## 98-а підсумкова наукова конференція професорсько-викладацького персоналу БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ



the parameters of a certain gestation period, which can be calculated on the percentage of various types of chorial villi. Preterm maturing of the chorial tree is found in the materials after abortions and during preterm labour.

Objective - to find morphometric parameters of preterm maturing of the placental chorial tree in case of iron-deficiency anemia of the range -29-32 weeks.

The following groups of investigation were formed: 1). the main group  $\mathbb{N}_2$ 1- the examination of combined iron-deficiency anemia and preterm maturing of the chorial tree in 29-32 weeks of gestation (n=18); 2). the comparison group  $\mathbb{N}_2$ 2 - the examination of preterm maturing of the chorial tree without anemia in labour in 29-32 weeks of gestation (n=19); 3). the comparison group  $\mathbb{N}_2$ 3 - the examination of iron-deficiency anemia in 29-32 weeks of gestation when the structure of the chorial tree corresponds to the term of gestation (n=20); 4), the comparison group  $\mathbb{N}_2$ 4 - the examination without any anemia in 29-32 weeks of gestation when the structure of the chorial tree corresponds to the term of gestation (n=21). In addition, morphology of physiological pregnancy are estimated (n=21).

Material and methods - histological examinations were conducted on the base of histological samples stained with hematoxylin and cosin. In every placenta in random fields of vision for 80 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≤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 29-32 weeks are the following: in general morphometric parameters of the chorial tree do not achieve the level of physiological pregnancy. 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 total percentage of terminal and terminal "specialized" villi, but more percentage of intermediate immature villi.

# Guzik O.V. TO THE QUESTION OF PRENATAL MORPHOGENESIS OF THE HUMAN UTERINE CERVIX

Department of Anatomy, Topographic Anatomy and Operative Surgery Higher State Educational Establishment of Ukraine «Bukovinian State Medical University»

Studies dealing with the embryological and fetal development of the cervix are rare and mostly refer to initial decades of the previous century. Doctors should know embryogenesis, development and variants of the cervix normal structure in order to understand morphological peculiarities of cervical diseases.

Objective of the work: to present morphofunctional characteristics of the cervix in prenatal human ontogenesis. 10 embryos and 11 pre-fetuses from 4 to 12 weeks of development, and 23 fetuses from 13 to 40 weeks of development have been investigated. The following investigational methods have been used: macroscopy, microscopy of consecutive histological and topographic-anatomical section series, conventional and thin preparations. In the 4th or 5th week of ontogenesis paramesonephric duct (Muller's) and mesonephric duct (Wolf's) were identified within urogenital blastema composition. From the 5th to 7th week of development ducts grow parallel to each other in cranial-caudal direction through the whole initial kidney depth. Later the caudal end of Muller's duct, tending downward, changes horizontal direction to vertical one, and approaches the duct on the opposite side. In the 8th week Muller's ducts invade to mesenchyme cluster, located between the rectum and urogenital sinus. Starting from the 9th week paremesonephric ducts approach each other and locate themselves medially along the midline of the embryo body, in "mesenchymal block". Paramesonephric ducts join (10th-11th week) and gradually (11th - 12th weeks) grow in the direction of the urogenital sinus. From the 13th to 20th weeks of embryonic development the uterine cervical canal is formed, which epithelial layer counteracts with urogenital area. From the 20th to 30th week epithelial layer of the uterine-vaginal tract is presented by coelomic type of epithelium, which in the area of ectocervix counteracts with vaginal epithelium and forms «squamocolumnar junction». In the second part of the intrauterine development growth rates of the uterine body and cervix differ: at 33 weeks the length of fetal cervix is \(^3\)/4 of its total length, and by the end of pregnancy - 2/3. From the 7th month of pregnancy intense growth of genitals, particularly cervix, starts. A detailed investigation of cervix peculiarities in the prenatal period of human development is of an important theoretic and practical significance to find the mechanisms of possible occurrence of lesions, variants and defects of development.

# Herasym L.N. MORFOGENESIS OF THE INTERNAL JUGULAR VEINS IN THE PERINATAL PERIOD OF ONTOGENESIS

Department of Anatomy, Topographic Anatomy and Operative Surgery Higher State Educational Establishment of Ukraine «Bukovinian State Medical University»

Population frequency of congenital pathologies in different countries, according to the WHO, is in the range 2,7-16,3%. Under present conditions, when there is a decrease in fertility and an increase in mortality, the paramount task is to decrease perinatal, neonatal and infant mortality. Scientific research in the field of perinatal anatomy, organ-specific critical periods of development and understanding the spatial correlations of organs and structures become very important.

Anatomical study of the major neurovascular bundle of the neck during the prenatal period will allow to determine morphologic aspects of the morphogenesis, will serve as a base for ascertaining different variants of its



structure and defects in its growth during the postnatal period of ontogenesis, they can also be used while elaborating new operative approaches and maneuvers for newborns. Anatomy of major neck veins has been sufficiently described in adults, but few publications have been devoted to morphogenesis of the jugular veins and jugular angles in human prenatal period, and the available data are controversial and fragmented.

