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PECULIARITIES OF DENSITY AND MINERAL CONTENT DYNAMICS OF MANDIBLE BONE TISSUE AFTER APPLICATION OF BONE DESTRUCTIVE TRAUMA WITH THE FOLLOWING CORRECTION WITH LINCOMYCIN

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Modern scientific literature shows that about 50% of tooth extractions are accompanied by varying degrees of destruction of bone tissue of the alveolar parts of the jaws. The course and duration of the post-traumatic period depends on numerous exogenous and endogenous factors, and its effectiveness is determined by the restoration of the structure and mineral composition of bone tissue.

The aim of our study was to determine the dynamics of the quality and mineral composition of the bone tissue of the mandible after the application of bone-destructive trauma, followed by correction with lincomycin. The study was performed on 15 white outbred adult male rats aged 3-3.5 months and weighing 180-200 g. The animals were kept on a standard diet of the vivarium of the Danylo Halytsky Lviv National Medical University with free access to water, at a constant temperature and humidity. The injury was modeled by violating the integrity of the bone tissue of the mandible in the area of molars with the help of a dental drill. The operation was performed under thiopental anesthesia. Lincomycin (30% solution) was administered intraperitoneally at a dosage of 25 mg / kg 1 time per day 6 days after injury.

Bone tissue density of rat mandible was measured on dental radiovisiograph Siemens with Trophy Radiology software. The unit of measurement of tissue density is the conventional unit of grayness (CUG).

The mineral composition of rat mandible bone tissue was determined by atomic absorption spectral analysis of its fragments. The content of eight mineral elements (calcium (Ca), phosphorus (P), magnesium (Mg) and sodium (Na), potassium (K), iron (Fe), strontium (Sr) and zinc (Zn)) was investigated. The study was performed on a C-115 atomic absorption spectrophotometer. The concentration of the studied elements in bone samples was indicated in mg / g.

The obtained data of the study testified the presence of a pronounced dynamics of the quality of mandible bone tissue during three weeks of the experiment.

The analysis of bone tissue density during the experiment showed that this index gradually increases by the end of the second week after injury, followed by a decrease by the end of the third week. At the end of the experiment, the bone tissue density remained higher than in norm.

The analysis of the results of studying the post-traumatic changes in the mineral composition of the bone tissue of the rat mandible body during three weeks of the experiment revealed that the absolute content of the studied macro- and microelements have a pronounced dynamics characteristic for each element in

particular. It was found that the content of calcium, iron and strontium increases throughout the experiment and reaches a maximum value three weeks after the application of bone-destructive trauma (41.6933 + 2.23 mg / g for calcium, 1.0467 + 0.13 mg / g for iron and 0.2133 + 0.14 mg / g for strontium) The amount of calcium increases almost three times compared to norm, the iron content doubles, and the amount of strontium is only slightly higher than in norm. The phosphorus content during the experiment has a minimal dynamics and three weeks after injury only slightly exceeds the norm (12.64667 + 0.13 mg / g). The amount of magnesium after bone injury decreases during the first week of the experiment (up to 2.31 + 0.02 mg / g), increases above norm during the second week (3.0433 + 0.16 mg / g) and decreases sharply by the end of the third week, reaching the minimum value (2.08 + 0.09 mg / g). The sodium and potassium content decreases sharply during the first week of the experiment (up to 1.8333 + 0.9 mg / g for sodium and 1.28 + 0.25 mg / g for potassium) and gradually increases by the end of the third week (2.5367+ 0.22 mg / g and 2.0467 + 0.13 mg / g, respectively). At the end of the experiment, the amount of sodium is higher and potassium is lower than in the control group. The content of zinc in the bone tissue of the mandible after injury increases sharply by the end of the first week of the experiment (0.23 + 0.02 mg / g), and during the second decreases (0.17 + 0.02 mg / g) and remains almost unchanged during the third week (0.1733 + 0.04 mg / g), only slightly exceeding the norm. Comparison of bone density dynamics and the dynamics of the content of the studied mineral elements in it showed the absence of similarities or dependencies between them.

The analysis of the dynamics of the specific shares of the studied elements in the bone tissue of the mandible showed that in all bone samples within three weeks of the experiment after bone-destructive trauma among four macroelements (Ca, P, Mg, Na) the largest proportion belongs to calcium (45% in intact animals and 69-70-71% after trauma). Slightly lower (38% in intact animals and 23-21-21% during the three weeks of the experiment) is the proportion of phosphorus. The smallest among the studied macroelements are the specific shares of sodium and magnesium, which in intact animals are 8% and 9%, respectively, and during the three weeks of the experiment the proportion of sodium is 4-3-4% and the proportion of magnesium - 4-6-4%. Comparison of the specific shares of the studied microelements (K, Fe, Sr, Zn) showed that in all bone samples the largest share of potassium, which in intact animals is 79%, and during the three experimental weeks - 60-59-59%. The specific share of iron in the bone tissue of intact animals was 12%, and after injury increased to 20-26-30%. The smallest in all studied samples were the specific shares of strontium and zinc, which normally amounted to 5% and 4%, respectively, and during the experiment also increased and the specific share of strontium was 9-8-6%, and the specific share of zinc - 11-7-5% .

The results of the research allowed us to draw the following conclusions:

1. The bone density of the mandibular body and its mineral composition within three weeks after the bone destructive trauma have a pronounced dynamics.

2. Within two weeks after injury, the bone density of the mandible in the injured area gradually increases and decreases by the end of the third week of the experiment.
3. Analysis of the mineral composition of the bone tissue of the rat mandible in norm and after surgical trauma allowed to determine the quantitative content of four macroelements (Ca, P, Mg, Na) and four microelements (K, Fe, Sr, Zn)
4. Among the studied macroelements, the largest share belongs to calcium, slightly less to phosphorus, the smallest are the shares of sodium and magnesium.
5. Among the studied microelements, the largest share belongs to potassium, slightly smaller - iron, and the smallest to strontium and zinc.
6. Absolute indicators of the content of the studied macro- and microelements have a pronounced dynamics characteristic for each element. Similarities between the dynamics of the studied elements and bone density were not found.

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FEATURES OF CONGENITAL HEART DISEASE

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In recent years, statistics shows disappointing data: the number of detection of the pathologies associated with the heart, has significantly grown. According to the data of the world health organization for 2019 Ukraine takes the first place in Europe and the second in the world as to mortality from cardiovascular diseases. The mortality of people with this diagnosis constitutes 68% of all deaths in Ukraine. Children are also included to this group. Congenital heart malformations are the most common anomalies and occur in approximately 0.8% of the newborns. The structure of congenital heart diseases is very diverse, the most common of them are: ventricular septal defect (40 %), atrial septal defect (14 %), transposition of the great vessels (5,7 %), and Fallot's trilogy (6,2 %), open aortic duct, hypoplasia of the left ventricle, stenosis of the pulmonary artery. Risk factors for having a child congenital heart disease are: maternal age, endocrine disorder in parents, toxicosis in the Ist half of pregnancy and risk of abortion, dead born history, the presence of other children with congenital malformations, taking by a woman of the endocrine drugs to maintain pregnancy. According to the data of the Ministry of health, about 40 thousand children with congenital cardiovascular diseases before the age of 14 years are registered in Ukraine. Early detection of abnormalities contributes to the prevention of complications. Congenital heart defects are characterized by abnormal development of the heart and great vessels as a result of embryogenesis damage in the period of 2-8 weeks of pregnancy against a background of hereditary (polygenic) predisposition under the influence of unfavorable external factors (viruses, toxic substances) and internal (products of the altered metabolism) environment. Congenital heart disease is a group concept that combines the anomalies of the position and the morphological structure of the heart and great vessels. A number of more severe, combined heart diseases with

frequent adverse outcomes increases already in the first months of life. Even in the countries such as the US and Britain in case of a natural clinical course of the disease until the end of the 1st year of life more than 70 % of children die. In North America, congenital heart disease is the cause of death in 37 % of infants, in Western Europe it is 45%.

In 1997congenital heart disease was diagnosed in 04% per 1000 of alive newborns in Ukraine, in 2000 - 0.5% and in 2005 - 0,85% per 1000. According to the Ministry of Health of Ukraine, in 2005 the total number of patients with congenital heart malformations before the age of 14 years constituted 37 588 people, at the age of14-18 years - 8708 people. Annually according to I. M. Yemets data about 5-6 thousand of infants are born in Ukraine. Nearly 1.5 thousand of them need urgent cardiac surgery. This does not include deep preterm infants and antenatal deaths, among whom CHD (congenital heart disease) is much more common. Thus, according to A.I. Kim and co-authors the incidence among the low-birth-weight newborns is 1.73%.

According to GV. Knyshova, N.M. Rudenko et al., 90% of patients with CHD without surgical correction die at the age of 1 year. In addition to that, 52% of infants with CHD die in the neonatal period. At the same time, as noted by M.F. Zinkovsky et al.,20% of children with CHD without surgical correction become completely or relatively inoperable by the end of the 1st year of life due to irreversible changes in the organs and systems. Only 10-15% of patients with heart defects without pronounced hemodynamic disorders reach adolescence without surgical correction. Children who have survived the first year of life without surgical treatment, usually die later because of various complications. In addition to that, the mortality of such children under the age of 14 constitutes 42-42,3%.

Therefore, the literature data indicate the diagnostics significance of cardiac heart defects in children as early as the 1st year of life to provide timely cardiac surgery and reduce mortality rates. However, the cardiac surgery coverage for children of 1 year of life with congenital heart malformations in Ukraine does not currently exceed 10-12%.

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BLOOD SUPPLY AND INNERVATION OF THE NASAL SEPTUM IN ADOLESCENCE

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Blood supply is due to anterior and posterior lattice arteries and a wedge-shaped artery. The mucous membrane lining the nasal cavity is covered by a high-multilayered cylindrical epithelium, in which the eyelashes are well expressed. In the respiratory region of the nucleus of its cells form 3-4 rows, and in the olfactory - 4-5. The thickness of the epithelium, compared with the previous age period does not change.

The contours of the glands become clearer. The diameter of the vessels of the anterior and posterior lattice arteries ranges from 0.28 to 0.38 mm. The number of branches of the second-order - 2 (lateral and medial), the branches of the third order - from 5 to 7. The diameter of the latter is 0.08-0.1 mm. The wedge-palatine artery in 6 cases (20%) gave 4, in two (5%) - 3 and in five (15%) - 2 posterior lateral nasal branches. Their diameter ranges from 0.36 to 0.4 mm. These branches branch, mainly, in the area of the lower and middle nasal shells and the corresponding nasal passages, where they form loops of different shapes and sizes.

The diameter of the posterior artery of the nasal septum is 0.3 - 0.6 mm. It divides into branches of the second-order (lower and upper).

In the posterior parts of the nasal septum penetrate the medial upper posterior nasal branches, which begin from the wing-palatine node and are found in its mucous membrane. The nasopharyngeal nerve goes in a downward direction, branches into small branches in the mucous membrane of the septum.

In the study of nerves, it was found that the anterior upper posterior nasal branches penetrate the posterior sections of the nasal septum, starting from the wing-palatine node and appearing in its mucous membrane. The nasopharyngeal nerve goes in a downward direction, branches into large branches in the mucous membrane of the nasal septum. All major nerve trunks with a diameter of the median branch of the lattice artery horizontally goes to the nasal septum (at the same time at the right angle intersects the trunks of olfactory nerves), and then has a descending direction.

In the nasal septum, the vessels divide into 5-8 branches of the third order, which diverge fan-shaped. The latter divide into branches of the following order. Their numerical stems are found in the mucous membrane of the nasal septum. The wedge-palatine artery enters through the wedge-palatine opening into the posterior portion of the nasal cavity. At a distance of 12.0-16.0 mm in front of the wedge-palatine opening, the latter gives 2-4 major branches to the lateral wall of the nose and one, larger, to the nasal septum - posterior artery of the nasal septum.

The posterior artery of the nasal septum on all preparations has a horizontal direction, in the posterior part of the nasal septum is Dichotomously divided into branches of the second order: upper and lower. The upper one runs anteriorly, divided into tertiary branches that anastomose with the posterior lattice arteries. The lower one is closer to the lower edge of the nasal septum. On its way, it gives the branches of the third order, which anastomose each other and form loops of different shapes and sizes. Besides, the above branches attach numerous thin branches to the epithelial lining. In the latter, they form a thick vascular mesh.

The highest concentration of the mesh of the arterial vessels on the investigated drugs is in the anteroposterior part of the nasal septum.

By WHO`s definition, rehabilitation is the restoration of the health of patients with disabilities to achieve full value in the physical, mental and social spheres.

Thyrotoxicosis is a common endocrinological disease that leads to disability.

The rehabilitation period from thyrotoxicosis can be physiological and pathological. In the majority of patients normalization of functions of a thyroid

gland is found. This period lasts about two years and complications do not develop.

An endocrinologist within 3 - 6 months, one and two years after treatment observe patients treated for thyrotoxicosis. If after two years there are no complications, then the patient can be removed from the dispensary.

During the pathological period of rehabilitation, the normalization of hormone-exchange disorders is not uniform and there are various pathological disorders: hyperaldosteronism, glucocorticoid insufficiency, hypernatremia, hypokalemia/hypercholesterolemia.

Besides, the titer of autoimmune antibodies to thyroid tissue may increase in some patients. These disorders form such complications, thyrotoxicosis.

In patients treated for thyrotoxicosis, during rehabilitation, the doctor often finds thyrotoxic encephalopathy in the form of anisoreflexia, tremor of the eyelids and fingers of the outstretched hands, the phenomena of static sensory ataxia, positive reflexes of oral automatism.

The complex of treatment includes desensitizing drugs, glucocorticoids, dehydrotomy preparations, vitamin therapy, treatment course 3 - 4 times a year.

The main condition for reducing the complications of thyrotoxicosis is early subtotal thyroid resection.

Ostafiychuk M.O.

EFFECT OF “LYSOCIM FORTE” ON THE CONDITION OF THE ORAL MUCOSA IN PATIENTS WITH DISEASES OF THE GASTROINTESTINAL TRACT

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Gastrointestinal pathology (GCP) is a complex of extremely common human diseases, the causes of which are quite many. In the oral cavity often develop the same type of inflammatory-dystrophic lesions (stomatitis), due to pathogenic processes occurring in the gastrointestinal tract.

The aim of this work was to study the therapeutic and prophylactic effect on the condition of the oral mucosa (SOPR) of a new drug of fortified lysozyme - "Lysozyme-forte".

The study was conducted on 39 patients with SCP who were admitted to the gastrosurgical department of the Chernivtsi Regional Clinical Hospital. The diagnosis of the disease was made by the doctors of the department on the basis of assessment of patients' complaints, clinical, laboratory and instrumental examination. Examination of patients with SCP for the condition of the oral cavity was carried out by us in accordance with existing recommendations, taking into account patient complaints, medical history, examination of the oral cavity and supplementing the study of hygienic and periodontal indices. All patients collected on an empty stomach unstimulated saliva, which determined the level of biochemical markers of inflammation: the activity of the proteolytic enzyme elastase, the content of the lipid

peroxidation product of malonic dialdehyde (MDA), the activity of the bacterial enzyme urease and the activity of antimicrobial analysis. in 10 almost healthy young people (20-30 years). From the first day of stay in the clinic, all patients received standard treatment and, in addition, Lysozyme-forte (2 tablets 30 minutes before meals peros 3 times a day for 10-12 days). The drug "Lysozyme-forte" contains egg lysozyme, quercetin, inulin, gelatin, CA citrate. Official permission for its use was obtained from the Ministry of Health of Ukraine. At the end of treatment, all patients repeated the same studies. The results of the experiments were subjected to standard statistical processing. The following results were obtained: in patients with SHKP significantly increases the rate of salivation (55.5%), which after treatment does not differ from normal. The hygienic Silness-Loe index, which tripled in patients, halved as a result of treatment. The Schiller-Pisarev index due to the disease increased by 50%, and was completely normalized due to the use of this drug. Due to gastrointestinal diseases, the PMA index increases more than three times. Due to the action of Lysozyme-forte, the index is completely normalized. In patients, the level of elastase in saliva increases almost twice, which indicates the presence of inflammation in SOPR. Lysozyme-forte significantly reduces the activity of elastase. In patients with SCP, urease activity increases 5 times, which indicates a significant increase in microbial contamination of SOPR. Lysozyme-forte reduces urease levels by 2 times. Lysozyme activity is significantly reduced in patients with SHKP. The introduction of lysozyme-forte significantly increases this figure. Thus, our clinical studies have confirmed the positive results of the therapeutic and prophylactic action of "Lysozyme-forte". Given the safety of the drug, the presence in its composition of only natural substances, taking into account that it complements the existing defense systems in the body, it is appropriate to recommend the widespread use of lysozyme-forte not only in patients with SCI, but also in many other patients associated with a deficiency of the nonspecific immune system.

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PHYSICAL CULTURE IN THE LIFE OF STUDENT YOUTH

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Modern market relations dictate strict requirements to a qualified specialist, not only to have basic knowledge, but also to be physically healthy individuals, be prepared for difficulties. It is physical culture and sports throughout life that shapes young people's endurance, liberty, aesthetic tastes, feelings of strength, benefits and justice. However, due to lack of attention, physical education in educational institutions passes into an elective or hobby category.

However, the number of obstacles to the spread of physical culture is increasing: reduced funding, sedentary lifestyle of students, poor media coverage.

All this hinders the implementation of educational strategies for young people in terms of physical perfection. This problem is especially relevant for students

because at their age the foundations of a healthy lifestyle are formed and laid, and physical education is not always a priority.

At the same time, the huge study load on students harms their general physical and mental condition, and this can have a particularly negative impact on the process of personality formation, which coincides in time with the period of study.

It is necessary to consider the concept of physical culture as a set of physical development of the student, his state of health, psyche and the actual "physical culture" as part of the cultural development of the individual.

It was found that regular exercise prevents disease, improves the immune system, and accelerates the recovery of functions of all systems and organs of the human body. The most positive results are given by physical exercises on the cardiovascular, respiratory, nervous and other systems. However, it should be remembered that exercise has a healing effect only when properly selected according to the disease and their correct dosage. It is also necessary to take into account age, sex, physical fitness and efficiency, functional capabilities of the body, severity of the disease and so on.

An important feature of the system of physical education is the preparation of people for highly productive work and protection of the Motherland. It determines the practical role of physical education in society.

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FEATURES OF TRAINING OF TECHNICAL SPECIALISTS

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The current situation is that young people often do not have a real opportunity to improve their level of physical culture. There is a point of view according to which the lack of a proper level of development of sports and promotion of physical culture gives rise to the growing prevalence of such "diseases of society" as nicotine addiction, alcoholism, drug addiction, gambling in the youth environment.

By the age of 16, a person's self-consciousness is already formed. It is from this moment that sport becomes something more than a game, it becomes a style and way of life full of benefits and pleasure that sports and physical culture bring.

The subject of physical education, which is taught in higher education, does not ignore the general physical condition of a person, his health, physical training and physical perfection. Exercise is, first of all, prevention of various diseases and first of all hypertension and coronary heart disease. These diseases are often found in technical specialists and require long-term treatment and, most importantly, constant prevention. In the process of exercising, the level of efficiency and

endurance increases. The person begins to work more, but at the same time gets tired less.

The professional activity of our students, given the needs of the labor market, requires good physical training and excellent health. And you can achieve all this by exercising regularly and exercising.

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PROPER LIFESTYLE IS THE KEY TO GOOD HEALTH

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The importance of physical culture in the process of forming a personality is huge - a clear example of this is the proverb - "In a healthy body - a healthy spirit." Analyzing scientific research, we can say that there is a direct dependence of the demographic, and hence the economic situation in the country on the level of physical culture of the population. To study the influence of physical culture on the process of personality formation and the choice of professional activity, it is necessary to take into account both permanent and temporary conditions that set before a person, the task of improving their physical condition and health. However, we should not forget about the importance of assessing physical culture throughout life. Sport and physical culture are not only a healthy way of life - it is a normal and healthy life in general, which opens more and more opportunities for the realization of strength and talents. This is the path he enters with common sense, so that the life lived would be fruitful, bring joy to himself and others. The progressive rhythm of life requires increasing physical activity and preparedness. All the increasing loads that fall on our shoulders throughout life require higher physical perfection, which must be achieved through physical education.

Health is the greatest wealth, no matter how you buy or receive it as a gift. Everyone needs to do everything to preserve it and support it. When people lead the wrong lifestyle, a person develops various illnesses, problems at work and at home. After all, it is possible to avoid various problems if you organize your life properly.

