boundary between the cartilage of the septum and the perpendicular laminaof the ethmoid bone was not detected. The labyrinth of the ethmoid bone has anterior-posterior length 11.2 - 12.4 mm, and it is 5.4 - 6.2 mm high. The semilunar hiatus is up to 7.7 mm long. The ethmoidal bulla is cylinder-shaped (5,1×2,2mm). The jaculator is not longer than 7.2 mm, and not wider than 2.4 mm.

The fetuses of the described age have well pronounced cells of the ethmoidal labyrinth but they are few – only between 3 and 6. The cells are lined with a mucous membrane 0,24-0,35 mm thick, they are oval and vary in size. The biggest of them is 1,4×1,12 mm, and the smallest one is 0,83×0,55 mm.

The study of the fetuses with 311,0-378,0 mm of CRL (aged nine- ten months) showed that the cartilaginous part of the nasal septum consists of uniform cartilaginous tissue, it is impossible to distinguish between the cartilage of the nasal septum proper and the perpendicular laminaof the ethmoid bone. Islands of the ethmoidal tissue appear in the lamina cribrosa of the ethmoid bone. Its anterior posterior size increases to 17,2-18,5 mm the transverse one to 7.5 mm. The ethmoid labyrinth has anterior-posterior size 13.5 mm, the vertical one is 6.7 mm. The posterior ethmoid cells open in the back third of the upper nasal passage. The semilunar hiatus is not longer than 8.6 mm. The ethmoidal bulla is 6.2 mm long and 2.3 mm wide. The jaculator is 8,1-8,7 mm long and 2.2 mm wide. The ethmoidal cells are well pronounced and their number ranges from 4 to 6. They are oval and their sizes vary. The biggest of them is 1,7 × 1,5 mm, and the smallest one is 1,0 × 0,7 mm.

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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 problem of surgical treatment of patients with detected obstruction of EBD, is an important and complex one in the surgery of the organs of hepatopancreatoduodenal area. The incidence of obstructive jaundice in the biliary tract diseases structure is 14,7-35,5%, and in case of malignant tumors of the bile ducts and organs of pancreatoduodenal area - 37-52%.

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. All the studies were carried out in compliance with fundamental bioethical provisions of the European Convention on Human Rights and Biomedicine (of 04.04.1997), Helsinki Declaration of the World Medical Association on ethical principles of scientific medical research involving human subjects (1964-2008), The order of the Ministry of Health Ukraine number 690 of 23.09.2009 and according to the guidelines.

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). 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. At the end of the CD rudiment the organ communicates with the lumen of the right hepatic duct, which in this period of formation is hollow. 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.

The anlage of the GB and CD arterial vessels takes place from the extra- and intra-organ sources in the fourth week of the prenatal growth. 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%.

Conclusions: 1. At the end of 4 weeks of the fetal development the cells of entodermal outgrowth of the initial intestine in the proximal hepatic diverticulum (sources of the extrahepatic bile ducts anlage) form the rudiments of the gallbladder, cystic duct and the proximal part of hepatic ducts.2. 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. 3. The intramural arteries of the spiral cystic duct have a circular direction, and around its smooth part they are represented by an arterial network, which continues as the arterial network of the extrahepatic bile ducts.4. 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. 5. 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. 6. 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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MORPHOLOGY OF PRETERM MATURING OF CHORIAL PLACENTAL TREE AGAINST IRON-DEFICIENCY ANEMIA IN 33-36 WEEKS OF GESTATION

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The labour is considered to be preterm beginning from the full-time 22nd till full-time 36th week of gestation. The frequency of preterm labour according to various literary evidences constitutes 4-20% and it does not have a tendency to decrease. A considerable percentage of preterm labour is the main cause of maternal and fetal loss. At present the influence of iron-deficiency anemia of the gravidas upon the morphology of preterm maturing of the chorial tree is not studied, but only there are observations of an opposite condition available – chorial tree immaturity in case of iron deficiency anemia of the gravidas. At the same time, the combination of preterm maturing of the chorial tree and iron deficiency anemia of the gravidas is highly probable, as the frequency of anemia of pregnancy is rather high; it varies from 28% to 84% according to the data of the world statistics.

Objective - to find morphometric parameters of preterm maturing of the placental chorial tree in case of iron-deficiency anemia of the gravidas for range – 33-36 weeks, to conduct a comparative analysis of these parameters using various groups of comparison. The following groups of investigation were formed: 1). the main group №1 the examination of combined iron deficiency anemia of the gravidas and preterm maturing of the chorial tree in 33-36 weeks of gestation (n=20). 2). the comparison group №2 the examination of preterm maturing of the chorial tree without any anemia in labour in 33-36 weeks of gestation (n=18). 3). the comparison group №3 – the examination of iron deficiency anemia of the gravidas in 33-36 weeks of gestation when the structure of the chorial tree corresponds to the term of gestation (n=19). 4). the comparison group №4 – the examination without any anemia in 33-36 weeks of gestation when the structure of the chorial tree corresponds to the term of gestation (n=22). In addition, morphometric parameters of physiological pregnancy are estimated (n=21).

Histological examinations were conducted on the base of histological samples stained with hematoxylin and eosin. In every placenta in random fields of vision for 90 chorial villi were studied and classified according to the criteria, as the result a percentage ratio between various types of chorial villi was obtained. For every group of examination arithmetic mean and its error were calculated. Digital material was statistically processed by means of the bilateral odd Student criterion. The differences were considered statistically valued with $p \leq 0,05$.

The peculiarities of preterm maturing of the chorial tree in case of iron deficiency anemia of the gravidas in the term of gestation of 33-36 weeks are the following: in general morphometric parameters of the chorial tree do not achieve the level of physiological pregnancy, although in the gravidas without anemia they do achieve; the degree of maturity of the chorial villi is less than in case of preterm maturing of the chorial tree without anemia which is seen in the less percentage of terminal "specialized" villi, in distribution of the percentage between intermediate villi changed for the benefit of immature ones, in increased percentage of trophoblastic and villous sprouts.

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MORPHOLOGY OF PRETERM MATURING OF CHORIAL PLACENTAL TREE AGAINST IRON-DEFICIENCY ANEMIA IN 29-32 WEEKS OF GESTATION

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Disorders of the chorial placental tree formation very often underlie pathogenesis of this organ failure. The diagnostics of preterm maturing of the chorial tree is based on finding the fact of its preterm structure as compared to