plete discoid morphology (58%). The lateral menisci were having 'C shape' morphology in 16 cases (32%) and crescent shape in 5 cases (10%).

Conclusions. The present study observed various shapes of medial and lateral menisci in the human knee joint. The incidence of discoid lateral meniscus was 58%. However all these were incomplete discoid in morphology and the complete discoid meniscus was not observed in the present study (0%). The discoid medial meniscus was not observed in the present study (0%). We believe that the data of the present study is enlightening to the orthopaedic literature and incomplete discoid lateral meniscus may be considered as a normal variant.

MORPHOLOGICAL CHARACTERISTICS OF THE ANTERIOR COMMUNICATING ARTERY

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Key words: *anterior communicating artery, brain, anatomy, origin, diameter*

Aim. Cerebral circulation, especially arterial, in recent decades has attracted the interest of anatomists and clinicians. The anterior communicating artery acts as an anastomosis between the left and right anterior cerebral arteries. The aim of this study was to determine the morphological and topographic characteristics of the anterior communicating artery and its variations.

Material and Methods. The investigations of anatomical characteristics of the anterior communicating artery are made on 133 human brains without cerebrovascular pathology, from both sexes at age from 23 to 68. Brains were fixed in a 10% solution of formaldehyde, and the obtained material was analyzed using a stereoscopic light microscope.

Results and Discussion. The length of the anterior communicating artery ranged from 0.6 to 7.6 mm, with mean value of 2.6 mm. The diameter ranged from 0.5 to 5.1 mm, with a mean value of 2.0 mm. In 54% of the cases anterior communicating artery was presented as a single artery connecting the anterior cerebral arteries. The most common variations of the anterior communicating artery were *Y* or *V* shaped (frequency 29%), plexular (frequency 8%), duplication (frequency 4%) and common trunk of anterior cerebral arteries with absence of anterior communicating artery (frequency 4%).

Conclusions. Detailed anatomical knowledge of the anterior communicating artery is important when considering vascular surgery in the area of the anterior portion of the circle of Willis, since is the most common site of intracranial aneurysm formation.

TRANSPLANTATION OF THE REVASCULARIZED TRACHEA IN THE EXPERIMENT AND, FURTHER, IN THE CLINIC WITH A GOOD REMOTE RESULT

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Key words: *transplantation, trachea, thyreotrial complex, experiment, vital organs*

Transplantation of vital organs has now become a daily reality. However, unlike many other organs, in clinical practice there is no reliable transplant of the trachea, capable of replacing it with total lesion. This is due to the peculiarities of the anatomy of the trachea, as well as its constant contact with the external environment, leading to infection of the trachea. The goal of the research was to develop an anatomical model of transplantation of a revascularized trachea with the aim of its clinical use for the tracheal defects replacement after extensive resection. In the anatomical theater were performed 109 experiments in which the anatomy of the vascular pedicle of the trachea was studied, the area of perfusion of the tracheal wall through the thyroid arteries was determined. Thus was developed a new method of transplantation of the revascularized trachea in the composition of the thyreotrial complex. Was developed the donor selection stage of the organ, which was carried out in 17 cases. Preference was given to the «fast» version of the fission of the thyreotrial complex, which is convenient to use in the multi-organ fence in the donor after the death of the brain. Recipient stage (n=5) was performed after subtotal resection of its own trachea. The blood supply was restored by superimposing vascular anastomoses of the lower thyroid arteries and the veins of the donor complex with the receptor vessels. The choice of recipient vessels was carried out individually in each specific case, depending on the location of mediastinal and transplant structures. In the experiment were determined on animals the permissible time of thermal ischemia of the thyreotrial complex, the preservative solution and the features of reperfusion injury. Thus, for the first time a technique for transplantation was proposed of the trachea in the composition of the thyreotrial complex with one-stage revascularization through the lower thyroid vessels. This technique used us in the clinic. The patient is a 37-year-old man with a diagnosis The operation was done for 37-year-patient with diagnosis: «Afterthracheostomic subtotal cicatricial stenosis and malacia trachea. The membranous part defect

