LIVER AND STOMACH COLLATERAL BLOOD SUPPLY AFTER DISTAL PANCREATECTOMY WITH CELIAC ARTERY RESECTION. IO US AND ICG GASTROSCOPY ARE MORE USEFUL TOOLS THAN PREOP COMMON HEPATIC ARTERY OCCLUSION: EXPERIENCE OF 115 CHA CLAMPING AND 26 DP CARS

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Key words: *liver, blood supply, distal pancreatectomy, cancer*

Background. Distal pancreatectomy with celiac artery resection (DPCAR) is in use for borderline-resectable pancreatic cancer. It is believed that considerable reduction of the liver arterial supply after DPCAR may cause severe liver ischemia. Decision to reconstruct CHA or left gastric has to be justified.

Aim. To study stomach's and liver's collateral arterial supply after common (CHA and celiac artery (CA) temporary occlusion.

Material and Methods. Arterial anatomy, diameters of CHA, proper hepatic, gastroduodenal and pancreatoduodenal arcades (PDA) were registered before surgery in 115 consecutive patients with pancreatic body/tail cancer (n36), gastric cancer with pancreatic involvement (n30) and liver tumors (n45) by CT. For DPCAR (n26) patients ICG gastroscopy or CT were performed during or after surgery. Arterial blood flow in the liver and mean systolic velocity in hepatic arteries before and after clamping were measured intraoperatively by US.

Results and Discussion. Classical arterial anatomy was identified in 67%. Pulse disappeared in 9 (8%) cases after clamping of CHA, RGEA and aLHA/rLPA. Collateral arterial blood flow in the liver parenchyma was preserved in all cases. DPCAR led to increase of GDA, PDA and RGEA blood flow in 1–12 times; PDA were detected only once before DPCAR. Gastric ischemia was revealed in four and liver ischemia in 0 cases.

Conclusions. 1. IOUS is a reliable modality for intraoperative assessment of liver arterial blood supply during DPCAR. 2. Gastric ischemia is much more frequent event than liver ischemia after CA occlusion. IO ICG gastroscopy can be the option for the reconstruction of left gastric artery. 3. CHA occlusion before DPCAR is unnecessary procedure.

MINIMALLY INVASIVE TUNNELING TECHNIQUE FOR BONE HARVESTING

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Key words: *tunnel technique, bone augmentation, bone autograft, minimally invasive technique, «MicroSaw» technique*

Aim. The aim of our study was to evaluate the effect of the atraumatic «MicroSaw» technique and the Tunnel Technique for bone osteotomy and autogenous bone grafting from retro-molar site used for bone augmentation prior to dental implant surgery.

Material and Methods. Forty free (43) partially edentulous patients with alveolar bone atrophy were enrolled in our clinical study and went through surgery. Osteotomies of the jaws were made using thin diamond saws «MiscoSaw» (Stoma, Germany), since these are the finest modern saws. The autografts were obtained from the retromolar site of the lower jaw. The bone wound of the donor site was filled with a blood clot and sutured with single sutures. The bone blocks were cut into thin cortical plates. Bone augmentation in the atrophy area was made both in height and width, using thin bone plates to create the contours of bone tissue. Autogenous bone chips were placed between the plates. Soft tissue edema, pain syndrome, wound healing time were clinically evaluated after the surgery. Four months later a bone column was taken from the implant site for its histological structure analysis. The bone tissue of the autograft was examined 4 months after bone augmentation.

Results and Discussion. The time of bone block grafting procedure while using the «MicroSaw» technique is significantly reduced due to high speed of diamond disk rotation. Bone cut has a negligible thickness, which minimizes bone trauma. Patients who underwent bone augmentation performed with the help of the «MicroSaw» technique noted a comfortable postoperative period and minimal postoperative edema. Patients rarely took painkillers. Postoperative wounds in the donor site healed without complications, the stitches were removed within 10.0±3.0 days, depending on bone augmentation method. There was no evidence of loss of sensitivity either of the lip or chin. No cases of hematomas or purulent inflammation were reported. The histo-

logical study of the autograft bone tissue 4 months after conventional and tunneling bone grafting indicates that the bone autograft is intimately connected with the native bone tissue and there is not border between these tissues. This phenomenon can be explained by the beneficial effect of this diamond micro-saws invasion in the bone tissue, which has a positive effect on the process of bone autograft osteoregeneration.

