

**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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and Z-lines were clearly visible in the myofibrils of contractile cardiomyocytes. The myofibrillar zone occupied a significant portion of the intracellular space of contractile cardiomyocytes, including myofibrils, mitochondria, elements of the sarcotubular system, cytogranules, and sometimes other organelles. Mitochondria were located between myofibrils, usually 1-2 per sarcomere, beneath the sarcoplasm, around the nucleus, but sometimes an increase in the number of mitochondria was observed. Bundles of cardiomyocytes separated by layers of loose fibrous connective tissue, in which blood vessels of the microcirculatory bed passed. In electron microscopic examination, microcirculatory blood vessels were found between cardiomyocytes, represented by capillaries of the somatic type. The wall of somatic-type capillaries was formed by flattened endothelial cells lying on the basal membrane. The basal membrane was continuous and did not contain fenestrae or pores. Pericytes were found on the outside. Formed blood elements were found in the lumen of the capillaries.

Conclusions. Continuing the study of the morphology of the papillary muscles of the valvular apparatus of the heart will improve methods for diagnosing malformations and heart diseases and understanding the mechanisms of complications. Moreover, it will contribute to the development of new surgical and pharmacological methods of treating heart diseases and increase the effectiveness of providing medical care to patients with heart diseases.

Oshurko A.P.

PLASMA RICH IN GROWTH FACTORS (PRGF) IN TARGETED REGENERATION OF MANDIBULAR BONE TISSUE

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Introduction. The biological activity of the mesoconcentrate in different fractional compositions is prioritized in the PRGF technique, which is based on two fundamental principles: - plasma rich platelets (PRP), whose functionality regulates the main processes of tissue regeneration; - fibrin matrix as a temporary graft with functional cell organization and control over the dynamics of growth factor release present in the mesoconcentrate, which ensures reliable potential for graft biocompatibility.

The aim of the study. To conduct a differential analysis of the fractional distribution of mesoconcentrate products according to their purpose.

Material and research methods. To study the diameter (\emptyset) of the formed fibrin fibers, density (number of occurrences in $10 \mu\text{m}^2$) in the PRGF fractions F1 and F2 of the mesoconcentrate products, namely, isolating membranes (M) and obturating blocks (B), we used the method of morphological study of objects using a stream of electrons, which, under the influence of high voltage, passed through thin films, allowing us to study the structure of these objects at the macromolecular and subcellular levels - transmission electron microscopy.

Research results. A significant difference is characterized by the concentration in the fractional distribution of PRGF (F1, F2) obtained according to these methods of plasma, which is a key feature in their selection and clinical application during augmentation for the treatment of acquired bone atrophy of the mandible caused by the loss of the masticatory group of teeth (Figure).

The obtained statistical results of the *median (Me) and interquartile range (IQR)*, where **F1-M** = 0.196 (0.176; 0.286) compared to **F1-B** = 0.344 (0.325; 0.394); **F2-M** = 0.180 (0.168; 0.214) - **F2-B** = 0.254 (0.202; 0.338) provide a proper forecast for their intended use.

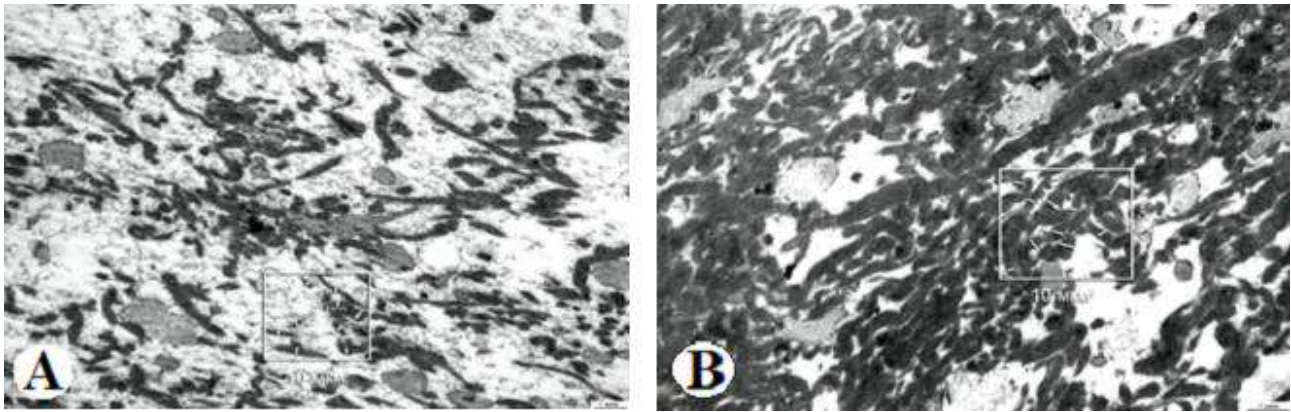


Figure. A, B. Transmission electron micrograph with determination of the cross-sectional diameter of fibrin fibers and their density. Magnification X3000: a) PRGF F2 - M, C) PRGF F2 - B.

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 epiitheliocytes os 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