МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ ВИЩИЙ ДЕРЖАВНИЙ НАВЧАЛЬНИЙ ЗАКЛАД УКРАЇНИ «БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»



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of the possible origin of the congenital spinal defects with the object of the development of new, more rational methods of surgical interventions in this area, elaboration of new stabilization technologies and spinal column correction at disabling deformities of the spine in children and adolescents.

The aim is at the ascertainment of chronological sequence of the development and formation of the topography structures of the section of the thoracic part of the spinal column in the early period of human ontogenesis. The topographic and anatomical features of the relationships between the structures of the thoracic part of the spinal column from the moment of their laying to birth, dynamics of their formation and growth taking into account morphogenesis of the adjacent structures are established. With the help of the adequate morphological methods, investigation of morphogenesis and dynamics of spatial-time relationships of the thoracic spine of the spinal column of a person, their connections during the fetal period of the development and in the newborns from the point of view of the topographic-anatomical approach to embryogenesis problems was carried out. The features of the blood supply and venous outflow of the spine are ascertained. Critical periods, morphological preconditions and time of the possible origin of some innate defects of the spinal column were established. On the basis of the obtained results, the problem of prenatal diagnostics of the innate malformations of the thoracic part of the spinal column was solved.

The thoracic vertebrae laying occurs in the germs of 7.0-9.0 mm CRL by forming the condensation of sclerotome cells round the chord and the nervous tube, from which mesenchymal thoracic vertebrae are formed. The vertebral bodies are formed from the cranial and caudal parts of two adjacent sclerotome masses. Intersegmental arteries remain on the level of the vertebral bodies, and the spinal nerves lie between thoracic vertebrae. In the germs of 10.0-12.5 mm CRL the arches of the vertebrae move away from the bodies perpendicularly in the dorsal direction. The formation of articular and transverse processes begin. At this early stage of the development there are no joints in the spinal column of the germs, the spinal canal forming begins. Bodies are clearly defined from the thoracic vertebrae, and in the lumbar and sacral vertebrae only arches are clearly visible and closely spaced bodies. The vertebral bodies at this stage are well differentiated. All of them have the same, primitive, quadrilateral body shape and are separated from each other by a layer of mesenchyma. The layers correspond to the future intervertebral discs.

On these early embryonic stages, the backbone of the skeleton, being in a significant development, is still at the base of the skeleton. Of the two layers that are distinguished in the chord in those vertebrates, in which it functions in an adult state, only one layer can be differentiated in a person, the so-called "epithelium" chord. It is presented in the germs of 10.0 - 12.0 mm CRL, the correct rows of narrow, elongated, small epithelioid cells located on the periphery of the body on both sides and returned with the basal ends to the middle, to each other. The thoracic spine of the spinal column in the prenatal development has 3 stages of the development: connective tissue (7,0-14,0 mm CRL), cartilage (15,0-45,0 mm CRL) and bone (45,0 -360,0 mm CRL). In the germs of 7,0-9,0 mm CRL vertebrae laying is only in progress. The embryo has one general curvature directed dorsally. This curvature is more pronounced in the thoracic department, which is due not so much to the skeleton that began to develop from mesenchyma, but rather more prevalent spinal cord, sharply bent at the dorsal side.

The germ line period is characterized by rather rapid qualitative changes in the development of the spinal column and sympathetic trunk and is one of the critical periods of organogenesis of the nodes of the sympathetic trunk and spine.

Lavriv L.P. ANATOMY OF THE PAROTID GLAND STRUCTURE IN HUMAN FETUSES

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Formation of the organs is a very complicated process which is not definitively studied nowadays. It is very important to study the structure of the organs and systems in association with



the basic processes of morphogenesis on the basis of the findings of embryogenesis. The study of the development and forming of the topography of the parotid gland during the prenatal period human ontogenesis is of great importance for integral understanding of the structural – functional organization of the salivary apparatus and the oral cavity on the whole. The analysis of scientific literature dealing with the parotid gland anatomy is indicative of a fragmentariness and discrepancy of the data, pertaining to the syntopy and chronology of the topographic-anatomical changes during the fetal period of human ontogenesis.

The objective of the study was to investigate variant anatomy and topographic-anatomical peculiarities of the human parotid gland and surrounding structures in fetuses.

The parotid gland was examined on 25 human fetuses, 130,0-375,0 mm of the parietal-coccygeal length (PCL). The following methods were applied in the course of the study: thing section of the parotid gland and parotid-masticatory area under the control of a binocular magnifying glass; macro- and microscopy; morphometry; computed 3-D design.

The parotid gland is found to be located in fetuses with 130,0-375,0 mm of PCL in a deep depression posteriorly the branch of the lower jaw, in the posterior mandibular fossa. A greater part of the gland is located between the mandible and sternocleidomastoid muscle penetrating deeply between these structures. The skin of this particular region is thin, movable. The subcutaneous pot is thin and fused with the skin. The structure of the parotid gland of 4-10 month human fetuses is anatomically changeable which is manifested by different shape (oval, leaf-shaped, horseshoe-like, triangle, irregular tetragonal), location and syntopy. Computed 3-D design of the gland presents its volumetric description which is the most practical one – in the shape of trilateral pyramid turned to the malar arch by its base, and to the mandibular angle – by its apex. A number of structures pass through the tissue of the parotid gland including facial nerve, posterior mandibular vein, external carotid artery, auricular-temporal nerve. The parotid duct is formed due to the fusion of two extraorgan lobular branches which in their turn are formed by means of fusion of several upper and lower lobular ducts emerging from the gland tissue passing through its capsule. The direction of the parotid gland is arch-like, with upward convexity. Passing along the external surface of the mastication muscle the parotid duct touches the upper extremity of the adipose body of the cheek and penetrates through the buccal muscle into the oral vestibule where it opens in the shape of a papilla of the parotid duct. The length of the parotid duct in the fetuses of the third trimester is 8,0-26,0 mm, diameter of the lumen is within 0,8-2,5 mm. The parotid duct is projected on the skin of the face from both sides along the line from antilobium to the mouth angle. The wall of the parotid duct consists of the connective tissue rich in elastic fibers and epithelium lying the lumen of the duct. The epithelium consists of two layers – deep cubic and superficial cylindrical.

Therefore, morphogenesis and topographic formation of the human parotid gland in fetuses are influenced by a total effect of spatial-temporal factors associated with the dynamics and close syntopic correlation of organs, vascular-nervous formations and fascial-cellular structures of the parotid area. At the end of the 10th month of the prenatal development the parotid gland under the microscope demonstrates its practically definite shape, although histological processes of differentiation in it are not completed yet. A study of the specific characteristics and consistent patterns of the morphogenesis and dynamics of the spatiotemporal changes of the salivary glands will make it possible to reveal new findings, pertaining to the emergence of variants of their structure, the preconditions of the onset of the congenital malformations and acquired diseases.

Lazaruk O.V. CANCEROGENESIS INVESTIGATION OF MAMMARY DUCT CARCENOMA BY PROTEIN MODIFICATION IN THE TISSUE

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None of tumor changes in the normal organ tissues occur without changes in the protein structures of the intercellular substance and epithelial cells. Damage of the protein structures