of a frozen human body» (1853–1859), namely: sawing in 3 mutually perpendicular planes, layerwise cleavage of frozen tissue or selectively thawing them in the necessary areas, the formation of windows with the abandonment of the most important anatomical landmarks, etc., undoubtedly, the most informative was the way of layer cuts. The technology of sawing developed by the great surgeon and anatomist with the subsequent accurate transfer of two-dimensional information from preparations to paper and then to lithographic stones became the prototype of modern methods of radiation visualization of anatomical structures by CT and MRI methods with software digital reconstruction of images in 2–4 D measurements. Pirogov's technology was brilliantly used by A. N. Maksimenkov during the Great Patriotic War to study the surgical anatomy of wound canals in gunshot wounds of extremities. This technology was further developed in the works of E. A. Dyskin, L. N. Aleksandrova, L. B. Ozeretskovsky when studying the problems of terminal wound ballistics of bullet and fragmentation wounds. Over the past 30 years, we have successfully used the method of sawing a frozen body in the study of amputated limb segments in the wounded that have been blown up on anti-personnel mines, and also after modeling of mine-blast injuries on anatomical objects and experimental animals. Due to the complex research performed, it was found out that the case architectonics of the limb segments for the distribution of reversible and irreversible disorders in tissues plays no less important role than the distance from the center of the explosion. The most severe and extended injuries are concentrated in the deep muscles along the bones, fascial septa and the interosseous membrane, as well as loose paravasal and paraneural tissues. The data obtained make it possible to develop a program for a full-fledged audit of injured tissues in the affected, to justify the tasks of surgical treatment of wounds, and, if necessary, the level and method of limb amputation.

MORPHOMETRIC CHARACTERISTICS OF ARTERIES OF AGED PEOPLE BRAIN

Fomkina O. A., Gladilin Yu. A., Muzurova L. V., Zaichenko A. A.

V. I. Razumovsky Saratov State Medical University, Saratov, Russian
oafomkina@mail.ru

Key words: *brain arteries, outer diameter, wall thickness*

Aim. Research — to reveal regularities of dimensional characteristics of arteries of the brain of people at advanced age.

Material and Methods. Investigated samples of anterior cerebral artery (ACA), middle cerebral artery (MCA), posterior cerebral artery (PCA), posterior communicating artery (PComA), basilar artery (BA) and intracranial parts of the vertebral arteries (VA) withdrawn at autopsy of 21 corpses of people of advanced age. Death hasn't been connected with sharp vascular pathology of a brain. Studied the outer diameter, wall thickness, diameter of a gleam of arteries. For assessment of the importance of distinctions used Student's t-criterion for independent selections (distribution normal).

Results and Discussion. The sizes of arteries of a brain at adults of advanced age have no significant bilateral and sexual distinctions and are characterized by average variability (the coefficient of variability 11–25%). Averages the outer diameter, thickness of a wall and diameter of a gleam of the studied arteries (mm): ACA — 2.28±0.05, 0.27±0.01 and 1.74±0.05; MCA — 2.99±0.05, 0.31±0.01 and 2.37±0.05; PCA — 1.36±0.04, 0.24±0.01 and 0.87±0.04; PComA — 2.34±0.06, 0.27±0.01 and 1.79±0.06; BA — 3.45±0.13, 0.41±0.03 and 2.65±0.11; VA — 3.02±0.11, 0.33±0.01 and 2.36±0.09. Differences between the parameters of arteries of the same name are statistically not significant: for the outer diameter of MCA and VA; for thickness of a wall of ACA and PCA, MCA and VA, ACA and PComA, PComA and PCA; for diameter of a gleam of MCA and VAS, VA and BA.

ANATOMICAL SIGNIFICANCE OF THE SPATIAL DISTRIBUTION OF THE PALATOPHARYNGEUS WITH REGARD TO CLOSURE OF THE NASOPHARYNX

*Fukino Keiko [1], Tsutsumi Masahiro [2], Sanudojose [3], Ono Takashi [1], Akita Keiichi [2]**

[1] Department of Orofacial Development and Function, Graduate School of Medical and Dental Sciences, Tokyo Medicaland Dental University (TMDU), Tokyo, Japan; [2] Department of Clinical Anatomy, Graduate School of Medical and Dental Sciences, Tokyo, Medical and Dental University (TMDU), Tokyo, Japan; [3] Department of Anatomy and Embryology, Faculty of Medicine, Complutense University of Madrid, Av. Ciudad Universitaria s/n, Madrid, Spain
* Akita.fana@tmd.ac.jp

Key words: *nasopharyngeal closure, palatopharyngeus, pharyngeal muscle, superior constrictor*

Background. Production of nasopharyngeal closure should be accomplished by the coordination of the various soft palate and pharyngeal muscles. However the anatomical basis of the functional roles of these muscles still remains unclear.

Aim. In the present study, we macroscopically and microscopically examined these muscles in detail, especially palatopharyngeus (PP) in order