

MICROANATOMY OF TENDONS OF UPPER AND LOWER EXTREMITIES MUSCLES IN APPLIED RELEVANCE OF MICROSURGICAL TENDON SUTURE

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Key words: *microsurgical anatomy, tendon, suture, extremities*

Aim. To obtain a set of new data on the microsurgical anatomy of the extremities tendon.

Material and Methods. We examined 80 tendons of the upper and lower extremities amputated for medical reasons and severed at the time of injury. Each tendon was examined together with the surrounding fascia and fatty tissue. We used a histotopographic method with the staining of sections with hematoxylin and eosin and picrofuxin according to Van Gieson. In total, 160 histotopograms were prepared.

Results and Discussion. The microanatomical interaction between intramuscular and tendon parts is complex, multi-plane, characterized by the presence of common sources of blood supply with its individual variability. The tendon sheaths (paratendinium, epitendinium, peritendinium) intercommunicate with each other. Peritendinium has the largest thickness — 0.1 mm. In the transverse section, peritendinium is represented in the central part of the tendon in various forms. The most common are T- and S-forms. Radiarily located spurs of peritendinium determine the presence of a vessel in the center of the confluence of these spurs. Endotendinium is represented in the form of a complex geometric structure, regardless of the topical position in the tendon. The construction of the tendon internal structure does not change along its length.

Conclusions. When performing a microsurgical suture, it is necessary to take into account the thickness and shape of peritendinium due to its topical and radial location.

TOPOGRAPHY OF THE FETAL PONS IN WEEKS 16–22 OF PRENATAL ONTOGENESIS

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Key words: *pons, neuroanatomy, macromicroscopic preparation, relationship*

Background. The fetal brain attracts considerable and constant interest from the point of view of its neuroanatomy and physiology. The hindbrain

and its departments in the prenatal period are most created.

Aim. Obtaining new data about topography of the brain pons and its relationship with structures of a skull became the purpose of the real research.

Material and Methods. The research is executed on material of 40 fetus of 16–22 weeks of development without congenital malformations of a brain. Material has been investigated by method of macro-microscopic preparation and a method of gistotopographical cuts in three mutually perpendicular planes. Cuts were coloured according to Van Gieson and subjected microscopy.

Results and Discussion. Results of a research have shown that the most informative for studying of this department of a brain are horizontal cuts. On horizontal cuts at the level of a middle part of the pons (external reference points — the middle of a frontal sinus and the upper border of the auricle) the distance from the brain pons to a frontal bone has made 33.69 ± 0.5 mm on the left side and 33.92 ± 0.5 mm on the right. The distance to the temporal bone was equal to 18.67 ± 0.5 mm at the left and 18.73 ± 0.5 mm on the right, to the occipital bone of 24.1 ± 0.5 mm and 24.33 ± 0.5 mm respectively. Sagittal and frontal cuts allow to receive a number of additional data on pons neuroanatomy.

MODERN TECHNOLOGIES OF EXTRACTION OF THE NEUROSECRETORY COMPLEX OF THE HUMAN DIENCEPHALON

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Key words: *arteries, brain, diencephalon, pituitary gland, hypophysis, epiphysis*

Aim. When transplanting the neurosecretory complex of the human's diencephalon, the preservation of blood vessels that supply this area is a prerequisite.

Material and Methods. Methods of brain extraction, which are used in pathoanatomical practice, do not provide this, since they lead to rupture of arteries of the hypothalamic-hypophyseal region, vessels of the epiphysis (G. V. Shor, 1925, A. I. Abrikosov, 1948, I. I. Medvedev, 1969). Methods of human brain extraction developed by V. D. Gvozdevich (patents № 548263, № 919663) are innovative methods. This method consists of several stages and involves the detachment of the dura mater from the base of the skull, the separation of the anterior inclined processes and the back of sella turcica from the sphenoid bone,