of thoracic trachea with the formation of false way into mediastinum. Mediastinitis. Tracheostomy. Chronic tracheobronchitis». The stage of withdrawal of the thyreotrial complex was carried out according to the developed protocol. Perfusion of the organ was made with a solution of «Custodiol». The recipient stage of transplantation consisted of a resection of a cicatricial trachea. The upper border of resection was at the level of the first intercropping interval, the lower one — along the upper right edge of the last cartilaginous half-ring, the resection of the tracheobronchial angle was performed along the left wall. Further, caudal and cranial tracheotraal anastomoses were performed between the donor complex and the trachea of the recipient. To restore blood circulation an anastomosis of the left and right lower thyroid arteries with a brachiocephalic trunk of the recipient was performed in the type of «end-to-side». The bloodstream was restored by an anastomosis of the lower thyroid vein of the donor with the left brachiocephalic vein of the recipient. In the postoperative period were prevented infectious complications and rejection. When analyzing the structure of the tracheal part of the graft, the preservation of the mucosa and the cartilaginous carcass was revealed in the near and distant periods after the operation, while maintaining a satisfactory lumen of the respiratory tract. At present, after 12 years the recipient is alive, breathing is satisfactory. In the late period, the development of malacia trachea was diagnosed. This required the stenting of the trachea, which the patient carries well. Thus was made a preclinical study devoted to the solution of tracheal transplantation. The implementation of the proposed technique of thyrotrheic transplantation in a clinic with a good long-term result and a follow-up period of 12 years showed the validity of the method in the treatment of patients with extensive tracheal lesion with the impossibility of alternative treatment. Disadvantage should be considered the need for immunosuppressive therapy.

PECULIARITIES OF 1D: 3D AND 2D: 4D FINGER INDICES IN DEPENDENCE ON GENDER AND TYPE OF THE CONSTITUTION

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Key words: *hand, finger indices, constitution, gender, handscaner*

Background. The study of morphology and functions of the hand is realized in everyday practice in various medical spheres.

Aim. The purpose of our research is to determine finger indexes of the hand 1D:3D and 2D:4D in adolescent people considering typological aspects, sexual dimorphism and bilateral asymmetry. 1D:3D and 2D:4D finger ratios of a hand are widely used for research in the field of predisposition of the individual to certain somatic diseases. 299 young people were surveyed in total with the calculation of the Pignet index, using a flatbed scanner and the author's program HandScaner.

Results and Discussion. As part of the study, it was identified that the finger indices of 1D: 3D in young men is significantly greater than that of girls in the hypersthenic group by 2% ($p<0.05$). Finger index of 1D: 3D is more by 1% in young men in the normosthenic group, in the asthenic group, the finger index of 1D: 3D is more in girls by 1% ($p>0.05$). When studying the index 2D: 4D, there were no statistically significant differences between the left and right hands in young men and women ($p>0.05$), as well as the relationship with the type of body build.

Conclusions. Despite this, many foreign authors note the presence of this connection in males and females in other age groups. In addition, according to foreign authors, this index, as well as in our study, is more in girls in comparison with young men.

CONDITION OF THE MUSCULAR SYSTEM IN PATIENTS WITH DENTOALVEOLAR PATHOLOGIES

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Key words: *dentofacial anomaly, neurogenic titania, pericranial musculature*

Aim. Substantiation of the need for preliminary evaluation of the tone of chewing, mimic and pericranial muscles in orthodontic patients with clinical manifestations of the phenomenon of increased neuromuscular excitability or neurogenic titania.

Material and Methods. In the clinic of orthodontics were examined 30 patients (18–36 years) without a somatic pathology: with the pathology of the dentoalveolar system (n=18) and without it (n=12). The tone of the masseter, temporal, SCM, m. obricularis oris was determined with the help of myotonometry. For all patient clinical examination was carried out, including assessment of occlusion, articulation, opening of the mouth and position of the tongue, swallowing test, the shape of the hard palate. To assess the increased neuromuscular excitability,