МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ

М А Т Е Р І А Л И

106-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького колективу
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Матеріали підсумкової 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) – Чернівці: Медуніверситет, 2025. – 450 с. іл.

У збірнику представлені матеріали 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) зі стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

Загальна редакція: професор Геруш І.В., професорка Годованець О.І., професор Безрук В.В.

Наукові рецензенти:
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професор Чорноус В.О.

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of the stomach begins to acquire a definitive hook-like shape with a sharp angle between the fundus of the organ and the esophagus. The organogenesis of the gastrointestinal tract is accompanied by the formation of the diaphragm in the 7th week of intrauterine development. In the pre-fetal period of ontogenesis, the muscle tissue of the diaphragm is formed with the formation of its crus. In the 14th week of intrauterine development, the syntopy of the diaphragm and stomach acquires definitive features of the topography. The pyloric part of the stomach is formed at the end of the 5th week of intrauterine development in the form of thickening of the circular and longitudinal layers of the muscular membrane, which extend to the duodenum.

Conclusions. The esophageal-gastric segment and the diaphragm are formed in the 7th week of prenatal development, their syntopy and the acute angle between the esophagus and the fundus of the stomach serve as the upper closing apparatus of the stomach. The lower closing apparatus of the stomach, represented by the circular layer of the pyloric part of the stomach, is formed at the end of the 5th week of prenatal ontogenesis.

Khodorovska A.A.

MACROSCOPIC EXAMINATION OF THE THORACIC CAVITY ORGAN COMPLEX IN HUMAN EMBRYOS

Department of Histology, Cytology and Embryology
Bukovinian State Medical University

Introduction. The study of embryonic lung development holds significant value for both basic science and clinical medicine. This study makes it possible to understand the mechanisms and stages of the formation of the respiratory system, which is important for the diagnosis, prevention and treatment of various lung diseases that can occur even at the stage of embryogenesis. Therefore, understanding the development of the thoracic organ complex, from the initial formation of the bronchial tree to the maturation of the alveoli, highlights critical periods in embryonic lung morphogenesis. Studying this process helps reveal potential vulnerabilities where possible disturbances can lead to malformations such as hypoplasia or agenesis of the lungs.

The aim of the study. To examine the peculiarities macroscopic examination of the complex of organs within the thoracic cavity of human embryos.

Material and methods. The study was performed on 21 complexes of organs of the thoracic cavity of fetuses on human embryos of 80 and 139 mm parietal-coccygeal length (PCL).

Results. During the macroscopic examination of 21 thoracic cavity organ complexes from fetuses with parietal-caudal size from 80.0 to 139.0 mm (fetuses from 3 to 4 lunar months), it was established that the shape and topography of the lungs correspond to the same definitive organs. However, similar to earlier stages of development, their size is much smaller than the corresponding pleural cavities. The growth of the lungs, especially in the anterior-posterior direction, occurs quite intensively, and during the 4th month of fetal life, this size of the right lung increases from 12.0 mm (a fetus with a parietal-caudal size of 80.0 mm) to 24.5 mm (a fetus with a parietal-caudal size of 139.0 mm), the left one – from 13.0 to 21.6 mm. The longitudinal size during the same time increases from 12.5 to 24.0 mm (right lung) and from 14.5 to 27.0 mm (left lung). In the transverse dimension, the right lung expands from 7.0 to 11.5 mm, while the left lung increases from 5.2 to 10.0 mm.

On all preparations, the main (oblique) interlobular furrow of both lungs is deep, reaches almost to the gate of the organ and completely divides the lung array into two departments (lobes). The horizontal interlobular furrow of the right lung is highly variable and only in 6 observations was it deep (it reached almost to the gate of the organ) and along its entire length separated the middle lobe from the upper. On the other 15 preparations, this furrow starts from the oblique at a distance of 9.0–12.0 mm from its upper end and is directed forward, but does not reach the front edge of the lung, ending at a distance of 6.5–8 .5 mm from the latter, as a result of which the middle part is fused with the upper part for a considerable length.

Conclusions. As the embryo grows, there is a complication of the structure and branching of the bronchial tree, which is distributed according to the lobular, zonal, segmental, subsegmental

structure of the lungs. The external structure of the lungs does not affect the character of the branching of the bronchial tree, however, the distribution of bronchi within zones and segments is subject to individual fluctuations. In fetuses of 3-4 months, the lung has a typical glandular structure. Intersegmental and interlobular septa are well defined. The bronchial tree branches to respiratory bronchioles of the 1st order.

Petryshen O.I.

CHARACTERISTICS OF EPITHELIAL TISSUE OF KIDNEYS THAT HAVE BEEN STRUCTURALLY REORGANIZED

Department of Histology, Cytology and Embryology
Bukovinian State Medical University

Introduction. The excretion of different xenobiotics pass through the kidney, that leads to morphological and functional disorders. These substances include different chemical compounds of industrial processes. Among the pollutants of a technogenic origin chemical combinations of different metals occupy the first place, aluminium and led salts take the leading role.

The aim of the study. Objectives of our research was to determine the influence of aluminium and lead salts on the renal morphology.

Material and methods. The complex of morphological methods studied the renal structure of 50 mature albino male rats weighing 0,15-0,2 kg. Animals were divided into 2 groups. The 1st group – control (n-25), and the 2nd group – experimental (n-25) that during 14 days received 200 mg/kg aluminium chloride and 50 mg/kg lead chloride on 1% starch suspension intragastrically.

Results. The analysis of morphological indices of the kidney has found enlargement of the cortical substance thickness and medullar substance. Besides, experimental animals showed morpholodgic changes of the cells that are the components of the renal canaliculi. Thy cytoplasm contains small and single large vacuoles, and a number of epithelicytes contain paranuclear vacuoles which makes the cell bigger. The nuclei of the cells are hyperchromic, nuclear-cytoplasmatic Hertwig index is shifted into cytoplasm site. Some epitheliocytes of the proximal and distal canaliculi demonstrate local morphological changes accompanied by dystrophic cellular lesions.

Conclusions. A combined influence of aluminium and lead salts results in morphofunctional and dystrophic changes of the renal tissue with the occurrence of hydropic and ballooning dystrophy in the epithelicytes of the nephron canaliculi which is accompanied by stasis and sludge with a sharp hyperemia and lymphectasy, stromal and perivasal edema, small foci of diapedesic hemorrhages. Further studying of the influence of combined action 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 as well as to develop methods of their correction.

Popova I.S.

CRITICAL PERIODS SHAPING THE EARLY PRENATAL DEVELOPMENT OF HUMAN NECK EMBRYO-TOPOGRAPHY

Department of Histology, Cytology and Embryology
Bukovinian State Medical University

Introduction. Given the stable incidence of congenital malformations in newborns worldwide, the study of human prenatal morphology provides critical insights into the origins and variations of human prenatal development, supporting efforts to manage and prevent these developmental abnormalities proactively. The anterior and lateral regions of the human neck contain key structures of the vascular, nervous, respiratory, and digestive systems, making this area particularly significant for clinical interventions such as cyst removal, tumor excision, and reconstructive surgeries. Moreover, data on critical periods of human embryological development enhance diagnostics and prevention of known congenital malformations during specific periods of gestation, especially for patients with a burdened family history.