerous studies currently demonstrates that generalized periodontitis leads to a moderate risk of atherosclerosis, with subsequent consequences (Junket et al, 2003, Mustapha et al, 2007, Humphrey et al, 2008). The mechanism of the relationship between periodontal disease and atherogenesis can be explained by a bacterial presence in the oral cavity. This bacteria causes inflammation of periodontal tissues and chronic systematic inflammation, which is due to increases in the levels of pro-inflammatory cytokines, CRP, cholesterol, LDL, acute-phase proteins, enzymes, cellular adhesion molecules and hemokines etc (Sesso H.D., 2003, Seinost G. 2005, Lugay M.I. 2007). Activation of endotelium by oral bacteria, increasing expression of adhesion molecules and hemokines are the first steps that lead to atherosclerotic lesions (Holmlund A. 2006).

Results. The results of tests in animals and humans indicate that Gr- bacteria presented in oral cavities cause aggregation of thrombocytes, which leads to hyper coagulation and blood viscosity. These play an important part in the development of an atherosclerotic plaque. However, the mechanism of the whole pathological process is not yet completely understood. Numerous results of scientific research state that generalized periodontitis is a marker for immune system hypersensitivity, that influences the development of systematic diseases. But first of all periodontal disease is a risk factor of CVD (Fentoglu O., 2011). The new opinion about the character of such a correlation will promote elaborations and create a new optimized and effective protocol for general periodontitis treatment in such patients. However, the purpose of using cardiovascular correction medication is not just to achieve a particular level of cholesterol or lowering LDL and cytokines etc. It is also effective for the whole physiological process of remodeling the target-organs, including periodontal tissue.

Conclusion. All of the above indicate the importance of analyzing the results of the use of medication that cardiologist prescribe. This is especially true for statins, which decreases cholesterol levels, including LDL blood levels and which also produce a positive effect in periodontal tissues.

Hassan Mirza Ali

PECULIARITIES OF ENDODONTIC TREATMENT OF THE FIRST PERMANENT MOLARS WITH COMPLEX ROOT CANALS ANATOMY IN PEDIATRIC DENTISTRY

Kharkiv National Medical University, Kharkiv, Ukraine
Scientific supervisor: Nasaryan R.S., Golik N.V., Fomenko Y.V.

Introduction. After the complete formation of the tooth apex and the periodontal ligament endodontic manipulations, carried out for children, does not differ in terms of protocol and treatment of adult tooth. The most problematic for endodontic treatment are both upper and lower jaw molars. This is due to limited access to the tooth and complex anatomy of roots. In pediatric dentistry first molars are endodontically treated most often. The lower first molar has 3 channels in 87% of cases, 4 channels - 13%. Sometimes there are 5-channel first molars, but usually it has 2 (medial and distal) roots and 3 root canal. The upper first molars have three roots (palatal, mesial buccal, distal buccal) and 3 channels. Often, these teeth have 4 channels (the fourth channel in the medial buccal root). According to the Green 14% medial buccal roots has two apical foramen, while 36% has two roots orifices. To date, the specialists of our department for treatment of permanent teeth formed with the complex anatomy use the system of nickel-titanium instruments MTwo. This system allows to expand the channels and give them shape for irrigation and obturation with gutta-percha. Not always the doctor will deal with wide channels and a large apical foramens in the cases of formed permanent teeth with complicated caries in 10-18 years old patients. High- plastic capacity of the child pulp sometimes lead to the active obliteration of root canals.

Conclusion. Thus, root canal preparation, which is one of the most difficult and time-consuming processing steps in the practice of children's dentist should be carried out with the use of the most advanced modern techniques and tools that will improve the quality of dental care for children's population.

Humairi Zainulabdeen Salih, Philipp Messias

THE ADDITIONAL ITEMS FOR HOME ORAL HYGIENE IN PREVENTION OF CARIES IN CHILDREN

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatric dentistry, pediatric maxillo-facial surgery and implantology
Supervisor: Kuzina V.V.

Introduction. The high-quality oral hygiene is very important for the prevention of dental caries. The home oral hygiene is a big part of oral hygiene care. Usually, it can be done by using of classic manual toothbrushes. Specific anatomical structure of occlusal surfaces of molars, incomplete mineralization of enamel, imperfect manual skills of the child, is a state, which requires special attention. Plague indicators allow to estimate the effect of the using of different hygienic items. They confirm that success can be achieved in the case of full "contact" of brush with all surfaces of tooth only. Unfortunately, the child's manual skills can not achieve the desired effect. Usually, the zones with remains of plague, which are not touched by brush can be detected after brushing. Manufacturers try to find new design of toothbrushes to made the better contact with the surface of the tooth. They made the bristles with different angles, unevenly trimmed, combined with silicone elements,

attenuate or make more acute. But there is another way - production of monotuft brushes. Theoretically, this brush helps to remove of dental plaque from areas, where the use of conventional brushes is inefficient, i.e. this brush to be regarded as an additional item for oral hygiene care.

The aim - optimization of individual preventive measures in children by means of using of monotuft toothbrush at home oral hygiene care.

Material and methods. A single study in two groups of patients, who visited in the clinic in order to dental care, with 15 children in each group, was conducted**.** The patients, who brush their teeth twice a day, after breakfast and after the last meal, while used only classic multitufts toothbrushes were the members of the first group. The second group included – patients, who also brush their teeth twice a day, after breakfast and after the last meal meet the basic requirements for oral hygiene, but in addition, the monotuft brush with a sharp pointed shape of working part and short handle (7 cm) for cleaning the occlusal surface and other difficult areas of the tooth row, was used. All patients were instructed about the oral hygiene care by dentist. They know the rules of brushing. On the day of the survey, patients were advised to brush your teeth in the usual manner and then do not eat during 2-4 hours. The initial hygienic condition of the occlusal surface of the molars and condition of interdental spaces was conducted in a group I and II. Quality of tooth brushing was estimated visually, with commercial solution for plaque detection, two times, using the criteria: "the presence of stain", "the localization of stain", "coloring characteristic of stain ", "the intensity of stain". It helps to estimate the mass of plaque and to characterize the manual skills of the child and the properties of the oral hygiene tool.

Results. The area of fissures on the occlusal surface of molars has been stained in all patients from the first group at estimation of initial hygienic status. This result indicates inability to provide high-quality hygienic care in whole volume with classic multitufts toothbrushes only.. “A weak staining" (2 points) in the area of fissures was detected in 54% cases, "absent stain" (1 point) in 46% of cases, among the patients from group I. “Intense staining” (3 points) was not registered. In the 2 group "weak staining" (2 points) in the area of fissures were detected in 42% of cases, "absent stain" (1 point) - 58%,”Intense staining” (score 3) was absent.

Conclusion. Oral hygiene care belongs to individual preventive measures. Brushing teeth with classic multitufts toothbrushes performs very often insufficient cleaning effect, especially in the fissure area and other difficult areas of the tooth row. Therefore, the use of additional items for oral hygienic care, like monotuft brush with a sharp pointed shape of working part are advisable for optimization of individual preventive measures in children.

Husam Ismael Mahmood[1], Jasim Balasim Oliewi [1], Shejiri Mben.S[1], Mohsin Mohammed Hussien[1], Garmash Ye.K.[2], Paliy E.V[1].

THE RESULTS OF PROPHYLACTIC AGENTS IN PATIENTS WITH HYPERSENSITIVITY OF DENTAL HARD TISSUES

[1]Kharkiv National Medical University (Therapeutic dentistry department)
[2] V. N. Karazin Kharkiv National University (School of medicine)
Supervisors: Professor Ryaboкon E.N., ass. Garmash O.V.

Introduction. The main goal in the theraputic dentistry is prevention. The prevention include desensitization activity in the dental treatment of periodontal diseases, where is a

hypersensitivity of the dental hard tissues. There are a several causes of sensitivity of teeth. Most of them loss the epithelial attachment with gums determine unsatisfactory level of hygine in the oral cavity and increase PMA index during this turn it will lead to periodontal inflammation.

The main **purpose** of clinic test determine effectiveness hygein products series Colgate 360 ° Sensitive Pro-Relief was formed three groups representative by gender and age (17-25 years) - 6 patients in each group. Acourding to clinical studying we detect that all patients are suffering from the 1st degree periodontitis and 1st degree hyperesthesia we devided patients into to 3 groups: 1st group used toothpaste Colgate 360 ° Sensitive Pro-Relief, 2nd group toothpaste and toothbrush series Colgate 360 ° Sensitive Pro-Relief, 3rd group toothpaste and toothbrush serios series Colgate 360 °Sensitive Pro-Relief, and additionally simultaneously used laser therapy. As a result of treatment and prevention all groups of patients with hypersensitivity were decrease pain intensity (temperature stimulus): 1st group pain intensity decrease from 1 to1.8 times, 2nd group pain intensity decrease in from 2.26 times, 3rd group pain intensity decrease from 2 to 2.15 times.

Results. The applications and prevention measures, all the pations studied group decreased performance index hygiene 32.7%, reducing pollution oral pathogenic flora and verified performance index decrease PMA (21%). Laboratory studies of oral fluid microcrystallization confirmed the results of clinical observations; crystal picture facies in oral fluid group 1 increased on average by 1 point, 2-point and 1 in the 3rd group was to increase 1-1.5 points. Reducing the crystalline pattern was not observed in any of the cases as after the daily sessions and integrated after the course of preventive procedures. Applying toothpaste Sensitive Pro-Relief as a desensitization and brushes designed for sensitive teeth causes a decrease in pain, indicating that the occlusive action and remineralization used complex.

Conclusion: laser therapy has advantage for effective treatment for hypersensivity in periodontal diseases.

Husam Ismael Mahmood[1], Razzac Miss Usma[1], Garmash Ye.K.[2], Salenko D.E[2], Paliy E.N[1].

COMPARATIVE ANALISIS OF THE BIOCHEMICAL AND MICROBIOLOGICAL STUDIES ON THE EFFECT OF LOW-INTENSITY LIGHT AT PERIODONTAL DISEASES TREATMENT

[1] Kharkiv National Medical University, Department of therapeutic dentistry
[2] V. N. Karazin Kharkiv National University
Supervisors: Professor Ryabokon E.N., ass. Garmash O.V.

Introduction: dentists are frequently using different methods of light therapy in complex treatment of patients with periodontal diseases.

The purpose of our study was to increase the effectiveness of treatment of periodontal tissues of patients with initial degree of periodontal disease by measurement of changes in the biochemical composition of oral fluid and determination the concentration of bacterial cells before and after therapeutic effect of low-intensity light on periodontal tissue.

Materials and methods: the investigation, which 12 students of the Dental Faculty (aged 18 to 25 years) participated in, was conducted. To compare results all participants have used identical toothpaste and toothbrushes. Also microbiological study of the patient's oral microflora was conducted. Patients from the first group underwent the exposure of broadband light therapy lamp on the periodontal tissues and patients of the second – low-intensity laser radiation. Hygiene, periodontal, biochemical and microbiological parameters

were determined prior to treatment cycles, after the treatment cycles, as well as a month after therapeutic procedures.

Results: As a result of the application of complex treatment measures Fedorov-Volodkina index decreased by (24% and 22%), due to reducing oral pathogenic flora PMA index decreased by (20% and 23%), in the first and second groups, respectively. After treatment courses improvement of the biochemical composition of oral fluid was observed in both study groups - 4 patients at the first group and 4 at the second one. Slightly better effect was mentioned after laser therapy sessions: the content of nitrite and nitrate in the oral fluid increased on 10-12% vs 10-8% for patients of first group. The concentration of L-arginine decreased on 6-15% vs 10-11%, respectively, while the level of citrulline increased on 13-30% vs 5-12%. This indicates increasing of the nitric oxide in the periodontal tissues and activation of vasodilatation. After treatment courses bacteriological examination revealed a significant reduction in the total number of microorganisms that inhabits the mouth (samples № 1,2,3,4,8,9) and, in some cases, absence of growth of certain microorganisms (samples № 7,10). According to the results obtained in one month after the treatment courses in the first group recorded growth of non-pathogenic-saprophytic micoroorganisms (gram-positive diplococci, gramm-positive bacteria, bacteroides, etc.) and pathogenic microorganisms in small quantities, in the second group bacterial sowings showed reducing of microorganisms' growth. The exposure of monochromatic red semiconductor laser has a bactericidal effect on the microflora of the oral cavity, which leads to a reduction of the microbial population. The exposure of broadband light therapy lamp, likely, has a bacteriostatic effect (prevents bacterial growth). In the comparison group significant changes of hygienic condition, oral microflora, biochemical composition of oral fluid were not fixed.

Conclusion. Positive clinical dynamics was accompanied by improved biochemical indices of oral liquid and microbiological parameters.

Jasim Balasim Oliewi, Abdul-hadi Ahmed Maad, Paliy O.V.

CLINICAL CASE IN THE PRACTICE OF DENTISTRY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of therapeutic dentistry
Supervisors: Professor Ryabokon E.N., assoc. Voropaeva L.V., ass. Garmash O.V.

Introduction. One of the urgent problems in dentistry is the treatment of diseases of the oral mucosa. Herpetic stomatitis is the most common among all types of viral stomatitis. The adult population is a carrier of the virus without any clinical signs, which manifests itself only against the background of reducing the body's defenses. When the diagnosis is noteworthy history data: recurrences followed by respiratory disease occurring with a high temperature, for various forms of acute viral respiratory tract infections, supercoiled. Quite often, another relapse associated with a local trauma oral mucosa. Therefore, knowledge of the clinical signs of the disease, the correct diagnosis is the key to successful treatment. Thus, the patient appealed to the clinic with complaints of weakness, fever (38.0 ° C), and refusal of food intake, pain and inflammation of the gums.

Results. History of disease: acute ill 02.17.2015, when the body temperature rose to 39.0 ° C, took Imudon. 18.02.2015 addressed to a private dental clinic, which was held a professional cleaning using an ultrasonic scaler, assigned mouthwash chlorhexidine.

20.02.2015 addressed to our clinic, continued fever, when viewed found significant erosive and ulcerative lesions in the oral cavity, soft plaque and dirty gray necrotic mass at the marginal part of the gums. In the history of life: hypothermia and stress. After further laboratory methods of examination was diagnose with exacerbation of recurrent herpetic stomatitis, necrotizing ulcerative gingivitis. Was ap pointed to the treatment regimen, including antiviral and antibacterial drugs. Recovery was 10 days.

Conclusion. Iatrogenic causes of diseases, at the moment, unfortunately, not uncommon. Knowledge of etiology, diagnostics, pharmacology help you avoid many of the complications in the practice of dentistry.

Kliuchka Ye.O.

RESEARCH ANALYSIS OF PARODONTAL PATHOLOGY PROBLEM IN ADOLESCENT GIRLS WITH MENSTRUAL DYSFUNCTION

Kharkiv National Medical University, Kharkiv, Ukraine
Department of dentistry
Scientific adviser: MD, Professor Sokolova I.I.

Introduction. Nowadays one of the main problems in dentistry is presented by parodontal pathology. In recent years, much scientific interest is devoted to research of parodontal pathology accompanied by adjacent somatic pathology, because it is known that there is plurality of common systemic causal factors of parodontal disease and somatic pathology. Taking into consideration that this problem is at the junction of dentistry with other medical specialties, it stays out of the deep complex medical research. So we decided to analyze how thoroughly researched is the problem of parodontal pathology in adolescent girls with menstrual dysfunction in order to conduct further comprehensive studies in this group of patients.

Aim. To analyze the availability and the content of researches of parodontal pathology in adolescent girls with menstrual dysfunction.

Materials and methods. The results were obtained by analyzing the literature data of domestic and foreign authors.

Results. Analysis of the available literature showed that, despite the fact that some fragments of this problem are being investigated in varying degrees by some authors, currently a number of questions in the discussed problem remain unclarified. Firstly, there are no well-structured and systematic data on the state of parodontal tissues and oral hygiene in adolescent girls with menstrual dysfunction, as there is also no definition of the features of clinical course of inflammatory parodontal diseases in this group of patients. Secondly, it is still not estimated, what kind of relationship exists between the development of inflammatory parodontal diseases and menstrual dysfunction in adolescent girls. Third, there is no specifically developed scheme of prevention of inflammatory parodontal diseases, which would be specific concretely for adolescent girls with menstrual dysfunction and the effectiveness of which would be proved.

Conclusions. The problem of parodontal pathology in adolescent girls with menstrual dysfunction is currently poorly studied and requires further investigation.

Kryvenko L., Oleinik N.

PATHOLOGICAL CHANGES OF ORAL MUCOSA AND LIPS IN CHILDREN WITH ALLERGIC PATHOLOGY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatric dentistry, pediatric maxillofacial surgery and implantology

Introduction. Allergic diseases are one of the most common problems among other diseases in children. Numerous studies of asthma, allergic rhinitis, and atopic eczema revealed high population prevalence of these diseases. But changes of oral cavity mucosa have not been studied yet in children with allergic atopic conditions.

