in acetone, and at last impregnated by local commercial unsaturated polyester resin and ultimately hardening at 50 ºC temperature.

Results and Discussion. The plastinated specimens are clean, curable, odorless, portable and non-toxic, it can be keeps for long durations without any changes the usage of widespread S10 silicon method is high costs so with the aid of using indigenous chemicals it is possible to produced low costs anatomical models for education and for studying anatomy.

THE MORPHOLOGY OF CEREBRAL CORTEX GANGLIONIC LAYER IN ISCHEMIC STROKE

Sergeeva S. P. [1]*, *Erofeeva L. M.*[2], *Balyasin M. V.* [1]

[1] Sechenov First Moscow State Medical University (Sechenov University); [2] Research Institute of Human Morphology, Moscow, Russia

* svetlanapalna@mail.ru

Key words: *ischemic stroke, cerebral cortex, morphology*

Aim. To reveal morphofunctional changes in the ganglionic layer of the pyramidal cortex of both hemispheres of the brain of people who died as a result of ischemic stroke.

Material and Methods. Samples of cerebral cortex 9 died as a result of left middle cerebral artery ischemic stroke human from 3 areas (1 — adjoining directly to the site of necrosis, 2 — 5–10 cm distant from the previous 3 — the area of the contralateral hemisphere symmetrical hearth) were investigated. Samples were stainedstained with cresyl violetand hematoxylin-eosin; p53 and NSE proteins were detected by indirect immunoperoxidase immunohistochemistry. All samples were examined by light microscopy.

Results and Discussion. Morphometric analysis revealed that the number of damaged bodies of neurons of ganglionic cell layer was greatest in the samples of the ipsilateral hemisphere (zone 1 and 2) and minimal in the zone 3. The relative content of reactively altered nerve cells was the smallest in the samples of the contralateral hemisphere. In the zone 2, all neurons were significantly altered, and in the remote from the border region by 5–10 cm, the number of reactively altered neurons significantly prevailed over the unaltered. Hhe highest number of p53 positive pyramidal cells was observed in zone 2; in zone 1 and 3 the number of labeled cells was comparable.

Conclusions. With the development of ischemic stroke, quantitative and qualitative changes occur in both hemispheres of the brain. Areas of maximum changes are distributed unevenly.

NEW DATA ON HUMAN VERTEBRAL COLUMN STRUCTURE ANATOMY IN THE INTERMEDIATE FETAL PERIOD OF DEVELOPMENT

Shalikova L. O. [1], *Liashchenko D. N.* [1], *Gadilshina I. R.* [2], *Gulina Y. V.* [1]

[1] Orenburg State Medical University, Russia; [2] Samara State Medical University, Russia

L.o.shalikova@yandex.ru

Key words: *vertebral column, development, anatomy, fetal*

Aim. To determine the presence of the spinal congenital anomalies and the degree of violation doctors need detailed information on the spinal structures morphology. The purpose of this study was to obtain morphometric data on the structure of the vertebral column on the prenatal stage.

Material and Methods. The study was carried out on 30 fetuses of 16–22 weeks of development using the method of macromicroscopic preparation, method of cuts according to N. I. Pirogov and histotological method.

Results and Discussion. The study of sectional material has established that the vertebral column has already been formed in the 16–22 weeks of development. The lumbar lordosis was detectedin all cases, the cervical lordosis and thoracic kyphosis were present in half of cases. Vertebral foramen were relatively wide and had an oval shape. There was a gradual narrowing of the vertebral foramenfrom L_5 to Sc_5, which has became a narrow slit at the level of coccygeal vertebrae. It was noteworthy that the vertebral arcs were not yet fused with the body. The average value of the transverse dimension of the vertebral body wasincreased from C_1 (2.3±0.65 mm) to L_3 (7.71±1.1 mm), then stabilized through L_4–L_5 and decreased to Sc_5 (1.84±0.43 mm).The sagittal size of the vertebral body wasincreased from C_1 (1.9±0.52 mm) to T_5 (5.95±0.87 mm), then the stabilization to L_3 (5.31±0.91 mm) was observed. The lowest values were established in the sacral part (from Sc_1 — 3.46±0.76 mm to Sc_5 — 1.95±0.37).

Conclusions. Results of research can be used in fetal diagnosis and therapy of deeply prematurely born newborns.

NEW ANATOMICAL DATA ON RECTUM AND ITS RELATIONSHIP WITH BONE STRUCTURES IN FETUSES AT 16–22 WEEKS OF DEVELOPMENT

Shalikova L. O., Liashchenko D. N., Gulina Y. V.

Orenburg State Medical University, Russia

L.o.shalikova@yandex.ru

Key words: *rectum, bone, developmental anatomy, relationship*

Background. Nursing of deeply premature neonates and progress of the intrauterine operations on the fetal pelvic organs dictate

Aim. To obtain new morphometric data on the rectum structure and its relationship with bones on the prenatal stage.

