

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»**



МАТЕРІАЛИ

**105-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького персоналу
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ
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Матеріали підсумкової 105-ї науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) – Чернівці: Медуніверситет, 2024. – 477 с. іл.

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У збірнику представлені матеріали 105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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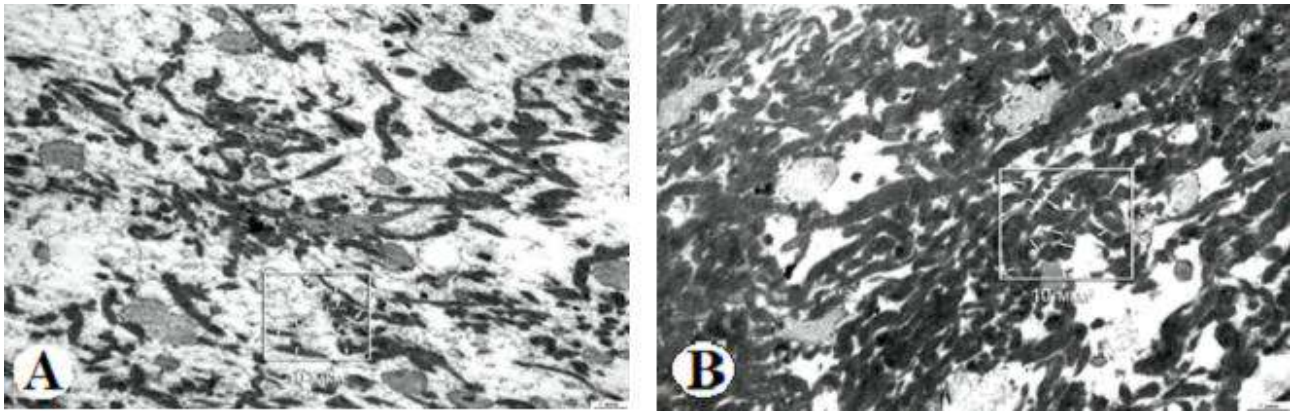


Figure. A, B. Transmission electron micrograph with determination of the cross-sectional diameter of fibrin fibers and their density. Magnification X3000: a) PRGF F2 - M, C) PRGF F2 - B.

Conclusion. The formed products of autacellular grafts are a co-synchronous result in the analysis of electron micrographs, which are differentiated by the density and diameter of fibrin fibers and acquire higher values in obturation blocks than in isolation membranes.

Petryshen O.I.

MORPHOLOGICAL REBUILDING OF THE RENAL STRUCTURE OF ANIMALS THAT UNDERWENT A COMBINED ACTION OF ALUMINIUM AND LEAD SALTS

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Introduction. One of the organs that provide the conservation of the permanency of the internal medium is kidney. The excretion of the final products of metabolism is done by specialized elements of kidney – nephrons. Large amount of nephrons, typical tissue division in kidney, heterogeneous structure, organization of microcirculatory stream, wide ways of venous and lymphatic drainage, presense of specialized endocrine apparatus, that take part in regulation of hemodynamics, intro- and extrarenal nervous ligaments – all these factors determine the complicated construction of kidney, as a life important organ, that keep permanency of internal medium of the organism.

The aim of the study. There are no published facts combined about the influence of aluminum and lead salts background.

Material and methods. 50 male adults of white rats, with body weight 0,18-0,2 kg, with free access to water and food, were studied by the complex of morphological and morphometrical methods. Animals were divided into 2 groups. I group – control (n=25), II group – research (n=25) in which animals during 14 days were injected in stomach by 1% starch suspension of aluminum chloride in dose 200mg/kg and lead chloride 50mg/kg.

Results. Analyzing morphometric kidney indexes of experimental animals, the width increasement of the cortical and cerebral substance was stated. Experimental animals had the increasement of nephron body sizes due to the volume growth of choroid glomus and filtrating fissure. Changes are also seen in the nephron tubules, the diameter becomes 2,5 times bigger in proximal part, Henle's loop and moderate growth of the distal part.