The aim of the study was to identify changes in the oral mucosa in children with allergic diseases.

Materials and methods. There were examined 55 children with allergic diseases: asthma, atopic dermatitis, allergic rhinitis. Common methods of dental examination were used.

Results. As a result of the investigation it was found a variety of pathological changes in the oral cavity of children with allergic pathology. The most common pathology was cheilitis. The prevalence of atopic cheilitis was equal to 21,5% of all patients. In 28,7% of children exfoliative cheilitis was found. In 16.3% of patients angular cheilitis was diagnosed. It was also found dryness of the oral mucosa in 30.8% of children with allergic pathology and in 18.6% of children desquamative glossitis was diagnosed. Among 29.3% of children swollen tongue with teeth imprints was found.

Conclusions. The investigation revealed numerous changes of the oral mucosa in children with allergic atopic conditions. These changes may be related to drug therapy, which is widely used among this contingent of children and a decrease in the rate of salivation, reduced local immune system response in oral cavity, local hemodynamic deviations, as stated in the literature. The obtained results determine the direction of the future research that is necessary for the definition of correlation between allergic atopic conditions and dental status of patients.

Kurov A.M.

AN EVALUATION OF THE EFFICIENCY OF TEMPORARY FILLING IN TEETH UNDER MASTICATION LOAD IN TERMS OF 2 WEEKS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of dentistry
Scientific adviser prof. Sokolova I.I.

Aim: To determine the status of marginal fit of temporary fillings in conditions that are close to the ones in oral cavity, in the terms of 14 days.

Materials and methods: 125 removed human teeth of different groups were prepared with Black class 1 cavities. Cavities of other classes were modified to class 1 with adhesive resin protocol. The teeth were divided into 5 groups of 25 teeth for incisors, premolars and molars were present in each group. The teeth were fixed in gypsum forming dentitions. All surfaces except fillings were isolated with wax. The first group was filled with zinc-sulfate paste “Tempolat” (Latus, Ukraine), the second – zinc-sulfate paste made by VladMiVa (Russia), the third – light curing resin “Tempolat-LC” (Latus, Ukraine), the

fourth – zinc-sulfate powder "Tempolat-SC" (Latus, Ukraine), the fifth – zinc-sulfate powder made by VladMiVa (Russia). The dentures were immersed into 1% methylene blue dye for 14 days at the constant temperature of 37±1°C. Mastication load was simulated by a chewing machine with walnuts 3 times per day for 20 minutes during 14 days.

An assessment of the fillings superficies and evaluation of an abrasive wear were made after 14 days. Longitudinal sections of teeth were made for evaluation of dye penetration. The assessment was made using loupes and calipers.

Results. 1. The average filling height was 4,0±1,0 mm. 2. All materials based on zinc-sulfate cements (powders and pastes) subjected to abrasive wear and the loss of the filling height up to 1 mm. Moreover, in group 2 more than 50% of fillings had major violence of integrity. The resin fillings did not make any evidence of abrasive wear, but had marginal fit violation. 3. The rate of fillings that preserved leakproofness was 77% in group 1, 65% in group 2, 58% in group 3, 67% in group 4, 59% in group 5. Dye penetration on the tooth-filling margin was found in all samples. Zinc-sulfate cements showed also a through-material penetration.

Conclusion: None of the materials used in the research provides adequate sealing of a cavity in terms of 14 days. The reasons of leakage were fillings destruction and bad marginal fit.

Mikulinska-Rudich Y.N., Mys V.O.

EXPERIENCE OF APPLICATION OF NANOCOMPOSITE MATERIAL IN LOCAL ENAMEL HYPOPLASIA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatric dentistry, pediatric maxillofacial surgery and implantology
Chief: professor Nazaryan R. S.

Introduction. Nanokomposite material Filtek Ultimate (3M ESPE), having excellent manipulative properties due to the unique patented technology nanofillers 3M ESPE. These technologies provide better light resistance material than microhybrid composite wear resistance higher than that of microhybrid material strength to withstand the stresses anterior and posterior teeth groups.

The purpose of our research is examine the effectiveness of the nanofilled composite material for the restoration of anterior teeth with carious lesions.

Materials and methods: patient 17 years with complaints about a cosmetic defect of the front teeth and high aesthetic requirements for the future of the seal. An objective examination revealed loss of vestibular surface of the tooth 21 in the form of round-shaped patches of yellowish color. The boundaries of the spots clear, smooth surface. The thickness of the enamel in the spots is not changed. Probing painless. Spots dyes do not stain. The impact of temperature irritants does not cause pain. X-ray examination was conducted, as this form is not detected radiographically. On the basis of physical examination was diagnosed with a form of speckled enamel hypoplasia of moderate severity, limited turbidity. We have proposed possible solutions to this problem: 1. Porcelain veneers - this method of recovery in this case is impossible, since the percentage of damaged hard tissues of the tooth is great 2. Dental crowns - a more reliable way to restore tooth structure, but talking about minimally invasive such designs are not quite appropriate. 3. Direct restoration composite. With the use of modern composite restoration can restore the

anatomical shape of the teeth and achieve the desired aesthetics. The advantage of direct composite restorations is a reasonable cost, speed of manufacture and minimally invasive compared with all-ceramic crowns.

In the course of planning the restoration we have identified mesiodistal tooth size for biomimetic method SV Radlinsky and color of the tooth- A2 in accordance with the scale VITA®. Under the applicative (Benzocaine 20%) and infiltration anesthesia Sol. Ubistesini 4% -1,0 ml held grinding of the affected enamel. Cofferdam fixed using clamp for front teeth. Etching the cavity 15 seconds dentin, enamel for 30 seconds. Washing time 30 sec. Applying adhesive Adper Single Bond 2 (3M ESPE) for 15 seconds, drying air stream reapplication adhesive massaging for 30 seconds, polymerization for 10 seconds. Sealing using adhesive technique by light-curing restoration layered nanocomposite Filtek Ultimate: Filtek Ultimate Flowable A3, the main filling - Filtek Ultimate A2. To simulate light optical effects that are part of the natural tooth used flowable Filtek® Ultimate Flowable shade XW.Finishing was carried out under the supervision of occlusion copy paper 8 microns. Polishing using abrasive discs «Sof-Lex», 3M ESPE (vestibular surface), rubber and silicone heads (palatal surface). Control of the contact surface floss.

Results. After a week and a month after sealing as a result of physical examination found no violation of fit of the composite, good adhesion to the material hypoplastic enamel during the probe along the border seal \ enamel probe slid smoothly without delays, occlusal relationship without violating, preservation of aesthetic properties, the maximum color match composite enamel.

Conclusions. Based on the results of clinical application of nano-filled composite Filtek Ultimate for the restoration of anterior teeth with enamel hypoplasia patchy form, it can be concluded about the good aesthetic properties of the material, ease of use, high strength and duration of the wear resistance of the material, durable marginal seal. A series of follow-up visits will determine the long-term results of treatment.

Rak A.V., Yakovleva D.U.

EXPERIENCE IN THE TREATMENT OF THE UPPER JAW FIBROUS OSTEODYSPLASIAE

Kharkiv National Medical University, Kharkiv, Ukraine
Department of oral and maxillofacial surgery
Scientific supervisor: professor Grygorov S.N.

Introduction. Fibrous osteodysplasia is a malformation of bone tissue, which is connected with stopping, slow down, disorder of the osteogenesis at a certain stage of a skeleton's embryonal development. For the first time the dysplastic origin of this disease was indicated by V. G. Braitsev in 1927. In 1938 Lichtenstein described the specific nosological form and gave it the name "fibrous osteodysplasia". This disease occurs rather rarely and amounts for 7-10% of all the skeleton system pathology. 80% of cases happen in junior and teenage groups and very rarely among adults (Vinogradova T. P., 1961; Kolesov O. O., 1989). The bone lesions of the cerebral and facial divisions of the skull take the second place after tubular bones in the frequency of occurrence.

The aim: to study the peculiarities of diagnosis and treatment of the upper jaw fibrous osteodysplasiae.

Materials and methods. Over the past two years in the clinic of surgical dentistry and maxillofacial surgery KhNMU three patients with the diagnosis of the upper jaw fibrous osteodysplasia were operated. All the patients were men at the age of 19 to 22 years old. The reason for seeing a doctor was complaint about the disorders of the face's configuration. The first clinical manifestations appeared during the period of puberty. The deformation developed gradually within 5-7 years, however the following 1,5-2 years the growth stopped. At the initial examination the face's asymmetry attracts the attention. This is due to a neoformation in the projection of the upper jaw, which comes from the bone tissue. In two cases in the pathological process was involved the maxillary bone, in one case the neoformation occupied malar and maxillary bones. The spiral computed tomography of the midface with the followed sterolithography modeling was made in order to clarify the spread of the neoformation, its size, the relationship with the surrounding organs and tissues. The volume of operative intervention in the study of the obtained models, the opportunity to save teeth in the neoformation area were determined. All the patients were operated: in two cases the pathologically changed bone tissue was radically removed within the healthy one, in one case a partial removal was confined, the correct proportions of the face was restored (the radical intervention was excluded because of the distribution of the neoformation on the fossa ptherigopalatina, skull base).

Results. The growth of the neoformation has not been for a year. In one case there was a complication 3 months after the intervention, the maxillary sinus fistula, which was excised with the further plastic closure of the local tissues.

Conclusion. Taking into consideration the above we recommend to conduct the spiral computed tomography with subsequent sterolithography modeling before surgery for such patients. This will allow you to determine the access and volume of surgical intervention, the defect substitution possibility by implant material.

Sodha Amir

COMPARATIVE ANALYSIS OF THE PREVALENCE OF MALOCCLUSION AMONG FOREIGN STUDENTS, NATIVES OF DIFFERENT COUNTRIES

Kharkiv National Medical University, Kharkiv, Ukraine
Department of pediatric dentistry, pediatric maxillofacial surgery and implantology
Scientific supervisor: assoc. prof. Khmiz T.G

Introduction. Orthodontists have long drawn attention to the fact that there are individual characteristics of the structure of maxillofacial system in people living in different regions. At the same time in the public health literature contains insufficient data about the distinctive traits of the dentition representatives of different racial groups.

The aim of this study was to determine the prevalence of malocclusions among foreign students, natives of different countries, to identify the racial characteristics of the formation of occlusion.

Materials and methods of the study were epidemiological and statistical analysis. In carrying out the work were used the principles and techniques of research on the methodology recommended by the WHO (1997). Clinical examination was carried out according to standard protocol of examination, in accordance with the international statistical classification of diseases and problems related to health (ICD - 10). We considered only the malocclusions that have not undergone orthodontic treatment. Selected

7 of the most significant, in our view, clinical diagnostic features, namely: 1. The ratio of the first molars according to Angle's classification. 2. The presence of saggital fissure. 3. The presence of the protrusions of the front teeth and the alveolar processes. 4. The presence of tremas, diastemas. 5. The presence of retrusions anterior teeth and alveolar processes. 6. Crowding the position of the teeth. 7. Deep incisal overlap. The study was conducted at University Dental Center at Kharkov National Medical University at the Department of Pediatric Dentistry, Pediatric Maxillofacial Surgery and Implantology. We examined 33 students aged 17-31 years of both sexes. 15 of them are natives of the South Asian countries (India, Maldives), 11 - the natives of the countries of the Middle East (Turkey, Iraq, Israel), 7 - natives of Africa (Congo, Nigeria).

Results. At the natives of South Asia countries class I according to Angle's classification identified in 67.7% of cases, class II according to Angle's classification - in 32.3% of cases, class III according to Angle's classification in this study are not identified; the presence of saggital fissure is at 20.4% of cases; the presence of protrusions of the upper front teeth and the alveolar processes is at 81.3% of cases; the presence of protrusions of the lower front teeth and the alveolar processes is at 66,7% of cases; the presence of tremas, diastemas of the upper dental arch is at 41.4% of cases; the presence of tremas, diastemas of the lower dental arch is at 13.4% of cases; the presence of retrusions of the front teeth and the alveolar processes is at 14.6% of cases; crowding of the upper teeth - in 32,9% of cases, crowding of the lower teeth - in 47,3% of cases; deep incisal overlap - in 7,1% of cases.

At the natives of countries of the Middle East class I according to Angle's classification identified in 73,5% of cases, class II according to Angle's classification - in 27,3% of cases, class III according to Angle's classification in this study are not identified; the presence of protrusions of the front teeth and the alveolar processes is at 9,6% of cases; the presence of tremas, diastemas of the upper dental arch is at 35,4% of cases; the presence of tremas, diastemas of the lower dental arch is at 9,6% of cases; the presence of retrusions of the front teeth and the alveolar processes is at 55,3% of cases; crowding of the upper teeth - in 18% of cases, crowding of the lower teeth - in 27,8% of cases.

At the natives of Africa class I according to Angle's classification identified in 85,3% of cases, class II according to Angle's classification - in 14,7% of cases, class III according to Angle's classification in this study are not identified; the presence of protrusions of the front teeth and the alveolar processes is at 86.4% of cases; the presence of tremas, diastemas of the upper dental arch is at 43,3% of cases; the presence of tremas, diastemas of the lower dental arch is at 29,6% of cases.

Conclusions. Different prevalence of malocclusion in among foreign students, natives of different countries, requires in-depth study of etiological factors. This will allow to develop adequate effective treatment and preventive measures.

Steblyanko A.,Tischenko A., Kishkan A., Guryeva A.

HYGIENIC ASSESSMENT OF MOUTH AND TONGUE AMONG STUDENTS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of therapeutic dentistry

Introduction. It is known that oral hygiene plays an important role in the prevention of dental diseases. There is accumulation of plaque on the tongue surface, which is a favorable environment for the development of bacteria, especially for patients with somatic pathology, while reducing the body's defenses.

The aim was to study oral hygiene and the state of tongue among students from 4-5 courses HNMU.

Materials and methods. We examined 55 students of both sexes aged between 21 and 28 years (28 women and 27 men). In a survey we made questionnaires to identify dental complaints, establishing the conditions of life, bad habits, diet, the usefulness of food intake, the family history, work and rest, the presence of common somatic diseases. In a survey there were found 16 people (I group), the history of which was marked by gastrointestinal pathology. We included 43 persons in the II group without somatic pathology.

Results. To assess the state of the oral cavity (OC) there was performed dental examination of patients under artificial lighting using dental mirrors, spatula and tweezers. Mucous tongue was stained by 5% aqueous solution of iodine to detect inflammation and definitions of tongue hygiene index (TH). We carried out digital photography of results in staining the mucous tongue. Hygienic condition of the oral cavity among patients from both groups was evaluated by an the index of PHP hygiene effectiveness (Podshadley AG, Haley P., 1968), the degree of gum inflammation – according to PMA index in Parma modification (1960). TH level was assessed visually and by using an index of hygienic tongue state (IHTSU) Ulitovskogo (2008). General hygiene oral condition in both groups was unsatisfactory: PHP index of patients from group 1 averaged 2,3 ± 0,2, persons in group 2 -1,9 ± 0,2. Assessment of periodontal tissues state showed that 78,6% patients from group 1 had gingivitis. PMA index averages 38,6 ± 2,5. In group 2 gingivitis was revealed in 32,8% cases, the average value of the index PMA was equal 16,7 ± 2,5. A survey of the tongue state showed perfect level of hygiene (LH) (0 points) among students from I group in 12% of cases, in the II group - 15% of cases. IHTSU corresponded to a very high level (1 point) in 19% of cases in the I group of students and 28% - in the II group. Good level (2 points) IHTSU observed in the I group of students in the 31% and 33% - in the II group. IHTSU corresponded to a satisfactory level of hygiene (3 points) in 38% of cases among persons from I group and in 24% - persons II group. Patients of I group suffering from diseases of the digestive system had a variety of pathological changes in the oral cavity in 44% of cases, patients without somatic pathology -in II group - in 23% of cases.

Conclusions. Thus, the results of the study showed that the tongue state among students depends on the quality of hygienic measures, as well as the presence of gastrointestinal pathology. All students should be encouraged to conduct a thorough oral hygiene, where the tongue cleaning is a necessary component. And when identifying inadequate effect of hygiene procedures there should be consultation at gastroenterologist or specialists in general.

Steblyanko A.A., Hudik A.K., Svidlo O.A.