Conclusions. The «MicroSaw» technique and Tunneling Technique have positive effect on postoperative healing of soft and bone tissue. Using Tunnel Technique and «MicroSaw» Technique reduces surgery time and makes the results more predictable.

ANATOMY MENTORING PRACTICE AS A NEW PROMISING WAY FOR TEACHING MORPHOLOGICAL SCIENCE

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Key words: *mentoring practice, novel teaching strategies, mentor, anatomy teaching*

Background. Traditionally, the anatomy of human body as the university course is associated with the number of complexities in the 1st year students. Pupils' decreased attentiveness in the period of adaptation for student`s life causes the necessity for novel teaching strategies in anatomy.

Aim. Thus, our study considers the benefits and drawbacks of new mentoring practice in Sechenov University.

Results and Discussion. Modern mentoring practice in anatomy department implies mentors teaching their coeval through education plan. The mentors are the most talented and motivated 1st year student with excellent marks during the first term-time. There are no special requests for students who will being trained; therefore, everyone could be taught within this type of program. Twenty chosen educators elaborate lesson plan in a special block of themes, and two testing controls both for student`s knowledge assessment and collecting statistics. Our intermediate results received during 2017–2018 academic years show the increased marks in five taught groups from medical, pediatrics, and foreign students' faculties. Furthermore, all the mentors from scientific faculty demonstrate great individual advancement.

Conclusions. Now we`re going to collect and analyze examination results from 13 June till 12 July for database and its further comparison with the similar ones. However, we`re convinced that our novel mentoring experience becomes necessary for all the student to recognize the responsibility for not`s only their own education, but both for qualify teaching their coeval. Finally, this unusual experience will foster awareness of student leadership attributes.

FUNCTIONAL ANATOMY OF THE CEREBRAL CORTEX: FROM BRODMANN CONCEPT TO 3D MULTIMODAL MAPS

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Key words: *3D multimodal map, neurovisualisation, neurovisualisating methods, brain mapping*

Background. In 1909, K. Brodmann have characterized 52 different areas in the cerebral cortex. For many years, neurologists and neurosurgeons have been using this map for working. However, the cortical architecture is more heterogeneous. Modern techniques of neurophysiological control allow expanding our knowledge in brain field organization.

Aim. To investigate modern data of cortical cyto-, myelo- and mesoarchitectonic organization using new neurovisualizating methods.

Material and Methods. Analysis of primary sources, reviews and dissertations, as well as articles from the Medline and Scopus databases over the past 20 years.

Results and Discussion. We consider cyto- and myeloarchitecture for defining 3D multimodal map in contrast to Brodmann brain map. New applications like Micro-optical sectioning tomography, optical coherence tomography, immunohistochemistry, receptor autoradiography — these new applications combining with computational techniques allow understanding multiple levels of brain organization.

Conclusions. Brodmann`s pioneered map is essential different from the current data. Thus, the letter confirms the hypothesis of cortical multilevel organization. This issue is not elucidate enough in Russian literature that must the preconditions for new research.

TENDINOUS INTERCONNECTIONS OF THE HAND FLEXORS

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Key words: *hand, tendinous interconnections, flexor pollicis longus, flexor digitorum superficialis, flexor digitorum profundus*

The thumb has one (flexor pollicis longus), while the other fingers have 2 flexor tendons (flexor digitorum superficialis and profundus). Interconnections of these tendons occur in about 20% of the general population and could be tendinous or tendon sheath