

LOCAL PECULIARITIES OF RENAL HEMODYNAMICS IN NORMAL CONDITION

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Key words: *segmental renal artery, norm, ultrasound, symmetry-asymmetry*

Background. For a clear demarcation of norm and pathology the knowledge of normal renal hemodynamic parameters is very important;

Aim. Nowadays is raised an interest to study in details various renal segments.

Material and Methods. In this work retrospective analysis of data obtained by vital study of 19 left and right kidneys of men 22–35 years of age without renal diseases using Doppler renal investigation of superior segmental arteries in color duplex scan mode and multislice computed tomographic angiography was performed. All kidneys were with a single renal artery. The peak systolic velocity (Vps) and the end diastolic velocity (Ved) of the blood flow, the resistive index (RI), the acceleration time (AT), origination angles and internal diameters (in millimeters) of superior segmental arteries were determined. Statistical analyses of results were performed by computer program package «Biostatistics». Differences were considered significant at p values less than 0.05.

Results and Discussion. By comparison of hemodynamic parameters of right and left superior segmental arteries statistically significant differences were not determined (Vps: on right — 37.7 ± 0.7 , on left — 40 ± 1.0 cm/s, $p > 0.1$; Ved: on right — 18.3 ± 1.2 , on left — 17 ± 0.6 cm/s, $p > 0.1$; RI: on right — 0.6 ± 0.03 , on left — 0.63 ± 0.01 , $p > 0.1$; AT: on right — 0.08 ± 0.01 , on left — 0.09 ± 0 second, $p > 0.1$). Comparison of origination angles, as well as of internal diameters, of right and left superior segmental arteries did not show any statistically significant differences (origination angles — 38.0 ± 2.0 and 46.0 ± 9.0 , $p > 0.1$; internal diameters — 4.5 ± 0.15 and 4.5 ± 0.15 , $p > 0.1$).

USING OF OSTEOPLASTIC MATERIALS IN RECONSTRUCTION OF JAW BONES DURING TREATMENT OF PATIENTS WITH DEFECTS OF DIFFERENT ETIOLOGY

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Key words: *xenogenic materials, jaw bone defects, surgical treatment*

Aim. To increase the efficiency of surgical treatment of patients with jaw bone defects of different etiology on basis of different osteoplastic materials.

Materials and methods. On the base of Sechenov First Moscow State Medical University and the privacy medical clinic during 8 years 83 patients were under the supervision: 34 with radicular cysts upper and lower jaw; 21 had retention dystopia of third molar; 18 patients with chronic maxillary perforative sinusitis; 7 while the open sinus lifting and 3 patients with bone plasty. All patients were appropriate operated in accordance with the detected pathology and using for filling of jaw defects with different materials and combinations — collagen I type, auto bone, xenogenic complex hydroxyapatite and collagen I type, PRF. For intergroup comparison, we used Mann–Whitney U-test and χ^2 -test.

Results and Discussion. There were no any complications in early period after operations among all patients. They were got complex medication and daily changed of bandaging. Sutures were removed on 9–12 days. While X-ray and CT-after 1 month we watched first signs of new bone formation in the field of defects, high density osteoregenerate was found in the area filled with materials with hydroxyapatite due to their primary features. In 3 months more pronounced signs of bone regeneration were detected. Full recovery of the bone tissue noted through 4–6 months.

Conclusions. The using of different osteoplastic materials was showed good results during filling of jaw bone defects and their chose must be done by surgeon according each clinical case.

ANATOMICAL AND SURGICAL RATIONALE OF VULVA PLASTICS

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Key words: *vulva plastics, displaced skin-fascial flap*

Aim. Improvement of the results of reconstructive plastic surgery with use of displaced skin-fascial flaps for closing wound defects on the female perineum.

Material and Methods. The study was performed on 325 objects: 21 corpses of people (women); 304 women, including 102 who studied anatomical parameters of the perineum and 202 patients who underwent surgical interventions on the perineum, followed by the closure of wound defects in various ways.