PRIMARY SURGICAL TREATMENT OF TRAUMATIC INJURIES IN THE MAXILLOFACIAL AREA

Kharkiv National Medical University, Ukraine
Department of oral and maxillofacial surgery

Introduction. Primary surgical treatment of traumatic injuries in the maxillofacial area is an initial and one of the most important stages of caring for the sick and injured. They may appear in house work, repair of apartments, using faulty appliances, domestic conflicts and other situations related to the physical and social life. Traumatic injuries of the maxillofacial area have a leading place in the facial soft tissue trauma. Isolated soft tissue injuries of the maxillofacial area occupy about 15% of the total number among patients who

applied to the maxillofacial department. There are numbers of patients with injuries but the home injury takes leading place (89%), in second place - injuries resulting from traffic accidents (7%) (Timofeev, A.A. et al., 2002). A special place among soft tissue injuries of the maxillofacial area occupies the injury resulting from the expansion and the shards of a broken disk range from an angle grinder. These injuries can be considered as contused lacerated wound of the maxillofacial area. Given the often extremely complex structure of wound, features of localization, volume and specific requirements for treatment of facial wounds we consider it appropriate to bring our own clinical example:

Results. The 54 years old patient K. was delivered to the dental office of Kharkiv Regional Clinical Hospital (KhRCH) by ambulance with complaints about the presence of a wound on the left infraorbital region. According to the patient, during the construction works in his home when using an angle grinder the grinding disc ruptured and the fragments gave a wound. He was brought to the KhRCH emergency department four hours after the injury. On examination, the patient was with contused lacerated wound, length of 10-11 cm, a depth of 2.0-2.5 cm, width up to 1.5-2.0 cm. The wound extended vertically from the left supraorbital area, up to left submental area. It had wrong odds and the edges were sieged. In the wound we noticed blood clots, as well as small pieces with a metallic sheen in diameter of 0.1 to 0.5 cm, no signs of bleeding, clinical fracture of the zygomatic bone, the anterior wall of the left maxillary sinus was not found, anterior wall of the left maxillary sinus was determined by palpation; there were domiciliary inflicted two provisory seams on the wound. The patient had the operation: "The primary debridement." Protocol of operation: We removed large and small fragments of traumatic element after two-times drug treatment of the surgical area and a local anesthetic. Wound was repaired in layers with interrupted sutures of "Vicryl" 4/0 atraumatic thread, drained by the use of rubber drainages, and treated with antiseptic. The patient was given a standard antibiotic, anti-inflammatory, desensitizing drug therapy, recommended the introduction of antitetanic serum and tetanus toxoid according to the place of residence. On the third day we made the extraction of drainages, on the 8th day there was done removal of sutures. Healing of wound after operation occurred by primary intention.

Conclusions. Thus, timely and comprehensive debridement with layer suture provides adequate cosmetic and functional effect.

Tarawneh Amir Shaker, Cherepynska Y. A.

COMPARATIVE MICROSCOPIC EFFICIENCY OF THE MECHANICAL DESTRUCTION OF THE BIOFILM, AN EXPERIENTAL STUDY

Kharkiv National Medical University, Kharkiv, Ukraine
Department of therapeutic dentistry

Introduction: Microorganisms of the oral cavity from the moment of their adhesion to the surface of the teeth engage actively in building a biofilm that in its formed condition is an etiologic factor for the development of the inflammatory processes of the periodontal complex and for demineralization of hard tissues of the teeth. Daily effective mechanical destruction of the biofilm with the help of personal care products helps forward a considerable reduction of the risk of development such popular dental diseases as caries and its caries, gingivitis, periodontitis and some others.

Aim: To compare the efficiency of the mechanical destruction of the biofilm in experiential conditions by using toothbrushes with middle irregular and ultra soft regular bristles and by using ultrasonic toothbrushes with regular bristles.

Materials and methods: For the experimental part of the research a shard of 15 chicken eggs was used. For growth of the biofilm on the surface, the egg shards were put into the tap water for 10 days under the temperature of 37˚C. In 10 days on the surface of each egg one chose and numbered three sections with the area of 2 sm^2 and colored them with methylene blue 1% solution. Over 6 sec. one cleaned the sections of the surface without using toothpaste. This time period was chosen on account of general recommendations in personal hygiene of mouth cavity (32 tooth - 180 sec.; 1 teeth - 5,6 sec.). On the section number 1 (Group A) the toothbrush with middle irregular bristles was used. The section number 2 (Group B) was cleaned with the help of the toothbrush with soft regular bristles, the section number 3 (Group C) - with the help of the ultrasonic toothbrush with regular bristles. The efficiency of the mechanical destruction of the biofilm in three groups was evaluated with the help of binocular 3,5 multiple optical magnification and test-grid with 1mm grid pitch.

Results: In the Group A the middle index of the cleaned surface was 54,4% out of general area of the surface. In the Group B this index was higher - 89,1%, in the Group C the index was 92,7%.

Conclusions: the result that we received permit to approve that the highest efficiency of the destruction of the biofilm was observed in Group B and C, where ultra soft and ultrasonic toothbrushes with regular bristles were used with comparison to the Group A where toothbrushes with middle irregular bristles were used. One can suppose that for more effective mechanical distraction of the biofilm, toothbrushes with regular bristles should be recommended. The facts of the experiment are expected to be confirmed in the clinic for the reasons of wide usage of the most effective personal care products.

Tishchenko O.

COMPARATIVE EVALUATION OF THE POSITION THIRD MANDIBULAR MOLARS WITH DIFFERENT X-RAY METHODS

Kharkiv National Medical University, Kharkiv, Ukraine, Department dentistry
Scientific adviser prof. Sokolova I.I.

Introduction. X-ray examination is the leading method for diagnosis of dental impaction and third molars malposition. Without X-ray examination of patients, based only on the results of clinical examination, doesn't allow to correctly establish the diagnosis, prognosis and determine the plan of treatment. Novadays, the most common methods of X-ray examination in dentistry remain intraoral radiography and orthopantomography. Several studies have explored these methods, but they have not provided enough information about the structure of the roots of teeth, their anatomical position and condition of the bone tissue surrounding the tooth. At the same time, CT has a number of advantages in relation to classical radiography. Orthopantomography (OPTG) gives a single-plane image, and CT scan gives a three-dimensional.

Aim: The aim of the present study was to determine the most informative method of radiological assessment of the mandibular third molars position, which will select the best method of treatment.

Material and methods. Retrospective analysis of X-ray data was performed on 20 patients with mandibular third molars aged 18-60. CT and OPTG was carried out in all patients.

Results. There was no significant difference between examinations CT and OPTG findings regarding to mandibular third molars position. Medial type of position was detected in 50% cases, distal type (10%), horizontal and vertical position was found in 20%.

Significant difference was found between examinations according to location of the root apex. CT examination showed the location of the roots of the teeth above the projection of the mandibular canal in 8 cases (40%) and OPTG showed 4 cases (20%). CT showed that the upper limit of the mandibular canal is projected at the level of the apex of the tooth in 10 cases (50%), OPTG in 5 (25%). Analisys of 20 CT identified the changes in the structure of the bone near the roots in 50% and pathological bone loss for the crown in 60%. At the same time, OPTG determined changes in the structure of the bone near the roots in 40% and pathological bone loss for the crown of third mandibular molars in 45%.

Conclusion. Our results suggest that OPTG is the most appropriate for the primary diagnosis of the condition of dental system and detects the presence of NTM, their topography, the topography of the root apex and the condition of the surrounding bone. The detection of horizontal position of mandibular third molars on the OPTG, the presence of bends roots, bone resorption around molars, the presence of overhanging edges of the bone over the crown are the indications for further CT examination. CT is more informative method, which allows to determine the diagnosis, treatment, and prevent complications.

Vasylenko O., Zeinab Hammoud

EFFICIENCY OF G-FILE IN GLIDE PATH OF ROOT CANAL TREATMENT

Kharkiv National Medical University, Kharkiv, Ukraine
Department of therapeutic pediatric dentistry, pediatric maxillofacial surgery and implantology
Scientific adviser -Nazaryan R.S.

Introduction: Numerous instruments have been designed and manufactured in modern dentistry to reduce, eliminate the risk of instrument breakage and to make a glide path more simples and fast before inserting conventional Ni-Ti rotary instrument. G- files is one of the new inventions in the world endodontic, which give possibility make all endodontic treatment by rotary way.

Aim: to evaluate the root canals prepared by Ni-Ti G-files and stainless steel hand endodontic instruments K-file and their effectiveness in treatment for creating of safe glide path during mechanical step of endodontic procedure.

Material and methods: Thirty rooted teeth of similar shape and canal size, extracted by orthodontic indications, were divided into two groups. Before starting of study patency of all canals were checked by hand K-reamer №10 till apex constriction. In group A (15 roots), canals were instrumented by using K-file №10, №15, №20 2% taper. In group B (15 roots), canals were prepared with G-files #12, #17 3% taper. Endopilot (Shlumbum, Germany) was used like endomotor for rotary files. Also during study was used 3% sodium hypochlorite and lubricant RC-prep for irrigation protocol. After mechanical and irrigation path the diameter of root canals were examined after several using of files, followed-up by evaluation of torsion resistance and cyclic fatigue resistance, which was analyzed by one way ANOVA -Post-hoc test ($p=0.05$). Although all results of study were checked Student confidence factor for detection and identification more accurate results.

Results: A 10 times of repetitive motion with G2 files resulted with remarkable larger canal diameter ($p< 0.05$). Although G2 files have showed a lower torsion strength than K-file (15/.02) at 2-, 3- mm levels ($p<0.05$) they had similar ultimate strengthen at 4-,

5-, 6-mm level (p>0.05).While G2 (17/.03) showed the lowest resistance in cyclic fatigue resistance. G-file showed more rapid indicators 3 min, than K-file 7 min for all glide path.

Conclusion: Repetitive insertions of G2 files created an adequate lumen of subsequent apical shaping with bigger than ISO size 20, without apical transportation of instrument, with better torsion and cyclic fatigue resistance in order to make an efficient glide path without apical transportation**.** The G-File instruments prove to be the most rapid system in creating a safe glide path compared to hand files. Clinicians may consider the instruments' sizes for each clinical case in order to get efficient glide path with minimal risk of fracture by using G-File. General practitioners and endodontists should give priority to G-File rotary instruments for creating glide path like more rapid and stress less system in modern endodontics.

Volchenko N.V.

CONDITION OF ORAL HYGIENE AND QUESTIONNAIRE IN CHILDREN WHO ARE TAUGHT ACCORDING TO DIFFERENT SCHOOL CIRRICULA

Kharkiv National Medical University, Kharkiv, Ukraine
Department of Dentistry,
Department of pediatric dentistry, pediatric oral surgery and implantology

Introduction: Over the last years the number of specialized schools, lyceums, classes with enhanced studying of different subjects is evidently increasing in our country. An apparent dependence of the degree and character of impairment of schoolchildren's health and the amount and intensity of academic load has been revealed. In this regard a lot of scientists try to detect factors which can influence health condition of schoolchildren in a negative way.

The aim was to investigate oral hygiene state and questionnaire survey in schoolchildren, who are enrolled in different education programs (children enrolled in general education program and schoolchildren enrolled in advanced study of foreign languages).

Materials and methods: this research involved 40 children at the age of 10 – 11 years, 25 of them are enrolled in board education program and 15 – are trained according to general education program. Index assessment for oral hygiene determination was carried out by two methods: hygiene index according to Fedorov-Volodkina. All children received questionnaires which were to be answered at home with the participation of their parents.

Results. Hygiene index determination according to Fedorov-Volodkina shows that schoolchildren have different oral hygiene rates, as for instance, the rate from 1 to 1,5, which is typical for good oral hygiene, was observed in 70,0% schoolchildren, enrolled in board education program and in 80,0% children, enrolled in general education program. The index in 6,3% children in the first group and in 17,4% in the second one was found to be satisfactory. The index of unsatisfactory hygiene, which amounts from 2,1 to 2,5 points, was observed in 15,7% board education program schoolchildren and in 2,6 % general education program schoolchild. The index comprising from 2,6 to 3,4 points, which implicates poor oral hygiene, was found in 8,0% children of the first group. This index was completely absent in the second group children. Extremely poor oral hygiene (more than 3,5 points) was not observed neither in the first nor in the second group.

The analysis of the answers has made it possible to obtain the following results: the majority of children of the main (50,0%) and experimental (53,7%) groups clean teeth twice

a day, 44,6% of the schoolchildren who represent the first group and 43,9% of the ones of the second group clean teeth once a day in the morning, and thereafter 5,4% of the pupils of the collegiate curriculum and 2,4% of the ones of the general education program – only in each evening. The main part of the first group children (43,2%) and of the second one (36,6%) usually visit a doctor when a tooth begins to be ill. Only 14,9% and 26,8% of children (in both groups) go to the dentist once a year.

Conclusion: Thus, we can conclude, that the children enrolled in the program advanced study of foreign languages have oral hygiene is worse than that of the traditional program students.

Volkova O.S., Cherepinskaya Y.A., Dolya E.I., Goenko H.N.

CHANGES IN THE ATROPHY DEGREE OF THE ALVEOLAR PROCESS OF RAT`S LOWER JAW UNDER THE INFLUENCE OF ALIMENTARY SUPPLEMENTS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of therapeutic dentistry

Introduction: Widespread dental caries caused the need to develop effective and accessible to all segments of the population preventive measures. One of the tasks of dentistry is to further study the mechanisms of tooth decay, and experimental research in this field may affect the search for new means of adequate prevention, which will improve the dental and physical health of the population.

Aim: The aim of our study was to investigate the influence of some nutritional supplements such as lecithin, vegetable oil, bone meal, bone health periodontal rats treated with cariogenic diet.

Materials and methods: The experiment was performed on 30 rats line WAG (Wistar Albino Glaxo) at the age of 45 ± 5 days. Caries in rats reproduced by keeping them on saccharose-casein cariogenic diet of M.G. Bugaeva, S.A. Nikitin (1954). As preventive drugs used nutritional supplements the following: soy lecithin; prefabricated bone food containing 15 % calcium TU 15.1-01566330.159-2004) and an additional amount of crude sunflower oil (only 10 %). Drugs were administered per os. After 60 days, the animals were taken out of the experiment with the rules of euthanasia. Removed jaw, determined the degree of atrophy of the alveolar process of the mandible. Statistical processing of the results of research carried out using the program "Statistica - 6.0".

Results: Studies indicate that the contents of the rats on the cariogenic diet significantly reduced the degree of atrophy of the alveolar process (20,2 ± 0,8, $p < 0.05$), indicating that the inhibition of resorption of periodontal bone. Lecithin addition to cariesogenic diet (18,6 ± 2,0, $p < 0.05$) and bone meal (19,6 ± 2,98, $p > 0.05$) did not alter the extent of periodontal bone atrophy, however, the addition of sunflower oil provided parodont influence (23,0 ± 1,0, $p > 0.3$).

Conclusion: So our findings confirmed the view that the cariogenic diet does not provide adequately nutritional needs of the animal organism, caused by deficient in it calcium, protein, and phospholipids. Their inclusion in the cariogenic diet eliminates some extent these nutritional deficiencies which reduces dental caries.

Volkovitska T.A., Cherepynskaya Y.A.

COMBINED USE OF ERBIUM (ER: YAG) AND NEODYMIUM (ND: YAG) LASERS AT THE SURGICAL STAGE OF CHRONIC PERIODONTITIS TREATMENT

Kharkiv National Medical University, Kharkiv, Ukraine
Department of therapeutic dentistry

Introduction: The need to improve surgical techniques encourages us to turn to modern technologies; namely: use of various types of lasers, allowing for creation of the best conditions for postoperative wound healing and improvement of conditions for bone regeneration.

The aim of the study is to increase effectiveness of complex treatment of patients with chronic generalized periodontitis by using lasers (Er: YAG (erbium) with wavelength of 2940 nm and Nd: YAG (neodymium) with wavelength of 1064 nm) at the surgical stage.

Materials and methods: 70 patients diagnosed with generalized periodontitis of moderate severity were examined and operated. All patients examined were divided into two groups. Group 1 included 35 patients, who at the surgical stage were subjected to operative interventions according to the modified Widman technique. Group 2 included 35 patients, who at the surgical stage were subjected to operative interventions according to the same technique, but with the use of lasers: a continuous paramarginal incision was performed under local anesthesia in the area of the operated tooth segment, the incision was performed by Er: YAG laser (2940nm, SSP, 2W). Then the mucoperiosteal flap was raised by the elevator for a better view of surface of the tooth root and alveolaris processus; the second incision was also performed right along the subgingival space, around each tooth, raising gums from hard tissues of the tooth to the very bottom of the pocket. Next, granulation and pathological epithelium of pockets was removed by Nd: YAG laser, (1,5W). At first, granulations were coagulated by the laser, and then they were carefully cleaned using abrasors, which significantly reduced duration of the surgery. Sharp bony prominences of the alveolaris processus were polished by the erbium laser, and tooth root and walls of the bone pocket were treated with this laser, were closed with automembrane. Sutures were applied. The periodontal index PI (A.L. Russel) was determined in all patients. The depth of periodontal pockets and the value of gingival recession were determined using the classification of gingival recessions according to Miller (1985). All clinical examination data was recorded prior to surgery, after surgery, within 6 months and within 1 year. X-ray examination was performed before treatment and 6 and 12 after treatment.

