Kashperuk-Karpiuk I.S.

FETUSES ANATOMY OF THE BUCCAL REGION

Department of Anatomy, Clinical Anatomy and Operative Surgery
Bukovinian State Medical University

Buccal region is a complex of structures of soft tissues, anatomic components of which are in a close mutual position, while its shape is maintained of the external muscular-aponeurotic 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 parotide duct is arched, with the convexity up, due to well developed buccal fat pad. The additional parotide duct is detected in 22% of cases. A variety of anatomical variants of syntopic interactions between the buccal fat pad and parotide 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 syntophy and special features of their spatial structure.

Kavun M.P.

MORPHOGENESIS OF LIVER VESSELS IN HUMAN PREFETUS

Mykola Turkevych Department of Human Anatomy
Bukovina State Medical University

The study of the development and formation of the liver vessels in human prefetus is necessary both for establishing the general patterns of histogenesis of the liver and for the investigation of the content of the formation processes that lead to the congenital defects of the organ.

The purpose of the investigation was to establish the general patterns of development of liver vessels in the prefetal period of human ontogenesis and to determine the composition of the processes leading to the occurrence of congenital liver malformations. At the beginning of the prenatal period (prenatal 14.0 - 20.0 mm CRL) the liver significantly increases in size, its transverse size is already 5.0 mm.

Entering the organ, the portal vein of the liver is divided into two main branches: the right and left partial veins. The left branch of the portal vein of the liver approaches the left lobe of the organ and connects with the umbilical vein. The right branch of the portal vein of the liver in turn is divided into right paramedian and right literal vein. The left branch of the portal vein is a short

vessel, also called the connecting branch, because it is the site of anastomosis between the portal vein of the liver and the umbilical vein.

In prefetus 18.0 mm CRL (mid-seventh week) along the branches of the portal vein of the liver, liver cells form thin bile ducts, and the latter are separated from the mesenchyme surrounding the portal vein of the liver, a well-defined slit, the width of which in preterm of this age group is 20 μm.

In 13 series of histological sections of the prefetus ranging in size from 21.0 mm to 30.0 mm CRL, it was found that the liver continues to increase in size, its transverse size in this group of amniotic fluid is 6.0 mm.

In the middle of the prefetal period (the ninth week of fetal development), the morphogenesis and topography of the structures we conduct our research on were studied in six series of preterm infants from 31.0 to 41.0 mm TCD.

The liver in the prefetus of this group continues to increase, occupies the upper and middle floors of the abdominal cavity, the transverse size of the organ is 35.0 mm, length - 7.0 mm.

In the middle of the prefetal period the width of the portal hepatic vein in the liver gate is greater than the width of the umbilical vein. Thus, in prefetus 35.0 mm CRL width of the portal hepatic vein is 300 μm, width of the umbilical vein - 250 μm.

At the end of the third month of prefetal development (prefetus 50.0 to 75.0 mm CRL) near the lower surface of the liver, the transverse size of the portal vein is 2.5 - 3.0 mm, umbilical vein - 2.0 - 5.0 mm. In the area of the gate of the organ, the portal vein of the liver with a short venous trunk (connecting branch) connects with the umbilical vein and then continues to the right lobe of the liver.

It should be noted that the diameter of the partial branches of the portal vein of the liver in this period slightly exceeds the diameter of the main trunk of the vessel and reaches 3.5 0 4.5 mm.

Kryvetskyi I.V.

ANATOMY OF THE SPINAL COLUMN IN THE FETUSES

Department of Anatomy, Clinical Anatomy and Operative Surgery
Bukovinian State Medical University

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