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«БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»

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Матеріали 101 – ї підсумкової наукової конференції професорсько-викладацького персоналу вищого державного навчального закладу України «Буковинський державний медичний університет» (м. Чернівці, 10, 12, 17 лютого 2020 р.) – Чернівці: Медуніверситет, 2020. – 488 с. іл.

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У збірнику представлені матеріали 101 – ї підсумкової наукової конференції професорсько-викладацького персоналу вищого державного навчального закладу України «Буковинський державний медичний університет» (м.Чернівці, 10, 12, 17 лютого 2020 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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The study was conducted on 18 dead neonatal bodies (455.0-500.0 mm of PCL) without external signs of anatomical deviations or defects by means of morphological methods of investigation: somatoscopy, anthropometry, macro- and microsection, morphometry, statistical method. To determine skeletotopy of the sigmoidorectal transition the application of radiopaque mixture was used on the base of red lead, and making metal marks on the anterior wall of the sigmoidorectal transition followed by radiography. The application and marking were made on the level of the narrowest segment within the borders of transition of the sigmoid colon into the rectum.

Topography of the sigmoidorectal segment is stipulated by the shape of the sigmoid colon and degree of its filling with meconium. The sigmoid colon of newborns is found to be mostly of a spiral shape (77.8 %), in some cases – zigzag (22.2 %). In the majority of neonates (66.7 %) the projection of the sigmoidorectal transition is found to be determined between the inferior border of I sacral vertebra and superior border of II sacral vertebra along the median surface.

In newborns the diameter of the sigmoidorectal transition is less than the diameters of the adjacent portions (Table). Morphometric parameters of the sigmoidorectal segment wall are indicative of prevailing thickness of all the membranes in the sigmoidorectal transition.

Table

Organometric parameters of the sigmoidorectal segment in newborns (n=18)

Length of the sigmoid colon (mm)	Diameter of the distal portion of the sigmoid colon (mm)	Diameter of the sigmoidorectal transition (mm)	Diameter of the peritoneal portion of the rectum (mm)
104.88±3.64 ($p \leq 0.05$)	11.52±0.4 ($p \leq 0.05$)	9.5±0.33 ($p \leq 0.05$)	13.9±0.41 ($p \leq 0.05$)

A strong correlation between the diameters of the sigmoidorectal transition, the age of the object, the length of the sigmoid colon, diameter of the distal portion of the sigmoid colon and diameter of the peritoneal portion of the rectum is found. It should be noted that the most reliable correlation is found between the diameter of the sigmoidorectal transition and the length of the sigmoid colon ($r = 0.8$; $p < 0.001$). A quick extension of the sigmoid colon length is determined compared with the second and third trimesters of the intrauterine development.

Therefore, in the majority of newborns (66.7 %) the sigmoidorectal transition projection is determined between the inferior border of the I sacral vertebral body and the superior border of II sacral vertebra along the median plane. Morphometric parameters of the sigmoidorectal segment wall are indicative of prevailing thickness of all the membranes in the sigmoidorectal transition.

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FEATURES OF THE VASCULAR BED ANLAGE IN THE GALL BLADDER AND THE CYSTIC DUCT IN HUMAN EARLY PRENATAL ONTOGENESIS

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Biliary tracts in adults have been studied in a large number of papers, but only some of them touched the features of their topography anlage throughout ontogeny prenatal period. Finding out the features of the development and anlage of the gallbladder (GB) and the cystic duct (CD) embryo topography including their sphincter apparatus will allow to substantiate morphologically and to develop new technologies for surgical correction of congenital and acquired diseases of the extrahepatic bile ducts (EBD). The aim of the study was to establish the features of morphogenesis and the structure of the gallbladder and cystic duct vascular bed in the early period of human ontogenesis. We have studied 42 specimens of human embryos and pre-fetuses with 4.5–79.0 mm of crown-rump length (4–12 weeks of intrauterine growth) on the basis of Chernivtsi regional public medical establishement "Pathological bureau". We have applied a set of morphological research methods:

anthropometry, morphometry, vascular injection, macroscopy, microscopy, image and 3D-reconstruction and statistical analysis.

The anlage of GB and CD takes place in embryos with 4.5 mm of CRL (the end of the 4th week), which is consistent with the data of L.J. Skandalakis et al. (2014), Tsyhykalo O. V. et al. (2014). In the 10th week of its development GB looks like a twig with a sac-like diverticulum which is biger in size than the hepatic duct. After 11 weeks of its growth the GB is cylinder- shaped at the level of its duct and pear-shaped on the periphery, as a result it resembles an elongated drop. At the end of the fifth week of growth one can find islets of blood formation in the mesenchymal layer – lumens of capillary blood vessels which is indicative of the formation of intra-organ blood stream. At the end of the embryonic period – at the beginning of the pre-fetal one a junction of extra- and intra-organ vessels can be observed. The anlage of the GB and CD veins was found in embryos in the late 4th - early 5th weeks of fetal development which looked like wide slits, surrounded by a row of mesenchymal cells. At the end of the embryonal and the beginning of the pre-fetal period of development in the structure of arteries and veins significant features of differentiation can be observed: the venous wall is much thinner and formed by a row of mesenchymocytes. At the beginning of the fetal period of the intrauterine growth the venous diameter becomes bigger than that of the arteries. The special spatial structure of the CD lumen creates resistance to the flow of bile out of the GB. Understanding the characteristics of the fluid in the biliary system, and in particular in the CD is very important when we explain the pathogenesis of stone formation in the GB. Anatomy of the CD is extremely variable due to a spiral fold. It is formed by the folds of the mucous membrane in the duct, which are placed in a spiral manner and are leaf-shaped. The role of these folds, which act as active or passive impedance device providing a comprehensive resistance of bile has been discussed in numerous studies. On the sections of the CD we would find from 3 to 14 such septa which provide important geometric shape of the CD lumen and a clearance between the wall surfaces and those of the folds. The angle between the GB and CD varies widely - from 5% to 180%.

Thus, the vascular bed of the gallbladder and cystic duct are represented by an arterial network and a chain of longitudinal arterial anastomoses that accompany their walls, by vascular plexuses in all membranes of the walls. Venous plexuses are located outside of the arterial plexuses. Around the cystic duct we found topographical and anatomical differences in angioarchitectonics: in 76.2 % we could detect arterial rings connecting the upper section of its own hepatic artery and the cystic artery. Around the cystic duct, unlike other segments of extrahepatic bile duct the venous network lies deeper than the arterial one. At the beginning of the second trimester the cystic duct in male individuals is located the lowest skeletotopically in the fetuses with the highest and lowest coefficients of the constitutional type, whereas in female fetuses it does not depend on the constitutional type. The period of intensive growth of the gallbladder and cystic duct within 4-5 weeks of development can be considered as one of the critical periods in the development of extrahepatic bile ducts.

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THE FORMATION OF STUDENTS' FORENSIC EXPERT THINKING BY MEANS OF SITUATIONAL TASKS USAGE

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The aim of the work, the purpose of this work is to discuss the possibility of situational tasks applying for the formation of forensic expert thinking among students.

One of the main tasks of medical students training at the department of forensic medicine and medical law is the formation of their forensic expert thinking, which allows to continue working independently during the on-site inspection of the corpse both during internship and medical practice. Taking into consideration that conduction of practical classes involves test control