Results: There was no statistically significant difference between indicators of depth of periodontal pockets in patients from Group 2 prior to treatment (6.6 ± 0.18mm) and these indicators in patients from Group 1 (6.94±0.21mm). 6 month after surgery, the result in Group 2 improved (4.31±0.22mm) and was significantly different from this parameter in patients from Group 1 (5.37±0.16mm). At one year, indicators in Group 2 (3.86±0.2mm) were also significantly better than in Group 1 (5.6±0.21mm). The value of gingival recession according to Miller (1985) prior to treatment in Group 1 was on average 2.2±0.07mm. 6 months after operative intervention, recession significantly increased up to 3.2±0.07mm, and at one year it remained almost without changes – 3.11±0.07mm ($p > 0.05$). Group 2 patients prior to treatment had recession value of 2.23±0.07mm, 6 month

after surgical stage of treatment recession significantly increased up to 3.0±0.02mm, in one year indicators significantly improved and remained stable at 2.54±0.09mm . PI Index (A.L. Russel) in patients from Group 2 prior to treatment was 3.81±0.19, 6 month after surgical stage of treatment, during control examination, the index significantly decreased to 2.24±0.18 ($p < 0.05$), and at one year remained almost unchanged (2.3±0.19) ($p > 0.05$). In Group 1 patients prior to treatment this indicator was at 4.22±0.06, 6 month after treatment it also significantly decreased to 2.06±0.17 and at one year it remained at the same level (1.98±0.15) ($p > 0.05$).

Conclusions: The results of our own observations have shown that the developed method of surgical treatment of generalized periodontitis with the use of Er: YAG (erbium with wavelength of 2940 nm) and Nd: YAG (neodymium with wavelength of 1064 nm) was effective.

Voloshan A.A.

SPARING TECHNIQUE OF SURGICAL TREATMENT OF PATIENTS WITH AMELOBLASTOMAS OF THE JAWS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of oral and maxillofacial surgery

Introduction. The face is a complex of several anatomical structures, each of which performs one or more functions, is an essential element that characterizes a person as a complex anatomical organ. Odontogenic tumor of epithelial origin, such as ameloblastoma, remain common form of bone tumors of maxillofacial area, leading to aesthetic and functional disorders. According to the literature - odontogenic tumors, cysts and tumor-like neoplasms amount to 51% of all benign neoplasms of the jaws (Gutan A.E and authors, 1990, Volkov V.A, 1990, Latvians S.V, 1992, Malanchuk V.A. 2010). Thus the aggressive nature of the flow ameloblasts raises the question of the degree of radical surgery.

Aim. Determine the optimal, individualized approach to treatment selection for patients with ameloblastomas.

Individually justify the degree of radical surgery with maximum preservation modern criteria of function and aesthetics standards.

Materials and methods. 9 clinical cases have been analyzed with ameloblastomas . All patients were treated at the department of oral and maxillofacial surgery in 2012-2015. All patients were underwent clinical, laboratory and radiologic investigations, 3D CT. In 7 clinical cases determined the presence of foci of bone destruction separated by osseous partitions in the area of the alveolar process, in some cases, destruction of articular and coronal process, branch and angle of the mandible without breach of continuity of the posterior border of the mandible with deformity and penetration into the soft tissues were detected. In these cases we held conserving surgery: «Cystectomy according Grigorchuk technique", drug therapy, rehabilitation uneventful. We used chemical method, which consists in the treatment of postoperative cavity walls with a concentrated solution of phenol and its neutralization by solution of alcohol to cause aseptic necrosis of epithelial elements of capsule of ameloblastoma. By the developed and proposed this sparing technique in 77 % we abled to avoid the most radical method of treatment of this pathology

– resection of the lower jaw. In 23 % (2 patients) we had a radical surgery – subtotal resection part of lower jaw according to clinical, laboratory investigations, 3D CT.

Results. There are big variety of methods, the main condition of which is the radical removal of the tumor followed by autologous or allograft, which used in case of radical surgery. However, sparing technique of Y.F Grigorchuk for over 30 years, remains effective, saving function and aesthetics standards, avoid disability of patients with this disease. Given the diversity of the proposed surgical treatment of ameloblastomas, the question of their optimization and individualization remains relevant at the present time.

Yakovleva D., Doly E., Bugaeva E., Volkova O.S., Cherepinskaya J.A.

ENDEMIC FLUOROSIS IN CONDITIONS OF CHUGUIV DISTRICT'S KHARKIV REGION

Kharkiv National Medical University, Kharkiv, Ukraine
Department of therapeutic dentistry

Introduction. Currently more than 260 million people of over the world use potable water with the fluorides concentration more than 1mg/dm³. When evaluating health of the population along with anthropogenic factors the influence of natural environmental factors has great importance. The main source of fluoride (fluoride combinations) for the man is potable water that means that the concentration of fluoride-ion in the potable water is the factor, determining the incoming level of fluoride in the organism. Besides water, fluoride incomes in the man's organism with food.

The aim of this work is the research of fluorosis' prevalence among the number of pupils of the settlements Chuguiv district and concentration of the ionization fluoride in the water sources.

Materials and methods. Chuguiv district is situated in the central part of Kharkiv region, in the valley of river Seversky Donets. The climate is moderate-continental, arid. The relief is flat, intersected by ravines and hollows. The district was found in 1923.

The potable waters are hard, contain a lot of iron. In certain settlements high concentration of nitrates (Korobochkino) and sulfates (Stara Gnilica) are observed. Water desalination (floods in the early spring) may slightly reduce the concentration of micro-and macroelements, including fluoride; affects for the pH value. Trihalomethanes are very rare, but still be observed, being dangerous carcinogens. Quantitative determination of fluoride in the water was performed by the photometric method. The concentration was determined by the chart, giving optical density, the performance of fotoelektrokalorimetry KFK-3. Water intake was conducted in the secondary schools in village Mospanovo and urban-type settlements Chkalovsky and Eskhar. The severity of destruction was determined by using the classification of V. K. Patrikeev and WHO. Besides fluorosis, was diagnosed caries.

Results. Hydrogeochemical characteristic of the natural water in village Mospanovo has the main role in the development of severe destructive fluorosis' forms of primary and permanent teeth (IFT – 2,98). Among the pupils of Escharovska school I-III levels the incidence of fluorosis was 56% (with the concentration of fluorides 1,36 mg/dm³). Visible cariesresistence is observed. Defluorination is expensive, but the most reliable method of the index reducing of dental fluorosis among the local population, where the replacement of the water source is not possible.

Conclusion. The degree of damage by fluorosis depends on the individual sensitivity of the organism, the presence of hereditary diseases, mainly the digestive tract. It doesn't subordinate to customary mathematical calculations.

Yarova A., Kopitko M.

REFINEMENT METHODS OF THE PROVSSIONAL CROWNS APPLICATION FOR THE PURPOSE OF THE REDUCTOIN EFFECT OF THE RESIDUAL MONOMER

Kharkiv National Medical University, Kharkiv, Ukraine
Department of orthopedic dentistry
Scientific supervisor: Yanishen I.V., Berezhna E.

Introduction. The application of provisional crowns (PC) at the fixed dentures (FD) treatment is topical for adaptation prosthetic area, restore chewing function and improvement of the patients' life quality even at the stage of treatment. However, using of acrylic plastic materials for making PC, in some cases, can negatively influence on the conditions of the oral cavity and the process of adaptation to FD. The level of residual monomers (RM) is the significant aspect of that problem.

Aim. Studding the clinical efficiency of the improved methods of manufacturing PC, that would reduce the level of RM on patients' immune-metabolic profile. There was used an advanced manufacturing technique of making PC using the direct methods, the essence of which is vacuuming of the plastic materials.

Materials and methods. Increasing of the extraction efficiency of residual monomer from the orthopedic constructions was reached by the addition to the specify temperature aquatic environment the process of vacuum extracting, which is an additional process of the intensity factor. We worked out a set of tools and devices, using of which provides the using a special camera, vacuum creating machine and certain vacuuming technologies of orthopedic constructions. We explored the contents of secretive immunoglobulin (sIgA) and indicators of oxidative homeostasis (OH): restored glutathione (RG), superoxide dismutase (SOD), catalase (CAT) was performed among 128 patients (61- without vacuuming PC, 67- with vacuuming).

Results. Generalized analysis of patients' immune-metabolic changes on the treating steps has revealed that in comparison with initial indications at the II phase (after TC installation) takes place the increase of almost all indicators, that characterize the enzyme chain activation – oxidative homeostasis of the mucous membrane of the oral cavity.

Conclusions. The most informative factor is the increase of CAT content as a functional reorganization indicator and enzymatic chain activation. At the III stage (after FD fixation) the most informative aspect is the growing of RG and the sIgA level.

Yeliseyeva O.V.

EFFECTIVENESS EVALUATION OF COMPREHENSIVE TREATMENT OF PATIENTS WITH CHRONIC GENERALIZED PERIODONTITIS ASSOCIATED WITH ORAL LICHEN PLANUS BY MONITORING LOCAL IMMUNITY INDICES

Kharkiv National Medical University, Kharkiv, Ukraine
Department of dentistry

Introduction. One of the most important causes, which determine the possibility of conjoint contraction of chronic generalized periodontitis (CGP) and lichen acuminatus (LA) and define their course, is the state of local mechanisms of defense of the oral cavity.

The aim of our research is assessment of sIgA in the oral fluid, C3 components of the complement, activity of lysozyme and beta-lysins in patients suffering from CGP and

LA before and after treatment, as indices of positive influence of suggested complex therapy on the immunological course of CGP pathogenesis.

Material and methods. 72 patients were examined and divided into 4 groups. The first group (20 people) comprised patients with CGP of initial and mild severity without LA. 32 patients with conjoint course of CGP associated with LA were divided into 2 groups (2 and 3). The second group (16 people) was represented by patients with CGP and LA without involvement of the oral mucosa; the third group (16 people) was represented by patients with involvement of the oral mucosa. The fourth observational group comprised patients with intact parodontium (20 people). Immunology research of the oral fluid included study of lysozyme activity by means of nephelometric method and also assessment of SIgA, C3 components of complement and beta-lysins activity by enzyme linked immunoassay.

Results. In patients of all groups with CGP of initial and mild severity in the setting of lichen acuminatus of typical form (the second and third groups) as well as without lichen acuminatus (the first group) decrease of lysozyme, beta-lysins activity, C3 components of conplement in the oral fluid is marked. Increase of concentration of sIgA by 2 (in comparison with the norm) has been detected. After conservative treatment firm increase of lysozyme and beta-lysins activity in the oral fluid of the patients of all observational groups. Also we can see a positive dynamics in concentration of C3 fragments and normalization of sIgA level in the oral fluid.

Conclusions. Efficiency of our method of treatment of patients with CGP associated with lichen acuminatus is proved through recovery of indices of local non-specific immunity of the oral cavity such as lysozyme and beta-lysins activity and concentration of C3 fragments of complement as well as normalization of SIgA level directly after the course is finished and in 3 months after treatment. Normalization of indices of local immunity of the oral cavity is accompanied by absence of symptoms of inflammation of parodontium tissue.

Zeinab Hammoud

PLATELETS RICH FIBRIN: A NEW APPROACH FOR PERIODONTAL REGENERATION

Kharkiv National Medical University, Kharkiv, Ukraine
Department of oral and maxillofacial surgery
Scientific adviser: as. prof. Vakulenko K.

Aim: The purpose of this study to discuss and evaluate clinically the efficiency of platelet rich fibrin (PRF) in periodontal regeneration in patients with aggressive periodontitis.

Material and methods: Electronic search was carried out on the entire pubmed data base looking for specific keywords, full texts and all related articles. In order to evaluate the effectiveness of PRF a research was conducted in a private clinic. Two patients with aggressive periodontitis were diagnosed and followed-up by clinical and radiographic examination. Surgical periodontal treatment along with PRF filled to the performed defects. Post-surgical re-evulation was carried out in specific interval of time for checking the changes.

Results: Filling with PRF have showen a great decrease intrabony pocket depth, and significant increase in clinical attachment level and radiographic change in the bone.

Conclusion: Platelet Rich fibrin has a good prospect concerning effective healing properties that accelerate the periodontal regeneration.

Zhdanova N.

JUSTIFICATION OF APPLYING OF MATERIALS FOR TEMPORARY OBTURATION IN THE TREATMENT OF CHRONIC APICAL GRANULOMATOUS PERIODONTITIS

Kharkiv National Medical University, Kharkiv, Ukraine
Department of therapeutic dentistry

Introduction: treatment of chronic granulomatous periodontitis is an actual problem of modern dentistry because very often on stage of temporary obturation of root canals there are complications. One of the most important factors in causing periodontitis is microbial. Of the various forms of streptococcus predominates Streptococcus virridans, less common Streptococcus hemolytic. In infected bacteria channels are also present in the biofilm, which is more stable source of infection in relation to the body's defense mechanism and antiseptic drugs, which are used in the treatment of chronic apical periodontitis. That's why it is very important to find the best material that will have expressed antiseptic and anti-inflammatory properties.

Aim: to conduct a comparative description of anti-inflammatory properties of calcium- comprising and iodoform- comprising materials for temporary root canal filling.

Material and methods: the research included patients who approached the dentistry clinic, and who have been diagnosed with chronic granulomatous periodontitis. Patients were divided into 3 groups of 10 people each. After the instrumental and antiseptic treatment of root canals patients of the first group were treated by deferred stopping of temporary obturation material based on calcium hydroxide. Patients of the second group temporarily sealing was performed on the basis of iodoform paste. Patients in the control group endodontic treatment was conducted in one visit without the use of temporary obturation method.

Results: Analysis of immediate results of intracanal treatment of chronic granulomatous periodontitis showed that patients of the first group (calcium-comprising material was used) complications in the form of pain during chewing observed in 4 of 10 people, pain on palpation of the mucous membrane in the area of projection of apex were found. In the second group of patients (using iodoform-comprising material) complications in the form of pain during chewing were only 1 patient, pain on palpation was found. Patients in the control group (one-stage treatment without the use of temporary obstruction) pain after obturation was observed in 7 patients, two patients - swelling of the mucous membrane in the area of projection apex.

Conclusion. Research has shown that the method of temporary obturation using iodoform-containing medicines in the treatment of chronic granulomatous periodontitis can reduce the risk of complications after endodontic treatment, as investigated paste has a great antimicrobial and anti-inflammatory activity, acting on the system and micro- and macro-canals affected tooth and periapical tissue.

Zotov D. E.

DIFFICULTY EXTRACTING OF IMPACTED AND DYSTOPIC TEETH ON THE UPPER JAW

Kharkiv National Medical University, Kharkiv, Ukraine
Department of oral and maxillofacial surgery

Introduction: In oral and maxilofacial surgery currently there is an urgent problem of extracting of impacted and dystopic teeth on the upper jaw without traumatizing adjacent anatomical and topographical structures. The reason of this is the lack information about the localization of the tooth, the wrong choice of the method of extracting the causative tooth.

Aim: To study of difficulties extracting of impacted and dystopic teeth on upper jaw.

Tasks: To avoid injury to neighboring anatomical and topographical structures and subsequent complications.

Material and methods: We observed 35 patients with retention and dystopic teeth of the upper jaw. All patients were treated for the period of January to March 2015 in the department of oral and maxillofacial surgery. The causative tooth of 20 (83%) patients was the 3d molar and 6 (17%) was impacted canine. During the study, there were such difficulties: intraoperations in two cases we found the possible perforation of the wall of the maxillary sinus of the 3d molars finding capsule of the cysts; In six case – possible perforation of the wall of the maxillary sinus of the 3d molars without growing cysts; In two cases when we extracting impacted canine we found possible perforation of the maxillary sinus; In one case when we extracting canine occurred traumatizing incisive plexus. The cause of the possible perforation of maxillary sinus was anatomical position the causatives teeth directly in maxillary sinus. In two cases we had surgery: "Sinusectomy with cystectomy and extracting the causative tooth". In nine cases product of the operations: "Sinustomy with extracting the causative tooth". In twenty four cases product of the operations: "Extracting of dyctopic and impacted tooth".

Results: Extracting of impacted and dystopic teeth on the upper jaw is difficult because of the presence of close relations with the neighboring teeth anatomical and topographical formation. In order to prevent complications that can occur when you extracting of impacted and dystropic teeth on the upper jaw, before the surgery there should be thorough and careful examination position tooth with neighboring structures. To do this, use additional methods of diagnosis.