Material and Methods. The present investigation was based on the study of the sectional material of 25 human fetuses both sexes of 16–22 weeks gestation from collection of Human Anatomy Department, OrSMU. It was used by macromicroscopic preparation, the method of cuts according to N. I. Pirogov, histology method.

Results and Discussion. The rectum is cylindrical in shape, without bends, its diameter increases from 2.66±0.5 to 4.56±0.8 mm during the studied period. The thickness of the rectal wall is 0.5±0.03 mm. At the level of pelvic inlet the distance from the rectum to lateral walls of the small pelvis cavity is 4.5±0.07 mm on the right and 5.1±0.07 mm on the left side. The distance from the rectum to anterior wall of the cavity is on average 7.2±0.07 mm, to posterior wall — 0.3±0.07 mm. At the level of pelvic outlet the rectum surrounded by perineal muscles is located in the center of the pelvic diaphragm of the perineum, the distance between the rectum and internal surface of the sciatic bones was 2.43±0.3 mm on the right side, 2.96±0.3 mm on the left.

Conclusions. The detailed knowledge of the developmental anatomy of the rectum will help to the clinicians and fetal surgeons.

ANATOMICAL VARIATIONS AND DIMENSIONS OF ARTERIES IN THE POSTERIORCIRCLE OF WILLIS

Shatri Jeton [1], Cerkezi Selim [2], Ballazhi Meriton [3], Bexheti Sadi [4]

[1] Department of Anatomy, Faculty of Medicine, University of Pristina «Hasan Prishtina», Pristina. Kosovo; [2] Department of Anatomy, Faculty of Medicine, University of Tetovo. Republic of Macedonia; [3] Department of Anatomy, Faculty of Medicine, University of Tetovo. Republic of Macedonia; [4] Department of Anatomy, Faculty of Medicine, University of Tetovo. Republic of Macedonia
bexhetisadi@gmail.com

Key words: *the circle of Willis, variations of posterior part, diameters of arteries, length of arteries*

Background. The circle of Willis (COW) as an anastomotic polygon at the base of the brain, forms an important collateral network to maintain cerebral blood perfusion. Most of the variations have been reported on posterior cerebral and posterior communicating arteries.

Aim. The aim of this study was to investigate different anatomic variations and dimensions of posterior part of the COW and their prevalence.

Material and Methods. This is an observative descriptive study performed at the University Clinical Center, Clinic of Radiology. A randomized sample of 513 angiographic examinations in adult patients of both sexes without clinical manifestations for cerebrovascular disease who were instructed to exploration is included.

Results and Discussion. The complete anterior part of COW is common with 77.7% of the all subjects, while the posterior part had a complete structure in 27.6% of the cases. The prevalence of unilateral FTPComA was 14.7% and bilateral FTPComA was found in 12.9%, while hypoplasia or absence of both PCoAin 45.8%. All dimensions of the arteries are larger in male than female, except the diameter of PCoA that is larger in female ($p<0.05$). Significant differences were found in diameters of arteries between the younger and theolder age groups.

Conclusions. Similar to other studies, most variations are related to the posterior part of the circle of Willis. Thus, knowledge of the variations, diameter and the length of the arteries of the circle of Willis has a great importance in interventional radiology for various endovascular interventions as well as during anatomy lessons.

MODERN METHODS OF DIAGNOSIS AND SURGERY OF INTRADERMAL PAPILLOMAS OF THE MAMMARY GLANDS

Shestopalova A. D.

M. Gorky Donetsk National Medical University, Donetsk
ntiy_work@mail.ru

Key words: *mammary gland, ductal papilloma, sonography, galactoductography, ductoscopy, laser surgery*

Aim. Analysis of diagnostic results and minimally invasive laser treatment of intrapropate papillomas (IPP).

Material and Methods. A retrospective analysis of 64 clinical cases from the mammary gland (MG). The main group — 28 patients after minimally invasive laser operations under the supervision of ultrasound, control group — 36 women who underwent resection of MG. Runway processing was carried out based on the use of 2 kJ of energy to destroy 1 cm^3 of tissue. To study local changes 3 days after the laser destruction of the runway, 15 women underwent histological examination of the biopsy specimens.

Results and Discussion. Allocations from the left nipple were 43 patients, 21 — from the right. 79% of the precipitations were spontaneous. Hemorrhagic nature of the secretion was observed in 26.5% of patients, serous-hemorrhagic — in 32.4% and serous — in 41.1%. Cytologically papillary complexes are found in 29% of cases. Sonographically, the runway was found in 6 women, radiographically in 23. The galactoductography was used in 58 cases. Visualization of the runway during duskoscopy — in 88% of cases. As a result of the complex diagnos-