Experimental animals also had morphological changes in cells that are the part of the renal tubules structure. There are significant hydropic changes and signs of ballonic dystrophy in epitheliocytes of proximal and distal parts of nephron. Cell cytoplasm contains small and few large vacuoles, and perinuclear vacuoles in many epitheliocytes, that increases cell sizes. Cell nuclei are hyperchromic, nuclei-cytoplasm Hertvig's index is moved to the cytoplasm side. Part of epitheliocytes of proximal and distal tubules has local morphological changes, which are connected to dystrophical disorders of the cell structure.

Conclusions. Action of aluminum, lead salts leads to morphofunctional and dystrophical changes in renal tissues with the effects of hydropic and ballonic dystrophy in epitheliocytes of

nephron tubules, which are accompanied by the effects of stasis and sludge with acute blood filling and broadening of lymphatic vessels, stromal and perivascular oedemata. Further studying of the influence of aluminum, lead salts on the kidney morphology will give the opportunity to reveal the dynamics of the development of compensatory-adaptive and reparative mechanisms, develop methods of their correction.

Popova I.S.

**PRENATAL ESTABLISHMENT OF STERNOCLEIDOMASTOID IN HUMAN
PREFETUSES AND FETUSES DURING UNIMPAIRED INTRAUTERINE
DEVELOPMENT**

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Introduction. The sternocleidomastoid (SCM) is a flexor muscle of the human neck and an accessory structure of inspiration. Spasm of the SCM, usually of congenital origin, is the cause of a flexion deformity of the neck known as wryneck or torticollis. Therefore, the biodynamics of the SCM and its morphological variations have a sufficient clinical significance. Investigations of SCM's prenatal establishment can contribute to better understanding of congenital malformations pathogenesis.

The aim of the study. Therefore, the aim of this study was to investigate spatial peculiarities of prenatal establishment of the SCM in human prefetuses and fetuses.

Material and methods. To reach the aim of the research we have used histological material of 6 human prefetuses (14,0-80,0 mm of parieto-coccygeal length (PCL) and 6 fetuses aged from 4th to 10th month of the intrauterine development (85,0-350,0 mm of parieto-heel length (PHL). Material was obtained from Chernivtsi Regional Pathology Bureau on the basis of bilateral agreement with the Department of Histology, Cytology and Embryology, as well as from the archive collection of histological slides of the Department. We have used classical methods of morphological investigation: layered dissection under the control of a binocular microscope, morpho- and anthropometry, microscopy, all of which were accompanied by consecutive photographing for further digital proceeding.

Results. SCM runs obliquely across both sides of the neck and is covered by two layers of deep cervical fascia. Prefetuses of 55,0 and 80,0 mm PCL already show the presence of two heads in the place of SCM attachment to the sternum and clavicle. Since the sternal part of SCM originates as a tendon around the upper anterior portion of the sternum, it goes upwards as a dense muscle bundle that turns backwards obliquely. Clavicular head of SCM is attached to its inner surface in the 1/3 posterior border of the clavicle with fibers directed vertically. The space between the arising heads of the SCM varies in its triangular shape and size depending on the total lengths of the SCM and its width. Both heads fuse together to form a SCM and attach to the mastoid process. According to the results of morphometry, the width of SCM region evaluated gradually, correlating with the age of fetuses (width of SCM = $0,5171+0,1536*x$; 0,95). Area index of the SCM region that was analyzed statistically (area of SCM = $-36,1279+15,035*x$), shows that the highest parameter can be found in fetuses of 9th month of intrauterine development. This index also tends to increase gradually with age. The course of left and right SCM was found to be symmetrical in all investigated cases with no deviations within attachment points.

Conclusions. Sternocleidomastoid muscle in human prefetuses and fetuses shows presence of two heads with typical points of attachment during investigated periods of intrauterine development. Triangular space between arising bellies varies depending on the morphometric index of muscle's length. The width and area indexes of sternocleidomastoid correlate with fetal age and therefore elevate gradually through the fetal period of intrauterine development.