Conclusion. We recommend to do surgery after radiologic investigations, 3D CT. It will help to assess examine and select the more appropriate method and access to the operation more accurately and efficiently. Conduct endodontic preparation close to the adjacent teeth if it is necessary, before resection. Before extensive extracting of the bone to preserve function and aesthetics, there is a restoration of the bone defect using a collagen membrane or osteoplastic material (synthetic or heterologous), recovery of plastic local tissues.

CONTENTS:

BIOMEDICAL SCIENCES 1
Abdullaieva Sona, Hasanova Aynur, Aleksandrova A.V. 1
INFLUENCE OF TELMISARTAN TO THE MODIFICATION OF CARDIOVASCULAR RISK FACTORS IN PATIENTS WITH 2nd TYPE DIABETES 1
Abdur-Rahman Fatima, Shaposhnikova Yu., Zlatkina V. 1
HELICOBACTER PYLORI INFECTION: THE LATEST IN DIAGNOSIS AND TREATMENT 1
Adeyemi A.A., Movchan Y.O., Yakymenko D.S., Myroshnychenko M.S. 3
METASTASES OF MALIGNANT TUMORS TO THE SKIN: RARE CASES IN THE PRACTICE OF A PATHOLOGIST 3
Aheto Ebenezer, Davis Henry, Vasylieva O.V. 4
PHYSIOLOGICAL BASIS OF THE CARDIAC CYCLE 4
Albab Farkad Yousif Alani 5
SOFT TISSUE SARCOMA AND ITS LOCAL RECURRENCE 5
Alexeenko R.V., Risovanaya L.M. 5
FEATURES OF THE REGULATION OF HUMAN LIFE IN THE PRESENT CONDITIONS OF THE WORLD 5
Alekseeva T.M., Sukhdeep Singh, Tishakova T.S. 7
INVESTIGATION OF QUANTUM-CHEMICAL PROPERTIES OF IBUPROFEN 7
Amjad Hamdallah 8
MODULATION ACTIVITY OF ALDEHYDE SCAVENGER ENZYMES IN POSTMITOCHONDRIAL FRACTION OF THIGH MUSCLE DIFFERENT AGES RATS 8
Ayesha Aslam Shaikh, Mohammed Ismail Syed Ali 9
FACTS OF HEART 9
Baikenich A.V., Rapava K.B., Cherepahin I.O. 10
VARIANTS OF BRANCHES OF ORBITAL NERVE 10
Bayrachnyy K.A., Tkachenko K.N. 11
STUDY OF GEROPROTECTIVE PROPERTIES OF METFORMIN 11
Bezrodnaya A.I.[1], Khodosh Y.E.[2] 11
GENEALOGY ANALYSIS OF BRONCHIAL ASTHMA 11
Bulgakova E.A. 13
MACRO MICROSCOPIC ANATOMY AND INTRATRUNKAL STRUCTURE HEPATIC PLEXUS NERVES 13
Chernyakova A.M., Karamian A.A. 14
ROLE OF OPPORTUNISTIC MICROORGANISMS AS MAJOR PATHOGENS OF INFLAMMATORY DISEASES IN NON-INFECTIOUS MULTIFIELD HOSPITAL 14
Chernykh V. V., Bondarenko V. V. 15
THE FORENSIC VALUE OF THE CONCENTRATIONS OF ETHANOL AND ACETALDEHYDE IN THE BLOOD IN THE EXAMINATION OF ACUTE ALCOHOLIC POISONING 15
Chertenko T. 16
CLINICAL AND MORPHOLOGOCAL CHARACTERISTIC OF TUMORS OF THE CENTRAL NERVOUS SYSTEM. RESULTS OF ANALYSIS CASE HISTORIES AND BIOPSY MATERIAL OF KHARKIV REGIONAL HOSPITAL FOR THE PERIOD FROM 2010 TO 2014 YEARS 16
Dziuba V.S., Sokol E.N. 16

THE ANALYSIS OF THE MEDICAL STUDENTS' ANXIETY LEVEL WITH THE CONDITION OF HYPODYNAMY 16
Dyadichev A.V. 17
MELANOMA 17
Dyadichev O. V., Grabovetskaya E.R. 19
FROM MACRO- TO MICROCRYSTALS 19
Ejagwulu Elizabeth, Shaposhnikova Yu., Nemtsova V. 20
LATEST EVIDENCE ON GOUT DIAGNOSIS, MANAGEMENT AND PREVENTION: WHAT THE CLINICIAN NEEDS TO KNOW 20
Fed'ko K.O. 21
MORPHOLOGICAL FEATURES OF THALAMIC VENTRAL NUCLEAR GROUP OF HUMAN'S DIENCEPHALON 21
Galata D.I., Potapov S.N. 21
BONE MARROW MORPHOFUNCTIONAL PECULIARITIES IN FULL-TERM FETUSES AND NEWBORNS FROM MOTHERS WITH MIDDLE-GRADE PREECLAMPSIA SEVERITY 21
Gordiychuk Dariya A., Ahmed Raliat B., Salawu Khairat T. 22
ACETYLCYSTEINE AS AN IMPORTANT PANACEA 22
Gordiychuk D.A., Dan'azumi Ibrahim A. 23
ACETYLCYSTEINE PERIODONTOPROTECTIVE AGENT IN CHRONIC GENERALIZED PERIODONTITIS 23
Gordiychuk D.A., Ohiri Akuyoma M., Fom Mildred N. 24
THE WORLD'S MOST DANGEROUS DRUG 24
Gubin N., Shmatko K., Gaynanova V. 25
FORENSIC MEDICAL DIAGNOSTICS OF LETHAL DAMAGES IN CASES OF BODY FALL FROM GREAT HEIGHT INTO THE WATER 25
Isayeva Narmin 26
EFFECTS OF HIGH-FREQUENCY RANGE OF ELECTROMAGNETIC RADIATION ON THE GROWTH PROPERTIES OF PATHOGENIC CORYNEBACTERIA 26
Joshna Thapa, Asma Anwardeen 26
CONGENITAL DISEASE OF HEART 26
Kolodeznaya T.Yu., Zupanets K.O., Ratushnaya K.L., Dobrova V.Ye. 27
THE PROCEDURE OF SIGNING THE INFORMED CONSENT AS A KEY FACTOR OF BIOETHICAL NORMS GUARANTEE DURING CLINICAL TRIALS OF DRUGS 27
Kukushkina M. 28
THE INFLUENCE OF DEXAMETHASONE PRENATAL INTRODUCTION ON CEREBRAL METABOLISM IN RATS - DESCENDANTS OF THE 1ST GENERATION .. 28
Kulakova K. A. 29
ASSESSMENT OF EFFICIENCY AND SAFETY OF CONTRACEPTIVES MINI-PILL 29
Kumah Ruth Jadu 30
HOW THE BRAIN AND HEART INTERFACE WITH OUR EMOTIONS 30
Lomakina O., Oliynik A. 31
IMETELSTAT - NEW THERAPEUTIC REMEDY FOR ADVANCED NON-SMALL-CELL LUNG CANCER 31
Mironchenko S. I., Kolesnik V.A., Brachkova D.S. 32
ALTERATION OF NITROGEN OXIDE METABOLITES IN ULTRAVIOLET-INDUCED SKIN LESIONS IN GUINEA PIGS IN RESPONSE TO THIOTRIAZOLINE OINTMENT WITH SILVER NANOPARTICLES 32
Mirza Himayatullah Baig, Bijay Chaudhary 33
SENSORY SYSTEM 33

Mohamad Sultan, Isaeva I.N, Karmazina I.S. 34
RESEARCH OF AUTONOMIC SUPPLY OF INTELLECTUAL ACTIVITY IN YOUNG PEOPLE 34
Mosina N. 35
AGE FEATURES AND BLOOD SUPPLY OF THE THYMUS 35
Mustafa M. Alhaad, Kudina O.V. 36
NEW THERAPY FOR THE TREATMENT OF ULCERATIVE COLITIS AND CROHN'S DISEASE 36
Nagiyeva Aynur 37
OBESITY AS A PROBLEM OF CLINICAL MEDICINE 37
Nefedov A.A., Khomiak O.V., Kovalenko E.Y 38
EXPERIMENTAL ANALYSIS OF NEUROPROTECTIVE AGENT IN COGNITIVE DEFICIENCY DEVELOPMENT IN THE MODELING OF MULTIPLE SCLEROSIS 38
Olkhova A.O., Martynova S.M. 39
PROOXIDANT AND ANTIOXIDANT SYSTEMS' STATE PRESENTED AT RATS WITH COPPER HYPERMICROELEMENTOSIS 39
Onuchukwu Chibuzor V., Aleksandrova A.V. 39
BELSOMRA AND ITS USE 39
Petruk. B.U., Aleksandrova A.V. 40
EFFECT OF PLANTS NEUROSTIMULATING AND SEDATING ACTION ON HUMAN'S BODY 40
Petrychenko I.I. 41
ADAPTOGENIC PROPERTIES OF ELEUTEROCOCCUS AS THE BEST SUBSTITUTE FOR GINSENG 41
Plushkina A., Kaligin M., Andreeva D., Gazizov I., Titova A., Sharipova E. 42
DYNAMIC OF EXPRESSION OF STEM CELL FACTOR RECEPTOR IN PANCREAS DURING ALLOXAN DIABETES IN RATS 42
Plyekhova O.A., Karnaukh E.V. 43
DOES CAFFEINE CAUSE HEADACHES, OR CURE THEM? 43
Polyakov O.V. Pysarenko H.M. Holovanova A.J. Kirichek L.T. 44
NEUROHORMONAL AND METABOLIC PARAMETERS IN ONE-MONTH RATS UNDER THE STRESS 44
Popenko S.A. 44
ERYTHROPOIETIN IS ELUSIVE DOPE 44
Praharaj Pooja, Kaluzhina O. 45
CHRONIC INTRAUTERINE HYPOXIA INFLUENCE ON COLLAGEN SYNTHESIS IN THE PULMONARY ARTERY OF FETUSES AND NEWBORNS 45
Shakiryanova A.V., Shcholok T.S, Bobrov A.E., Lutenko M.A. 46
TO THE QUESTION ABOUT MORPHOLOGY OF HUMAN MUSCULOCUTANEOUS NERVE 46
Shcholok T., Kolisnik I. 47
INDIVIDUAL DIFFERENCES IN STRUCTURE OF HUMAN'S CELIAC TRUNK 47
Sheptukha N. 48
IMPROVING TREATMENT COMPLIANCE IN CORNEAL ALKALI BURN INJURY BY MEANS OF COMBINED DRUGS 48
Shevchenko Yu.S. 49
DETERMINING OF THE ENERGY IMBALANCE IN PEOPLE WITH NORMAL WEIGHT AND OVERWEIGHT 49
Shiyan Denis, Akhundova Giella 50

INFLUENCESWEET NONALCOHOLIC THE GASSED BEVERAGES ON DIGESTIVE SYSTEM, THE PROCESS OF THE DIGESTIONANDON THE HUMAN ORGANISM INTHE WHOLE 50
Starov K.P., Stoyanov Y.D., Karnaukh E.V. 51
CONTEMPORARY ANALYSIS OF PHARMACEUTICAL MARKET OF MODERN SEDATIVE DRUGS BASED ON MELISSA OFFICINALIS ARE REGISTERED IN UKRAINE TODAY 51
Stepansky D.A., Khomiak O.V., Kremenchutsky G.N., Rozumna A.A. 51
BIOCHEMICAL CHARACTERIZATION OF DIFFERENT BIOTYPES OF AEROCOCCUS VIRIDANS 51
Sukhonos N.K. 52
ACTIVE LEARNING METHODS OF STUDENTS IN HIGHER MEDICAL SCHOOLS 52
Telehuzova O.V., Gayduchenko M.I. 53
CHANGES IN ACTIVITY OF NASAL MUCOCILIARY CLEARANCE CAUSED BY EXPOSURE OF PATHOGENS 53
Tkachenko A.S., Tkachenko M.O. 54
PROINFLAMMATORY CYTOKINES AND PROTEIN OXIDATIVE MODIFICATION IN CHRONIC CARRAGEENAN-INDUCED GASTROENTEROCOLITIS 54
Tokareva I.L. 54
METROLOGICAL SUPPORT DISSERTATION RESEARCH 54
Tokareva I.L. 55
QUALITY CONTROL RESEARCH 55
Trofimov M.A. 56
ANABOLICS WISELY 56
Tymoshchuk V.S. 56
FEATURES OF FORENSIC EXAMINATION OF SEX CRIMES 56
Urazova L.F., Ananko S.Ya. 57
TARGETED THERAPY FOR LUNG CANCER 57
Yuzyuk M. 58
CLINICAL CASE OF ECHINOCOCCUS INFECTION IN THE LUNGS, CLINICAL CASE 58
Zaporozhchenko E. 59
CLINICAL CASE OF ASCARIASIS LUMBRICOIDES IN THE CLINICAL PRACTICE 59
THERAPY 60
Abeer Elhaj, Akewusola Nimat Adeola, Doreen Naluzze, Ivanchenko S. 60
PREVENTION AS THE BASIS OF MEDICINE 60
Abugu Livinus Nnadozie 60
THE FUNCTIONAL STATE OF THE HEPATOBILIARY SYSTEM IN PATIENTS WITH RHEUMATOID ARTHRITIS 60
Adeem Farked Yousif Alani 61
TAKOTSUBO CARDIOMYOPATHY 61
Afolabi K.R, Andrieieva A. 62
WHAT IS NEW IN INFLUENCE OF FISH-OIL SUPPLEMENTATION IN REDUCTION OF CARDIOVASCULAR EVENTS 62
AL-Ketan Mutaz, Pasiieshvili T.M. 63
THE PREVALENCE OF TYPE 2 DIABETES MELLITUS AMONG THE POPULATION OF JORDAN 63
Al-Ketan M, Tytova A. 64
ENDOTHELIAL DYSFUNCTION INACUTE CORONARY SYNDROME 64
Amoh Christin, Zazdravnov A. A. 64

RENAL STATUS OF CHILDREN WITH SICKLE CELL DISEASE IN ACCRA, GHANA 64
Bardinov D.V. Lahno O.V. Kirilovich E. I. 65
THE STATUS OF BONE METABOLISM IN PATIENTS WITH THYROTOXICOSIS SYNDROME 65
Berezhna[1] A., Tertyshnyy[1] V., Pligovka[2] V., Shaposhnikova[1] Yu. 66
ASSOCIATION BETWEEN INSULIN RESISTANCE AND HYPOTHYROIDISM IN PATIENTS WITH HYPERTENSION AND OBESITY 66
Bezuglova I., Ofure Abigael Obinyan 67
CEREBROVASCULAR PATHOLOGY IN PATIENTS WITH DIABETE MELLITUS 67
Bilchenko A.O., Prosolenko K.O. 67
EFFECT OF TREATMENT IN PATIENTS WITH CAD ON ALBUMINURIA 67
Boma Douglas 68
RENAL ARTERY DENERVATION: PERSPECTIVES OF MODERN METHOD OF TREATMENT OF RESISTANT HYPERTENSION 68
Butov D.O., Pomogaev S. O., Akzhigitova A.A. 69
CHANGES IN THE LEVEL OF NITRIC OXIDE BLOOD AT PATIENTS WITH PULMONARY MULTI-DRUG RESISTANT TUBERCULOSIS IN THE PROCESS OF CHEMOTHERAPY 69
Butova E.Y. 69
THE PREDICTORS OF CARDIOMETABOLIC ABNORMALITIES FOR PATIENTS WITH HYPERTENSION AND DIABETES MELLITUS TYPE 2 69
Chidimma Ucheze, Al-haddad Mustafa, Pasiieshvili T.M. 70
BURNOUT SYNDROMEIN GRADUATESTUDENTS OF MEDICAL UNIVERSITY 70
Dospehova M.A. 71
STUDYING OF PATHOLOGICAL PHYSIOGNOMICAL SIGNS AS POSSIBLE PREDICTORS OF RESPIRATORY DISEASES 71
Elhaj Abeer, Akewusola Nimat Adeola, Doreen Naluzze, Ivanchenko S. 72
PREVENTION AS THE BASIS OF MEDICINE 72
Feldman D.A., Chervan I.V., Popova T.O. 73
IMPACT OF LIPIDIC DISBALANCE ON FORMATION AND PROGRESS OF ARTERIAL HYPERTENSION IN PATIENTS OF A CARDIOLOGICAL PROFILE 73
Gabisoniya T.N., Minukhina D.V. 73
PATHOGENETIC VALUE OF VISFATIN AND ADIPONECTIN IN PATIENTS WITH STABLE ANGINA AND OBESITY 73
Garmash P., Garmash N., Bolokadze E. 74
COPD WITH SIMULTANEOUS RENAL AFFECTION 74
Gerasimchuk U. S., Lahno O.V. 75
EXPERIENCE IN TREATING PATIENTS WITH IRRITABLE BOWEL SYNDROME 75
Grevtsova H.E, Kovel I.V., Suprun S.A. 76
EFFICACY AND SAFETY OF PROBIOTICS AS ADJUVANT AGENTS FOR TREATMENT OF HELICOBACTER PYLORI INFECTION 76
Halo Azad Khidwrbagi, Pasiieshvili T.M. 77
USING OF ELECTRICAL NERVE STIMULATION IN PATIENT WITH DIABETIC NEUROPATHY 77
Iermak A.S. 78
COPEPTIN'S DYNAMICS AND ANTHROPOMETRIC PARAMETERS IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND OBESITY 78
Ilyukha S., Yeryomenko G., Taranenko A. 78

