



system. It consists of muscles, fascias and maintaining junctions, which come from deep and fixed structures to the moved skin.

There are numerous anatomic structures located on relatively small area, including terminal segment (portion) of parotid duct, buccal fat pad, blood vessels, lymphatics and nerves. The lack of knowledge about the structural peculiarities of buccal region ensure new researches, which in turn allows to improve the methods of diagnostics and surgical correction of congenital and acquired diseases of human face.

We have developed the scheme of topographical and anatomical coordinates of the boundaries of lateral and buccal areas of the face and imaginary line of the parotid duct. Parotid duct projection on the skin of buccal region passes from the auricle's tragus to the angle of the mouth.

The direction of the parotid duct is arched, with the convexity up, due to well developed buccal fat pad. The additional parotid duct is detected in 22% of cases. A variety of anatomical variants of syntopic interactions between the buccal fat pad and parotid duct or its shape variants have been researched. Duct either pierces the corpus buccal fat pad or passes it superiorly.

There were 74 specimens of the buccal region of human fetuses aged from 4 to 9 months of the intrauterine development measuring 90,0-410,0 mm of parietal-coccygeal length (PCL) (35-men's and 39 - women's) studied using complex of morphological methods which included morphometry, anthropometry, identification of body type, preparation, 3D-reconstruction and statistic analysis.

The scheme was developed for topographical and anatomical coordinates of boundaries of lateral and buccal regions of the face and imaginary projectional line of the parotid duct.

The relationship between parotid duct and buccal muscle has been researched on macro- and microscopic levels. The study suggests that the structural peculiarities of the syntopy provide sphincteric function, which prevents regurgitation of saliva.

So, a variety of anatomical variants of syntopic interactions between the buccal fat pad and parotid duct and its shape variants have been researched. Duct either pierces the corpus buccal fat pad or passes it superiorly. The structures of buccal region are singled out by the considerable anatomical variability. The further aim of this study is to find out spatiotemporal dynamics of their syntopy and special features of their spatial structure.

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MORPHOGENESIS OF LIVER VESSELS IN HUMAN EMBRYOS

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The study of the development and formation of the of liver vessels in human embryos is necessary both for establishing the general patterns of histogenesis of the liver, and for the learn the content of the forming processes that lead to the congenital defects of the organ

The purpose of the study was to establish the general development patterns of liver vessels in the embryonic period of human ontogenesis and to determine the composition of the processes leading to the occurrence of congenital liver malformations.

The primary liver anlage was found in embryos 4.0 - 5.0 mm in length, which corresponds to the beginning of 4 weeks of intrauterine development. It is presented in the form of a conglomerate of epithelial cords that grow into a transverse septum that surrounds the intestinal tube and hepatic bay on three sides.

The blood supply to the liver at this stage of embryo development occurs due to two bringing venous systems: umbilical veins and yolk-mesenteric veins that go from the yolk sac to the body of the embryo.

While developing, the yolk-mesenteric veins form venous sinusoids, with which the development of the liver is closely related. Liver cells, which grow into the transverse septum, surround the sinusoids on all sides, in close contact with them. Between the liver cells there is a



mesenchyme, in which, in turn, local vascular formation occurs. These vessels form anastomoses between the larger vascular trunks.

At the end of 4 weeks of intrauterine development (embryos 5.0 - 6.0 mm in length), three anastomoses are formed between the yolk-mesenteric veins. The first (cranial) anastomosis is located inside the liver. The second (middle) anastomosis is located behind the intestine. The third (caudal) anastomosis is located in front of the intestine.

At the fifth week of embryonic development (embryos 7.0 - 8.0 mm in length), the portal vein trunk is formed from the remnants of the anastomoses that existed between the yolk-mesenteric veins. The unusual spiraling course of the portal vein in adults is due to the disappearance of the beginning of the left vessel, which is located cranial to the middle anastomosis and the beginning of the right canal, which is located caudal to the middle anastomosis.

The study of a series of histological preparations of embryos indicates that the vascular trunks, which are formed in the liver parenchyma, flow into the portal vein trunk, which is being formed. Such data has not been found previously in the literature.

So, a definite pattern in growth of the liver parenchyma, as well as in the formation of liver lobules, was not found. The structure of the liver is formed as a result of complex correlative relationships of the vessels of the liver, mesenchyme and cell strands.

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TOPOGRAPHICAL PECULIARITIES OF THE THORACIC SPINE OF THE SPINAL COLUMN IN THE FETUSES

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The urgency of the work is explained by the necessity of a complex study of the development peculiarities, topography formation of structures of the thoracic spine of the spinal column and dynamics of their syntopic correlation in the prenatal period of ontogenesis and in the newborns, that is of great significance for elucidation of the morphological preconditions and time 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 to ascertain chronological sequence of the development and formation of the topography structures 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.

Thus, 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.