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EDUCATION OF COMPREHENSIVELY HARMONIOUS DEVELOPMENT OF PERSONALITY

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It is difficult to overstate the importance of physical culture and sports for human health, development and general condition. From an early age, parents, educators, the media - radio and television - try to explain to the child the unique

benefits of physical activity and encourage children to play sports. At this age, sports are usually under the supervision of experienced coaches and professionals who monitor the proper and harmonious development of the growing body. Physical education teachers at school are important at school age.

Gymnastic performances, sports competitions, mass sports festivals, demonstrations, sports parades and other sports and entertainment events have a particularly great effect on the development of aesthetic education. aesthetic tastes, ideals, the need for their implementation in everyday life.

Every sensible person wants to live his life long and happily. But you can't buy or receive health as a gift. And no online gift shop will help.

In addition, physical culture and sports give a person not only a sense of physical perfection, but also give him strength and shape the spirit, raises the level of moral qualities, which is so necessary for today's society., Stimulating a new approach to life and work, new achievements. In order to consciously come to the conclusion and the importance of physical culture and sports, a person must understand its role in his life. And it is very good if he realizes it not too late, in order to start leading a healthy lifestyle. Physical culture and sports are effective means for education of comprehensively harmonious development of the personality which combine educational, improving, educational and other links.

So you need to do everything to save it until it's too late. Usually, due to the wrong way of life, a person develops nervous disorders, various diseases, problems at work and at home. After all, often trips to the doctor can be avoided if you build your lifestyle properly.

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INNOVATIVE TECHNOLOGIES AS A COMPONENT OF BASIC TRAINING OF SPECIALISTS IN PHYSICAL CULTURE AND SPORT

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Like other disciplines, physical culture provides the student with the necessary knowledge, skills and abilities, influences the formation of the need for systematic physical self-improvement. An important factor that determines the state of health of students is the maintenance of optimal physical activity throughout the stay in the university.

Article 3 of the Law of Ukraine "On Physical Culture and Sports" provides for the right of citizens of Ukraine to engage in physical culture and sports through the free choice of sports and physical culture and sports services.

Effective organization of the process of physical education in higher education involves creating conditions for a wide choice of students of physical education for training and participation in sports activities that would meet their needs, interests, health, physical and technical fitness, sports qualifications.

With attendance at classes in the main department, training in the department of sports improvement and independent classes in sports sections, students have the opportunity to choose the type of physical activity that most attracts them and allows them to meet the needs of movement, exercise, games, communication, self-affirmation, cognition, entertainment, emotional relaxation. Sports sections are organized from those sports for which the university has a material sports base and the opportunity to provide the training process with a qualified coaching staff. Sections are completed according to gender and level of sports qualification, those who are engaged, (according to the presence of sports ranks and titles). The number of those who study in a group and the number of hours of training per week per group depend on sports training and are regulated by the Regulations on the organization of physical education and mass sports in higher education institutions.

Classes are conducted by trainers-teachers, specialists in physical education, who have higher physical education.

Gorodinsky S.I.

FEATURES OF PHYSICAL EDUCATION FOR STUDENTS

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The activity of teachers of physical education departments should ensure the formation of students' skills of self-improvement, education of motivation and interest in physical culture, as well as in the state of their own health.

In recent years, there is a clear trend towards the desire of students to realize their needs in the field of physical education in classes in groups by sport or physical activity of the students' choice. The definition of a sport, which is consciously carried out by the student, is the beginning of a meaningful choice of forms of motor activity that meet individual physical and psychological needs. Physical education and the formation of a healthy lifestyle are considered as an important component of the educational process in higher education institutions and are carried out in close cooperation with other areas of educational activities of the university to train physically, spiritually and morally healthy professionals.

Work on attracting students to a healthy lifestyle is carried out in the following areas: - effective training in physical education according to the schedule; -organization of sports in sports sections, in the national teams of the university in various sports; - Carrying out of mass improving, physical culture actions in out of school time.

The opportunity to systematically engage in the chosen sport, improve their sports skills, as well as regularly participate in competitions of various levels, mainly provided to students in their free time from academic classes in sports sections of various sports. Classes in sports sections allow to involve gifted student youth in sports as much as possible, and also to provide preparation of students-athletes, to keep their sports form and to prolong their sports longevity.

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METHODICAL BASIS OF ACTIVITY OF SECTIONS IN HIGH SCHOOL

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Given the rational organization of the educational and training process, regular sports, as one of the types of physical activity in higher education, provide solutions to the following tasks:

- involvement of students and graduate students in regular physical education and mass sports; - formation of their stable interest in various types of physical activity; - development and improvement of physical and moral qualities of students; - improving the state of health and level of physical fitness through the use of martial arts; - to promote the development of professional, ideological and civic qualities in students; - carrying out of various sports actions with involvement in them of participation of students and postgraduate students; - promotion of martial arts, namely, freestyle wrestling as an affordable and effective type of physical activity in higher education; - selection of promising athletes from among students and the formation of national teams of universities to participate in various competitions.

Recruitment in the section is carried out at the beginning of the school year, taking into account the state of health, physical fitness, sports qualifications and personal desire of students. Students who are enrolled in the main medical group, who according to the results of control testing have positive indicators of functional and physical fitness, and, as a rule, indicators of sports qualification in this sport (which is not always mandatory) can study in the university sections.

The methodological basis of the section is the work program, which must meet the requirements of the program of the department. It contains the necessary information on the types of training in martial arts (theoretical, physical, technical, tactical), regulatory requirements for physical and technical training. The program is aimed at students of the main department who have expressed a desire to engage in this sport, aimed at in-depth study of freestyle wrestling, allows you to get results from activities in competitions and tests, assess abilities, form the need for regular classes. For the effective use of martial arts, the program is accompanied by visual materials and guidelines.

Gorodinsky S.I.

FREESTYLE WRESTLING – AS ONE OF THE TYPES OF EDUCATIONAL PROCESS

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Classes in the wrestling section require students to have appropriate functional training. Therefore, the process of training and improving technical and

tactical actions of freestyle wrestling and the development of basic physical qualities (strength, endurance, speed, agility, flexibility) includes the use of not only martial arts, but also exercises in other sports (athletics and weightlifting, gymnastics, acrobatics, sports games), which makes it more saturated and diverse. This is facilitated by the availability of appropriate material and technical base (specialized wrestling hall, sports hall, athletics stadium, athletic gymnastics hall).

The approach to the organization of physical education of students engaged in the wrestling section of the university is based on the principle of individualization, which emphasizes the leading role of the student's personality in determining the tasks and extent of physical activity, taking into account individual mental and physical characteristics, physical development and physical fitness. .

The effectiveness of the wrestling section of the university is ensured by the presence of the following interconnected structural components:

- data on medical examination, physical development and functional condition of students engaged in the section;
- clearly set goals and objectives;
- educational material in the form of the program, visual materials, methodical recommendations;
- the presence in the teaching staff of the Department of Physical Education specialists in this sport;
- rationally selected teaching methods and tools used;
- control tests (in the form of tests or competitions);
- the necessary logistics.

Thus, classes in the wrestling section of the university are an affordable and effective type of physical activity for student youth, which provides them with a sufficient amount of physical activity, provided the health orientation of classes.

Gorodinsky S.I.

FEATURES OF TRAINING FUTURE PHYSICAL EDUCATION TEACHERS

Department of Disaster Medicine and Military Medicine, Ukrainian State Medical University, BSMU

Focusing on the requirements for professional training of future teachers of physical culture is, above all, the modernization of the educational and pedagogical process, the use of innovative technologies for its activation, the change of structural elements in its organization.

An important direction of the modern educational and pedagogical process is the purposeful substantiation of the introduction of innovative technologies in the practice of training future teachers of physical culture.

According to the scientific observations of V. Vlasov, T. Krutsevich, M. Zaitsev, the latest learning technologies act on the one hand, not just as a form of acquiring knowledge, but as a process of developing students' creative abilities,

which allows to turn knowledge into personal life and human consciousness. On the other hand - as a process of forming a teacher-innovator, who must introduce new innovative technologies into the educational process, master the system of knowledge, form a personal attitude to any problem, considering it from different positions.

According to RF Akhmetova V.K.,. Shaversky in modern conditions of socio-economic transformations in Ukraine - is the introduction of new, certain changes, the application of new methods, tools, concepts for the implementation of educational programs, tools, teaching methods, training on new, more progressive principles. One of the characteristic features of the current state of the system of pedagogical education is the search not for mechanical increase of innovations, but careful preservation of traditions, orientation on original pedagogical values, combination of new forms, methods, means and technologies of teaching - pedagogical innovations. The solution of this problem is necessary first of all in order to provide the future teacher with mobility in realization of professional training and personal creative potential in pedagogical activity.

Gorodinsky S.I.

INNOVATIVE LEARNING

Department of Disaster Medicine and Military Medicine, Ukrainian State Medical University, BSMU

Innovative learning is a process organized for the future, focused on training professionals to work in new conditions. The word "innovation", which translated from English "innovation" means innovation, comes from the Latin "innovation" - "renewal", "update", "change". In the educational context, "innovation" means the creation of new approaches and technologies based on the rethinking of previous experience and the introduction of new achievements and their integrated use.

Some researchers attribute innovative technologies to personality-oriented learning technologies, which involve interactive learning, in the process of which learners become active participants in the learning process. According to UNESCO, learning technology is a systematic method of creating, applying and defining the process of teaching and learning, taking into account technical and human resources, as well as their interaction, which aims to optimize forms of education. This can be an important reason for improving the educational material base of an educational institution that trains future physical education teachers. In such a situation, the process of academic and professional training acquires diversity and a focused approach to learning, and in the educational process contributes to the individualization and differentiation of practical and theoretical training.

According to the results of scientific observations, the use of innovative technologies involves the inclusion in the curriculum of new teaching methods, techniques, methods, planning and organization, control, adjustment and

evaluation of educational activities, which allows students to form a culture of educational work.

Therefore, in our opinion, the use of innovative technologies in the educational and pedagogical process of training physical education teachers creates new opportunities to improve learning, enhance thinking, various forms and means of learning.

Ibragimova L.S.

PHYSICAL EDUCATION TEACHERS AS HEALTH COORDINATORS

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Insufficient introduction of innovative technologies in the practice of training physical education causes a number of contradictions: between the requirements of society to train future physical education teachers as coordinators of health education and insufficient understanding and generalization of this process in pedagogy; between the mass of training and the individual creative nature of their professional activities; between the focus on new models of the educational and pedagogical process and the traditional content, forms and methods of training future specialists in physical culture.

According to the results of research ES Wilczkowski and BM More than half of teachers do not have a modern method of improving motor skills and do not link their development with the acquisition of exercise techniques. Of particular concern is the poor arsenal of forms and methods of physical education that are cultivated in most schools, the inability of teachers to apply new innovative technologies in practice.

According to LP Sergienko, still leaves many gaps in the training of specialists in physical culture, both in theoretical and practical aspects. Thus, one of the little-studied areas of professional training of physical education teachers is the formation of professional knowledge, skills and abilities in the teaching of sports and pedagogical disciplines. Despite the fact that the technology of using innovative learning as a subject of research was considered in almost all scientific works concerning the formation of professional skills of future physical education teachers, in most studies only certain components of skills were singled out and the process of their development was insufficiently studied. specific forms, methods and means of teaching.

Mitchenok O.V., Boychuk M.M.

ELIMINATION OF DENTAL DEFECTS BY FREE-METAL CERAMIC STRUCTURE WITH RAMPING OF PROSTHETIC FEATURES

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To date, there are ceramic materials from which free-metal structures are made by injection molding (IPS Empres (Ivoklar, Schaan, Liechtenstein))

At manufacturing special refractory weight and a long cycle of baking is applied, the usual technique of molding on wax models which are smelted is used. Wax models are placed in the oven together with Empress bars and slowly heated to about 1200 ° C. The mold of the extruder is located at the bottom of the injection system of the Empress extruder at a temperature of approximately 1150 ° C, and the selected glass bar is placed in the upper chamber for pressing at a pressure of about 0.4 MPa.

Bars are available in several shades and two techniques can be used to make the restoration. The restoration can be cast in its final form and subsequently painted and glazed to obtain an aesthetic fit. Alternatively, the frame can be pressed and buttered with porcelain to obtain the final shape and shade of restoration. Empress restorations have high translucency and, according to publications, bending strength up to 160-180 MPa. The IPS Empres system is used for the production of crowns and veneers for front teeth, as well as veneers, overlays, crowns for molars and premolars and bridges with a small defect that are subjected to a small load. The advantages of this system are the absence of the opaque layer and the metal frame, excellent fit and excellent aesthetic qualities. The disadvantages include the possibility of chipping in the restoration of lateral teeth and the need to use special expensive equipment. The all-ceramic restoration system In-seram is based on an alumina framework with the subsequent infiltration by glass. With the help of elastomeric impression material, the mold is removed from the treated surfaces. A model made of special gypsum, supplied with In-seram, is cast from the mold to make a model on which In-seram aluminum oxide is applied. In-ceram frame material is undoubtedly one of the strongest all-ceramic materials available for restoration purposes. The values of bending strength of the frame reach 600 MPa, but can decrease with decreasing thickness of the frame or with the addition of facing porcelain. In-Ceram ceramics is used for the manufacture of single crowns on the front and side teeth. This system can also be used for the manufacture of bridges from three units that are not subject to high loads. However, there is a risk of chipping ceramics, as well as the fact that such bridges are very difficult to remove after fixation. In the manufacture of bridges of short length, it is recommended to create a solid aluminum frame in the area of contact points. The aluminum mass is first cast on an absorbent refractory stamp,

and then fired to a temperature at which the sintering of ceramic particles. After sintering, the ceramic base is infiltrated with glass and fired for 4 hours at a temperature of 1100 ° C to eliminate porosity and strengthen the base. In the process of firing the particles are sintered only in areas of small size, which will avoid significant shrinkage. Due to this, In-Seram restorations have an excellent edge fit and adaptation. The advantages of glass-infiltrated ceramics are high strength, excellent fit and the absence of a metal frame. This system has the following disadvantages: the packaging of the base of the restoration can adversely affect its aesthetic qualities; the base is resistant to acid, so it is not subject to normal digestion; special laboratory equipment is required for the restoration. The aluminum base of the In-seram structure is coated with Vitadur Alpha according to the manufacturer's instructions, any cement can be used to fix such restorations. However, it is recommended to use polymer cement, as this will increase the resistance of ceramics to chipping.

Correction of occlusal contacts is carried out with fine diamond burs or smooth stones with water cooling. Polishing is carried out with floppy disks or heads, and then felt cones with diamond polishing paste.

Mitchenok O.B., Kozak R.V., Mitchenok M.P.

ANALYSIS OF THE NEED TO REMOVE DENTAL DEFECTS WITH THE IMPLEMENTATION OF IMPLANTS

Higher State Educational Institution of Ukraine "Bukovynian State Medical University", Chernivtsi,
Ukrainian Medical Dental Academy, Poltava

In modern dental practice, implants are widely used to eliminate dentition defects. The need for prosthetics with implants has recently increased significantly.

Among the defects of the dentition, partial absence takes first place, as evidenced by data from various authors.

Despite preventive treatment measures in the fight against caries and periodontal disease, half of the world's population aged 45-74 years have defects in the dentition due to lack of teeth, especially among young and middle-aged people indicates that almost 2/3 of the population over 45 years requires the manufacture of removable dentures.

The population's need for dental prosthetics is 44.3-53.8%, and after 56 years - 93.6%.

Partial adentia, along with caries and periodontal disease, is the most common pathology of the dental system, according to the WHO. 75% of the world's population suffers from adentia, and according to domestic authors, secondary partial adentia is from 40 to 75%. The greatest difficulty in prosthetics are patients with end defects (from 5.7 to 13.3%)

65% of the population aged 35-45 years need dental prosthetics. The need for dental prosthetics in women is 20% greater

At inspection of patients in group of 50-59 years 38% had no teeth completely. End defects of dentitions were determined in 18.3% of cases, and more often there were unilateral end defects with included (31% of the number of patients with end defects).

The survey of residents of the Chernivtsi region noted that at the age of 30-40 years, the final defects of the dentition in women and men, respectively, are: 5.2% and 4.9%; in 40-49 years - 8.3% and 9.5%, and in patients older than 50 years - 17.3% and 21.8%.

The analysis of the statistics of the behavior of the residents of the Kharkiv region showed that the largest number of patients with defects of the dentition and indications for prosthetics with implants was observed among women in all age groups ranging from 59.4% to 66.1%. Men were most in need of such treatment in the age groups 41-50 and 50-60 years (40.3 and 40.6%, respectively).

Thus, such discrepancies in the data can be explained by medical and geographical conditions of the regions, different socio-living conditions of the population, increasing the number of dentition defects, as well as the fact that researchers used different methodological approaches to study this issue.

Yuryk Ihor, Ivan Horbachevsky

PECULIARITIES OF MORPHOLOGICAL CHANGES OF ENDOTHELIOCYTES AND ARTERIAL REMODELATION UNDER CONDITIONS OF EXPERIMENTAL HYPERURICEMIA

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Under the conditions of experimental hyperuricemia endothelial dysfunction develops with the morphological marker which is an increase in the number of blood-circulating desquamated endothelial cells (DEC), but this situation needs to be clarified in the development of this pathology in the age aspect.

To find out the features of remodeling of endothelial cells and arteries of the hind limbs in the rats of pre-repopductive (PRA) and reproductive age (RA) with experimental hyperuricemia.

The experimental group consisted of 16 animals with biochemically confirmed hyperurycemia , which were divided into 2 groups: the first – 8 animals 2–3 months old, weighing 150 – 170 grams and the second – 8 rats weighing from 11 to 11 months weighing 230 – 250 gram. The control group consisted of rats of the same age of 8 animals in each. Determination of the number of desquamated endothelial cells circulating in the blood was carried out according to the method of J. Hladovec (1978) in the modification of V.V. Sivak. Hyperuricemia was reproduced according to the methodic of O. Sunyachenko (2007) in modification of Ya Bodnar and others (2015). Withdrawal of lab rats out of the experiment was conducted by decapitation under intraperitoneal thiopental narcosis on 15^{th}, 30^{th} and 45^{th} day of research. Limb tissues were used with hematoxylin and eosin,

Weigert`s elastic and Van Gieson`s stains, PAS-reaction, Hart`s fuxeline, iron hematoxylin Heidenhain`s and Alcian blue. The content of rats and all experiments were carried out in compliance with the provisions of the European Convention for the Protection of Vertebrates Animals used for Experiments and Other Scientific Purposes (Strasbourg, 1986).

Hyperurycemia causes damage to the vascular endothelium of the arteries, which is characterized by an increase in the number of desquamated endothelial cells in the peripheral blood. The most circulating blood in desquamated endothelial cells was detected in 45 days of study in animals of RA age, where the number of desquamated endothelial cells increased by 2,68 times, and in animals with PRA – 2,47 times. Morphological changes were characterized by thickening of the intima of the arteries of the femur, knee and tibia due to swelling of the endothelial cells, their desquamation and proliferative changes in places of preserved vascular endothelium. In response to the deposition of lipids and SHIK – positive substrates, cellular reactions appeared as weak lymphocytic infiltration. In addition to hyperlastosis, fragmentation of elastic fibers was revealed. Correlation of intima contributed to the narrowing of vascular lumen. In the inner shell of the arteries, lipids, xanthocytes and sour mucopolysaccharides were accumulated. In addition to lymphocytic infiltrates, the amount of collagen fibers in adventitia increased.

Under conditions of hyperuricemia the number of desquamated endothelial cells in the blood increases, and arterial remodeling is characterized by manifestations of hypertrophic-neoplastic remodeling in rats of prereproductive age, and in reproductive animals there were a combination of hypertrophic and sclerotic-inflammatory changes.

Kaskova L.F., Batig V.M., Abramchuk I.I.

CARIES INDICATORS IN ADOLESCENTS IN THE AGE OF 15-16, WHO STUDY IN VARIOUS INSTITUTIONS OF EDUCATION

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Higher State Educational Institution of Ukraine "Bukovynian State Medical University", Chernivtsi

Purpose. To determine the prevalence (%) and intensity of caries (CPV of teeth) in each age period.

Research methods. The study of dental status was conducted according to the generally accepted method in adolescents studying in different educational institutions (school, college) Chernivtsi. The prevalence (%) and intensity of caries (CPV of teeth) in each age period were determined.

Results. Our studies of the condition of the hard tissues of the teeth in adolescents found that all subjects had caries. That is, the prevalence of caries in all age groups, regardless of place of study was 100%. According to the WHO criterion, it is a high prevalence of dental caries. The intensity of dental caries in adolescents aged 15 years who studied at school is 1.94 times lower (low level of

intensity) than in college adolescents (medium level of intensity). The component "K" (unvarnished caries) visitors college to 3.19 times higher than that of students. The number of filled teeth in schoolchildren is 70.2% of the CPV rate, and in college students - 50.9%.