A RETROSPECTIVE ANALYSIS OFCALLS TO EMERGENCY MEDICALCARE TO PATIENTS WITHALLERGY 78
Isaac Adaora 79
NEW MODERNIZED TREATMENT OF RHEUMATOID ARTHRITIS 79
Istomina O.V. 79
ROLE OF VEGF IN DEVELOPMENT OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN COMBINATION WITH HYPERTENSION 79
Kadykova O.I., Shaparenko O.V. 80
LEVEL OF sCD40LIN PATIENTS WITH ARTERIAL HYPERTENSION AND TYPE 2 DIABETES MELLITUS 80
Kadykova O. I., Shaparenko O.V. 81
INTERACTION BETWEEN INSULIN RESISTANCE DEGREE AND LEVEL OF ARTERIAL HYPERTENSION IN PATIENT WITH DIABETES MELLITUS TYPE 2 81
Kalinichenko A.,Tytova G. 82
NITRIC OXIDE METABOLISM IN PATIENTS WITH POSTINFARCTION CARDIOSCLEROSISAND OBESITY 82
Koteliukh M.Yu. 82
THE ROLE OF MATRIX METALLOPROTEINASES AND THEIR INHIBITORS IN THE DEVELOPMENT OF ACUTE MYOCARDIAL INFARCTION 82
Kovalenko A.N. 83
CLINICAL-AND-MORPHOLOGICAL CHARACTERISTICS OF CHRONIC GASTRITIS IN THE PATIRNTS OF DIFFERENT AGE GROUPS WITH H. PYLORI INFECTION 83
Kravchun P. P., Kadykova O. I. 84
THE PATHOGENETIC ROLE OF DISORDERS OF CARBOHYDRATE METABOLISM IN THE PROGRESSION OF CHRONIC HEART FAILURE IN PATIENTS WITH POSTINFARCTION CARDIOSCLEROSIS, TYPE 2 DIABETES AND OBESITY 84
Lapshyna K. 85
RELEVANCE OF THE PROINFLAMMATORY BIOMARKERS USAGE IN NONALCOHOLIC FATTY LIVER DISEASE PATIENTS WITH HYPERTENSION 85
Lebedynets P.V., Bohdanov A.N. 86
SELECTIVE INTRA-ARTERIAL THROMBOLYSIS FOR ISCHEMIC STROKE PATIENTS 86
Lopina N. 87
NONINVASIVE INDICATORS OF ARTERIAL STIFFNESSIN PATIENTS WITH CORONARY ARTERY DISEASE AND TYPE 2 DIABETES MELLITUS 87
Melenevych A. 88
ROLE OF EPITHELIAL-MESENCHYMAL TRANSITION IN FORMING COPD 88
Molodan D.V. 89
ENDOTHELIAL AND METABOLIC ABNORMALITIES IN PATIENTS WITH HYPERTENSION ASSOCIATED WITH OBESITY AND HYPERURICEMIA 89
Narizhnaya A., Ryndina N. 89
FUNCTIONAL CLASS OF CHRONIC HEART FAILURE AND IMMUNOINFLAMMATORY MARKERS (IL-1B, IL-10) IN PATIENTS WITH ISCHEMIC HEART DISEASE AND TYPE 2 DIABETES 89
Nebesna H.O., Kerbazh N.R., Goptsii O.V. 90
ADIPOCYTOKINES AND CARBOHYDRATES METABOLISM INDEX INTERACTION IN PATIENTS WITH ARTERIAL HYPERTENSION 90
Oliinyk M.O. 91
THE ROLE OF TNF-α IN METABOLIC DISORDERS IN PATIENTS WITH OSTEOARTHRITIS AND TYPE 2 DIABETES MELLITUS 91

Petiunin P.O., Zolotaikina V.I. 92
IMMUNE INFLAMATION, RENAL FUNCTION IN CHRONIC HEART FAILURE AND CHRONIC HEART FAILURE ACCOMPANIED BY CHRONIC KIDNEY DISEASE 92
Radzishevska Y.K. 92
ULTRASOUND MARKERS OF STIFFNESS DEFINITION IN PATIENTS WITH ARTERIAL HYPERTENSION AND ARTERIAL HYPERTENSION ASSOCIATED WITH TYPE 2 DIABETES MELLITUS 92
Romanenko V., Ogneva O. 93
THE ROLE OF TUMOR NECROSIS FACTOR-α IN PATHOGENESIS OF NONALCOHOLIC FATTY LIVER DISEASE 93
Romanova I.A. , Andrusha A.B. 94
PECULIARITIES OF MANAGEMENT OF PATIENTS WITH CUTANEUS MANIFESTATIONS OF HEMOBLASTOSIS IN FAMILY MEDICINE 94
Rudenko M., Tytova G. 95
RENAL DYSFUNCTION OF PATIENTS WITH CHRONIC HEART FAILURE OF ISCHEMIC ORIGIN AND CHRONIC PYELONEPHRITIS 95
Shekhovtsova Yu. 96
THE FUNCTIONAL STATE OF THE PANCREAS IN PATIENTS WITH TYPE 2 DIABETES MELLITUS WITH DIFFERENT PHENOTYPE 96
Shirgba Sonter Jacob, Kochubiei O. 96
ALDOSTERONISM AND HYPERTENSION: CONN'S SYNDROME 96
Sukhonos N.K. 97
THE CONDITION OFCYTOKINE STATUS WITH VIBRATION DISEASED PATIENTS IN CONJUNCTION WITH HYPERTENSION DISEASE 97
Tabachenko E.S. 98
OBESTATIN LEVELS IN PATIENTS WITH ARTERIAL HYPERTENSION AND DIABETES MELLITUS TYPE 2 DEPENDING ON THE PRESENCE OF OBESITY 98
Telnova S. 99
FEATURES OF LIPID AND CARBOHYDRATE METABOLISM IN PATIENTS WITH NONALCOHOLIC FATTY LIVER DISEASE IN COMBINATION WITH HYPERTENSION AND HYPOTHYROIDISM 99
Ternovaya N, Priashchenko M, Bolokadze E., Malich T. 100
SOME URGENT ASPECTS OF DIAGNOSIS FOR COPD PATIENTS 100
Tryfonova N. 101
CHANGES IN THE LEVELS OF PROINFLAMMATORY CYTOKINES AND PREGNANCY-ASSOCIATED PLASMA PROTEIN A IN PATIENTS WITH UNSTABLE ANGINA AND TYPE 2 DIABETES 101
Tymoshenko G.Y. 102
THE FEATURES OF LIPID PROFILE IN PATIENTS WITH CHRONIC NONCALCULOUS CHOLECYSTITIS AND TYPE 2DIABETUS MELLITUS 102
Tytova A.Yu. Adeyemi A.A., Soe T. 102
DEPRESSION AND SLEEP DISORDERS IN PATIENT'S WITH CARDIOVASCULAR DISEASES 102
Viun T.I. 104
ASPECTS AND FEATURES OF DISEASES OF CARDIOVASCULAR SYSTEM IN PATIENTS WITH CHRONIC PANCREATITIS 104
Vorobyova H. 105
INTERACTION OF THE CONDITION OF THE IMMUNE SYSTEM AND WAY OF LIFE OF YOUNG PEOPLE 105

Zaikina T.S., Rynchak P.I., Kovalyova Yu.A., Kasim Abd Elrahim 105
CORRELATION OF SCD40L LEVEL AND THE LEVEL OF INSULIN IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND DIABETES MELLITUS TYPE 2 ... 105
Zaozerskaya N.V., Aksjonova N. 106
QUALITY OF LIFE AND PSYCHOLOGICAL TRAITS OF CHARACTER IN PATIENTS WITH DIABETES VS CARDIOVASCULAR PATHOLOGY 106
Zhuravlyova A., Ogneva O., Homich M., Ganshin N. 107
THE CORRELATION BETWEEN THE OVERWEIGHT AND THE RISK OF CANCER PATHOLOGY 107
SURGERY, TRAUMATOLOGY AND ORTHOPEDICS 108
Adeem Farkad Yousif Alani 108
THE ROLE OF URGENT ULTRASOUND IN THE DIAGNOSIS OF ACUTE INTESTINAL OBSTRUCTION IN PREGNANT 108
Adeem Farked Yousif Alani 109
OUR EXPERIENCE OF USING FIXATION APPARATUS OF INJURIES IN PATIENTS WITH SPINAL CORD INJURY (SCI) 109
Basylaishvili S.Yu, Lukashova O.P. 109
ULTRASTRUCTURE OF NON-SMALL CELL LUNG CANCER CELLS 109
Boyarskiy A.A., Khodak A.S. 110
METHOD OF APPLYING ESOPHAGEAL - GASTRIC ANASTOMOSIS DURING RESECTION INTRATHORACIC PART OF THE ESOPHAGUS 110
Goni S.A.T. 111
LOCAL RADIATIVE LESIONS 111
Goni S.-K.T. 112
THE OPTIMAL METHOD OF OBTAINING PRP FOR TREATMENT OF CHRONIC LIMB ISCHEMIA 112
Dolgov V., Medyanik E., Mezhenskaya K. 112
ANOMALIES OF THE CORONARY ARTERIES 112
Ievtushenko D.V., Robak V.I., Byzov D.V. 113
MANAGEMENT OF PATIENTS WITH MIRIZZI SYNDROME 113
Isaac Precious Adaora 114
RECENT FINDINGS FOR COLORECTAL CANCER TREATMENT 114
Karchins′kyy O. O., Orlova T. V. 114
USING THE REMOTE INFRARED THERMOGRAPHY IN THE DIAGNOSIS AND ASSESSMENT OF TREATMENT EFFECTIVENESS OF PARANASAL SINUSITIS 114
Khodak A.S., Khodak V.P. 115
TUMOR STEM CELLS AS THE SOURCE OF MALIGNANT NEOPLASMS RISK 115
Khodak A.S., Khodak V.P. 115
COMPLICATIONS AT MAMMARY GLAND CANCER AFTER SALVAGE OPERATION 115
Koshman S. K., Lozkho N.V., Pazhin S.A. 116
INNOVATION METHOD OF TREATMENT OF CHILDREN CEREBRAL PALSY 116
Lapshyn D.V. 117
COMPARISON OF SEVERITY SCALES OF THE CONDITION AND DAMAGES FOR VICTIMS WITH ASSOCIATED INJURIES 117
Lievashova A.I. 118
DYNAMIC OF VEGF LEVEL IN PATIENTS WITH LUNG CANCER 118
Mayorova M.V., Istomin D.A., Oleynik A.A. 119
THE PREVENTION OF TROMBOEMBOLITHICAL COMPLICATIONS IN CASES OF FRACTURES PROXIMAL PART OF THE FEMUR 119

Mikhaylusov R.N. 120
CUVETTE FOR DISPENSING LIQUID OPTICAL RADIATION IN MEDICAL PHOTOBIOLOGICAL RESEARCH 120
Olefir O.S., Robak V.I., Kurbatov V.A. 120
CAUSES OF POSTOPERATIVE MORTALITY IN ACUTE NECROTIZING PANCREATITIS 120
Omelchenko-Seliukova A.V. 121
THE EFFECTS OF TOTAL INTRAVENOUS ANESTHESIA ON COGNITIVE FUNCTIONS IN ELDERLY PATIENTS 121
Robak V.I., Ievtushenko D.V., Byzov D.V., Kurbatov V.A. 122
INTESTINAL FAILURE IN COURSE OF ACUTE NECROTIC PANCREATITIS 122
Panich R., Shuba D. 123
OPERATIVE SURGERY OF THE ECTOPIC PREGNANCY 123
Pavlichuk E., Shuba D. 123
SURGICAL TREATMENT OF VERTICAL STRABISMUS IN ADULTS 123
Riga A.S. 124
DYNAMICS OF BIOCHEMICAL BLOOD TESTS IN PATIENTS WITH SEVERE PERITONITIS IN THE FIRST DAY AFTER SURGERY AND ON THE MODEREN ANTIBIOTIC THERAPY 124
Shubina M. 125
CHOICE OF SURGICAL TREATMENT OF 'COMPLEX' FEMORAL HERNIA 125
Sushetskaia D.A. 126
SURGICAL TREATMENT OF ENDOMETRIOSIS 126
Svirepo P.V., Volik M.S. 127
THE USE OF MINIMALLY INVASIVE SURGICAL TECHNIQUES IN THE TREATMENT OF SOLITARY HEPATICHYDATID 127
Trofimova A.V., Tyshko A.S., Zaytseva O.V., Liubomudrova K.S 128
ULTRASOUND DIAGNOSTICS OF EARLY INTRA-ABDOMINAL COMPLICATIONS IN PATIENTS WITH GENERALIZED PERITONITIS 128
Zamyatin D.P. 129
MODERN DIAGNOSTICS CARDIO-RESPIRATORY DYSFUNCTION IN CARDIAC CONTUSION IN PATIENTS WITH CLOSED CHEST INJURY 129
OBSTETRICS AND GYNECOLOGY 130
Adeem Farked Yousif 130
INFECTION ASPECTS OF ENDOMETRIAL HYPERPLASIA 130
Adeyemi A.A., Yousif N. 130
ILLICIT DRUG USE DURING PREGNANCY: PREDISPOSING FACTORS IN WOMEN; EFFECTS ON FETAL GROWTH AND MATERNAL PHYSIO-PSYCHO-SOCIAL SYSTEMS 130
Adeyemi A.A., Parashuk V.U., Mayorova M.V., Soe T., Kraskovskaya T.Y. 131
CHRONIC SALPINGO-OOPHORITIS, AS REASON OF IMMUNOLOGICAL STERILITY 131
Alaya Lamia 132
SEXUAL DYSFUNCTION IN WOMEN WITH GENITAL PROLAPSE IN PERIMENOPAUSE 132
Aralova V.O. 133
THE EFFECTIVENESS OF METHODS FOR EXPECTED FETAL WEIGHT DETERMINATION 133
Chernushova L.A., Novikova A.A., Kozyr O.V., Kamardina K.O., Pshikun Yu.M. 134