Results and Discussion. A complex of new morphometric data on the structure of the surface tissues of the female perineum was obtained. Data on the variability of anatomical parameters of the female perineum depending on the type of Constitution and body weight are presented. On the basis of anatomical data the model of formation of the moved skin-fascial flap from a back surface of a hip at plastic

of wound defects of a crotch is developed. The anatomical parameters of the perineum, allowing to calculate the size of the moved skin-fascial flaps and the probability of necrosis and ischemia of the flaps in the postoperative period, were determined. Identified areas of high risk for suturing tissues and this morphological substantiation of application of surgical and microsurgical operative techniques stitches in different parts of the wound.

Conclusions. These studies expand the understanding of anatomy and morphometric characteristics of female perineum tissues and can be used in the planning and individualization of perineal plasty, which improves the long-term results of surgical treatment and the quality of life of patients.

EXAMINATION OF THE ORIGIN OF THE SUPERIOR CEREBELLAR ARTERY BY DIGITAL SUBTRACTION ANGIOGRAPHY

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Key words: superior cerebellar artery, anatomy, variations

Aim. Currently the superior cerebellar artery attracting the attention of neurosurgeons, radiologists and anatomist because of its variations. The aim of this study was to investigate the anatomy and variations of the superior cerebellar artery in the Macedonian population and to emphasize their clinical significance.

Material and Methods. We examined radiographs of 55 patients who had DS angiography undertaken for a variety of clinical reasons, performed as a part of their medical treatment at the University Clinic for Radiology in Skopje, Republic Macedonia. The study population included 27 male and 28 females, age range from 18–79, mean age 51.09 years.

Results and Discussion. In 90.9% of the patients superior cerebellar artery have origin from the distal portion of the basilar artery on both sides as a single vessel. The most common variations of the superior cerebellar artery were duplication (frequency 5.45%) and origin from posterior cerebral artery (frequency 3.63%). We found unilateral duplication on the right side in two patients and on the left side in one patient.

Conclusions. Although anatomically interesting, an awareness of the superior cerebellar artery anatomy and variations is clinically important for save performance of diagnostic and interventional procedures in radiology and for surgeons during planning and accomplishing surgical interventions.

GEOMETRICAL ANALYSIS OF INTRACRANIAL ARTERIES COURSES IN COORDINATE SYSTEM IN THE AIM OF ANATOMICAL NOMENCLATURE OF ARTERIAL WALLS USING 3 DIMENSIONAL AXIS-PLANE METHOD

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Key words: blood vessel, blood supply, anatomical nomenclature

Background. Anatomic names of the intracranial arterial walls have been widely used in mainly microneurosurgical operations and cadaveric studies principally to provide spatial orientation. In literature, on the basis of which criterias are considered to define the surface anatomy of blood vessels never been described before.

Aim. The objective of the current study was to effectuate and clarify a method to determine the anatomic surfaces of the intracranial arteries.

Material and Methods. An axial feature of a blood vessel named luminal axis is defined and placed in coordinate system schematically. The angles between the luminal axis of a blood vessel and three anatomical axes are measured in MR Angiographic images in which anatomical coordinate system situated. According to the angulation between the luminal axis and anatomical axes, anatomical surfaces of intracranial arteries are defined and named.

Results and Discussion. Angulation of the luminal axis of an arter with sagittal axis smaller than the other anatomical axes has medial, lateral, superior, inferior walls; angulation of the luminal axis of an arter with vertical axis smaller than the other anatomical axes has medial, lateral, anterior, posterior walls; angulation of the luminal axis of an arter with transverse axis smaller than the other anatomical axes has anterior, posterior, superior, inferior walls.

Conclusions. «3 Dimensional Anatomical Axis-Plane method» based on numerical dates' obtained from geometrical measurements in coordinate system is a reliable and scientific method for determining and anatomical nomenclature of the arterial surfaces.