At the age of 16, the intensity of caries in schoolchildren increases by 1.35 times compared to the previous age period, ie by 34% (average), and in college students - by 1.55 times (by 54 , 8%) (very high). We observe a more significant increase in the intensity of caries in adolescents enrolled in college from 15 to 16 years, which requires a more detailed study of the causes of this phenomenon. In 16-year-olds of different forms of education, the rate differs significantly. Those who attend school have a caries intensity 2.28 times lower (122.8%) than those who receive further education in college. At this age, the percentage of filled teeth in schoolchildren is - 71.29%, and in college students - 39.1% of the CPV.

In schoolchildren the indicator remains at the same level in comparison with 15-year-olds, and in college students the permanent teeth (0.16 ± 0.3 teeth) appear worse and appear.

Conclusions. Given the indicators of caries intensity, we can assume that adolescents who study in college do not pay enough attention to hygiene, which leads to an increase in the number of teeth affected by caries in each age group that were studied.

Vepriuk Y.M., Boichuk M.M., Fedoruk V.O.

PREVENTION OF PERIODONTIC DISEASES

Higher State Educational Institution of Ukraine
Bukovynian State Medical University

In recent years, Ukraine has sharply increased the number of dental diseases. Particular attention is paid to periodontitis. Periodontium (parodontium) - a complex of tissues surrounding the tooth, closely related genetically, morphologically and functionally. The composition of the periodontium includes: gums, periodontium, bone tissue, tooth root cementum. Periodontitis is an inflammatory disease that is accompanied by destructive destruction of all periodontal tissues.

The aim of our work was to investigate the prevalence of periodontal disease and preventive measures among the population.

During the study of the periodontal status of patients who went to the dental clinic with complaints about the condition of the periodontium, there were 100 people. Including: 60 women and 40 men. The severity of this disease was determined using a hygienic index. It was evaluated on a five-point system: 1 point - no color; 2 points - coloring 1/4 of the tooth surface; 3 points - coloring 1/2 of the tooth surface; 4 points - color of 3/4 of the tooth surface; 5 points - color of the entire tooth surface. The survey showed that the true level of patient hygiene can be assessed as low.

Studies have shown that only 12% of people have a healthy periodontium, 53% have initial inflammatory changes, 23% have initial destructive changes, and 12% have moderate to severe changes. According to the results of our epidemiological studies, periodontal pathology is the most common. Young people have gingivitis, and after 30 years - periodontitis.

So, most patients suffer from various forms of periodontal disease (99%). The level of hygiene is assessed as low. The phenomena of periodontitis of various severity are observed in 71% of patients, periodontitis - in 4% of patients. Very low attendance at the dentist: every two years - 40%, less often - 31%.

Until now, patients go to the dental clinic for pain - 33%, rehabilitation of the oral cavity - 59%, and only 2% for a preventive examination. The above indicates that the population is unaware of preventive measures that include periodontal disease.

Shvets V.I, Shvets N.V., Kashperuk-Karpiuk I.S.

MERCAZOLILUM AND MELATONIN ON THE REGULATION OF FIBRIN AND PROTEOLYTIC PROCESSES IN BLOOD PLASMA OF WHITE RATS

Higher State Educational Establishment of Ukraine "Bukovinian State Medical University" (Chernivtsi City, Ukraine)

The highest concentrations of melatonin in the body are registered in organs of the gastrointestinal tract, heart and blood plasma. In addition, there is a rhythm of sensitivity to melatonin organs and systems that can determine the peculiarities of the hormone's effect on fibrinolysis. In our opinion, this effect may be due to the combined effect of the hormone of the epiphysis - melatonin, and the inhibition of thyroid function in the administration of Mercazolil. The results of the combined effect of Mercazolilum and Melatonin on the fibrin and proteolytic processes in the blood plasma of white rats are presented in the work. According to the results of our study in blood plasma, the intensity of enzymatic lysis of fibrin under the influence of indolamine increases, it can be explained by a different phase of chronotropy to melatonin. In conducted experimental studies on non-linear males of hypothyroid white rats, it was found that melatonin causes an increase in the intensity of enzymatic and non-enzymatic fibrinolysis and a decrease in the parameters of proteolytic activity of plasma.

The pineal gland is a producer of the methoxydol family, of which N-acetyl-5-methoxy tryptamine (melatonin) and 5-methoxy tryptamine have hormonal properties, which is clearly proven. As a gland that has very wide integrative properties, the epiphysis through melatonin, on the one hand, modulates neuroendocrine functions, on the other hand, it is the object of managing various hormonal and humoral signals. There are some reports of increased levels of melatonin in patients with cirrhosis of the liver with chronic renal and cardiovascular disease. In addition, it is known that melatonin is a major component of the pacemaker system. He participates in the formation of circadian

and circadian rhythms, both acting directly on cells, and by changing the secretion of other hormones and biologically active substances whose concentration varies depending on the time of day.

Literary reports indicate that the nature of the influence of the epiphysis on the thyroid gland has been investigated in various experiments: epiphysectomy, in the regime of constant illumination, in blind animals, under conditions of introduction of epithelium extracts, blockade of synthesis of indoles, etc. It has been established that melatonin reduces the sensitivity of the pituitary thyrotrophy to the stimulating action of thyreolyubine, and epiphyseal methoxindoles affect only the initial and final phases of the hypothalamic-pituitary-thyroid system.

Questions of fibrinolysis attract the attention of a wide range of medical specialists in the clinical and theoretical areas. Depression of fibrinolytic activity is one of the pathogenetic factors in the development of thrombosis. It is known that the fibrinolytic potential of blood is regulated by inhibitors and plasminogen activators.

Great importance belongs to urokinase, which is injected by the kidneys and increases the intensity of fibrinolysis. The influence of melatonin on the homeostatic activity of the kidneys was revealed. However, the effect of the combined effect of melatonin and Mercazolil on the fibrinolytic and proteolytic activity of the plasma is not sufficiently studied.

Banul B.Y. , Yemelyanenko N.R

FEATURES OF THE STRUCTURE OF THE LEFT UTERINE TUBE AT THE END OF THE FETAL PERIOD OF HUMAN ONTOGENESIS

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In fetuses 190,0-230,0 mm PCL the length of the left uterine tube is 16,0 ± 0,2 mm. The left uterine tube is located almost vertically in the pelvic cavity major, has a distinctly expressed shape, covered with peritoneum from all sides. Its total length is 19.0 ± 0.5 mm in particular: the infundibulum - 4.7 ± 0.1 mm, ampulla - 9.0 ± 0.1 mm, the isthmus - 3.8 ± 0.1 mm, the uterine part - 1 , 6 ± 0,05 m, the infundibulum width - 3,8 ± 0,1 mm, the thickness of the ampulla -4,1 ± 0,1 mm, the thickness of the isthmus - 2,2 ± 0,1 mm, the length of the mesentery of the uterine tube - 12 , 2 ± 0.3 mm. The isthmus of the tube is placed horizontally, the ampulla and the infundibulum – obliquely. In fetuses 270,0-310,0 mm PCL the left uterine tube is located in the pelvic cavity and covered with peritoneum from all sides. Its total length is 20.0 ± 0.5 mm, in particular: infundibulum - 4.2 ± 0.1 mm, ampulla - 8.9 ± 0.1 mm, isthmus - 6.1 ± 0.1 mm, the uterine part - 1,7 ± 0,2 mm, the width of the infundibulum - 3,8 ± 0,2 mm, the thickness of the ampulla - 4,9 ± 0,1 mm, the thickness of the isthmus - 2,2 ± 0,1 mm, the length of the mesentery of the uterine tube - 12.1 ± 0.2 mm. Five constrictions are found along the tube, two of them in the area of its isthmus. The tube has a pronounced winding shape,

placed horizontally. In fetuses 311,0-345,0 PCL the left uterine tube is located in the pelvic cavity, covered with peritoneum from all sides. Its total length is 25.7 ± 0.05 mm, in particular: the infundibulum - 6.1 ± 0.2 mm, ampulla - 12.4 ± 0.5 mm, the isthmus - 5.2 ± 0.1 mm, the uterine part - 2,0 ± 0,1 mm, the width of the infundibulum - 4,1 ± 0,2 mm, the thickness of the ampula - 4,6 ± 0,1 mm, the length of the mesentery of the uterine tube - 16,2 ± 0,5 mm. The uterine tube has a distinct tortuosity, which is caused by a significant difference between the length of the tube and its mesentery. The tube is placed horizontally in the cavity of the pelvis, below the upper margin of the uterus. The infundibulum is directed laterally, the isthmus of the tube is placed over the round uterine ligament

Sorokhan M.M., Buttercup M.D.

ON THE QUESTION OF THE BLOOD SUPPLY OF A PERIODONIAN

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Department of Human Anatomy M.G. Turkevich
Supervisor Doctor of Medical Sciences, Professor Kryvetsky V.V.

From time immemorial, humanity has had and will continue to have problems with dental disease in the future. This primarily depends on the blood supply to the periodontium and the tissues adjacent to the tooth. That is why the issue of studying the blood supply to the teeth has always been relevant and has not only theoretical but also practical interest in dentistry, because it is known that when the blood supply to the teeth and adjacent tissues is disturbed in the first place, their diseases always occur.

Familiarity with the available literature has shown that, not surprisingly, in our time, the question of the peculiarities of the blood supply to the periodontium by various authors is covered quite contradictory. Most works depict the blood supply or only the pulp of the tooth, or only the periodontium, and not the whole complex of periodontal tissues. The data obtained by the authors are often contradictory.

The first experimental studies of periodontitis belonged to De Sharan (1880), who studied the vascularization of teeth in dogs. At the same time, he unequivocally established that blood vessels penetrate into the pulp of the tooth not only through the hole in the top of the tooth root, but also from its lateral surfaces.

At the same time, other authors, such as (Gofung EM 1946), argued that the hard tissues of the tooth do not have their own blood vessels, and their nutrition is due to transudate from the pulp capillaries through the dentinal tubules, and from the periodontal capillaries into the slits cement.

Despite different scientific interpretations of vascularization of teeth and surrounding tissues, most researchers based on the study at different levels of serial transverse, frontal and sagittal histotopographic sections in comparison with the results of topographic anatomical preparation and modern latest MRI, CT and computer technology. teeth and surrounding tissues is carried out on the lower jaw

from the lower alveolar artery. In the thickness of the mandibular canal, branches depart from it, which branch into the actual dental and intercellular branches. Actually dental arteries are represented by branches of small diameter in number of one or two branches which get into the root canal of a tooth. As for the intercellular vessels, they pass in a much larger diameter in the intercellular septa, providing vascularization not only of the bone structures of the septa, but also reach the masticatory surface of the jaw, forming the so-called perforating yarteries of the gums.

Vascularization of the periodontium is due to the arteries that enter the tooth cell and feed the pulp of the tooth penetrating through the cell wall. These vessels anastomosing with each other form vascular plexuses of the branches which are oriented parallel to the longitudinal axis of the tooth. In the area of the apical opening, at the edge of the cell, there is the formation of vascular glomeruli, resembling the shape of the glomerulus of the kidneys. According to many researchers, this design of the bloodstream of the teeth is a protective mechanism, which is that during chewing, when closing the teeth, the vascular loops of the glomeruli straighten without disturbing the normal vascularization.

As can be seen from a brief overview of vascularization of teeth and surrounding tissues, due to numerous anastomoses, the circulatory system of these structures has great reserve capacity to adapt to vascularization conditions that are constantly changing during chewing hard and soft food particles.

In the case of thrombosis or spasm of the arterial branch, the existing numerous anastomoses between the vessels of the pulp of the tooth and periodontium, on the one hand, and the arteries of cells and gums, on the other hand, can ensure normal vascularization.

Sorokhan M.M., Belikov O.B., Belikova N.I.

COMPARATIVE CHARACTERISTICS OF PHYSICAL AND MECHANICAL PROPERTIES OF FIXING MATERIALS FOR INDIRECT RESTORATIONS

Higher State Educational Establishment of Ukraine
"Bukovinian State Medical University"

One of the most important problems in the use of bridge prostheses adhesive fixation, which reduces their level of widespread use is the lack of quality and affordable fixing material. In this regard, we investigated a polymeric material called “Maxcem Elite”, which we used to fix the elements of fixed orthopedic structures.

Composite material "Maxcem Elite" is made on the basis of a monomeric matrix consisting of organic components: Bis-GMA, urethane dimethacrylate triethylene glycol dimethacrylate - 18.8% by weight, inorganic fillers - 81.0% by weight, a small amount of catalysts, stabilizers and pigments 0.2% by weight. The share of inorganic fillers is 81% by weight and 68% by volume. The particle size is 0.04-7.0 μm.

Using modern advances in chemical science and requirements for clinical application, the selected components of the material and their rational ratio were substantiated, which combines low viscosity of the polymer matrix and high dispersion of the hybrid filler, thus achieving high ductility, which prevents the formation of thick material. adhesive pad and tooth surface. For a reasonable recommendation for the use of the investigated material as a fixative, it was necessary to carefully study its physical, mechanical and technological properties. Physico-mechanical properties of the photopolymer material "Maxcem Elite" were tested on the following parameters: the appearance of the paste and adhesive, their consistency; the appearance of the polymer; diametrical strength; water absorption and water solubility; Heppler strength and conical yield point; tensile strength; adhesive strength of the connection with the hard tissues of the tooth. The above data show that absolutely all the characteristics of "Maxcem Elite" meet the requirements of ISO 4046-81 and TU.U.24.4-00481318-022-2002. And the main qualitative indicators, such as high strength of the connection with the hard tissues of the tooth, which is 1.6 times higher than the requirements in combination with a high level of tensile strength, which is 1.5 times higher than the requirements, allows you to get a reliable fixation, which is a necessary condition for the use of this type of prosthesis. The large value of the hardening depth (4.6 mm), which is 2.3 times higher than the standards, expands the possibilities of using AMP with metal frames due to the full-fledged photopolymerization also from the vestibular surface of the abutment teeth.

We performed a comparative analysis of the physical and mechanical properties of the studied material "Maxcem Elite" with analogues (Bifix VOCO, Relyx U 100 3M ESPE), revealed the following patterns. All the materials studied during the exams proved to be highly viscous, homogeneous pastes in which there are no impurities and inclusions. Although the hardening depth of “Maxcem Elite” is significantly ($p < 0.05$) inferior to Bifix by 14.9% and 13.3% by Relyx, it does not significantly affect the quality of the connection of the adhesive structure with the hard tissues of the tooth, especially thanks to the technique developed by us of production of adhesive overlays of AMP. Analyzing the indicators of diametrical strength of the studied materials reliably ($p < 0.001$) we note the indicators of “Maxcem Elite” higher than in Bifix by 17.2%, and higher than Relyx by 17.3%. Investigating other physical and mechanical properties of the material "Maxcem Elite" we come to the conclusion about a significant ($p < 0,0015$) advantage in terms of conical flow point according to Heppler between "Maxcem Elite" (1673,7±0,68) MPa and Bifix (1476,7±0,75) MPa, the result of which is less by 8.6% and Relyx (1489,3±1,94) MPa- less by 7.8%. Heppler hardness “Maxcem Elite” is almost at the level ($p < 0.05$) of Bifix and Relyx at (839,6±41,9) MPa and (732±36,6) MPa and (756±37,8) MPa in accordance. All this indicates the high mechanical strength of the proposed material.

The study of the level of water absorption indicates a significant lack of variability in the studied material compared to a comparable foreign counterpart. This figure in "Maxcem Elite" is significant and reliable (at the level of $P > 0.0001$), lower than Latelux (by 20%). The values of water solubility of all studied

photocomposites do not differ from the value of "Maxcem Elite" (within (2,5±0,1)%), and meet the requirements of ISO 4046. We believe that statistical analysis confirms this, because the difference between Maxcem Elite ”And Relyx could be argued only at an extremely low level of significance (P> 0.18). Note that these indicators affect the stability of the adhesive seam and the toxic effects on the human body.

Among the most important strength characteristics that are attached to the fixing materials are the adhesive strength of the connection with the hard tissues of the tooth and the tear strength. In terms of adhesive strength of joints with hard tissues, the undisputed leader was "Maxcem Elite", which is significantly (p <0.001) and significantly superior to Bifix by 37.2%, and Relyx by 30%. Regarding the tensile strength, which seemed to be approximately the same in “Maxcem Elite” (5,32±0,27) MPa and Relyx (5,0±0,25 Mpa) and better by 13.6% compared to Bifix. However, as the exact analysis showed (Table 3.9), the advantage of “Maxcem Elite” over Relyx can be stated at a high level of significance P <0.013.

The high level of adhesive strength of the connection with the hard tissues of the tooth and the tear strength ensures the reliability and durability of the connection of the enamel-composite-metal system, which allows us to use the material developed by us to fix the adhesive structures.

Therefore, based on the results of complex comparative characteristics of physical and mechanical properties of the studied photocomposite materials, we can conclude that the performance of the material "Maxcem Elite" on the main parameters exceed similar performance of foreign counterparts, indicating a high degree of competitiveness of the studied material. to offer for clinical use in the fixation of bridges adhesive fixation as a method of choice in the treatment of small included defects of the dentition.

Sorokhan M.M., Belikov O.B., Belikova N.I.

ADVANTAGES OF APPLICATION FOR FIXING OF FIXED STRUCTURES OF SELF-ETCHING SELF-ADHESIVE COMPOSITE CEMENT FOR INDIRECT RESTORATIONS "MAXCEM ELITE"

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The main disadvantage of the use of adhesives that require pickling is the need to apply orthophosphoric acid, its subsequent washing and drying. At these stages, there is a high probability of various errors and complications. Etching of enamel leads to the formation of a porous layer with a depth of 5-50 μm, which is able to penetrate the adhesive molecules. Along the periphery of the demineralized surface of the enamel prism, large polymeric strands are formed, and directly on

the demineralized surface - small polymeric strands due to getting into the gaps between the crystals of hydroxyapatite [1].

When applying orthophosphoric acid, it is difficult to control the degree and depth of demineralization of dentin and enamel. This leads to the fact that the adhesive does not completely fill the open dentinal tubules, there are empty gaps, and this in turn does not ensure the formation of a full-fledged hybrid layer [2].

Therefore, we have proposed a self-etching self-adhesive composite cement for indirect restorations "Maxcem Elite", Kerr, California, USA to fix non-removable adhesive structures.

Maxcem Elite uses the same adhesive as Kerr's famous OptiBond family. The optimized matrix and filler increase resistance to moisture, which allows to achieve higher adhesion and the possibility of immediate light polymerization for greater stability. Its thixotropic properties facilitate the application of the material and ease of removal of excess. The patented redox system provides unique color stability, in comparison with amino-initiated systems, for even more aesthetic restorations.

Features:

Adhesion strength 22-25 MPa. Excellent adhesion without the use of an adhesive system. Ease of use. Does not require manual kneading and refrigeration. Excess is easily removed. Compatibility with any surfaces (dentin, enamel, metal-free and metal ceramics, SAD / CAM blocks). Highly efficient mechanism of polymerization in the dark. Complete polymerization even in the absence of light.

The set of fixing material "Maxcem Elite" consists of: 1 syringe 5 g of transparent shade, 5 mixing nozzles standard, 5 nozzles with a wide tip, 5 intraoral nozzles of paste colors A2, A3, B2, C3 - one syringe (4 g) of each color ; adhesive - 1 bottle (15 g); pickling gel - 1 syringe (2 g); brush holder - 1 piece; disposable brushes (25 pcs) - 1 package; cannulas (5 pcs.).

The use of the material "Maxcem Elite" as a fixative consists of the following stages:

1. Degreasing of the prosthetic field of adhesive pads with alcohol and drying with warm air.
2. Thorough cleaning of the prosthetic bed of the abutment tooth with brushes and abrasive pastes that do not contain fluoride.
3. Isolation of abutment teeth by lip holder and saliva ejector.
4. Acid etching of enamel within the prosthetic bed with an etching gel containing 37% orthophosphoric acid for 30 seconds.
5. Removal of the gel with a jet of warm water for 60 seconds, and drying the surfaces of the teeth with air until a matte surface.
6. Applying the adhesive to the prepared surface of the prosthetic field of the adhesive pad and the prosthetic bed of the enamel of the abutment teeth, removing excess adhesive with air current.
7. Carrying out photopolymerization of the adhesive for 20 sec.
8. Applying a thin layer of "Maxcem Elite" paste, according to the color of the abutment teeth on the prosthetic field of the adhesive pad AMP. AMP positioning. Removal of excess fixing material.