UTERINE BLEEDING AT PUBERTY (CASE REPORT) 134
Dudnichenko N.A., Pirozhenko Yu. S., Kolisnyk A. I., Fesenko E.A. 135
CLINICAL DIAGNOSTIC PECULIARITIES OF ENDOMETRIAL HYPERPLASIA ACCOMPANIED BY HYSTEROMYOMA 135
Dynnik O.O. 135
THE ROLE OF SEX STEROID-BINDING GLOBULIN IN ABNORMAL UTERINE BLEEDING AT PUBERTY 135
Fedkovich L. A., Epshtein M. M., Piloyan A. Zh., Sheyko A. I. 137
STRUCTURAL ABNORMALITY OF FEMALE GENITALIA (CASE REPORT) 137
Gradil O.G. 138
THE ROLE OF OVARIAN RESERVE IN ART PROGRAMS 138
Khan Aqeel Aftab, Taiwo Toyeeb 139
EARLY DIAGNOSIS OF PRETERM LABOR 139
Korolevych R.R 140
COURSE OF PREGNANCY AND CHILDBIRTH WITH COAGULOPATHY 140
Litvinova A.V. 140
CHANGE UTERINE BLOOD FLOW BEFORE LABOR 140
Liubomudrova K.S., Parashchuk V.Y., Serdiuk V.V. 141
MODERN APPROACH TO THE PROBLEM OF OVARIAN HYPERSTIMULATION SYNDROME 141
Lutsky A.S. 142
PREGNANCY RATES AFTER TRANSFER OF CRYOPRESERVED EMBRYOS VITRIFICATION METHOD 142
Marakushina E.A., Vygovskaya L. A., Pokryshko S.V. 143
RETROSPECTIVE ASSESSMENT OF GESTATIONAL PYELONEPHRITIS FACTORS 143
Mu'awya Salem Nasr Almaradat 143
COMPARATIVE ANALYSIS OF DIFFERENT METHODS OF CORRECTION CERVICAL INCOMPETENCE 143
Palamarchuk V. V., Vygivska L.A., Blagoveshchensky E. V., Rogachova N.Sh. 145
CLINICAL PATHOGENETIC CHARACTERISTICS OF HORMONAL HOMEOSTASIS IN WOMEN WITH ARTERIAL HYPERTENSION FOLLOWING SURGICAL MENOPAUSE 145
Palamarchuk V. V., Vygivska L.A., Blagoveshchensky E. V., Rogachova N.Sh. 145
PSYCHOLOGICAL ASPECTS OF MENOPAUSAL SYNDROME SECONDARY TO UTERINE LEIOMYOMA 145
Prudivus A. A., Chumak A. M., Buravel B. O. 146
METHODS OF CERVICAL INCOMPETENCE CORRECTION IN PREGNANT 146
Pylypenko N.S., Reznik M. A., Rakityansky I.Yu., Rubinskaya A. N. 147
EXPERIENCE INDOLE-3-CARBINOL IN THE TREATMENT OF RETENTION CYSTS (CASE REPORT) 147
Reznik M. A., Rakityansky I.Yu., Rubinskaya A. N., Dyakova I.V. 148
ULTRASOUND INDICES OF OVARIAN ENDOMETRIOSIS 148
Riabushko I.R., Mikhanovskiy A.A. 149
THE ANALYSIS OF 5-YEAR TREATMENT OUTCOME OF PATIENTS WITH CANCER OF VULVA 149
Saytarly D. P., Demidenko O.D., Rubinska T. V., Merenkova I. M. 150
MENSTRUAL FUNCTION PECULIARITIES IN REPRODUCTIVE AGE WOMEN WITH SIGNS OF CONNECTIVE TISSUE DYSPLASIA 150
Skibina K.P. 151

ROLE OF CONNECTIVE TISSUE DYSPLASIA IN THE FORMATION OF NEONATAL PATHOLOGY 151
Skorbach O.I., Al-Karawi Ahmed Shakir 152
THE DYNAMICS OF METABOLIC DISORDERS IN WOMEN AFTER HYSTERECTOMY 152
Soe T., Adeyemi A.A., Zaytseva O.V. 153
MOST FREQUENT PLACE OF LOCALIZATION AND FACTORS AFFECTING THE ECTOPIC PREGNANCY 153
Tarawneh D.Sh. 153
CHARACTERISTICS OF FAMILY ANAMNESIS OF INFERTILE WOMEN WITH UNSUCCESSFUL ATTEMPTS OF ASSISTED REPRODUCTIVE TECHNOLOGIES PROGRAMS 153
Tertyshnyk A.O. 154
ANTIBIOTIC RESISTANCE OF MICROORGANISMS IN PATIENTS WITH SALPINGITIS 154
Teryanik A.V., Dusmatova A. K., Sayenko V. P. 155
TREATMENT OF VULVOVAGINAL INFECTIONS IN ADOLESCENTS 155
Tysyachka G.M., Semenchenko L.A., Mironchuk E.I., Solyanik V.Yu. 156
ENDOTHELIAL DYSFUNCTION DIAGNOSIS IN CHILDREN AND ADOLESCENTS WITH INFLAMMATORY DISEASES IN GYNECOLOGICAL PRACTICE 156
PEDIATRICS AND MEDICAL GENETICS 157
Amash A.G. 157
CORRELATION OF CALCIUM - MAGNESIUM PROFILE IN INFANTS 157
Chernenko L.N., Avdieichyk E.V. 157
THE LEVEL OF IL-1ß AND TNF-α IN CHILDREN WITH BRONCHOPULMONARY DYSPLASIA 157
Chernenko L.M., Mayorova M.V. 158
THE STATE OF THE DIGESTIVE SYSTEM IN CHILDREN WITH BRONCHOPULMONARY DYSPLASIA 158
Chernenko L.N., Pasichnyk V.V. 160
STATE OF THE LEFT VENTRICULAR FUNCTION IN CHILDREN WITH BRONCHOPULMONARY DYSPLASIA 160
Dryl I.S., Petrenko L.K., Zabashta I.V. 161
ASSESSMENT OF MENTAL STRESS IN CHILDREN'S LIFE WITH CHRONIC KIDNEY DISEASES 161
Dubinin S., Molchanyuk D., Dmitrenko A. 162
FEATURES OF BUDD-CHIARI SYNDROME (CLINICAL CASE) 162
Duru A., Pever T., Adogba O., Onuchukwu C.V., Lupaltsova O.S. 163
THE EFFECT OF BREAST FEEDING AND MATERNAL POSTNATAL ANXIETY 163
Ekpo Mbuotidem Emmanuel, Golovko T. 163
THE PARTICULARITIES OF INTERVENTRICULAR COOPERATION OF HEART VENTRICLES IN CHILDREN WITH MYOCARDIUM PATHOLOGY 163
Golovachova V., Chernyh A., Odinets P. 164
THE STUDY OF THE SCHOOLCHILDREN HEALTH CONDITION IN A BIG INDUSTRIAL CITY 164
Grishchenko S.A., Dolzhko N.V., Solyanik A.O. 165
RISK STRATIFICATION OF CARDIOVASCULAR PATHOLOGIES IN NEWBORNS 165
Karpushenko J.V., Hewlett F. 166

THE STATE OF UPPER DIGESTIVE SYSTEM MUCUS IN CHILDREN WITH ALLERGIC DISEASES 166
Koval V.A., Loskutov O.V. 167
INCIDENT OF DISORDERS OF SULFUR AMINO ACID METABOLISM, HYPERHOMOCYSTEINEMIA, COBALAMIN DEFICIENCY 167
Kravtsova G.D., Ovcharenko S.S., Koval A.V. 168
FORMATION OF THE SYSTEMIC INFLAMMATION RESPONSE OF NEWBORNS, SUFFERED FROM HEAVY ASPHYXIA 168
Markevych M.A., Kalyuzhka V.Yu. 169
UNPRODUCTIVE COPING-STYLES AS A FACTOR IN THE DEVELOPMENT OF DISEASES IN SCHOOLCHILDREN 169
Mustafa M. Alhaad 170
INFANT MORTALITY IN THREE DIFFERENT SOCIETIES 170
Panko N.O., Abiodun M.A., Adegoke E.A., ... 171
DIFFERENCES OF CYTOKINES RESPONSE BETWEEN JUVENILE IDIOPATHIC ARTHRITIS AND REACTIVE ARTHRITIS ON EARLY STAGE OF DISEASE DEVELOPMENT 171
Plyekhova O.A, KalyuzhkaV.Yu. 172
REPRODUCTIVE HEALTH OF MODERN GIRLS: PROBLEMS AND PROSPECTS 172
Podgalaya E.V. 173
CLINICAL «MASKS» OF CYSTIC FIBROSIS 173
Potikhenska K. 174
THE FEATURES OF ANEMIAS IN CHILDREN 174
Pugacheva E. 174
DIFFERENTIAL DIAGNOSIS OF REACTIVE ARTHRITIS AT CHILDREN 174
Rybka O. 175
DIETARY PATTERN AND ANTHROPOMETRIC PARAMETERS OF OBESE ADOLESCENTS AND THEIR MOTHERS 175
Shkilniuk Maryna 176
IMPACT OF MOBILE COMMUNICATION ON SOCIAL AND MEDICAL ASPECTS OF PUPILS 176
Shokry S., Chirochirwa L., Panko N. 177
CLINICAL AND LABORATORY FINDINGS IN PERSONS WITH OLIGOARTICULAR AND POLYARTICULAR FORMS OF JUVENILE IDIOPATHIC ARTHRITIS 177
Strelkova M.I., Yermolayeva M.M., Kotelevs`ka V.I. 178
CLINICAL OBSERVATIONS OF AUTOIMMUNE POLYGLANDURAL SYNDROME OF THE I TYPE IN A 15-YEAR CHILD 178
Tikhonova O.O. 178
CAPILLAROTROPHIC VIOLATIONS AND THEIR CORRECTION IN PATIENTS WITH ACUTE LEUKEMIA 178
Tsymbal V.M. 179
NOVEL MARKERS OF DIABETIC NEPHROPATHY IN CHILDREN 179
Tsyura O. N. 180
STRATIFICATION OF CARDIOVASCULAR RISK IN CHILDREN WITH BRONCHOPULMONARY PATHOLOGY 180
Tsyura O.N., Popova T.O., Kvasova P.A. 181
RUFFIER- TEST AS METHOD OF EVALUATION THE RISK OF CARDIOVASCULAR COMPLICATION IN CHILDREN WITH BRONCHOPULMONARY PATHOLOGY 181
Zimnytska T.V., Rabin Basnet 182

ASSESSMENT OF COLON ELECTRIC ACTIVITY IN CHILDREN WITH DOLICHOSYGMA 182
Zolotaryova T. U., Kovalchuk E. A., Malko T. G., Serebryakova N. Y. 182
RESEARCH OF THE EFFECTIVENESS SPECIALIZED NUTRITION FOR CHILDREN WITH METABOLIC DISEASE – LEUCINOSIS 182
NEUROSCIENCES 184
Adeyemi A. A. [1], Novohatskii M. S. [1], Salum I. S. [1], Shevchenko I. G. [2] 184
AMYOTROPHIC LATERAL SCLEROSIS: A CASE STUDY 184
Anoop Vasu, Kufterina N.S. 185
MITOCHONDRIAL ENCEPHALOMYOPATHY LACTIC ACIDOSIS AND STROKE-LIKE EPISODES 185
Anto Darrel, Kufterina N.S. 185
CLINICAL-DIAGNOSTICAL FEATURES OF VERTEBRAL AND MUSCULAR TONIC SYNDROME 185
Chernyak A.V., Kokhan O.M., Riznychenko O.K. 186
THE EFFICACY OF THE SELECTIVE SEROTONIN REUPTAKE INHIBITORS AND THE NOREPINEPHRINE IN THE TREATMENT OF THE NEUROPATHIC PAIN 186
Clio Jis Francis, Nekrasova N.A. 187
VERTEBRAL ARTERY SYNDROME IN PATHOGENESIS OF TRANSIENT ISCHEMIC ATTACK 187
Denisenko I.V., Zelentsova A.S. 188
PHARMACOLOGICAL CHARACTERISTICS OF CITICOLINE AND IT'S ROLE IN THE TREATMENT OF ISCHEMIC STROKE 188
Don Philip, Kufterina N.S. 188
CURRENT ASPECTS OF TREATMENT OF EPILEPSY 188
Eugenia Mawutor Edjameh, Kufterina N.S. 189
CURRENT ASPECTS OF THE LUMBOISHALGIA MANAGEMENT 189
Feldman D.A., Mykhaylov V.B. 190
STUDY OF PSYCHO-EMOTIONAL DISORDERS IN PEOPLE AND DISPLACED RESIDENTS FROM ATO ZONE 190
Gasan A.A., Batalina E.A. 191
CADASIL SYNDROME DIAGNOSTIC CRITERIA 191
Hmain S. 192
EFFECTIVENESS OF ART THERAPY IN TREATMENT OF PATIENTS WITH DEPRESSIVE RECURRENT DISORDER 192
Isaac Adaora 193
ETIOLOGY OF VIRAL ENCEPHALITIS 193
KashyrinaA. 193
EFFECTIVENESS OF CALCIUM HOPANTENATE PREPARATIONS IN TREATMENT OF COGNITIVE IMPAIRMENTS AT EPILEPSY 193
Koshman S., Shportko O. 194
THE MODERN ASPECTS OF STIGMATIZATION IN PATIENTS WITH SCHIZOPHRENIA 194
Leshchyna I.V. 195
THE ROLE OF ART THERAPY IN REHABILITATION PATIENTS WITH MENTAL DISORDERS 195
Levchenko A.L. 196
PREVENTION OF DRUG ABUSE AMONG TEENAGERS BY TIMELY DETECTING DEPRESSION 196

Lychko V., Malakhov V., Arkhypova K. 196
MICROWAVE WAVEGUIDE-BASED DIELECTROMETRY FOR THE MONITORING ERYTHROCYTES' BETA-RECEPTORS ACTIVITY IN PATIENTS WITH ISCHEMIC STROKE 196
Markovska O.V., Awodunmila O.E., Nekrasova N.A. 198
MORPHOLOGICAL PECULIARITIES OF PERIPHERAL NERVOUS SYSTEM IN MULTIPLE SCLEROSIS 198
Molchanyuk D. 198
THE DIAGNOSTIC CAPABILITIES OF PSYCHODIAGNOSTIC METHODS OF IDENTIFYING THE EFFECTS OF STRESS AND POST-TRAUMATIC STRESS DISORDER 198
Nana Ama Christian, Kufterina N.S. 199
CLINICAL FEATURES OF MOYA-MOYA DISEASE 199
Nefedov A.A., Khomiak O.V., Kovalenko E.Y 200
EXPERIMENTAL ANALYSIS OF NEUROPROTECTIVE AGENT IN COGNITIVE DEFICIENCY DEVELOPMENT IN THE MODELING OF MULTIPLE SCLEROSIS 200
Nesteruk A.V. 200
POTENTIAL FOR USE A TRANSPLANTATION OF EMBRYONIC NEURAL TISSUE IN LENNOX-GASTAUT SYNDROME 200
Olefir A.S.,Telsenko O.A. 201
BRAIN DEFEAT IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE 201
Nekrasova N., Oluwayemi Moses, Akinkugbe Ayobola 202
THE MEASUREMENT OF HEART RATE VARIABILITY IN ASSESSMENT OF THE AUTONOMIC PROVIDING IN YOUNG PATIENTS WITH VERTEBROBASILAR INSUFFICIENCY 202
Platynyuk O.B. 203
CLINICAL FEATURES OF FORMATION OF PTSD IN THE COMBATANTS WHO WERE INJURED 203
Samoilova H., Jacobs Yvonne 203
CLINICAL CASE OF COMPLICATED COURSE OF GENERALIZED MYASTHENIA GRAVIS WITH THYMOMA AFTER SURGICAL TREATMENT 203
Savchenko A.G. 204
DIAGNOSTIC CRITERIA FOR MOYAMOYA DISEASE IN NEUROLOGIST'S MEDICAL PRACTICE 204
Subba Sanjay Kumar, Kufterina N.S. 205
EPIDEMIOLOGICAL DATA OF TRAUMATIC BRAIN INJURY AND POST-TRAUMATIC EPILEPSY 205
Tikhonova O. 206
CHRONIC NASOPHARYNX DISEASES AS THE CAUSE OF CRANIOCERVICALGIA IN PATIENTS OF YOUNG AGE 206
Tverezovska I.I., Kauk O.I. 207
APPEARANCE AND DEVELOPMENT OF HYPERKINETIC DISORDERS IN TENDER AGE CHILDREN 207
Voloshin-Gaponov I.K. 207
FEATURES OF THE BIOLOGICAL AGE IN PEOPLE WITH KONOVALOV-VILSON'S DISEASE 207
Yeromenko A. 208
PATHOGENIC ASPECTS OF CARDIOGENIC CEREBRAL EMBOLISM 208
Kharkiv National Medical University, Kharkiv, Ukraine 208