Objective. To determine topographical and anatomical features of the internal jugular veins during the third trimester of the intrauterine growth.

The study was conducted on 32 cadavers-specimens of the fetuses aged 4-10 months and 163,0 to 500,0 mm long from the vertex to the heel, by means of macro and micropreparation, radiography, vascular injections and morphometry.

The internal jugular veins extend vertically downwards from the external base of the skull to the place of joining with the subclavian veins. The superior and inferior bulbs in the internal jugular veins of the fetuses aged 4-10 months can be identified, their external diameter being different at different levels; it is only the same in the fetuses, aged 6-7 months, except the inferior sections (veins dilate). The external diameter of the right internal jugular vein in 4months-old fetuses is 1,8±0,3 mm, in 6-months-old - 2,7±0,2 mm, 7-months-old - 3,4±0,1 mm, in 10 - months-old,  $4.5\pm0.2$  mm, the external diameter of the left internal jugular vein increases from  $1.5\pm0.3$  mm (4-months-old fetus) to  $2.4\pm0.2$  mm (6-months-old fetus) and from  $1\pm0.2$  mm (7-months-old fetus) to  $4.2\pm0.2$  mm (10-month-old fetus). In the upper part the internal jugular veins take retromandibular, pharyngeal, facial, lingual veins and rarely (4 cases out of 32), jugular venous arch. The internal jugular veins are located under the sternocleidomastoid and scapular-hyoid muscles. The muscles of subhyoid group are adjacent to the medial surface of the internal jugular vein, the right common carotid artery to the posteromedial surface, the right vagus adjoins the posterior surface, the medial edge of the anterior scalene and the right phrenic nerve are adjacent to the lateral surface. The internal jugular veins along with the subclavian ones in the lower sections of the neck form jugular venous angles. The right jugular angle rate in 4-10 months old fetuses is 105-120° that of the left angle is 120-140°, the lowest angle rates were found in the fetuses, aged 5 months. During the perinatal period of the ontogenesis some more complicated topographic and anatomic correlations with the internal jugular veins and the adjacent structures of the neck take place.

## Kayun M.P.

### THE DEVELOPMENT OF THE LIVER IN THE PREFETAL PERIOD OF HUMAN ONTOGENESIS

Mykola Turkevych Department of Human Anatomy Higher State Educational Establishment of Ukraine «Bukovinian State Medical University»

The characteristics of the liver were studied before fetal period of human ontogenesis. 20 human cadaver prefetuses of different age groups were studied by means of histological methods with image reconstruction and morphometry.

At the beginning of the prefetal period (prefetuses 14.0 - 20.0 mm of crown-rump length (CRL)) the liver was found to increase significantly in its size. Its transverse size is already 5.0 mm.

The right and left sagittal fissures are clearly defined on the visceral surface of the liver in the 7<sup>th</sup>week prefetuses. The gallbladder is in the right anterior sagittal sulcus; umbilical vein is in the right anterior sagittal sulcus.

The development of the liver during the 8th week of prenatal development was studied on 10 series of histological sections of human prefetuses with the size from 21.0 mm to 30.0 mm CRL.

The liver continues to enlarge in its size, and its transverse dimension in the correspondent group of the prefetuses is 6.0 mm.

In this age group of prefetuses the hepatic-duodenal ligament runs from the liver gate to the top of the duodenum and reaches the head of the pancreas. In the thickness of the ligament the hepatic artery and bile ducts are located. The portal vein of the liver passes to the left from the bile duct. Then it turns slightly behind the hepatic artery.

Morphogenesis of the liver in the middle of the prefetal period (9th week of fetal development), was studied on six histologic series of the human prefetuses with the size from 31.0 to 41.0 mm CRL.

The liver occupies upper and middle floors of the abdominal cavity in prefetuses of this group, the cross body size of the liver is 3.5 mm, longitudinal body size - 7.0 mm. The hepatic artery proper is presented to the left of the common bile duct in the gate of the liver. The portal vein of the liver passes behind and slightly below the artery.

### Lazaruk O.V.

# PECULARITIES OF METASTASES IN WOMEN OF CHERNIVTSI REGION WITH INVASIVE DUCTAL BREAST CARCINOMA ACCORDING TO TNM CLASSIFICATION (CATEGORY T-N)

Department of Pathological Anatomy Higher State Educational Establishment of Ukraine «Bukovinian State Medical University»

In the case of invasive ductal breast carcinoma, the severity of the disease and the life prognosis is determined by the histological type of the tumour and/or occurrence of metastases. Metastases are secondary tumour changes that occur due to invasive growth and dissemination of the tumour in the patient's body. It is rather complicated cascade of processes of tumour cell separation, its penetration through the biological barriers, implantation into new tissues and the initiation of growth of a separate malignant process. In metastasis of carcinoma are found life prognosis and survival of patients worsens immediately. According to number of studies breast carcinoma occupies a leading place in the