9. Photopolymerization is carried out in two directions: from the vestibular surface of the abutment tooth for 40 seconds. and on the side of the locking pad, initially at an angle of 450 for 40 seconds. then close for 40 seconds.

10. The patient is recommended to come in 3 months for a follow-up examination, then annually. Brush your teeth regularly, remembering that AMP and abutment teeth, like abutment teeth, need careful care. Do not eat solid foods.

Laboratory and clinical studies of the new domestic fixing material "Maxcem Elite" and its comparative evaluation with foreign counterparts prove that it is not inferior to them in most respects, and in some respects surpasses them.

Due to its increased plasticity, the material is more evenly distributed on the surfaces of the prosthetic field of the adhesive pads, which allows to obtain a more uniform layer between the surfaces of the adhesive pad and tooth enamel. Also, excess material of this consistency is removed much easier compared to, for example, liquid composites.

Yemelyanenko N. R., Banul B.U.

TOPOGRAPHIC AND ANATOMICAL FEATURES OF THE NASAL SEPTUM IN ADOLESCENCE

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In the walls of the nasal cavity is an increase in their size, changing topographic-anatomical relationships with adjacent structures. The nasal bones have a rectangular shape and they are elongated in the inferior direction. The lower edges are 1.0 - 2.0mm wider than the upper edges. Their longitudinal size reaches 16,0 ± 0,4 mm, transverse - 8,3 ± 0,07 mm.

The cartilage of the nasal septum is formed by the cartilage of the nasal septum, and the bone is the perpendicular plate of the lattice and blades. The dimensions of the perpendicular plate vary. Its anteroposterior size reaches 22,0 ± 0,8 mm, height - 18,8 ± 0,7 mm. The anterior-posterior size of the blades does not exceed 34.0 ± 0.4 mm, the vertical size is 18.0 ± 0.8 mm. The anterior-posterior size of the nasal septum is 59.0 ± 0.9 mm, the largest vertical size is 41.0 ± 0.8 mm.

The upper wall of the nasal cavity in the anterior compartment is formed by the inner surfaces of the nasal bones and the nasal part of the frontal bone, which is thickened. In the middle part, it is formed by a holed pallet of the anteroposterior nasal septum, the mucous septum is thickened

The upper wall of the nasal cavity in the anterior compartment is formed by the inner surfaces of the nasal bones and the nasal part of the frontal bone, which is thickened. In the middle part, it is formed by a holey plate of the anteroposterior nasal septum. The mucous septum is thickened. Blood supply is due to anterior and posterior lattice arteries and a wedge-shaped artery.

Chorna N.M., Riaba I.V.

THE PROBLEM OF SKIN CANCER IN UKRAINE AND THE WORLD

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The incidence of melanoma remains one of the fastest growing among all types of cancer worldwide. This explains the increased attention of doctors of all specialties to skin tumors. Melanoma of the skin - in the structure of all malignant neoplasms of the skin is about 10% of the proportion, but it accounts for more than 80% of mortality in this group (Lemekhov VG, 2001). The number of newly registered cases of melanoma is growing every year. According to the WHO, more than 200,000 cases of skin melanoma and approximately 65,000 melanoma-related deaths are reported worldwide each year (Jemal A. et al., 2007; Thiers B., 2011). In Europe, Singapore, Canada, and the United States, the incidence continues to rise, especially among light-skinned races, by 3–7% per year (Linos E. et al., 2009). The highest incidence rates are observed among men of Caucasian age 65 years and older (120.6 per 100 thousand population), followed by women over 65 years (46.9 per 100 thousand population) (Darre ll S. Rigel et al., 2012).

In 2017 in Ukraine were registered more than 3 thousand new cases of melanoma and about 1 thousand deaths due to this tumor. On average, in Ukraine the incidence of melanoma is 6.18 cases per 100 thousand population. In Australia, where UV radiation is one of the highest on the planet in connection with the depletion of the ozone layer, the frequency of basal cell carcinoma is approximately 788 per 100 thousand persons (R. Tung, 2009).The proportion of malignant skin tumors detected during preventive examinations, is 30% of all detected at prophylactic examinations of tumors (SI Korovin et al., 2010) for 80 years it has grown to 395 times.Most people have melacytic nevi (acquired), the number of which ranges from one to several hundred.Primarily they appear during childhood, then their number is actively growing in puberty. People with a large number of nevi (100 or more) are at risk. Causes of malignant degeneration of melanocyte nevi can be:

- excessive exposure to UV radiation, including artificial Solarium;
-chronic photodermatitis;
- frequent injury of the skin in the area of moles (friction, shaving, chemical irritation factors);
-self-treatment (with the use of irritating drugs);
-hormonal disorders;
-primary and secondary immunodeficiency states.

Risk factors include exogenous and endogenous factors. One of them includes some biological characteristics of the organism, the presence of which increases the risk of melanoma. Another group is formed by predecessors of the melanoma, i.e. pathological changes of the skin that have a greater likelihood of malignant transformation. Signs of malignant transformation of melanocyte nevi are: their

rapid increase in size, the appearance of unpleasant sensations: pain, itching, tingling, rapid discoloration of the mole, the acquisition of black or blue color; surface change: elevation above the skin, appearance of bumps, intense hair growth, change in the shape of the spot when its contours become less clear, the spot or mole begins to get wet constantly, or there are periodic bleeding, appearance on the surface of the peeling skin, etc.

Thus, contradictory and unsystematized data from the literature; late diagnosis of malignant forms, lack of proper cancer prevention in both doctors and the public regarding skin cancer necessitate further study of this issue.

Sorokhan M.M., Belikov O.B., Belikova N.I.

METHOD OF PREPARATION OF ABUTMENT TEETH WITH MINIMALLY INVASIVE PREPARATION TO IMPROVE THE RETENTION OF BRIDGES OF ADHESIVE FIXATION

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Among the advantages of adhesive bridges are gentle preparation of teeth, a small surface area of the prosthesis, and thus rapid adaptation to them. Another advantage is the possibility of using prosthetics in patients with health conditions (myocardial infarction), when you want to eliminate the stressful situation by reducing the stay in the doctor's chair and a conservative approach to prosthetics [1, 3]. However, they have specific disadvantages: much lower fixation strength on teeth compared to traditional bridges due to the lack of ideal fixing material and imperfect design of the adhesive pad; deterioration of aesthetic norms on the oral surface of abutment teeth due to the presence of open metal surfaces of adhesive pads; impossibility of their temporary fixing for check of operational characteristics of a design; increase in the thickness of abutment teeth from the oral surface, which in some cases leads to impaired fixation; the possibility of use only in the absence of 1 tooth in the lateral area and not more than 2 teeth in the front, which in comparison with traditional bridges significantly limits their use; each subsequent fixation reduces the bond strength of the enamel-composite-metal complex. There is another specific disadvantage, namely: the destruction of the fixation system on the border of the prosthesis-fixing material-hard tooth tissue [2, 4].

Therefore, our task was to improve the design and clinical and laboratory stages of manufacture. To solve this problem, we have developed and proposed an improved design, as well as detailed stages of its manufacture. The main direction in the development of the structure was the preparation of abutment teeth with their minimally invasive preparation.

This form of preparation of abutment teeth provided on the one hand increase of indicators of mechanical fixing, and on the other improvement of quality of a fixing material.

The results of laboratory and clinical studies of the method of manufacturing a solid veneer claim that the following technique: eliminates the shift during

insertion into the prosthetic bed, allows you to evenly distribute the adhesive fixative material between the hard tissues of the tooth and the occlusal pad; prevents the formation of pores in the fixing material; prevents demineralization of hard tissues of teeth; increases the service life of the prosthesis; allows better polymerization.

Our proposed method of manufacturing adhesive pads is performed as follows. If the patient did not require prior orthodontic preparation of abutment teeth, the oral surface of abutment teeth was prepared by forming retention grooves on the oral surface with a depth of 1.0 - 2.0 mm and an area corresponding to the anatomical shape of the tooth with additional application of a series of recesses in the retention grooves. 0.5 - 1.0 mm.

To create retention points for support platforms, a set of drills was used, which consisted of spherical diamond tools with a diameter of 2 and 3 mm, which will be created for adhesive prosthesis, thin elongated cone-shaped drills with a grain size of 100 μm for preparation of proximal or oral surfaces, diamond drills - 50 microns for finishing of edges of a cavity and contouring of restoration, carbide burs for grinding (with faces from 12 to 32), and also polishing heads, disks and strips for final processing of a design. After preparation, an impression of the dentition defect was obtained with silicone material, the model was cast from gypsum, studied in a parallelometer, the boundaries of occlusal overlays were delineated with a ballpoint pen, and the model was prepared for duplication. Duplication of the gypsum model was performed with silicone duplicating material Replisil 32 N. After preparation of the silicone duplicate, the casting of the fire-resistant model was started. On the fire-resistant model, a wax reproduction of the adhesive structure was made according to the generally accepted method with the reflection of retention elements. The wax composition was replaced by metal according to the generally accepted method, the cast metal frame was released from the casting system and machined and sandblasted. Then on the intermediate part of the frame made a ceramic artificial tooth. The bridge prosthesis made in this way was fixed on the teeth with "MaxcemElite".

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FEATURE OF THE DIAGNOSIS OF THE SALIVARY GLANDS TUMORS

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The frequency of occurrence of the salivary glands tumors are 1-2% of the total number of tumors of the human body. The same type of clinical manifestations, variety and complexity of histological structure compared to inflammatory processes, which complicates the clinical diagnosis and differential diagnosis, characterizes neoplasms of the salivary glands (SG), both malignant and benign. According to the maxillofacial department of the RCH (clinical base of the Department of Surgical Dentistry and Maxillofacial Surgery of KhNMU), SG

diseases account for 2.6% of all pathologies of the maxillofacial department of the skull. Neoplasms among SG diseases were in 23.1% of cases. Benign tumors and tumor-like formations accounted for 97.1%, malignant - 2.9%.

A big number of mistakes occur when diagnosing malignant tumors of the SG. They are very similar to inflammatory processes, which complicates the diagnosis, and can lead to late treatment and complicated course of the disease.

At the initial examination of the patient, the doctor must make a differential diagnosis of the neoplastic process with chronic inflammatory processes, sialosis, sialoadenitis and make a plan for additional examination and determination of the degree of the tumor malignancy to determine the treatment algorithm. The crucial criterion for the rational choice of methods of additional research is the initial "diagnostic hypothesis", which is formed because of the analysis of complaints, anamnesis and examination of the patient.

The examination plan of a patient with suspected malignancy should preferably include aspiration puncture with a fine needle, ultrasound scanning, multislice computed tomography (CT) or magnetic resonance imaging (MRI), radiosialography.

Each of the diseases of the SG has its own clinical manifestations. However, in many cases it is very difficult to make a correct diagnosis without special diagnostic devices. For many patients, certain research methods may be contraindicated. Most often, the patient's examination ends on palpation, history taking and radiosialography. MRI, CT and biopsy are usually used as evidence of a tumor and immediately before surgery, or not used at all. This is due to the relatively high cost of these studies, and in more than half of the cases, to the lack of knowledges and self-confidence of physicians. As a result, the malignant neoplasm is mistaken for an inflammatory process, so treatment begins at a later stage. Below we will consider the picture of the course of malignant tumors and inflammatory diseases.

At malignant tumors the periodic pricking, then constant obtuse aching pains is observed at first. On palpation, there is a dense, bumpy sedentary formation without clear boundaries, which rapidly increases in size. The nature of the disease – progressive growth, the appearance of metastases in regional lymph nodes. On the later stages, facial muscle paralysis occurs due to compression or damage of the facial nerve. The function of the salivary gland is gradually weakened until the complete absence of salivation.

The radiosialography reveals a defect in the filling of part of the gland with a contrast agent, breakage of the shadow and fragmentation of the excretory ducts, the presence of foci of accumulation of contrast in the parenchyma surrounding the periphery of the tumor.

In inflammatory processes (sialoadenitis), for which malignant tumors are most often mistaken, gland compaction and painless palpation are observed. With exacerbation, the gland enlarges, thickens, and pains appear. Salivation decreases, but saliva is turbid or with pus.

As you can see, the differences in the results of the sialogram and the general examination are significant. With the correct diagnosis and correct interpretation of

the results, we can assume the presence of a malignant neoplasm with a probability of 76% and begin full treatment in time.

Diagnosis of diseases of the salivary glands, unfortunately, causes significant difficulties for many doctors. Even with the palpation method of examination and radiosialography, it is possible to distinguish tumors from the inflammatory process. Therefore, when making a differential diagnosis of salivary gland diseases, you should not rely only on a general examination or radiosialography, as well as every time with little suspicion to refer patients for MRI or biopsy.

Bulyk R.Ye., Yosypenko V.R.

AGE CHARACTERISTICS OF MORPHOMETRIC CHANGES OF THE ANTERIOR-LATERAL PREOPTIC NUCLEUS OF THE HYPOTHALAMUS OF RATS

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Today in the population of the Earth there is an increase in people over 60 years. Among the problems common for this age period, there is a violation of sleep quality. Sleep disorders affect the development of pathological processes, quality and duration of life. The anterior-lateral preoptic nucleus of the hypothalamus plays a key role in the regulation of the sleep-wake cycle.

The aim of the study was to study the morphometric characteristics of the anterior-lateral preoptic nucleus of the hypothalamus of mature and old rats under normal lighting.

Studies were performed on 28 white nonlinear male rats. Morphological analysis of neurons was performed using a microscope LUMAM-8. The material removed at 14.00 and 02.00, due to the different activity of the pineal gland.

Under the standard light regime (light from 08.00 to 20.00), the average volume of neurocytes in mature rats was: at 02.00 PM - 1148±12,9 μm^3, and at 02.00 AM - 1151±12,1 μm^3. Whereas in older rats, under the same lighting, this indicator was: at 02.00 PM - 1007±11,6 μm^3, and at 02.00 AM - 1011±10,2 μm^3 ($P<0,001$). The difference between the average volumes of neuronal nuclei was insignificant. In mature rats, at 02.00 PM this indicator was in the range of 424±10,2 μm^3, at 02.00 AM - 426±10,0 μm^3. In old rats - at 02.00 PM - 422±10,7 μm^3, at 02.00 AM - 425±10,2 μm^3. The growth of the nuclear-cytoplasmic ratio in neurons of old rats relative to mature ones attracted attention. Particular, in mature rats at 02.00 PM this figure was 0,369±0,0028, and at 02.00 AM - 0,370±0,0025, while in old rats at 02.00 PM it was in the range of 0,419±0,0031, and at 02.00 AM - 0,420±0,0034 ($P<0,001$). At the same time, it is necessary to indicate a significant decrease (about 30%) in old rats compared to mature rats with the average number of neurons per unit area of 10,000 μm^2 of histological section (100x100 μm^2). In mature rats, the average number of neurons at 02.00 PM was

24±0,3, and at 02.00 AM - 24±0,3, while in old rats, the average number of neurons at 02.00 PM was 16±0,2, and at 02.00 - 16±0,3 (P<0,001).

Thus, it can be concluded that in old rats, on average, the total volume of neurons decreases, which increases the nuclear-cytoplasmic ratio. Also in old rats, there is a decrease (about 30%) in the average number of neurons per unit area of 10,000 μm^2 histological sections (100x100 μm^2).

Tovkach Yu. V., Godorog R. M., Bambuliak A.U., Boichuk O.M.

CHARACTERISTICS OF THE MAXILLARY FRACTURES

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Injuries to the maxillofacial region hold a significant position among all fractures of other parts of the skeleton. The anatomical structure of the maxilla tends to the most common fractures in the weakest areas, which can be attributed mainly to the maxillary processes. Data on the incidence of fractures of the maxilla are different. Thus, Gurlt (1865) has encountered only 2 fractures of the maxilla for 281 cases of facial bone fractures. Weber has reported that 4 fractures of the maxilla have encountered for every 56 facial fractures. According to Bruns, their number has accounted for 10% of all fractures. Due to A.A. Limberg, it has occurred 79 fractures of the maxilla (24%) and 173 of the mandible (76%) for 252 fractures. Non-gunshot fractures of the maxilla have accounted for 13-24% of all jaw fractures (G.A. Vasiliev, 1973). Fracture lines run according to three types: the first type of fracture occurs when the fracture line runs horizontally through the base of the pear-shaped aperture along the base of the alveolar process towards the buttress of the pterygoid processes of the sphenoid bone. Fractures, as a rule, are not accompanied by a large displacement of the fragments, the mobility of the alveolar process and hemorrhage into the maxillary sinuses is noted. Malocclusion occurs in case of unilateral alveolar process fracture when according to the second type of fracture, the entire maxilla loses its strong attachment with other bones of the face and skull base: the fracture line passes through the bridge of the nose, orbital floor, the suborbital margin, and the posterior line passes through the pterygoid processes. Bleeding from the nose can result from the rupture of the mucous membrane of the nose and violation of the integrity of the maxillary sinuses, the ethmoidal labyrinth.

The maxillary fractures can only be traumatic by etiological factors. Traumatic fractures are divided into two main groups: non-gunshot fractures and gunshot. The severity of fractures of the maxilla is explained by the fact that the incidence of "pure" fractures is fairly low, more frequent combined fractures occur when they are in combination with other facial fractures. Gunshot fractures of the maxilla may not have typical fracture lines in anatomically "weak" areas; the projectile motion and the place of its immersion, as well as the characteristics of the wound canal play a decisive role in types of facial fractures.

The "symptom of glasses" occurs immediately after a fracture of the maxilla due to hemorrhage in the eyelids which differs from a similar symptom in case of a basilar skull fracture when hemorrhages into periorbital intracellular tissue appear a day or more after the injury. But it is necessary to consider the possibility of combining fractures of the skull base.

The fractures of the maxilla according to the third type are more extensive, since the cheekbones break together with the entire jaw and the fracture line runs horizontally anterior-posteriorly, from superior pear-shaped opening, above the alveolar process and the palatine rhaphe to the pterygoid process of the sphenoid bone. In this case, the floor of the maxillary sinus breaks off. At the same time, horizontal fracture of the nasal septum occurs. The second and third types are often accompanied by a concussion.

The literature data regarding injuries of the maxilla are not systematized and versatile. According to Le-Fort classification (1901), there are three types of fractures of the maxilla which have been described above. Other authors, like M. Schroeder (1916) described the lines of fracture according to Le-Fort classification where the second type of the fracture is considered as the first, and vice versa. Wassmund (1927), B.B. Bransburg (1931), G.A. Vasilyev (1973), et al., differentiate fractures related to the inferior line due to Le Fort-1 classification, the medial line due to Le Fort-2, and superior line due to Le Fort-3.

Vepriuk Y.M., Tovkach Yu. V., Mamchyn I. P.

TRAUMATIC BRAIN INJURY

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Traumatic brain injury (TBI) is one of the most important and urgent problems of modern medicine and neurosurgery. This is one of the main causes of death and disability.

Every year more than 10 million people in the world get traumatic brain injuries, about 200-300 thousand of the victims die. The frequency is from 2 to 5 cases per 1000 population in Ukraine.

According to the WHO, the number of cases of traumatic brain injury is growing by 2% annually, which is mostly due to the increasing the number of traffic accidents, rapid urbanization and not always sufficient cultural level of behavior of all traffic users. The main causes of traumatic brain injury are domestic (approximately 50%, half of which are criminal), traffic accidents - traffic accidents (approximately 35%) and industrial accidents (15%). The term "traumatic brain injury" refers to combined damage to the skull and brain, which is not always the case. Severe brain injury is not often possible without concomitant damage to the skull bones. The opposite situation is possible, fractures of the skull, accompanied by minimal brain injury.

The several types of classification have been proposed to assess the severity of trauma. They are all fairly simple, based on the Glasgow Coma Scale (GCG).

15-14 points are easy; 13-9 points are average; 8 and below are considered a severe form of trauma. There are also several other classifications that are relevant today.

Classification of TBI is based on the following principles:

1. By the nature of damage to the outer skull and meninges are divided into two main types: Closed - there are no violations of the skull or there are superficial soft tissue wounds without damage to the aponeurosis (approximately 25-30% of all TBI); Open - damage to the bones of the skull, aponeurosis and soft tissues (approximately 70-75% of all TBI).

2. According to the mechanism of trauma are: Primary - (concussion, skull fractures, diffuse axonal damage, contusions of the brain stem); Secondary - developed as a result of primary, mainly due to hypoxia of the brain.

3. According to the state of the dura mater (TMO) are divided into: Penetrating - the shell is damaged and accompanied by cerebrospinal fluid; Impermeable - the integrity of the shell is not violated.