Zagora O.O., Riznychenko O.K. 209
THE USE OF STATINS IN A PREVENTION OF CEREBROVASCULAR PATHOLOGY – THE DILEMMA OF MODERN MEDICINE 209
Zavgorodnia N. 210
DIAGNOSIS AND PSYCHOTHERAPEUTIC CORRECTION OF ADAPTATION DISORDER IN WOMEN DELIVERED A PREMATURE INFANT 210
Zelenska K. 210
BASIC MECHANISMS OF THE SUICIDAL BEHAVIOR FORMATION IN YOUNG PEOPLE WITH PSYCHOGENIC DEPRESSION 210
OPHTALMOLOGY 212
Duras A. 212
IRIS CONFIGURATION IN ACCOMMODATION IN PIGMENT DISPERSION SYNDROME 212
Gulida A., Gaber D.I. 212
DETERMINATION OF THE LOCATION OF THE LAMINA CRIBROSA WITH APPLICATION OF THE DEVELOPED CRITERA BASED ON OPTICAL COHERENCE TOMOGRAPHY DATA 212
Honchar O.M., Tikhonova O.O., Sarkisian G.S., Khatsenko I.O., Kazaryan L.V. 213
DEPENDENCE ON THE RETINAL GANGLION CELLS COMPLEX THINNING FROM THE VISUAL ACUITY IN PATIENTS WITH PRIMARY OPEN-ANGLE GLAUCOMA .. 213
Ivzhenko L.I., Sheremeta I.A. 214
IMPROVING THE PROCESS OF MEIDOGRAPHY 214
Lytvyshchenko A.V., Samofalova M.M., Kazaryan L.V., Sarkisian G.S., ... 215
Friantseva M.V., Khatsenko I.O. 215
METHOTREXATE IN POSTSURGICAL PERIOD IN PATIENTS WITH PERIPHERAL UVEITIS 215
Miroshnichenko Y.N., Pakhomova A.V. 215
CONTACT LENS CORRECTION FOR PRESBYOPIA 215
Rozhdestvenskaia A.A. 216
MYOPIC TRACTION MACULOPATHY: CLINICAL FEATURES, PATHOGENESIS AND PROSPECTS FOR TREATMENT 216
Samofalova M.M., Friantseva M.V., Khatsenko I.O., Sarkisian G.S., Kazaryan L.V. 217
PROGNOSTICALLY FAVORABLE AND PROGNOSTICALLY UNFAVORABLE FACTORS OF GOOD FUNCTIONAL OUTCOME OF TREATMENT OF PATIENTS WITH CHORIORETINITIS AND NEUROCHORIORETINITIS 217
Sarkisian G.S., Honchar O.M., Friantseva M.V., Khatsenko I.O., Kazaryan L.V. 218
CHANGES BCL-2 IN GLAUCOMA 218
Stoliarova O. 219
BINOCULAR VISUAL FIELDAND QUALITY OF LIFE IN GLAUCOMA PATIENTS ... 219
INFECTIOUS DISEASES 221
Adamsky M.A., Mironchenko A.A., Batovskaya A.O. 221
DIFFICULTIES IN DIAGNOSIS OF TUBERCULOUS MENINGITIS WITH AND WITHOUT HIV 221
Adeem Farkad Yousif Alani 222
CLINICAL-PATHOMORPHOLOGIC ASPECTS OF HIV INFECTION WITH PJP 222
Adeyemi A. A.[1], Shevchenko I. G.[2], Snyder D.[3], Snyder M.[3] 222
USE OF THE ZERO IN ON ZERO™ MODEL FOR TUNGIASIS PREVENTION AND CONTROL 222
Ata M.A 223

THE ROLE OF TEMPERATURE MEASUREMENT AREA SELECTION IN THE HEARTH OF THE SKIN IN THE DIFFERENTIAL DIAGNOSIS OF LOCALIZED SCLERODERMA IN THE PERFORMANCE OF REMOTE THERMOGRAPHY 223
Berezhnoy B.Y., Gavrylov A.V., Sokhan A.V., Zoth Ya.V. 224
CLINICAL MANIFESTATIONS OF CEREBRAL TOXOPLASMOSIS AMONG HIV-INFECTED PERSONS 224
Boyarskiy A.A., Sukhomlin N.P., Tikhonova O.O., Shevchenko O.S. 225
MULTIDRUG RESISTANT TUBERCULOSIS: PROFILES OF RESISTANCE OF THE ISOLATED STRAINS OF MYCOBACTERIUM TUBERCULOSIS 225
Dhrubojyoti Basu 226
HIGH RISK OF MULTIDRUG-RESISTANCE TUBERCULOSIS IN PATIENTS OF KHARKOV REGION SCREENED BY GENE EXPERT MBT/RIF 226
Dhrubojyoti Basu 227
RATIONAL THERAPY OF SKIN AGING 227
Gololobova O.,Gololobova N., Liadova T., Sorokina O. 228
THE STATE OF IMMUNOREGULATION IN PATIENTS WITH HCV-INFECTION 228
Kerbazh N.R. 229
LEPTOSPIROSIS, "UNDER RECOGNIOZED THREAT TO PUBLIC HEALTH": PROBLEMS AND SOLUTIONS 229
Khristenko N.Ye., Antsyferova N.V., Mohylenets O.I., Solomennyk G.O. 230
POSSIBILITIES OF LIVER FIBROSIS STAGES DIAGNOSTICS IN PATIENTS WITH CHRONIC HCV-INFECTION 230
Kotsar E.V., Turmanidze K.I. 231
THE COMBINED EFFECT OF LINCOMYCIN AND BENZOYL PEROXIDE AGAINST S.AUREUS STRAINS 231
Lenskaya M. 232
PLASMOLIFTINGIN COSMETOLOGY 232
Liashenko S.Y., Khatsenko I.O., Osovskiy I.K. 232
EPIDEMIOLOGICAL CHARACTERISTIC OF PERTUSSIS IN UKRAINE 232
Mayorova M.V., Korzhenko D.O., Zaytseva O.V. 233
BEHAVIOURAL GROUPS OF RISK AND HIV INFECTION EPIDEMIC IN UKRAINE 233
Ostropolets A.S., Solomennyk A.O., Bondar A.E., Mohylenets O.I., Iurko E.V., ... 234
Antsyferova N.V. 234
DIAGNOSTIC VALUE OF GAMMA-GLUTAMYL TRANSPEPTIDASE LEVEL IN PATIENTS WITH CHRONIC HEPATITIS C 234
Kovalenko T., Panich R. 235
THE CHANGE IN THE CONCENTRATION OF C3 FRAGMENT OF COMPLEMENT IN INFLAMMATION AND USE OF THE IMMUNOCORRECTION DRUG IN EXPERIMENTAL ANIMALS OF DIFFERENT AGES 235
Osipenko T. S. 236
FEATURES TREATMENT EARLY FORMS OF SYPHILIS 236
Plotnikova V.V. 236
INTERLEUKIN 6 AND IP-10 IN THE PATHOGENESIS OF PSORIASIS 236
Povydysh O.S., Vinokurova O.M., Mohylenets O.I. 237
LIPID METABOLISM IN PATIENS WITH HEPATITIS B AND ITS CONSEQUENCES 237
Thurein Soe 238
THE BURDEN OF TUBERCULOSIS IN MYANMAR (BURMA) 238
Sukhorukova M.F., Popovich N.V., Anoshina A.S. 238
MORBIDITY OF HEMORRHAGIC FEVER WITH RENAL SYNDROME 238
IN KHARKIV REGION 238

Tertyshnyy V., Berezhna A., Bibik V., Iemets T. 239
ANALYSIS OF CLINICAL DATA, CLINICAL STATUS VALUES KEY PRO-INFLAMMATORY CYTOKINE IL-1β AND LEUKOCYTE INDEX OF INTOXICATION IN THE INITIAL PERIOD OF INFLUENZA AND OTHER RESPIRATORY 239
Yousif N. 240
OCULAR HEMORRHAGIC DISORDERSIN EBOLA VIRAL INFECTION CASES 240
Yurko K.V., Adeyemi A.A. 241
FEATURES OF DISORDERS OF MINERAL METABOLISM IN PATIENTS CO-INFECTED WITH HIV/HCV 241
PREVENTIVE MEDICINE 243
Ahmed Raliat Balogun, Salawu Khairat Titilope 243
COMPARATIVE STUDY OF HEALTHY LIFESTYLE OF STUDENTS IN MEDICVAL UNIVERSITY 243
Besh A., Semenova N. 244
ELECTROMAGNETIC FIELDS AS A PART OF THE COMPLEX OF FACTORS OF THE NEONATAL INTENSIVE-CARE UNITS 244
Chehovskaya I. N., Mayorova M.V. 245
THE FEATURES OF NITROBENZENE TOXIC EFFECT ON THE LABORATORY ANIMALS ORGANISM'S IN THE COLD STRESS CONDITION 245
Unaam Edidiong Akaninyene, Sesay-Tlahyomi Abdulai, Katelevskaya N. N. 246
ANALYSIS OF HEALTH RISKS OF WI-FI AND RADIO FREQUENCY RADIATION (RFR) 246
Fom Mildred Noroh, Ohiri Akuyoma May, Katelevskaya N. N. 247
PREVENTION OF COMPUTER ADDICTION AMONG CHILDREN AND TEENAGERS 247
Basheer N. Younis 248
DETERMINATION OF STRESS ON TIBIA DURING STANDING IN THE FLATFOOT CASE 248
Nagiyeva Aynur 248
OBESITY AS A PROBLEM OF CLINICAL MEDICINE 248
Onwujekwe Udodi Ebubechukwu, Ogunyemi Opeyemi Oluwafunmilayo, ... 250
Bogachova O. S. 250
STRESS DISORDERS IN CHILDREN AND TEENAGERS 250
Zinchuk A.N., Siphesihle Mbuli, Zinchuk O.G. 251
DISTRIBUTION OF LUNG CANCER IN VARIOUS COUNTRIES OF THE WORLD AS COMPARED WITH UKRAINE 251
DENTISTRY 253
Abdul Karim Zeiad M., Al-Mashhadani Ahmed Mohammed 253
MANUFACTURING TECHNOLOGY OF CAST METAL-PLASTIC DENTURES FROM METHOD OF LAYERING AND POLYMERIZATION FACING COATING 253
Al Abed Nazem 254
RECEPTION APPARATUS PROTECTION OF THE TEETH USED TO SUPPORT NON-REMOVABLE DESIGN OF DENTURE BY PROPOSED METHOD 254
Al Salihi Ahmed Ibrahim, Cherepynskaya Y.A. 255
EFFICIENCY IN NON-SURGICAL TREATMENT PHASE OF PATIENTS WITH SEVERE CHRONIC GENERALIZED PERIODONTITIS, A PRELIMINARY CLINICAL STUDY . 255
Alkarawi Manar Shakir 256
«ADENOID DISEASE» ACCORDING TO PEDIATRIC DENTISTRY SPECIALIST 256
Barylyak A.Y., CherepynskaY.A. 257

USING THE Er:YAG LASER IN COMBINATION WITH PHOTODYNAMIC THERAPY FOR TREATMENT OF PERIIMPLANTITIS 257
Bilobrov R., Sydorova O., Kopitko M. 258
CLINICAL AND TECHNOLOGICAL ASSESSMENT OF THE QUALITY OF THE ASHLESS PLASTIC INSERTION PRODUCTION 258
CherepynskaY.A., Volkova O.S., Dolya E.I. 259
APPLICATION OF GLUCOSAMINE SULFATE IN THE PHASE OF NON SURGICAL TREATMENT OF PATIENTS WITH CHRONIC GENERALIZED PERIODONTITIS 259
Cherepynskaya Y.A., Volkovitska T.A. 260
THE USE OF DIODE LASER 940 μm IN TREATMENT OF PATIENTS WITH SESERE CHRINIC GENERALIZED PERIODONTITIS, PRELIMINARY CLINICAL STUDY 260
El Mohdi Asmae 261
REMOVAL DEFECT to STABILIZATIONS FULL WITHDRAWABLE PROSTHETIC DEVICE 261
German S.A. 262
LOCALIZATION AND STRUCTURE OF DENTITION DEFECTS IN PATIENTS OF UDC KHNMU 262
Goienko O., Cherepinska U., Volkova O. 263
SELECTED ASPECTS ON THE RELATIONSHIP BETWEEN PERIODONTITIS AND CARDIOVASCULAR DISEASES 263
Hassan Mirza Ali 264
PECULIARITIES OF ENDODONTIC TREATMENT OF THE FIRST PERMANENT MOLARS WITH COMPLEX ROOT CANALS ANATOMY IN PEDIATRIC DENTISTRY 264
Humairi Zainulabdeen Salih, Philipp Messias 264
THE ADDITIONAL ITEMS FOR HOME ORAL HYGIENE IN PREVENTION OF CARIES IN CHILDREN 264
Husam Ismael Mahmood[1], Jasim Balasim Oliewi [1], Shejiri Mben.S[1], Mohsin Mohammed Hussien[1], Garmash Ye.K.[2], Paliy E.V[1]. 265
THE RESULTS OF PROPHYLACTIC AGENTS IN PATIENTS WITH HYPERSENSITIVITY OF DENTAL HARD TISSUES 265
Husam Ismael Mahmood[1], Razzac Miss Usma[1], Garmash Ye.K. [2], Salenko D.E[2], Paliy E.N[1]. 266
COMPARATIVE ANALISIS OF THE BIOCHEMICAL AND MICROBIOLOGICAL STUDIES ON THE EFFECT OF LOW-INTENSITY LIGHT AT PERIODONTAL DISEASES TREATMENT 266
Jasim Balasim Oliewi, Abdul-hadi Ahmed Maad, Paliy O.V. 267
CLINICAL CASE IN THE PRACTICE OF DENTISTRY 267
Kliuchka Ye.O. 268
RESEARCH ANALYSIS OF PARODONTAL PATHOLOGY PROBLEM IN ADOLESCENT GIRLS WITH MENSTRUAL DYSFUNCTION 268
Kryvenko L., Oleinik N. 269
PATHOLOGICAL CHANGES OF ORAL MUCOSA AND LIPS IN CHILDREN WITH ALLERGIC PATHOLOGY 269
Kurov A.M. 269
AN EVALUATION OF THE EFFICIENCY OF TEMPORARY FILLING IN TEETH UNDER MASTICATION LOAD IN TERMS OF 2 WEEKS 269
Mikulinska-Rudich Y.N., Mys V.O. 270
EXPERIENCE OF APPLICATION OF NANOCOMPOSITE MATERIAL IN LOCAL ENAMEL HYPOPLASIA 270

Rak A.V., Yakovleva D.U. 271
EXPERIENCE IN THE TREATMENT OF THE UPPER JAW FIBROUS OSTEODYSPLASIAE 271
Sodha Amir 272
COMPARATIVE ANALYSIS OF THE PREVALENCE OF MALOCCLUSION AMONG FOREIGN STUDENTS, NATIVES OF DIFFERENT COUNTRIES 272
Steblyanko A.,Tischenko A., Kishkan A., Guryeva A. 273
HYGIENIC ASSESSMENT OF MOUTH AND TONGUE AMONG STUDENTS 273
Steblyanko A.A., Hudik A.K., Svidlo O.A. 274
PRIMARY SURGICAL TREATMENT OF TRAUMATIC INJURIES IN THE MAXILLOFACIAL AREA 274
Tarawneh Amir Shaker, Cherepynska Y. A. 275
COMPARATIVE MICROSCOPIC EFFICIENCY OF THE MECHANICAL DESTRUCTION OF THE BIOFILM, AN EXPERIENTAL STUDY 275
Tishchenko O. 276
COMPARATIVE EVALUATION OF THE POSITION THIRD MANDIBULAR MOLARS WITH DIFFERENT X-RAY METHODS 276
Vasylenko O., Zeinab Hammoud 277
EFFICIENCY OF G-FILE IN GLIDE PATH OF ROOT CANAL TREATMENT 277
Volchenko N.V. 278
CONDITION OF ORAL HYGIENE AND QUESTIONNAIRE IN CHILDREN WHO ARE TAUGHT ACCORDING TO DIFFERENT SCHOOL CIRRICULA 278
Volkova O.S., Cherepinskaya Y.A., Dolya E.I., Goenko H.N. 279
CHANGES IN THE ATROPHY DEGREE OF THE ALVEOLAR PROCESS OF RAT`S LOWER JAW UNDER THE INFLUENCE OF ALIMENTARY SUPPLEMENTS 279
Volkovitska T.A., Cherepynskaya Y.A. 280
COMBINED USE OF ERBIUM (ER: YAG) AND NEODYMIUM (ND: YAG) LASERS AT THE SURGICAL STAGE OF CHRONIC PERIODONTITIS TREATMENT 280
Voloshan A.A. 281
SPARING TECHNIQUE OF SURGICAL TREATMENT OF PATIENTS WITH AMELOBLASTOMAS OF THE JAWS 281
Yakovleva D., Doly E., Bugaeva E., Volkova O.S., Cherepinskaya J.A. 282
ENDEMIC FLUOROSIS IN CONDITIONS OF CHUGUIV DISTRICT'S 282
KHARKIV REGION 282
Yarova A., Kopitko M. 283
REFINEMENT METHODS OF THE PROVSSIONAL CROWNS APPLICATION FOR THE PURPOSE OF THE REDUCTOIN EFFECT OF THE RESIDUAL MONOMER 283
Yeliseyeva O.V. 283
EFFECTIVENESS EVALUATION OF COMPREHENSIVE TREATMENT OF PATIENTS WITH CHRONIC GENERALIZED PERIODONTITIS ASSOCIATED WITH ORAL LICHEN PLANUS BY MONITORING LOCAL IMMUNITY INDICES 283
Zeinab Hammoud 284
PLATELETS RICH FIBRIN: A NEW APPROACH FOR PERIODONTAL REGENERATION 284
Zhdanova N. 285
JUSTIFICATION OF APPLYING OF MATERIALS FOR TEMPORARY OBTURATION IN THE TREATMENT OF CHRONIC APICAL GRANULOMATOUS PERIODONTITIS 285
Zotov D. E. 286

DIFFICULTY EXTRACTING OF IMPACTED AND DYSTOPIC TEETH ON THE UPPER JAW 286