

МІНІСТЕРСТВО ОСВІТИ ТА НАУКИ УКРАЇНИ
СУМСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ
МЕДИЧНИЙ ІНСТИТУТ



АКТУАЛЬНІ ПИТАННЯ
ТЕОРЕТИЧНОЇ ТА КЛІНІЧНОЇ МЕДИЦИНИ
Topical Issues of Theoretical and Clinical Medicine

ЗБІРНИК ТЕЗ ДОПОВІДЕЙ
V Міжнародної науково-практичної конференції студентів та молодих вчених
(м. Суми, 20-21 квітня 2017 року)

Суми
Сумський державний університет
2017

food it was used boiled desalted feed. To prevent a physiological support of water homeostasis and the achievement of the required degree of hydration rats were injected with - "Minirin". Control animals were injected with "Minirin" twice a day. During the experiment these animals received normal drinking water and food within the daily physiological needs.

Results: In experimental animals we observed uneven expansion chambers of the heart, namely RV cavity rapidly expands and ASRV is larger than the control on 29.28% ($p < 0.0001$), while ASLV changes not significant. As a result, PI is decreased on 17.24 % in comparison with the control ($p < 0.0001$). Thus, the characteristic feature of changes of organometric indicators of rat's heart is uneven mass increase and expansion of ventricular's chamber with hypertrophy and RV dilatation.

Conclusions: Dynamics of cardiometric parameters in severe degree of water overload is characterized by a disproportionate increase in mass of the heart chambers and extended their cavities. The most significant changes we observed in the right ventricle: MRV increases on 48.13% ($p < 0.0001$), ASRV is larger than the control on 29.28% ($p < 0.0001$). Under the hypoosmolar overhydration we determined thickening of the heart's wall, swelling of muscle fibers with strengthening of their cross striation and their local absence, decreasing number of vessels with violations of blood rheology, increase of collagen in the stroma.

FEATURES OF VARIANTS OF THE STRUCTURE OF THE ARTERIAL BED

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Introduction. Intraspecific features of topography and a branching of arteries pelvic to a belt and a free back extremity are important for experimenters, especially those which are engaged in transplantation of an extremity. At the same time, the available data of literature insufficiently fully display the listed above questions.

Work purpose. To investigate intraspecific features of options of a structure of the arterial course and their value for transplantation of her back extremity.

Materials and methods of a research. Considering stated, the anatomic research of the arterial course pelvic to a belt and a free back extremity was made.

Results. Arteries go along fibers of ventricular knot, bunch and legs, give arteriola, braid groups of fibers and form the extended loops of a polygonal form. The general principle of a structure of the arterial course of a myocardium is the layer-by-layer arrangement of arterial networks and compliance of an arrangement of vessels directly of bunches of muscle fibers. Dependence of spatial orientation of vessels on the direction of fibers of a myocardium is proved and this situation was confirmed further in many researches.

Conclusions. Results of a research of the arterial course pelvic to a belt and a free back extremity can be considered by experimenters at selection of animals to experiments on its transplantation and modeling of different pathophysiological states on this body.

OSSIFICATION OF BONES OF THE BRUSH

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Introduction. In literature known to us there is a number of the works devoted to studying of process of a mineralization of a skeleton taking into account century changes of an organism. However to unity on this matter in the analysis of results of researches it is not traced.

Work purpose. The analysis of data on an occasion of process of a mineralization of a skeleton taking into account century changes of an organism.

Materials and methods of a research. A number of works, prisyacheny danniya to subject were studied. So the mineralization of bones increases with age and reaches the maximum size up to 50 - 60 years, an other authors claim that this process increases continuously during all life. As opposed to it it is considered that the amount of mineral salts, since 16 years, gradually decreases from 1,21 mg/mm³ to 1,14 mg/mm³ up to 70 years. Other scientists who revealed that osteoporosis is inherent in all centuries since youthful years and by an extreme old age adhere to the same thought.

Results. At the same time M. N. Pavlova and A. N. Polyakov established that increase of process of a mineralization happens from a sort up to 25-30 years, relative stabilization in the period from 30 to 45 years and subsequently its gradual decrease then is observed. Considerably expands the range of terms relative to constancy of a mineral saturation of bones O. M. Pavlovsky. He considers that the pitch of a mineralization comes at the age of 15-16 years and rather stable up to 60 years.

Conclusions. Therefore, it is possible to say that process of increase of a mineralization of a skeleton at children's and youthful age which is noted by one and all authors in the century period taken by us is not smooth, and rather accurately displays those functional changes which happen in the teenager's organism during inclusion of the strengthened activity of some endocrine glands.

AGE FEATURES OF THE POWER SPECTRUM OF ALPHA-BAND EEG DURING COMPLEX MENTAL ACTIVITIES

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Urgency: Electroencephalographic analysis is one of the most informative methods of study of the systemic organization of integrative processes of the human brain in different functional States, mental activity, attention.

Objective: to Study the age peculiarities of the organization of the cerebral cortex in the alpha sub-bands with complex mental activities with verbal and figurative components.

Materials and methods: System of computer electroencephalography, a method of calculating power spectra abstract-logical tests, visual-figurative tests of Ravenna, the method of variation statistics student's t-test.

Research results: In a state of functional rest with open eyes observed generalized desynchronization of alpha-range and its subranges in all age groups.

During the execution of the visual-figurative tasks in all age groups decreased SP in alpha-1, alpha-2, alpha-3 subranges. At younger age there are shifts of SP of high-frequency alpha sub-band 3, however these changes are insignificant.

Most of the reductions SP are generalized to the alpha-1 and alpha-2 bands. In adolescence, marked shifts of SP in the alpha-3 band to a greater extent than in younger age. Depression of SP alpha-3 subrange is recorded in the frontal and occipital areas of the cortex.

Conclusions: In a state of functional rest in children of primary school age are more pronounced power spectra of the alpha-1 and alpha-2 bands, adolescence – alpha -3. the flattening of the eyes and complex mental activity with verbal and figurative component in all age groups cause depression of all the sub-bands of alpha waves of EEG. when spatial visualization ability reduced the SP of the alpha-3 subrange in prednisone areas of the right hemisphere in adolescence and young adulthood.