4. In the presence of damage to other organs and tissues, the following forms of trauma are distinguished: Isolated - no other damage; Combined - the presence of traumatic brain injury with damage to other organs and tissues; Combined - a combination of trauma with other injuries of non-mechanical nature (chemical, radiation, thermal).

5. Depending on the nature of the brain damage: Concussion; Mild brain contusion; Moderate brain contusion; Severe concussion; Compression of the brain; Compression of the head; Diffuse axonal damage.

The main method of diagnosis is computed tomography (CT). This study allows you to assess the condition of the skull bones and intracranial structures, the presence and nature of pathological processes. In addition, CT does not require significant time and is quite affordable in many medical institutions. The magnetic resonance imaging (MRI) is a possible option in the absence of a working computed tomography in the clinic for various reasons. In this case, mandatory craniography is required, for the presence of objects of metal foreign bodies (in their presence, MRI is not allowed). As additional methods, laboratory tests (biochemical analysis of blood, urine and cerebrospinal fluid) can be used.

The particular importance is the provision of timely first aid to victims of trauma. The main goal at the prehospital stage is to prevent disorders of vital functions, such as respiration and cardiovascular activity. The algorithm includes the rule "DrABCC":

1) Danger - removal from the danger zone;

2) Airway - check the patency of the upper respiratory tract;

3) Breathing - providing artificial lung ventilation;

4) Circulation - support of systemic hemodynamics;

5) Cervical spine - observation of the cervical spine (if necessary, immobilization).

At the hospital stage, the task of doctors is to diagnose correctly and prevent secondary damage. The main method of treatment is conservative. The indications for surgery are:

- Bruising combined with hematomas;

- Focal bruising with destruction of the brain substance, accompanied by dislocation of the middle structures of the brain with the development of contralateral hydrocephalus.

The main complication that can develop in trauma is secondary brain damage, which may be accompanied by epidural, subdural (acute or chronic), intracerebral hematomas, edema or cerebral ischemia.

The exceptional importance is the care of immobilized patients. From the first hours after a severe trauma, even when using a special anti-decubitus mattress or special bed, at least every 4 hours it is necessary to change the patient's position in bed, wipe the whole body daily with special hygienic substances designed to care for critically ill patients. The bedsores do not develop with the proper care of the patient.

So, it is important to provide first aid, correctly diagnose the injury, determine the method of treatment and adequate care for the patient. The patient can recover quickly with the restoration of all impaired functions under these conditions.

Karavan Yuliia,

EMMITION OF FORMALDEHYDE FROM FUNUTURE AND ITS EFFECT ON HUMANS' ORGANISM

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Relevance of studies. Nowadays, human health depends not only on hereditary factors, but also on the quality of the environment. Unfortunately, all the environments in which humanity lives are in crisis. This is especially true for air quality. A person is surrounded by things that contain toxic substances that significantly affect health in everyday life. Formaldehyde is one such substances.

Body. Formaldehyde is quickly broken down in the air – generally within hours. It dissolves easily in water, but does not last long there, either.

It is used in pressed-wood products, such as particleboard, plywood, and fiberboard; glues and adhesives; permanent-press fabrics; paper product coatings; and certain insulation materials. It is also used to make other chemicals.

Formaldehyde can be added as a preservative to food, but it can also be produced as the result of cooking and smoking.

The main way people are exposed to formaldehyde is by inhaling it. The liquid form can be absorbed through the skin.

Formaldehyde is normally made in the body. Enzymes in the body break down formaldehyde into formate (formic acid), which can be further broken down into carbon dioxide. Most inhaled formaldehyde is broken down by the cells lining the mouth, nose, throat, and airways, so that less than a third is absorbed into the blood.

Formaldehyde is normally present at low levels (less than 0.03 parts per million) in both indoor and outdoor air. Materials containing formaldehyde can

release it as a gas or vapor into the air. Automobile exhaust is a major source of formaldehyde in outdoor air.

Pressed-wood products containing formaldehyde resins are often a source of formaldehyde in homes. These materials are used for the manufacturing of furniture.

We have been carried an experiment to know the levels of formaldehyde which can release from different parts of furniture used at homes.

Materials and methods. Such parts of furniture as a back wall of cabinet (fiberboard), the side wall of cabinet (chipboard) and a part of the cabinet door (laminated board) were analyzed. These parts of the furniture were placed into the camera for 24 hours and the released air was analyzed. Concentrations of formaldehyde were measured by HPLC method.

Results. According to the results of the experiment the highest concentrations of formaldehyde were found in the chipboard samples, the lowest in the laminated board sample. Concentrations of formaldehyde released from chipboards exceeded the regulatory values in 7-10 times.

What should to be concluded from these results? Formaldehyde is dangerous matter which can lead to severe disorders.

Several studies have found that embalmers and medical professionals that use formaldehyde have an increased risk of leukemia, particularly myeloid leukemia. Some studies of industrial workers exposed to formaldehyde have also found increased risks of leukemia, but not all studies have shown an increased risk. One study found that workers exposed to formaldehyde had higher than normal levels of chromosome changes in early white blood cells in their bone marrow. This finding supports the possible link between formaldehyde exposure and leukemia.

Conclusions. Formaldehyde is a toxic substance which can highly influence humans' health. Different things like furniture, cosmetics, medicines can include some amount of formaldehyde which can be released to the air. A lot of disorders like cancer, skin irritation, allergic reactions, congenital malformations can be caused by inhalation of the formaldehyde. To not be at risk of affection people should avoid using products which could include formaldehyde

Glushchenko T.A.

STRUCTURE OF PERIODONTAL PATHOLOGY OF PERSONS WITH METABOLIC SYNDROME

Higher State Educational Institution of Ukraine "Bukovynian State Medical University", Chernivtsi

Inflammatory-dystrophic changes in the periodontium are directly dependent on the general condition of the body and the presence of general somatic pathology.

The aim of our study was to study the structure of periodontal pathology in individuals with metabolic syndrome**.**

Materials and methods of research. To solve this goal, we examined 190 people with metabolic syndrome, who were registered at the endocrinology clinic in Chernivtsi. The age of the subjects ranged from 25 to 55 years.

Discussion of the results. According to the obtained data, in patients with metabolic syndrome, periodontal disease was detected in 155 of 190 subjects, which was 81.58 ± 2.82%. The structure of periodontal diseases in people with metabolic syndrome was dominated by generalized periodontitis, with the largest percentage accounted for advanced stages of the disease: 26.45 ± 3.56% of cases were generalized periodontitis II degree, 21.94 ± 3.33% - III degree , p <0.01. With increasing age, the percentage of people with periodontal disease, patients with metabolic syndrome, increased to 93.05 ± 3.12%.

Conclusions. Thus, patients with metabolic syndrome were dominated by developed forms of lesions of the dental apparatus, their progression was faster relative to the status of persons not burdened by this pathology. The presence of metabolic syndrome creates conditions for the formation and rapid progression of inflammatory and destructive lesions of the periodontium.

O.M.Slobodian, N.A. Hrymailo, A.Y. Zavolovych

PERINATAL DIAGNOSTICS OF CONGENITAL MALFORMATIONS OF THE CHOLEDOCHOPANCREATO-DUODENAL ORGANOCOMPLEX IN THE IIND TRIMESTER OF PREGNANCY

Bukovinian State Medical University, Chernivtsi City, Ukraine

One of the basic causes of the perinatal and children's mortality and various forms of invalidism is congenital malformations. Their incidence makes up 20.3 per 1000 nejnates in Ukraine. Congenital malformations, requiring surgical correction are very common – 3 % of the inner organs being placed third in the general pattern of children's mortality during the first year of life.

Interpreting the findings of ultrasound examinations, computed tomography, magneting resonance imaging and the results of a modeling study, while establishing the regularities of human organogenesis, is an algorithmic basis for preventing maldevelopments, variants of the structure of the organs and fetal structures. All this plays a decisive role in the prophylaxis of perinatal pathology.

It is necessary to carry out ultrasonography at intervals of 20-24 weeks (the fetal period) of development in the second trimester of pregnancy in order to fight effectively with severe forms of congenital and hereditary fetal pathology. Regardless of the fact that the forming of all the organs and structures of the fetus does not stop, their optimal visualization is attained at this time, owing to which the diagnosis of anomalies is sufficient-improved.

The absence of optimal diagnostic programs, as well as the complex character of interpreting the results of various instrumental methods of investigation result in erroneous conclusions. A correct diagnosis – choledochocele was made only in 30 % of the patients prior to surgical intervention. A difficult differential diagnosis

between choledochocele and congenital malformations of the duodenum is diverticular duplication peripapillary diverticulum.

One of the real ultrasound signs of fetal pathology is a hyperechogenic gut which is characterized by a high degree of echogenicity of its wall similar to bone echogenicity. The rate of detecting hyperechogenic gut in a fetus in trimesters II and III of pregnancy constitutes 0.2-1.4 % and that may be considered an echographic marker of congenital and hereditary diseases.

Duodenal atresia is the most common type of congenital small bowel obstruction. The incidence of this pathology makes up 1:10000 of neonates. Only in 30-52% of the cases atresia of the duodenum is an isolated defect, in 37% - it is combined with anomalies of the osseous system, whereas it is combined with the annular pancreas in 20%. In the majority of cases this anomaly is associated with insufficient canalization of the primitive intestine in the eleventh month of pregnancy.

The objective findings of ultrasound anatomy of the choledochopancreatduodenal area of fetuses and newborns may be the basis for practical medicine with respect to a timely detection and prognosticating the development of perinatal pathology.

I.M. Yaremii, O.Yu. Kushnir, V.I. Shvets, N.V. Shvets

THE EFFECT OF MELATONIN ON GLUCOSE METABOLISM IN MUSCLES OF ALLOXAN DIABETIC RATS

Higher Education Institution in Ukraine «Bukovinian State Medical University», Chernivtsi

The aim of this study was to determine the influence of melatonin on basal level of glucose in the blood (BG), glycogen content (GC), activities of glucose-6-phosphate dehydrogenase (G6PD), pyruvate kinase (PK) and lactate dehydrogenase (LDH) in muscles of alloxan diabetic rats under conditions of different photoperiod (artificial equinox, constant darkness and constant light).

Methodes. Alloxan diabetes was evoked via intraperitoneal injection with a 5% solution of alloxan monohydrate in a dose of 170 mg/kg of body weight. The animals were divided into 3 groups: 1) rats under artificial equinox (Light: Darkness = 12:12, LD); 2) rats under constant dark (L:D = 0:24, DD); 3) rats under constant light (L:D = 24:0, LL). In each group there were 5 subgroups: 1) control group; 2) group with DM (BG $\geq$ 8.0 mmol/l); 3) alloxan diabetic animals with overt diabetes which were injected with melatonin (42 daily injections of 10 mg/kg); 4) alloxan diabetic rats with impaired glucose tolerance (IGT) (BG level $\leq$ 6.9 mmol/l); 5) alloxan diabetic animals with IGT which were injected with melatonin.

Results. In the DM rats the LDH activity increased on average by 65%, whereas the GC and the activities of PK and G6PD decreased on average by 40%, 58%, and 55% respectively compared with control values. All of these changes were not dependent on the light conditions. The BG level of the IGT rats didn’t

reliably differ from the control, however, the LDH and the G6PD activities were respectively higher on average by 30% and 52%, except rats under the constant light conditions whose G6PD activity was lower by 40%.

Conclusion. A melatonin administration led to an improvement of the glucose metabolism: the BG level, the GC, the activities of PK and LDH were normalized, while the G6PG activity was increased by an average of 35%. The influence of melatonin was more prominent in the IGT rats under the constant light conditions.

Batig V.M., Batig I.V.

EFFICACY OF ENDODONTIC TREATMENT IN PATIENTS WITH SYMPATHOTONICS WITH PERIODONTAL-PERIODONTAL LESIONS

Higher State Educational Institution of Ukraine "Bukovynian State Medical University", Chernivtsi

Development of methods of endodontic treatment of periodontitis taking into account the general condition of patients is an urgent problem of therapeutic dentistry.

The aim of our study was to determine the effectiveness of drug treatment of acute chronic periodontitis and endodontic treatment of teeth with stage II acute generalized periodontitis in patients with a predominance of the sympathetic nervous system.

Material and methods. For this clinical study, 30 patients with acute course of generalized periodontitis of the II degree and the presence of periodontal-periodontal lesions (acute chronic periodontitis) with a predominance of the sympathetic nervous system - the main group were selected. To normalize the autonomic nervous system, patients were prescribed a course two days before each dental visit "Anaprilin" 0.01 g - 1 tablet 2 times a day, valerian tincture 25 drops 3 times a day and "Doxazosin" 0.001 g - 1 tablet 1 time per days. After the dental intervention is prescribed for 3-5 days: "Ibuprofen" 0.2 g - 2 tablets 3 times a day, valerian tincture 20 drops 3 times a day, "Anaprilin" 0.01 g - 1 tablet 4 times per day and "Doxazosin" 0.001 g - 1 tablet 1 time per day.

Results and discussion. The use of the proposed method of endodontic treatment with prior premedication showed a complete reduction in pain in patients after endodontic treatment.

Conclusions. The conducted clinical research and statistical analysis show the effectiveness of the proposed drug premedication in endodontic treatment of teeth in patients with a predominance of the sympathetic division of the autonomic nervous system.

Skoropadskyi V. V., Basenko M.V.

CESAREAN SECTION AND ITS SIGNIFICANCE FOR WOMEN

Bukovynian State Medical University

At present, the question of the safety of caesarean section is acute for practitioners and scientists. Its effect on the subsequent quality of life of patients, psychoemotional state, fertility and menstrual function of a woman remains not fully studied. Also rapidly gaining momentum IVF procedure as a method of infertility treatment, we will consider the place of cesarean section in this procedure.

The history of caesarean section began in 1598 in France, first performed by French physician Jacques Gillimo, but the operation itself became popular in Europe after the introduction of anesthesia in the mid-19th century. In 1876, the Italian physician Eduardo Porro suggested that the uterus be removed at the same time as the caesarean section, which made it possible to prevent bleeding and the development of a generalized infection. Max Zenger later developed a technique for suturing the uterus to prevent its removal.

As noted in the work of A.O. Ogorodnika, Yu.V. Давидова, Л.П. Butenka "Cesarean section: long-term consequences" niche "of the postoperative scar" at the present stage of development of obstetric care there is a steady increase in the frequency of cesarean section. On average, its frequency is 30%, and in some private clinics 70-80%. Thus, among young women, this intervention is the most common operation.The consequences of the intervention may be defects in the postoperative scar. Complications of the postoperative scar include niches, isthmocele, uterine-peritoneal fistulas and diverticula. For example, the prevalence of complications such as niches ranges from 24% to 70% in the population of women who have had a caesarean section.

There is no doubt about the expediency of caesarean section on vital signs, for example in the case of placenta previa, clinical inconsistency, fetal distress. According to the WHO, the optimal cesarean section is considered to be the target value within 15%.

The psycho-emotional state is described in the article by I.A. Usevicha, VL Kolesnyk "Influence of the category of urgency of cesarean section on the adaptive capacity of pregnant women", because the peculiarity of the social situation in Ukraine is a decrease in birth rates, an increase in the number of complicated pregnancies and births, reduced infant health. On the one hand, the reason for the trend is the unstable socio-economic situation, which adversely affects the emotional sphere of women. On the other hand, the impact of pregnancy on the psyche of women is so great that some authors consider this phenomenon as a crisis situation.

Psychological problems during pregnancy and childbirth are currently a little-studied topic in modern obstetrics. Possibilities of solving psychological problems that arise in cases of emergency obstetric situations are almost not used by Ukrainian specialists due to lack of knowledge and skills to provide assistance in

this profile.According to VI Krasnopolsky and LV Dolgiev, in patients of in vitro fertilization programs with singleton pregnancy it is possible to significantly reduce the frequency of abdominal deliveries in favor of vaginal delivery by narrowing the indications for planned caesarean sections due to the age of women, first-born women. the duration of infertility and the repeated introduction of in vitro fertilization to achieve pregnancy. When choosing a method of delivery in patients with in vitro fertilization, scheduled caesarean section should be practiced only in the presence of indications for abdominal delivery, which are mandatory, because delivery can occur naturally.

Thus, it can be concluded that most women who became pregnant as a result of in vitro fertilization gave birth by cesarean section. In pregnant women and parturients in the preoperative period significantly increases psycho-emotional stress in cases of cesarean section.

Pregnant women who have a history of cesarean section are more adaptable and less emotionally charged than women who are having a caesarean section for the first time. The type of this operation is gaining momentum around the world, so doctors and scientists are increasingly investigating caesarean section, to prevent negative consequences.

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TRAUMATIC SHOCK

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Shock is the result of almost every injury, wound, burn or other cause, its study is relevant. Studying of its features, the cause, the mechanism of action, its treatment is important for the avoidance of many deaths and the development of serious pathological conditions.

Shock - a complex pathological condition that occurs when exposed to the body of extreme factors of the external or internal environment. The shock is based on a decrease in oxygen supply to the tissues. The most severe changes are received cardiovascular and respiratory systems. Therefore, to evaluate the severity of the shock, analyze these indicators.

The mechanism of shock: The primary cause initiates numerous physiological interactions that result in a set of changes that lead to circular insufficiency and shock. Reduced oxygen supply or consumption is a common cause of all kinds of shock. Lack of oxygen limits metabolism in cells. At first, there is no energy for their normal functioning, secondly, there is compensatory enhanced glycolysis, which leads to the accumulation of non-oxidized substances that are toxic to the body. Reduced delivery may be caused by decreased blood flow due to bleeding or cardiogenic shock, impaired blood flow in the microcirculatory bed due to vascular spasm due to septic shock, increased metabolic needs in oxygen exceeding its delivery level. The physiological compensatory response to the decrease in oxygen supply includes: increased cardiac output, increased myocardial contractility,

increased heart rate, changes in heart tones. These compensatory reactions are usually obvious manifestations of shock and often the first clinical signs. Unfortunately, these superficial changes are often not perceived as interconnected with shock syndrome and little attention is paid to correcting them.

Physiological changes in functions are adaptive and necessary. The goal of therapy is not to bring them back to normal, but to prevent a state of irreversibility. For example: it is not correct to suppress the pituitary-adrenal system during shock. The most important factor in the treatment of shock is the time factor. Because in the first phase of shock, the body maintains itself at the expense of physiological reserve. In the next phase, the compensatory possibilities are exhausted and assistance should be provided immediately, aimed at delivering oxygen to tissues and organs, especially the brain.

In the treatment of traumatic shock, it is advisable to identify five areas: 1 Bleeding, airway recovery, ventilation, closed heart massage, aseptic closure, immobilization, and transportation to the hospital. 2 Pain therapy. 3 Removal of hypoxia: inhalation of oxygen, artificial ventilation. 4 Replenishment of circular blood volume. 5 Prevention or treatment of the following functional disorders: shock to the lung, acute renal failure, changes in the liver and myocardium. In the case of surgical interventions, you must first withdraw from the state of shock and then operate. However, urgent surgery should be performed with prolonged internal bleeding of the wounded chest with open pneumothorax.

So, there is a formation of a new form of functional pathological system that works in an unusual mode and gives a new result. To avoid adverse effects, it is necessary to know the clinical signs of shock, its phases, stages, features of assistance, and respond very quickly, as delayed care can lead to permanent brain changes and death.

Banul B.Y., Yemelyanenko N.R.

FEATURES OF THE STRUCTURE OF MESENTERY AND FIMBRIAE OF THE LEFT UTERINE TUBE AT THE END OF THE FETAL PERIOD OF HUMAN ONTOGENESIS

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In fetuses 190,0-230,0 mm PCL the mesentery of the uterine tube is formed by two leaves of peritoneum, which without distinct contours pass into the parietal peritoneum of the pelvic floor. The length of the tubular margin of the mesentery exceeds the length of the uterine margin. The tube fimbriae are weakly expressed in the form of five lamellar processes.

In fetuses , 270.0-310.0 mm, the PCL of the mesentery is formed by two leaves of the peritoneum, one of which without distinct boundaries passes into the parietal, which covers the psoas major muscle and the adjacent structures, the upper one is distinctly limited by the suspensory and the proper ovarian ligaments.

The tubular edge of the mesentery is longer than the ovary. The tube fimbriae have the appearance of short lamellar processes.

In the fetuses 311,0-345,0 PCL of the tube mesentery is formed by two leaves of peritoneum, which without distinct boundaries pass into the parietal peritoneum of the pelvic floor. Mesentery of the tube becomes a uterine mesentery , which should be considered the end of the creation of the broad ligament of the uterus.

The fimbriae are well developed, presented in the form of numerous filiform and lamellar processes.

