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vascular length towards PUS. At the same time of development the rate of diameter growth of the ureteral arteries accelerates similar to the beginning of the fetal period.

Venous outflow from the UUT occurs mainly in the two directions: in proximal – renal, and distal – ureteral, capsular, testicular (ovarian) veins. The venous branches joining together form a major vessel and the lateral surface of the PUS and proximal portion of the ureter. Repeating the segment inflexion between the pelvis and ureter, and simultaneously the outlines of the kidney medial border, it looks like an arch or arcade. Due to it venous blood from the PUS can flow upwards or downwards even in case of occlusion of one of the extremities of the ureteral vein. Therefore, an original venous circuit on the level of the PUS can be determined, providing free drainage of the venous blood from the segment into the inferior vena cava system in two directions: ascending way – in the renal vein, or descending – into the capsular, testicular (ovarian), peritoneal veins, etc. This peculiarity of the venous blood outflow from the PUS and proximal portion of the ureter can be indirectly indicative of an important role of the vascular component of its sphincter function.

Thus, blood supply of the pyeloureteral segment in fetuses is ensured by the branches of the ureteral, testicular (ovarian) and capsular kidney arteries. A venous collector of the pyeloureteral segment is arcuate vein located on its lateral wall. Venous outflow occurs in two directions: cranially – in the capsular and renal veins, caudal – in the capsular, ureteral and testicular (ovarian) veins.

Hryhorieva P.V.

TOPOGRAPHIC ANATOMICAL PECULIARITIES OF THE BLOOD SUPPLY AND INNERVATION OF MUSCLES OF THE MEDIAL FEMORAL GROUP

Department of Histology, Cytology, and Embryology
Higher State Educational Establishment of Ukraine
"Bukovinian State Medical University"

Clear ideas about the variations of blood supply and innervation of muscles in different areas of the body allow the surgeon to select the neurovascular pedicle, when performing muscle transposition operations using microsurgical techniques, to correctly choose the muscle flap, the method of replacing the defect and the localization of the donor area.

The aim of the research: to clarify the information about the sources of innervation and blood supply to the gracilis muscle, adductor muscles and pectineus muscles, as well as to investigate the intramuscular distribution of nerves and arteries in the muscles of the medial group of the thigh in human fetuses aged 4-10 months.

The peculiarities of the fetal topography of the arteries and nerves of the medial femoral group muscles were studied in 42 human fetuses aged 4-10 months using the methods of macromicroscopic preparation, vascular injection, and surface staining of the prepared vessels and nerves, and morphometry.

It has been established that the distribution of nerves and arteries is uneven in the thickness of the muscles of the medial group of the thigh, at the same time the middle third of all adductor muscles are supplied with blood and innervated more intensively. The places where nerves penetrate the thickness of the muscles of the medial femoral group, do not coincide with the places where the arteries enter, pectineus muscle is an exception. The nature of the intramuscular distribution of nerves and arteries depends on the structure and function of the muscle. The intramuscular nerve trunks are interconnected in the gracilis and adductor magnus muscles, forming loops and arcades. Nerve connections between the obturator and sciatic nerves are found in the thickness of the adductor magnus muscle.

In the picture of the intramuscular distribution of nerves and arteries in the muscles of the medial group of the thigh in human fetuses, three forms can be distinguished: loose, trunk, and mixed. In the thickness of the muscles of the medial femoral group, the distribution of nerves and arteries is uneven. Segmentation is preserved in the intramuscular distribution of arteries in the

gracilis muscle, adductor longus, and magnus muscles, while in the distribution of nerves in these muscles segmentation is absent.

Khodorovska A.A.

PECULIARITIES OF RESPIRATORY SYSTEM ORGANOGENESIS IN HUMAN PREFETUSES

Department of histology, cytology and embryology
Higher state educational institution of Ukraine
"Bukovinian State Medical University"

Studies on organogenesis of the upper respiratory tract and lungs contribute to the development of new methods for prevention, diagnosis and treatment of congenital and acquired pathology in pulmonology and thoracic surgery. The aim of our research was to determine the peculiarities of organogenesis of the respiratory system in the prefetal period of human ontogenesis.

We have examined 23 series of sequential histological sections of human prefetuses of 21.0-30.0 mm of parietal-coccygeal length (PCL).

We have seen that intralobular sulcuses undergo depression and get much narrowed, their size is around 52-56 μm. The dorsal lobe was found in embryos 21,4 and 23 mm long in both right and left lungs. Lobe has an almost rounded shape and is equal to 104 - 108 μm in diameter. The longitudinal size of the right lung at the PCL embryo of 24 mm is 2,6 mm, the left lung is 2,42 mm; the transverse size is 1,4 and 1,26 mm, respectively. At these stages of development, the majority of primordium of lungs is mesenchyme, forming syncytia, and the bronchial tree is still slightly branched and occupies a smaller part of the pulmonary rudiment. The length of the right main bronchus in the PCL embryo of 24 mm reaches 660 μm, the left - 946 μm, the diameter of the bronchus respectively is 440 and 352 μm, the wall thickness is 84 μm.

Unlike the previous stages of development, the mucous membrane does not form high longitudinal folds, which are equal to 12-16 μm. The luminescence of the lobular and segmental bronchial tubes still retains even contours.

Histological specimens show that the nuclei of epithelial cells lining the bronchial tree occupy a predominantly apical position, and in the region of the bronchial buds, they are located approximately midway between the lumen and the basement membrane.

The blood vessels still have a slightly differentiated wall and a narrow lumen, but the number of small branches, especially in the embryo of 24 mm in length, greatly increases, they have a capillary structure and repeatedly anastomose. The diameter of the right pulmonary artery is 52 μm, the left - 48 μm embryo 23 mm long and the embryo 24 mm respectively 56 and 58 μm; wall thickness 22 microns. The diameter of the pulmonary veins on the right is 56 μm - upper and 52 μm - lower, the left ones 48 and 44 μm, respectively. The distance between the blood vessels and the bronchial wall ranges from 16 to 20 μm. The structure of the vessel wall does not differ from the same structure in the embryo length 20 mm.

Examination under the microscope of one series of histological preparations of the embryo 23 mm long as a result of a paraffin bock slice along the frontal plane revealed that both lungs consist of three particles. In this series, reconstructions of the model of both the external shape of the lung and the bronchial tree were made. The lower lung lobes are the largest with a longitudinal size of 1,21 mm (right lung) and 1,11 mm (left lung). The depth between the lobular furrows ranges from 660 to 704 μm (oblique) and from 308 to 506 μm (transverse).

The surface of the lungs is smooth and there is only a small amount of large, round-shaped protuberances reaching up to 400 microns in diameter only on its costal surface.

Comparing the number and direction of the main bronchial branches of the embryo with a length of 16,5 mm, we came to the conclusion that features outside the particle structure of the lungs do not affect the branching process of the bronchial tree.