In the fetuses of 345.0 mm PCL have a distinction between uterine tube and uterine mesentery using their proper ovarian ligament. The tube fimbriae are well developed and presented in the form of filiform and lamellar processes. One of the fimbriae is connected to the tubular end of the ovary by a peritoneum.

In fetuses, the 346.0-375.0 mm PCL of the tube mesentery is separated from the uterine mesentery by its proper ovarian ligament. The fimbriae of the tube surround the abdominal ostium of the uterine tube in the form of numerous lamellar processes.

Banul B.Y. , Yemelyanenko N.R.

FEATURES OF THE STRUCTURE OF THE RIGHT UTERINE TUBE AT THE END OF THE FETAL PERIOD OF HUMAN ONTOGENESIS

Higher State Educational Establishment of Ukraine
«Bukovinian State Medical University» (Chernivtsi City, Ukraine)

In fetuses 190,0-230,0 mm PCL the length of the right uterine tube is 18,0 ± 0,2 mm. In fetuses 270,0-310,0 mm PCL the right uterine tube is located in the pelvic cavity and covered with peritoneum from all sides. The total length of the uterine tube is 22.5 ± 0.5 mm, in particular: infundibulum - 5.1 ± 0.1 mm, ampulla - 10.0 ± 0.3 mm, isthmus - 5.7 ± 0.1 mm, uterine parts - 1,8 ± 0,1 mm, infundibulum width - 4,1 ± 0,2 mm, thickness of ampulla - 4,3 ± 0,1 mm, thickness of the isthmus - 2,3 ± 0,05 mm, length of mesentery of the uterine tube - 12.2 ± 0.2 mm. The tube ampulla is elongated, circular in shape. Three narrowings are identified along the tube. The uterine tube is placed horizontal. In fetuses 311,0-345,0 PCL the right uterine tube is located in the cavity of the pelvis and is covered with peritoneum from all sides. The total length of the uterine tube is 31.0 ± 0.5 mm, in particular: infundibulum - 7.2 ± 0.3 mm, ampulla - 16.5 ± 0.3 mm, the isthmus - 5.6 ± 0.1 mm, uterine parts - 1,9 ± 0,1 mm, infundibulum width - 4,4 ± 0,2 mm, thickness of the ampulla - 4,5 ± 0,1 mm, thickness of the isthmus - 2,4 ± 0,1 mm, length of the mesentery of the uterine tubes - 12.3 ± 0.3 mm. The tube is winding. The infundibulum with the fimbriae of the uterine tube is directed forward. In the fetus of 345.0 mm PCL , the length of the right uterine tube is 34.0 ± 0.5 mm, in particular: the infundibulum - 5.7 ± 0.2 mm, the ampulla - 19.8 ± 0.3 mm, the isthmus - 6.2 ± 0,2 mm, uterine parts -2,3 ± 0,1 mm, infundibulum width -

4,1 ± mm, thickness of the ampulla - 3,4 mm, thickness of the isthmus - 3,1 ± 0,5 mm, length of mesentery of the uterine tube - 14 , 2 ± 0.3mm. The isthmus of the tube is directed horizontally, the ampulla and the infundibulum in the form of the letter "C". The isthmus of the tube tightly adhered to the circular ligament of the uterus. The uterine end of the ovary is found behind the isthmus. The ampulla is located on the anterior surface of the psoas major muscle.

Stoliar D.B.

MORPHOMETRIC PARAMETERS OF THE TEMPOROMANDIBULAR JOINT IN THE SECOND TRIMESTER OF FETAL DEVELOPMENT

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Department of Histology, Cytology and Embryology

Nowadays, scientific and technological progress has significantly influenced the direction of morphological research. Today, it is important to study the anatomical variability of human, its morphometric characteristics, relationships of organs, anatomical structures, their parts at all stages of human development. However, information on the structure of the temporomandibular joint (TMJ) during fetal development remains controversial and contradictory.

The study aimed to study the anatomical and morphometric features of the TMJ in the second trimester of fetal development. The research was performed on 4 fetuses from 161.0 mm to 295.0 mm of parietal-heel length using morphological methods (morphometry, craniometry, macro- and micro preparation, computed tomography).

It is established that in fetuses of 4-6 months the articular fossa has a flat shape. The bone substance of the articular fossa is thin. Zygomatic process of the temporal bone there is no pronounced protrusions, which confirms the absence in this period of the articular tubercle. The formation of elements of the synovial membrane of the joint capsule is observed. In the lower and upper parts of the joint cavity, the folds and twists of the connective tissue plate are determined, and capillaries grow into the synovial membrane. The TMJ is adjacent to the lateral pterygoid muscle, and the parotid gland is adjacent to the outside and above. The right and left TMJs to have the same size. Morphometric parameters of the external structures of the TMJ in the dynamics of the second trimester gradually increase. The articular disc is formed by dense fibrous connective tissue. The tissue of the articular disc is penetrated by individual blood vessels.

In certain areas, their number increases, but closer to the attachment of the articular disc to the anterior part of the articular capsule, the number of vessels decreases. In fetuses at 4 months, the circumference at the level of Glabella, parietal humps and Inion (outer occipital hump) is 132 ± 7.63 mm, the distance between the parietal humps is 36 ± 3 mm. The distance in the sagittal plane between the Glabella and the Inion is 43.3 ± 3 mm, the distance between the most distant points of the zygomatic arch is 31.6 ± 2.08 mm. The distance between the

Nazion and the Gnathion (the lowest point of the jaw in the middle plane) is 21.6 ± 1.5 mm. From the 5th month there is a further differentiation of the structures of the TMJ and the actual articular sac, clearly distinguishes the articular disc and the upper and lower gap between the articular surfaces, the size of the fissures are the same. The upper fissure is slightly mediocre than the lower. The articular disc is fused with the articular sac. Further development of the joint occurs in the upper lateral direction. In 5-month-old fetuses, the circumference through the Glabella, parietal humps and Inion is 171.5 ± 12.6 mm, the distance between the parietal humps is 45 ± 4.5 mm, the sagittal distance between the Glabella and the Inion is 55.75 ± 3, 86 mm, the distance between the most distant points of the zygomatic arch - 41.1 ± 3.1 mm, between the Nasion and Gnathion - 27.25 ± 2.21 mm. In 6-month-old fetuses, the circumference through the Glabella, parietal humps and Inion is 220.5 ± 18.8 mm, between the parietal humps - 57.5 ± 5.5 mm. The sagittal distance between the Glabella and the Inion is 73 ± 6.2 mm, the transverse distance between the most distant points of the zygomatic arch is 53 ± 5 mm, the distance between the Nazion and the Gnathion is 34.75 ± 2.2 mm.

In conclusion, in the dynamics of the second trimester of fetal development, the temporomandibular joint is characterized by the presence of a flat joint fossa and the absence of a joint tubercle. There is an increase in all craniometric parameters, which indicates an increase in total bone mass of the skull and an increase in the size of the temporomandibular joint.

Shakhova O.A., Levynska N.I.

PECULIARITIES OF BRONCHIAL HYPERACTIVITY IN CHILDREN WITH THE PHENOTYPE OF LATE ONSET ASTHMA DEPENDING ON ACETYLATION STATUS

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Goal. To assess the indices of non-specific reactivity of the bronchi in children suffering from asthma of a late onset considering acetylated status of patients.

Material and methods. 72 children suffering from Bronchial asthma (BA) of late onset (after six years of age). The patients were distributed into two clinical groups depending on acetylation status. The first clinical group (I) included 34 children with late onset asthma (LOA) phenotype and slow acetylation character, and the second group (II) included 38 children suffering from LOS and quick acetylation phenotype.

Results and discussion. The indices of the risk of bronchospasm in response to the dose physical exercise in patients with slow acetylation phenotype compared with rapid acetylation were the following: relative risk – 1,7 [95%CI: 1,04-2,6] in case of odds ratio – 2,2 [95%CI: 0,8-5,9]. At the same time, slow acetylation phenotype increased a relative risk of pronounced bronchial lability 2,9 times [95%CI: 1,9-4,6] in case of odds ratio – 4,7 [95%CI:1,6-14,2]. Pronounced bronchial hypersensitivity is determined (HTC_{20}<2,0 mg/ml) to occur in 25%

representatives of II clinical group and 8% of children from the group of comparison. The indices of the risk promoting development of pronounced respiratory tract hypersensitivity in children suffering from LOA with rapid acetylation type were the following: relative risk – 3,2 (95% CI: 2,0-5,2) with odds ratio 4,0 (95% CI: 0,7-21,6).

Conclusions. There was established, that the relative risk of a distinct hypersensitivity of the airways increased 3,2 times, the odds ratio of the event was equal to 4,0, in children with late-onset asthma late with rapid type of acetylation as compared to slow acetylators.

Chorna N.M., Kotenko O.O.

RESECTION OF THE BODY FAT BISHA

Higher State Educational Establishment of Ukraine "Bukovinian State Medical University", Disaster and military medicine department, Chernivtsi, Ukraine

The fatty body of the cheek (Bisha's lump) is named after the French anatomist, physiologist and physician Marie François Xavier Bisha, who discovered it. The fat body performs a vital function only at infancy, when the infant is breast milk, increasing the back pressure in the mouth. In adults, it is considered an auxiliary, partially protective structure with respect to mimic muscles. Bisha's lump is something like a skeleton, so not everyone wants this operation. Because subcutaneous fat decreases significantly after 40-45 years, the face will look painful and tired. The main anatomical landmark for finding Bisha coma is the excretory duct of the parotid gland. A fat lump lies directly below it, covering slightly the anterior-upper edge of the chewing muscle. A few millimeters from its leading edge lies the main trunk of the facial vein.

Operations aimed at resection of the body fat are becoming more popular every day, but not all patients are satisfied with the result. A number of patients were either openly disappointed or simply dissatisfied with the outcome. They noted the loss of the turgor at the site of removal, the appearance of wrinkles during a normal smile. Considering the statistics (among those who are satisfied), after the lumps are cut, the White Face actually changes in only 20% of women (with hypertrophied fat). The remaining 80% had a placebo effect.

Under the facial fascia is a superficial leaf of the capsule of the fat body of the cheek. In turn, the deep connective tissue is separated by loose fat from the buccal muscle. These two leaves form a fascial capsule with a well-developed vascular mesh. It contains adipose tissue, the basis of which is a loose connective tissue with impregnations of fat particles.

The smallest dimensions of the area and volume of body fat in people with dolichocephalic skull and euryprosoptic face, and the largest - with mesocephalic skull and mesoprosotic face. The average sizes are 10-12 cm2, 4.0-4.5 cm3. In women with a glbelo-gonial angle greater than 75 degrees, the results of surgery are significantly better than in patients with a smaller angle. The second is better to

transpose the fat body. In addition, one should pay attention to the ethnicity of the person who applied. According to statistics, women of European descent are more likely to have bumps, nasolabial folds. In people of Eastern descent, the cheekbones are better developed and "hold" the entire volume of tissue, resulting in frequent dimples on the cheeks after surgery.

This surgery helps to combat age-related changes caused by the weakening of the facial muscles. After the surgery, we can observe certain side effects: numbness and swelling of the cheeks, discomfort in the area, swelling, difficulty in chewing. There were also asymmetry, impaired innervation, development of infection. In some cases, there have been consequences that none of the known methods of maxillofacial surgery can be corrected.

Shvets' N.V, Shvets V.I.

SUPPLEMENTATION INFLUENCES OMEGA-3 FATTY ACID ADIKOPINES LEVEL AND IMPROVES DYSLIPIDAEMIA IN OBESE PATIENTS WITH ARTERIAL HYPERTENSION, OSTEOARTHRITIS

Bukovinian State Medical University

Obesity is increasing in the Western society, and obesity-linked complications are under intense scrutiny. Among these, not only metabolic disorders, such as diabetes mellitus and dyslipidemia, but also cardiovascular disorders, such as hypertension and ischemic heart diseases, have been shown to be associated with obesity. More recently, also chronic diseases in which inflammation plays a role such as osteoarthritis, rheumatoid arthritis, inflammatory bowel disease, chronic obstructive pulmonary disease, and asthma have been associated with obesity.

Omega-3 fatty acid supplementation has potential of restoring of natural balance of adipokines (leptin, adiponectin) and mild lipid-lowering action in obese patients with arterial hypertension, osteoarthritis and their combination, so, seems to be useful in therapeutic patterns for mentioned diseases. Exact mechanisms, dosage and longer duration of therapy may be promising subject for further investigation.

Omega-3-polyunsaturated fatty acids are able to inhibit partly a number of aspects of inflammation including leucocyte chemotaxis, adhesion molecule expression and leucocyte-endothelial adhesive interactions, production of eicosanoids like prostaglandins and leukotrienes from the n-6 fatty acid arachidonic acid, production of inflammatory cytokines and T cell reactivity. Mechanisms underlying the anti-inflammatory actions of n-3 fatty acids include altered cell membrane phospholipid fatty acid composition, disruption of lipid rafts, inhibition of activation of the pro-inflammatory transcription factor nuclear factor kappa B so reducing expression of inflammatory genes, activation of the anti-inflammatory transcription factor NR1C3 and binding to the G protein coupled receptor GPR120. These mechanisms are interlinked.

Osteoarthirtis, arterial hypertension and their coincidence, as proven, may have benefit from omega-3-polyunsaturated acids implication. Adipokines (leptin and adiponectin) levels are investigated and compared depending on body mass index in patients with mentioned pathology; dynamics of values investigated under influence of omega-3-polyunsaturated acids implication. Established, that omega-3 fatty acid supplementation has potential of restoring of natural balance of adipokines (leptin, adiponectin) and mild lipid-lowering action in obese patients with arterial hypertension, osteoarthritis and their combination, so, seems to be useful in therapeutic patterns for mentioned diseases. Exact mechanisms, dosage and longer duration of therapy may be promising subject for further investigation.

Recent studies have clearly shown the importance of polyunsaturated fatty acids (as essential fatty acids) and their nutritional value for human health.

The adipose tissue consists of adipocytes and the stromal vascular fraction, in which a variety of immune cells can be found. Among these, macrophages and T-cells are the most abundant. Expansion of the adipose tissue is accompanied by an increased infiltration of immune cells with a pro-inflammatory phenotype. The cross-talk between the infiltrating cells and the tissue-resident adipocytes leads to secretion of adipokines, cytokines, chemokines, and lipids with a predominant pro-inflammatory character. Moreover, the levels of various adipokines and cytokines are altered in obese individuals compared to lean ones. So it seems so that one of therapeutic strategies must be directed to normalization of not clinical values only but for correction of mentioned molecular interplay.

This cross-talk has also been shown to affect the function of adipocytes, such as lipolysis, which will most likely result in an altered concentration of circulating free fatty acids. Indeed, obese persons have higher levels of free fatty acids in plasma compared to lean persons. Whether and which of these soluble factors (adipokines, cytokines, lipids, etc.) contribute to obesity-mediated inflammatory effects in diseases is still under investigation.

Shyam Tawar, Nazymok Ye. V., Ivanushko Ya.G.

AVAILABILITY OF PREMEDICAL AID IN SOME DEVELOPING COUNTRIES

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The goal of Premedical Aid is to stabilize patients who have different types of trauma in Extreme Situations. It includes two major components: medical decision-making, and the actions necessary to prevent needless death or disability because of time-critical health problems, irrespective of the patient's age, gender, location or condition. However, not all segments of the population have access to health care (RazzakJ.A. et all, 2002). When a person arrivesat a clinic to get treatmentin developing countries, theyare not only treated, but they also contaminate the people around them. Additionally, cultural and spiritual beliefs

may lead citizens to seek traditional healing methods. Sometimes, Emergency Medical System staff are often inexperienced, overworked and have limited or no medical training. In some countries, they receive no formal training and rely only on the job experience. The minimum standards for Premedical Aid should be made clear, but it is not easy to define the Emergency Services to which everyone should have access. This matter should be discussed by health care providers, health system researchers, policy-makers, ethicists and other interested parties. In addition to supplementing the knowledge and skills of professional providers at community health centres, low income countries should consider implementing programmes for teaching the fundamentals of Premedical Aid to large numbers of volunteers. For example, initiating a few simple measures at the scene of an accident can do much good. Traumatic injury, most often from road traffic accidents, was identified as oneof the most common patient categories requiring Premedical care inlower-middle income countries. Additional efforts for trauma care improvement in both low-income and middle-income developing nations should focus on prehospital and emergency room care (Mock C.N. et all, 1998).

So, this study highlights the need for devoted international dialogues on delivery of Prehospital care. Priority should be placed on developing minimum guidelines for emergency medical care in low-income countries. Countries with well-developed Prehospital care systems can influence Emergency Medical System in these countries through training and education collaborations.

Lavriv L.P.

SURGICAL ANATOMY OF THE PAROTID GLAND

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The salivary glands comprise the parotid, the submandibular and the sublingual glands as well as small subsidiary glands scattered beneath the mucosa of the buccal cavity. The largest, the parotid gland, drains by its duct into the mouth at the level of the second upper molar tooth. Both benign (non-cancerous) and cancerous salivary gland tumors may develop anywhere in the salivary glands, but the majority of them are parotid tumors. Because of the variety of cell types, there are many different types of tumors and cancers that can develop in the parotid gland. Additionally, because there are several lymph nodes inside the parotid gland, at times skin cancers over the temple, scalp and cheek areas can spread to this area; additionally, lymphomas can occur in these lymph nodes. The salivary glands are constantly working, and can be affected by many medical conditions, medications, and even not drinking enough water. Obstruction of the ducts, which can happen because of salivary stones or narrowing of the duct from infection, can cause the saliva to back up into the gland and lead to it to swelling up as well.

In general, the facial nerve divided within the parotid region into temporofacial and cervicofacial branches with different variations and this nerve branching may add difficulty to surgery. In the parotid gland surgery, particularly during removal of deep lobe tumors, facial nerve can be injured because of many variations and anomalies. In case of injury to this nerve the unbalanced facial muscles and the inability to close the eyelids or to chew the food, may lead the patient to tremendous psychic trauma. Given its delicate nature and critical functions, the preservation of the facial nerve is one of the most important aspects of a successful parotid surgery. A knowledge of the anatomy of the seventh nerve in relationship to the parotid gland is necessary for the performance of biopsy of the gland, superficial lobectomy of benign and noninfiltrative malignant tumors, and for incision and drainage of abscess. In surgical excision of infiltrative cancer, a knowledge of the location of the deep cranial nerves and regional arterial supply is also a necessity.

In parotid gland surgery if the branching variation of the facial nerve is kept in mind, the surgeon will be safe from unpleasant surprises. For this reason, it is imperative that surgeons who are responsible for managing such surgeries should have a thorough knowledge of anatomy of parotid gland.

Lavriv L.P.

DEVELOPMENT OF THE PAROTID GLAND IN FETUSES

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The forming of the organs is a complicated process which is not completely studied nowadays. It is very important to study the structure of the organs and systems in association with the basic processes of morphogenesis, on the basis of the findings of embryogenesis. A study of the development and forming of the topography of the parotid salivary gland during the prenatal period human ontogenesis is for great importance for integral understanding of the structural – functional organization of the salivary apparatus and the oral cavity as a whole.

The study of variant anatomy and topographical and anatomical features of the human parotid gland on 20 fetuses with 130,0-375,0 mm of crown to rump length by means of fine preparation under the control of a binocular magnifier: macro- and microscopy, morphometry and 3D reconstruction.

According to the results of computer 3-D modeling of the parotid glands of the fetuses aged 6-10-month, the most practical is a 3-D description as the trilateral pyramid, which lies in the retromandibular fossa and in the lateral area of the face, turned with its base to the zygomatic arch, its vertex going downwards - to the angle of the mandible. 8-10 -month-old fetuses had some indurations in fascial cellular masses of the glandular bed, especially in the areas of close topographical and anatomical interrelations of organs and structures. Between the outer capsule of the gland, surrounding vascular, nerve branches and fascial formations of the

investigated area in 8-10 months fetuses there are tight adhesions that should be considered during the operative interventions within the parotid- masticatory area in newborn infants.

Active application of perinatal prevention of congenital defects requires up-to-date approaches and methods of embryonic growth study. Embryotopographic research, which takes into account specific and critical for some organs periods of their growth and some peculiarities of their interrelations with adjacent organs and structures, becomes especially important.

Kavun M.P.

LIVER MORPHOGENESIS IN HUMAN EMBRYOS 10.0 - 13.0 MM IN LENGTH

Department of human anatomy named after M.H.Turkevych
Bukovina State Medical University

15 preparations of human embryos 10.0 - 13.0 mm in length were studied by the methods of histology, making image reconstruction and morphometry. We have studied the development of human liver during this period of intrauterine development.

It is established that in the middle of the sixth week of intrauterine development (embryos 10.0 - 11.0 mm in length), the liver significantly increases in size. Its cells, which form bands and beams, surround sinusoids of different caliber.

Constantly multiplying mesenchymal cells, as well as newly formed vessels, penetrate between the liver beams. However, compared to the liver parenchyma, the amount of mesenchyme is small.

Certain patterns in the proliferation of liver parenchyma and formation of particles could not be determined. The structure of the liver is created due to the complex correlative relationships of blood vessels, mesenchyme, cellular bands and beams.

There are many primary blood cells at different stages of differentiation in the liver. Among them are often found mitosis. The number of definitive polychromatophilic erythroblasts has increased in the liver at this stage of development. All of the above data indicate the presence of a hematopoietic process in the liver.

At the end of the embryonic period (embryos 11.0 - 13.0 mm in length), the liver continues to grow in size. The transverse size of its embryo 13.5 mm in length is 2.3 mm. The liver occupies the cranio-ventral and middle divisions of the abdominal cavity of the embryo. The right lobe is still ahead of the growth of the left lobe of the organ.

Kavun M.P.

DEVELOPMENT OF THE LIVER OF THE HUMAN EMBRYOS 5.0 - 9.0 MM IN LENGTH

Bukovina State Medical University
Department of human anatomy named after M.H.Turkevych

We have studied the development of human liver in human embryos 5.0 - 9.0 mm in length. 15 preparations of human embryos were studied by the methods of histology, making image reconstruction and morphometry.

It is established that the embryos of 5.0 - 6.0 mm in length the primordium of the liver significantly increase in size, occupying the cranio-ventral department of the abdominal cavity. The transverse size of the liver in the embryo 6.0 mm in length is 1.35 mm.

The primordium of the liver surrounds the primordium of the duodenum and gallbladder.

In embryos 7.0 - 8.0 mm in length, the primordium of the liver significantly increases in size. It occupies the cranio-ventral part of the abdominal cavity, its transverse size in the embryo 7.5 mm in length is 1.4 mm. The right lobe of the liver is much larger than the left and reaches the posterior wall of the abdominal cavity, but is not fixed to it. The liver surrounds the primordium of the stomach on three sides.

In the right half of the liver, to the right of the umbilical vein are the primordium of the bile ducts (common hepatic and common bile ducts).

In embryos 9.0 mm in length, the liver, which is rapidly enlarging in volume, occupies not only the cranio-ventral, but also the middle part of the abdomen. The transverse size of the liver is 2.0 mm.

The right lobe increases much faster than the left and is located at a distance of 66.0 μm from the mesenchyme of the posterior abdominal wall.

The left lobe, which is significantly behind the growth of the right lobe, occupies only the ventral section of the abdomen.

Kavun M.P.

BRANCHES OF THE PORTAL VEIN OF AND BILE DUCTS IN FETUSES 4 - 5 MONTHS OF INTRAUTERINE DEVELOPMENT

Department of human anatomy named after M.H.Turkevych
Bukovina State Medical University

10 preparations of human fetuses 4 - 5 months of intrauterine development were studied by the methods of macro-, micro preparations and morphometry. We have studied branches of the portal vein of the liver and intrahepatic bile ducts in fetuses during this period.

Macroscopic examination revealed that the largest organ of the abdominal cavity in the fetuses of this age group is the liver, which almost completely

occupies its anterior-superior part. With its lateral surfaces, the liver reaches the lateral surface of the abdominal cavity, covering the anterior stomach, duodenum, transverse colon, and loops of the small intestine.

Entering the liver, the portal vein of the liver is divided into two main branches: the right and left lobal branches. The length of the left lobal branch is greater than the right (their proportion is 1: 1.6), while the diameter of the right lobal branch exceeds the diameter of the left one in the proportion 1:1.2. Then the right lobal branch of the portal hepatic vein divides into the right lateral and right paramedian branches. On the anterior surface of the right lobal branch of the portal vein of the liver lies the right hepatic duct, on the anterior surface of the left - the left hepatic duct.

During the fourth and fifth month of intrauterine development, the intrahepatic bile ducts are represented by the right and left hepatic ducts and their branches of the II and III orders.

On corrosion preparations, all intrahepatic bile ducts, except for the right and left hepatic ducts, are located on the upper surface of the branches of the portal vein of the liver.

The right and left hepatic ducts are located on the lower surface, respectively, of the right and left branches of the portal vein.

Banul B.Y.

STUDENT OLYMPIADS AS PART OF EDUCATIONAL ACTIVITIES

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Student learning needs to be intensified and improved. One of such means is to hold student olympics, which occupy a special place among the control of students' knowledge. They are held annually and are important not only for students but also for teachers.

The result of student competitions determines not only the knowledge of students, but also problems and weaknesses in the pedagogical process. Employees of the Department of Human Anatomy annually carefully prepare in advance for the olympics. The most appropriate is the use of test tasks, which in a short time allow you to control the knowledge of students from different sections of the discipline. It is also necessary to control the acquisition of practical skills by students with the help of tablets and preparations.

According to the analysis of our student olympics, many interested students take part in them. The winners are mostly students who have studied well throughout the teaching of this discipline. Several students can win one prize if well-prepared students take part in the competition. For the participants of the Olympiads, not only the direct participation in this event is positive, but also the opportunity to renew the studied material.

It is important to hold competitions and for the teaching staff, because the results of their conduct, you can identify those issues that are poorly absorbed by students and then pay more attention to them, explain the material in more detail. The topics on which the most mistakes were made should be submitted for additional consultations.

So, one of the ways to improve students knowledge is student olimpiads

Banul B.Y.

THE ROLE OF LECTURES IN THE THEORETICAL TRAINING OF STUDENTS

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The level of teaching material should ensure that students master large amounts of information per unit time and productive use of this information in the learning process.

The leading place in the theoretical preparation of students is occupied by the lecture. It equips students with knowledge of the methodological foundations of a particular science, introduces them to the main stages of formation and development of theoretical concepts. Only at the lecture the student can form a clear idea of the current state of a problem. The lecture cannot be replaced by a practical lesson, which is conducted at a high level and involves a survey of students. Lectures form the professional worldview of the future doctor, expand, deepen and supplement knowledge in a particular subject. They play an important role in improving the quality of the educational process.

Lectures that deal with complex material that is difficult for students to master has a particular importance. To do this, slides, presentations, diagrams, tablets, tables are demonstrated, which contribute to a deeper disclosure of the topic and allow more accessible explanation of the material.

A necessary condition for optimizing learning is the structural and logical modeling of the lecture course with regard to modern areas. Review, analytical and generalized lectures are needed for better coverage of issues. They must be trained to make decisions in specific situations, to ensure mobility and adaptation to rapid changes in production and social requirements.

So , it is necessary to reform lecture teaching, increase the professional and pedagogical skills of lecturers, as well as the use of advanced information technologies.

Banul B.Y.

FEATURES OF THE ORGANIZATION OF INDEPENDENT WORK OF STUDENTS

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In institution of higher education , independent work of students is an important component of the educational process. It forms theoretical knowledge, practical skills, helps to master additional professional information, and also teaches to work independently with literature. All this contributes to the formation of the future specialist, expands the worldview of the future doctor, teaches clinical thinking, and helps to further improve knowledge.

One of the main tasks of high institution is to teach students to learn independently. This is a way to prepare for lifelong learning. During lectures and practical classes, it is impossible to analyze in detail all the material provided by the curriculum in a particular discipline. Therefore, some topics are submitted for independent study. However, it should be borne in mind that it is difficult for a student to determine the main thing within this discipline. Therefore, it is necessary to properly organize the independent work of students, to prepare students for its successful implementation.

It is important to provide methodological support for self-training, it is necessary to make a thematic plan, which should be professionally oriented, indicate the purpose, educational objectives of the work, the end result. Constantly manage and control the process of self-education. Of particular importance is computer control of knowledge. It should consist of both test tasks and clinical tasks. It is necessary to use the main and additional literature, to provide advice on issues that arise. For self-study to be effective, it is necessary to evaluate its results objectively and in a timely manner.

Particular attention should be paid to the constant maintenance of motivation to learn, students interest in mastering certain material.

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HUMORAL IMMUNITY IN CHILDREN WITH TOXOCARIASIS

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Toxocariasis is a parasitic disease (tissue helminthiasis) caused by the migration of dog roundworm Ascaridate larvae (Toxocara canis) in various organs and tissues, and is characterized by a long recurrent course and multiple organ lesions of an allergic nature. According to foreign sources, the incidence of toxocariasis has increased by 300% over the past 50 years.

Based on the fact that the degree of pathological changes in the host depends on the nature of the formation of the immune response to invasion, a study was made of the state of cellular and humoral immunity in 40 children from 1 to 14 years old with toxocariasis and in 25 practically healthy children of the corresponding age.

The most independent factors allowing to assess the functional activity of the B-cell immunity are indicators of the content of immunoglobulins of different classes, namely IgA, IgG, IgM, in the blood serum of the examined children.

The study of humoral immunity revealed that the content of immunoglobulins (Ig) of the main three classes (A, M, G) in patients with toxocariasis did not differ from the average values of the control group. However, the number of total immunoglobulins and the percentage of each of them significantly differed from the control. This proves that in patients with toxocariasis there is a redistribution of the percentage of major serum immunoglobulins, which is one of the signs of immunosuppression. This is confirmed by the results of determining the ratio of IgG / IgA, as well as low compared with the control, the humoral immunity coefficient, HIC.

In order to comprehensively assess the state of humoral immunity in patients with toxocariasis, taking into account the frequency of development of allergic reactions in them, a study was made of the concentration of circulating immune complexes (CIC), which are a combination of antibodies of classes IgM and IgG with antigen and complement. The formation of the CIC is a physiological reaction of the body; normally they are destroyed by phagocytes. Immune complexes become pathogenic with various defects of phagocytosis. The CIC indices were within normal ranges in the examined patients with toxocariasis. However, when analyzing each indicator, it was found that only in half of the patients the CIC content in the blood was within normal limits, and in 37.8% of cases exceeded the norm.

Thus, in children with toxocariasis, there is a progression in the development of an imbalance of humoral immunity indicators, quantitative and functional changes in lymphocytes are detected, disturbances in the normal ratios of cell subpopulations, dysimmunoglobulinemia occur, which is direct evidence of varying degrees of impaired immunological reactivity and a decrease in the body resistance to toxocariasis.

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THE USING OF 3D MODELS FOR LEARNING ANATOMY

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Higher State Educational Establishment of Ukraine «Bukovinian State Medical University», Chernivtsi city

Human anatomy is one of the most important and at the same time the most difficult disciplines in higher medical institutions. The volume and complexity of information about the structure and functioning of the human body are increasing,

while methods of study (the main one based on the use of corpse material) have remained virtually unchanged for centuries. The disadvantages of this approach are the lack of "material", difficulties in its processing, and storage.

Today, the one way to facilitate the understanding of human anatomy by medical students is using 3D models, which also contribute to the development of new surgical treatments.

Anatomical 3D models can be manufactured in a short time without costing much, and, unlike corpses, do not require special treatment and special storage conditions. The human 3D layout does not contain human tissue, and it is reproduced to the finest detail of the extremities, chest, abdomen, head and neck.

Using a computer mouse or a touch screen, a three-dimensional model of any anatomical structure can be rotated in any direction, zooming in and out hundreds of times without losing image resolution. The model allows us to look inside the human body and see organs, muscles, tendons, ligaments and blood vessels. Three-dimensional images help to explore not only complex anatomical structures but also such dynamic processes as, for example, muscle contraction, which gives movement to the human body. One of the reasons why 3D models go beyond a two-dimensional learning experience is that movement occurs in a three-dimensional plane.

Most of the developers of 3D models of the human body offer the user a complete list of organs belonging to the selected system, a brief description of each, which contains data on topography, skeletal topography and syntropy, external and internal structure, functioning. We can use the link to go to theoretical information on any topic without spending time and effort to turn half of the textbook or in a general search for another.

Having analyzed the above, we can conclude that one of the most optimal ways of studying human anatomy in the present conditions is the use of 3D models.

Tovkach Y.V. , Fedoruk V.O.

FEATURES OF MICROANATOMY OF INJURIES OF THE UPPER JAW IN RATS

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The share of maxillofacial lesions is 21-40%, which indicates further study of this problem. While electron microscopic study in the ultrastructural organization osteoblasts were observed degenerative changes of cell membrane destruction and internal cell structures. After 14 days after injury jaw rats electron microscopic study of the ultrastructure of osteoblasts kept condensation of chromatin in the nucleus and its enlightenment matrix. The nuclear membrane had foci of destruction. Mitochondria had a clearly contoured outer membrane and cristae. The mitochondrial matrix acquired a finely granular structure. However, there are often foci of destruction of both membranes and crystals.

The cisterns of the granular endoplasmic reticulum are dilated, their contents are electronically transparent from the cell of lysis of its membranes.

The number of ribosomes bound to the membranes of the endoplasmic reticulum, as well as ribosomes and polysomes, which are freely located in the cytoplasm of cells, is much larger than in the previous observation period. In the cytoplasm of osteoblasts there is hyperplasia of the granular endoplasmic reticulum.

Numerous ribosomes with a typical structure were localized on the membranes of the granular endoplasmic reticulum. Compared to the previous term, the number of free ribosomes and polysomes increases

Tovkach Yu.V.

CHARACTERISTICS OF THE MAXILLOFACIAL AREA

VDNZ of Ukraine "Bukovinian State Medical University"

Fractures of the bones of the skull are often complicated by damage to the internal organs. Types of displacement of the chips are related to the mechanism of injury and muscle contraction. Gunfire fractures are characterized by significant destruction of bone and tissue surrounding it. Muscle gaps are often accompanied by damage to large vessels and nerves. These fractures are mostly multicellular, often causing significant bone defects. The number of fractures are single and multiple. To solve the main problems in treating patients with fractures of the maxillofacial area, it is necessary to carry out the following main measures: repositioning – comparing or moving the chips to the correct position; immobilization - fixing the chips in the correct position for the period necessary for their consolidation (consolidation) with the help of conservative and operational methods; drug treatment is aimed at preventing complications during treatment; Physical methods of treatment - to improve tissue trophism and prevent complications. There are two types of regeneration: physiological and reparative. Physiological regeneration refers to the restoration of tissue structures of a healthy organism as they age and die. A clear example of this is the skin - a permanent detachment and removal of the epidermis. Physiological regeneration is a constant and very slow process that does not cause a stressful situation in the body. Reparative regeneration is the recovery of damaged or lost tissue. The degree and quality of the regenerative process in different tissues are different. The higher the di-fermentation of the tissue (nervous, muscular), the less it has the ability to restore its structure. Therefore, anatomical repair of the damaged area occurs due to replacement of the defect with the connective tissue - a scar. Damaged bone tissue is able to pass through a number of stages of the reparative process and relate its anatomical form, histological structure and functional suitability.

Tovkach Yu.V.

ATROPHY OF THE BONE TISSUE

VDNZ of Ukraine "Bukovinian State Medical University"

But there are occasions when young people with the help of which young jaw atrophy becomes noticeable in connection with an early dropout of teeth and their long absence in the mouth. External signs of bone destruction can be pronounced. The bone tissue of any tooth can undergo dystrophic processes. Clinically, it can not manifest itself. In some cases, the presence of an atrophy of the jaw appears with any doctor's interventions conducted directly in the oral cavity.

In patients there are wrinkles in the area of missing teeth, there is a tingling of cheeks. This is because the facial muscles that attach directly to the bones are also exposed to adverse factors in the oral cavity. Many patients complain of difficult chewing food. Some have a tongue change. Often, at the atrophy of the jaw there is an outcrop of the necks and distortion of the remaining teeth, which, in turn, can lead to the development of severe periodontal disease.

You can restore the required bone tissue both upper and lower jaw in various ways. For these purposes, specific preparations of phosphorus and calcium can be used, as well as specially prepared and prepared bones of some animals or their own resources. In this case, bone tissue in most cases is taken from the area of the chin of the patient, where after some time the most complete regeneration of the structure of the jaw bone occurs. The new bone is formed within six months after the performed osteoplasty. Despite the length of the process, osteoplasty is popular among patients due to the small number of side effects and its high performance.

Sapunkov O.D., Kosakovskyi A.L., Sapunkova S.S.

DIGITAL TECHNOLOGIES IN THE STUDY OF OTOLARINGOLOGY

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Modern medicine requires the training of physicians to integrate new technologies into everyday practice. Changes in public expectations also have a great impact on medical education. They put patient safety first and raise the ethical issues of education in living patients. Therefore, new forms of education are used today. They are aimed at self-acquisition of knowledge using digital technologies.

The essence of this is to acquire basic knowledge, improve the decision-making process, increase perception variations, train for rare or critical events, improve psychomotor skills and team training. The essence of the new era of technological tools in education can be represented by the expression «Anyone can learn anything from anyone at any time».

We see several ways to improve the study of otolaryngology with the help of digital technologies. Computer training is one of them. Of great importance is the

use of three-dimensional computer graphics in the study of the anatomy of the ear, throat and nose. Of great interest is the use of medical mobile phone programs to obtain patient data and prescribe rational treatment. We see the growing role of simulation teaching methods in the training of students, interns, practitioners. These methods improve the coordination of eyes and hands, reduce the reflex time. No less important is the method of modeling. It allows you to simulate real situations that otolaryngologists may encounter in their practice.

Digital teaching and learning technologies need to be used wherever they have real advantages over other learning scenarios. But at the same time it is necessary to use the opportunity to learn from leading specialists. The task of medical schools is to combine traditional education with new technologies.

Sapunkov O.D., Kosakovskyi A.L., Sapunkova S.S.

DIMENSIONS OF TYMPANIC CAVITY STRUCTURES OF THE HUMAN FETUSES NINE MONTHS OF THE DEVELOPMENT

Higher State Educational Institution of Ukraine «Bukovinian State Medical University», Chernivtsi, Ukraine

Introduction. The influence of a number of adverse factors lead to a significant increase in the percentage of non-pregnancy in recent decades.

For the nurse of premature infants of all ages, currently the doctors of various specialties are ingaged, including otolaryngologists. As a result, the prevention of disability and the timely rehabilitation of such children are becoming an important problem for them.

That’s why the study of embryological aspects of the development of the middle ear, its anatomy and topographic anatomy in the fetuses remains actual.

The aim of the study. To study of the topographic anatomical features of the tympanic cavity in the fetuses of 9 months of fetal development and to substantiate the morphological interconnection of its forming processes with adjacent structures.

Materials and methods. The study was performed on 7 human fetuses of 311.0-345.0 mm of parietal-coccygeal length (PCL).

In the course of the study the following methods were used: fine anatomization of the middle ear and adjacent areas under the control of binocular enlarging lens; macro- and microscopy; morphometry; photomacrography of the “OLIMPUS μ 1000 All-weather 10.0 Mpix” digital camera.

Result and discussion. The canal of the internal carotid artery passes at an angle of 55 ° to the base of the skull and lies on the inferior surface of the temporal bone, which during this period of the development is in the form of a triangular pyramid. The diameter of the canal of the internal carotid artery is 2,56 ± 0,04 mm. The width of the jugular fossa - 7,25 ± 0,18 mm, length - 9,50 ± 0,24 mm. Dimensions of the tympanic cavity: length from below - 7,60 ± 0,19 mm, length at the promontory level - 9,75 ± 0,18 mm, length from above - 7,40 ± 0,23 mm. Vertical dimensions of the tympanic cavity: in front - 8,15 ± 0,19 mm, opposite the

promontory - 9,68 ± 0,34 mm, behind - 7,15 ± 0,17 mm. The width of the tympanic cavity: in the inferior anterior portion - 2,22 ± 0,05 mm, in the inferior posterior portion - 5,22 ± 0,12 mm, in the anterior superior portion - 3,85 ± 0,15 mm, in the posterior superior portion - 4,82 ± 0,19 mm. The thickness of the walls of the tympanic cavity is: the superior – 0,99 ± 0,03 mm, the superior – 0,62 ± 0,03 mm, the inferior – 0,72 ± 0,02 mm. The long diameter of the annulus tympanicus with tympanic membrane is 8,12 ± 0,19 mm, the short diameter is 7,25 ± 0,23 mm.

Discussion. During this period the formation of the inferior and anterior wall of the tympanic cavity continues. The internal carotid artery and jugular bulb participate in this process. Tympanic holes of the auditory tube continue to move from the bottom upwards tympanic cavity to the upwards.

Conclusions.

1. The inferior and anterior walls of the tympanic cavity, epitympanum continue to form from the fetuses of this age.
2. The tympanic openings of the auditory tubes begin to move from the inferior part of the tympanum to the upwards.
3. The identified features are important in improving the technology and the adequacy of surgical treatment and manipulations in premature babies.

Sapunkov O.D., Kosakovskyi A.L., Sapunkova S.S.

SIMULATION TECHNOLOGIES IN OTOLARYNGOLOGY

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Modern high-tech medicine requires appropriate training of doctors. Training a otolaryngologist requires the development of a large number of practical skills. They are traditionally mastered on real patients, laboratory animals and cadaveric material. This has obvious disadvantages. When training on patients - medical errors, moral and legal problems. When training on cadaveric material - the risk of infection, lack of the necessary pathology, organizational, ethical and legal problems. When training in laboratory animals - the limitations of biomedical ethics, financial and organizational problems.

An alternative way to obtain and practice specific manual skills is to use simulators. The lack of in-line financial costs, the possibility of re-performing the manipulations and an objective assessment of the acquired skills, the lack of the need for the constant presence of a teacher are their undoubted advantage. Many doctors have improved their training using the achievements of modern technology. Today we use anatomical models, phantoms of organs and organocomplexes, virtual simulators. These include combined simulators with augmented reality, virtual simulators and virtual simulators with tactile sensitivity. The price of such devices can reach hundreds of thousands of dollars, but the economic efficiency and feasibility of their use are reliably proven.

Simulators allow you to train practical skills using a real set of surgical instruments, objectively evaluate them, conduct reusable realistic training, and work with individual patient data. All this allows you to reduce the number of errors and reduce time during real operations.

Based on this, we can conclude that modern high-tech simulation training technologies make it possible to obtain professional knowledge and skills to provide quality medical care. They have great potential and should be used wherever they have real benefits.

Sapunkov O.D., Kosakovskyi A.L., Sapunkova S.S.

THICKNESS OF THE LOWER WALL OF TYMPANIC CAVITY IN PREMATURE INFANTS

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Introduction. At this time, the problem of the pathology of the middle ear in newborns and infants is very topical due to the high frequency of their detection of otitis media. It connected with certain anatomical characteristics of the structure of the nasal cavity and the middle ear, and the presence of amniotic fluid in the middle ear. Most authors study ear pathology in children in their early years. Only a few researchers study ear diseases in premature babies. It should be noted that otitis media in premature infants is quite difficult and in the future it is necessary to conduct surgical intervention - miringoplasty or shunting of the tympanic cavity. Modern scientific achievements have considerably expanded the practical possibilities of endoscopic operations with diseases of the ear. The introduction of them contributed to the development of the priority direction - endoscopic operations, which have several advantages over traditional otomicrosurgical operations. That’s why the study of embryological aspects of the development of the middle ear, its anatomy and topographic anatomy in the fetuses, remains very important.

The aim of the study. To study the peculiarities of the development of the inferior wall of the tympanic cavity in the early period of ontogenesis.

Materials and methods. The study was carried out on corpses of 58 fetuses of 271,0-375,0 mm of parietal-coccygeal length (PCL) and 11 newborns by methods of ordinary and fine preparation under the control of binocular enlarging lens, macromyscope and morphometry, photomacrography of the “OLIMPUS μ 1000 Allweather 10.0 Mpix” digital camera.

Result. We have found out that the inferior wall of the tympanic cavity limits the jugular fossa and begins to form on the 8th month of intrauterine development as an processus of the petrosal part of the temporal bone. The development of internal jugular vein contributes to the formation of this wall. Within process of increasing of its diameter the lower edge of the annulus tympanicus begins to depart from the promontory and the tilt angle of the upper edge increases. As a result the annulus tympanicus moves from a horizontal position in a more inclined.

The thickness of the inferior wall of the tympanic cavity during this period is 0,63±0,03 mm.

During the ninth month of intrauterine development that the tympanic cavity becomes more irregular in shape, numerous cells appear on its walls. The inferior wall of the tympanic cavity increases its size and the lower edge of the annulus tympanicus departs from the promontory even more, and the angle of inclination of the upper edge increases. As a result the tympanic cavity from the almost horizontal position moves in the inclined. The thickness of the inferior wall of it is 0,72±0,02 mm.

During the tenth month of intrauterine development the formation of the inferior wall of the tympanic cavity continues as a result of the increase of the diameter of the internal jugular vein. Its thickness is 0,87±0,04 mm.

The tympanic cavity of the newborns has the form an irregular cube with rounded edges that is filled with embryonic tissue. The inferior wall of the tympanic cavity is a bone plate under which the bulb of the jugular vein is located. Its thickness is small and is 1,06 ± 0,03 mm.

Discussion. The results of this study will contribute to the rational choice of methods for surgical interventions in the middle ear of newborns and babies in the first months of life.

Conclusions. 1. The thickness of the inferior wall of the tympanic cavity is 1.06 ± 0.03 mm of newborns, which should be taken into account when performing manipulations and surgical interventions on the middle ear. 2. The thickness of this wall of newborns does not differ from the thickness of it of children of 13 years. 3. The thickness of this wall of the fetuses of the 8th - 10th months is thinner than of newborns.

Ibragimova L.S.

PROBLEMS OF FUTURE PHYSICAL EDUCATION TEACHERS

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The regularities of formation of professional skills of future physical education teachers, their connection with the peculiarities of means, methods and organizational forms of teaching in pedagogical educational institutions, and pedagogical conditions that determine the effectiveness of the educational process remain insufficiently studied. The problem of ensuring the connection of education in educational institutions with future professional activity, including in the field of formation of professional skills of future physical education teachers, has not been fully resolved. Based on the above, we can conclude that the professional education of future teachers of physical education should provide their high professionalism, conditions for self-realization, flexibility, variability of learning.

Improving the professional training of future physical education teachers at the present stage requires more effective ways of organizing the educational and

pedagogical process, raising it to the modern technological level using an innovative approach to learning.

Therefore, taking into account the above and the results of practical work, professional education of physical culture specialists should be based on the methodological principles of advanced ideas of domestic and foreign scientists, the Constitution of Ukraine, legal documents of Ukraine on physical culture. Work on improving the professional skills of future physical education teachers made it possible to establish that the introduction of innovative technologies is preceded by a conscious and well-thought-out program of action for the organization of educational process and vocational training, which became the basis for further development of our new technological models.

Ibragimova L.S.

FEATURES OF SPEED AND FORCE TRAINING OF FOOTBALL PLAYERS OF 17-18 YEARS IN HIGHER EDUCATION INSTITUTIONS

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The rapid development of women's football necessitates the development of scientific bases for training football players, who on the one hand can rely on the experience gained in men's football, on the other hand, must take into account the specific physiological reactions of women to training and competitive loads.

Speed and strength training as a factor in the formation of sportsmanship. The effectiveness of sports movements associated with the active interaction of athletes with the objects of the external environment is determined mainly by the nature of the forces developing in this case, as well as the direction and speed of movement. In particular, when performing various techniques in football, associated with overcoming significant resistance of the opponent, the improvement of the working effect is mainly due to the increase in the value of the maximum effort in a certain range of time

As practice shows, speed indicators begin to grow actively from 15-16 years, while the indicators of maximum strength are approaching the level of adults at 17-18 years of age. Therefore, the age of 17-18 years is favorable for the development of speed and strength qualities in football players.

The results of the analysis of various aspects of strength and special speed and strength training in football allow us to identify the following important factors in the structure of physical fitness of athletes:

1) special physical fitness on the basis of a high level of development of speed and power qualities;

2) strength training taking into account anthropometric indicators;

3) strength endurance on the basis of technical skill;

4) speed abilities.

It should be borne in mind that the strength of some muscles should be developed and improved mainly in the direction of speed and force (leg muscles), while other muscles - mainly in the direction of the actual force (back muscles).

Ibragimova L.S.

NEW APPROACHES IN THE ORGANIZATION OF TRAININGS

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Improving the system of training athletes is impossible without finding new approaches and methodological solutions in the organization of training, as well as the use of modern achievements of sports science in the practical work of coaches. The analysis of works of domestic and foreign experts convincingly proves that for high mastering of technical - tactical skill and effective competitive activity in football the high level of speed and power qualities is necessary.

In the process of strength training it is necessary to solve the following tasks:

a) to ensure the general development of the main muscle groups in order to create the conditions for specific manifestations of strength in the chosen sport and the successful mastering of general-preparatory, special-preparatory and competitive exercises (general strength training);

b) to ensure the development of specific for the selected sport physical abilities (strength, speed-strength, strength endurance, etc.) necessary for the successful assimilation of motor actions, which is the basis of competitive activity in this sport.

Thus, the work on improving new approaches in the organization of training of future physical education teachers made it possible to establish that the introduction of innovative technologies is preceded by a conscious and well-thought-out program of action.

Ibragimova L.S.

ATROPHY OF THE BONE TISSUE OF THE JAW IS ITS RECOVERY

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The bone tissue of any tooth can undergo dystrophic processes. Clinically, it can not manifest itself. In some cases, the presence of an atrophy of the jaw appears with any doctor's interventions conducted directly in the oral cavity.

But there are occasions when young people with the help of which young jaw atrophy becomes noticeable in connection with an early dropout of teeth and their long absence in the mouth. External signs of bone destruction can be pronounced. In patients there are wrinkles in the area of missing teeth, there is a tingling of cheeks. This is because the facial muscles that attach directly to the bones are also

exposed to adverse factors in the oral cavity. Many patients complain of difficult chewing food. Some have a tongue change. Often, at the atrophy of the jaw there is an outcrop of the necks and distortion of the remaining teeth, which, in turn, can lead to the development of severe periodontal disease.

You can restore the required bone tissue both upper and lower jaw in various ways. For these purposes, specific preparations of phosphorus and calcium can be used, as well as specially prepared and prepared bones of some animals or their own resources. In this case, bone tissue in most cases is taken from the area of the chin of the patient, where after some time the most complete regeneration of the structure of the jaw bone occurs. The new bone is formed within six months after the performed osteoplasty. Despite the length of the process, osteoplasty is popular among patients due to the small number of side effects and its high performance.

Banul B.Y., Yemelyanenko N.R.

FEATURES OF THE STRUCTURE OF THE MESENTERY AND THE FIMBRIAE OF THE RIGHT UTERINE TUBE AT THE END OF THE FETAL PERIOD OF HUMAN ONTOGENESIS

In fetuses 190,0-230,0 mm the PCL of the uterine tubes extends from the beginning of the infundibulum to its proper ovarian ligament, formed by two leaves of the peritoneum. The tube of the fimbriae are weakly expressed, defined in the form of lamellar process. In fetuses, 270.0-310.0 mm, the PCL of the mesentery is formed by two leaves of the peritoneum, one of which without distinct limits passes into the parietal peritoneum, which covers the psoas major muscle and adjacent structures (femoral nerve, genitofemoral nerve, external iliac vessels), and the upper leaf of the mesentery is limited by the suspensory and the proper ovarian ligaments. The tubular margin of the mesentery is longer than the ovary, which causes distinct limit at its specified level. The tube fimbriae are well developed in the form of numerous lamellar processes adjacent to the anterior surface of the iliac muscle and femoral nerve. In fetuses 311,0-345,0 PCL of the mesentery of the tube without distinct limits passes into the uterine mesentery. The tube fimbriae are well developed, in the form of filiform and lamellar processes. At the point of departure of the fimbriae is determined by the narrowing of the infundibulum. In the fetus 345.0 mm PCL of the tube mesentery is separated from the uterine mesentery by its proper ovarian ligament. The tube of the fimbriae are expressed distinctly and presented as ciliary and lamellar processes , 2.1-2.3 mm high.

In the fetus, 346.0-375.0 mm PCL of the tube mesentery is separated from the ovarian by the uterine mesentery. Fimbriae of the tube surround the abdominal ostium of the uterine tube.

Banul B.Y., Yemelyanenko N.R .

FEATURES OF THE STRUCTURE OF SOME PARTS OF THE UTERINE TUBES AT THE END OF THE FETAL PERIOD OF HUMAN ONTOGENESIS

In fetuses of 190.0-230.0 mm PCL, the length of the ampulla of the right uterine tube is 10.0 ± 0.3 mm, the isthmus is 5.7 ± 0.1 mm, the thickness of the ampulla is 4.3 ± 0.1 mm, the thickness is the isthmus is 2.3 ± 0.05 mm. The tube ampulla is elongated and circular. The length of the ampulla of the left uterine tube is 9.0 ± 0.1 mm, the isthmus is 3.8 ± 0.1 mm, the thickness of the ampulla is -4.1 ± 0.1 mm, the thickness of the isthmus is 2.2 ± 0.1 mm. The isthmus of the tube is placed horizontally, the ampulla - obliquely.

In fetuses 270,0-310,0 mm PCL the length of the ampulla of the right uterine tube - 16,5 ± 0,3 mm, the isthmus - 5,6 ± 0,1 mm, the thickness of the ampulla - 4,5 ± 0,1 mm, the thickness the isthmus is 2.4 ± 0.1 mm. The length of the ampulla of the left uterine tube is 8.9 ± 0.1 mm, the isthmus is 6.1 ± 0.1 mm, the thickness of the ampulla is 4.9 ± 0.1 mm, the thickness of the isthmus is 2.2 ± 0.1 mm.

In fetuses 311,0-345,0 PCL the length of the ampulla of the right uterine tube is 16.5 ± 0.3 mm, the isthmus is 5.6 ± 0.1 mm, the thickness of the ampulla is 4.5 ± 0.1 mm, the thickness of the isthmus - 2,4 ± 0,1 mm. The length of the ampulla of the left uterine tube is 12.4 ± 0.5 mm, the isthmus is 5.2 ± 0.1 mm, the thickness of the ampulla is 4.6 ± 0.1, the thickness of the isthmus is 2.2 ± 0.1 mm. In fetuses of 345.0 mm PCL, the length of the ampulla of the right uterine tube is 19.8 ± 0.3mm, the isthmus is 6.2 ± 0.1mm, the thickness of the ampulla is 3.4 ± 0.1mm, the thickness of the isthmus is 3.1 ± 0 , 1mm. The isthmus of the tube is directed horizontally, the ampulla in the form of the letter "C". The length of the ampulla of the left uterine tube is 22.5 ± 0.5mm, the isthmus is 1.8 ± 0.1mm, the thickness of the ampulla is 3.4 ± 0.1mm, the thickness of the isthmus is 3.1 ± 0.1mm. The isthmus of the tube is directed vertically. The tube ampoule is presented in the form of two loops directed obliquely up.

Yemelyanenko N. R., Banul B.U.

REHABILITATION OF PATIENTS WITH THYROTOXICOSIS

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By WHO`s definition, rehabilitation is the restoration of the health of patients with disabilities to achieve full value in the physical, mental and social spheres.

Thyrotoxicosis is a common endocrinological disease that leads to disability.

The rehabilitation period from thyrotoxicosis can be physiological and pathological. In the majority of patients normalization of functions of a thyroid

gland is found. This period lasts about two years and complications do not develop.

An endocrinologist within 3 - 6 months, one and two years after treatment observe patients treated for thyrotoxicosis. If after two years there are no complications, then the patient can be removed from the dispensary.

During the pathological period of rehabilitation, the normalization of hormone-exchange disorders is not uniform and there are various pathological disorders: hyperaldosteronism, glucocorticoid insufficiency, hypernatremia, hypokalemia/hypercholesterolemia.

Besides, the titer of autoimmune antibodies to thyroid tissue may increase in some patients. These disorders form such complications, thyrotoxicosis.

In patients treated for thyrotoxicosis, during rehabilitation, the doctor often finds thyrotoxic encephalopathy in the form of anisoreflexia, tremor of the eyelids and fingers of the outstretched hands, the phenomena of static sensory ataxia, positive reflexes of oral automatism.

The complex of treatment includes desensitizing drugs, glucocorticoids, dehydrotomy preparations, vitamin therapy, treatment course 3 - 4 times a year.

The main condition for reducing the complications of thyrotoxicosis is early subtotal thyroid resection.

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BLOOD SUPPLY TO THE NASAL SEPTUM IN THE AGED PEOPLE

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The median branch of the lattice artery horizontally goes to the nasal septum (at the same time at the right angle intersects the trunks of olfactory nerves), and then has a descending direction.

In the nasal septum, the vessels divide into 5-8 branches of the third order, which diverge fan-shaped. The latter divide into branches of the following order. Their numerical stems are found in the mucous membrane of the nasal septum. The wedge-palatine artery enters through the wedge-palatine opening into the posterior portion of the nasal cavity. At a distance of 12.0-16.0 mm in front of the wedge-palatine opening, the latter gives 2-4 major branches to the lateral wall of the nose and one, larger, to the nasal septum - posterior artery of the nasal septum.

The posterior artery of the nasal septum on all preparations has a horizontal direction, in the posterior part of the nasal septum is Dichotomously divided into branches of the second order: upper and lower. The upper one runs anteriorly, divided into tertiary branches that anastomose with the posterior lattice arteries. The lower one is closer to the lower edge of the nasal septum. On its way, it gives the branches of the third order, which anastomose each other and form loops of

different shapes and sizes. Besides, the above branches attach numerous thin branches to the epithelial lining. In the latter, they form a thick vascular mesh.

The highest concentration of the mesh of the arterial vessels on the investigated drugs is in the anteroposterior part of the nasal septum.

Vlasova O.V.

INFLUENCE OF THE CONTENT OF ULTRAMAL PARTICLES IN ATMOSPHERIC AIR ON THE COURSE OF NEONATAL SEPSIS

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Introduction. The effect of low-intensity xenobiotics due to bioaccumulation in the mother's tissues and their release into the bloodstream during pregnancy can have a pathogenic effect on the fetus, especially in sensitive periods of its development. Therefore, the aim of the study was to evaluate the effect of the content of ultrafine particles(UFPs) in the air during fetal development of newborns with sepsis and to analyze its key indicators.

Materials and methods. For analysis, selected indicators of ultrafine particles with a size of 10-20 nm, which when inhaled by pregnant women are able to penetrate into its bloodstream and, accordingly, into the circulatory system of the fetus. Two clinical observation groups were formed. The first group was formed by 17 patients with neonatal sepsis in which in one of these periods the integrated index of UFPs in the air exceeded 1.0. The second group included 35 newborns with sepsis in which in one of these periods the UFPs content in the atmospheric period was less than 1.0.

Results. In children of group I, there is a certain imbalance of markers of the systemic inflammatory response of the body to infection in the form of a significant decrease in anti-inflammatory IL-10, as well as increased serum presepsin. Thus, in group I the content of presepsin was 907.1 ± 198.2 pg / ml, and in the comparison group 672.6 ± 152.4 pg / ml ($p > 0.05$). The content in the serum of immunoglobulins A, G, M in the subgroups of comparison did not differ significantly.

Conclusion. The content in the air of ultrafine particles with a size of 10-20 nm during fetal development does not significantly affect the gestational age, the general nature of the intensity of sepsis therapy and the duration of its treatment in the hospital. A characteristic feature of patients in the main group can be considered a tendency to a higher level of serum presepsin at low levels of anti-inflammatory interleukin -10.

Vlasova K.V. Bulyk R.Y.

CHANGING OF MELATONIN RECEPTORS DENSITY IN SUPRAOPTICAL NUCLEI UNDER STRESS FACTORS

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Keeping to physiologicaly characteristic lifestyle is especially important for human safety and productivity.

The aim of the study was to determine the influence of stress on the optical density of melatonin receptor 1A (M1A) in neurocytes supraoptic nuclei (SON) of the hypothalamus.

Sexually mature males of nonlinear albino rats were divided into three series,and biomaterial sampling was carried out at 2 PM and 2 AM in each of them on the eighth day of the experiment. To determine the optical density of melatonin receptors 1A, specific polyclonal antibodies produced by Abcam (UK) and streptavidinbiotin visualization system LSAB2 (USA).

The indices of optical density of specific M1A neurocytes of SON staining obtained in the intact group (at 02.00 AM- 0,488 ± 0,0024, at 02.00 P.M. - 0,464 ± 0,0023, p = 0.002) and in animals subjected to immobilization (at 02.00 AM-0,295 ± 0, 0019, at 02.00 P.M.- 0,286 ± 0,0018, p = 0,012) had a probable value and were characterized by a clear diurnal periodicity. In the group of animals with pineal gland hypofunction modulation (at 02.00 A.M.- 0,216 ± 0,0017, at 02.00 P.M. - 0,214 ± 0,0021, p> 0,05) the results of optical density of specific M1A neurocytes of SON staining are not probable, indicating the existing primary signs of cellular disfunctions

Saving or restoring the inherent biorhythm is extremely important as changing the functioning of the hypothalamus SON neurocytes is likely to have significant consequences associated with an imbalance of water-salt metabolism.

CONTENT

Natural Science Readings

abstracts book