Material and Methods. Sixteen adult male wistar rats were divided into four groups of four animals each. Treated groups were orally administered with 300, 400 and 500 mg/kg body weight of aqueous Cola nitida extract. Control group was given distilled water. All the animals were fed with rat chow and water liberally for 28 days. The rats were weighed on the first and final days of drug administration with an electronic weighing balance. The rats were sacrificed by chloroform inhalation. The brains were dissected out, weighed immediately and transferred into a bouins fluid for histological study.

Results and Discussion. The result showed significant ($p<0.05$) weight gain in all the groups. Histology of the lateral geniculate body of rats treated with Cola nitida extract revealed liquifactive necrosis, cellular degeneration, hypertrophy and vacuolations.

Conclusions. We conclude that prolong consumption of Cola nitida is toxic to the cells of the lateral geniculate body as compared with the control.

POSTERIOR FEMORAL CUTANEOUS NERVE IN THE LEG: SURPRISING FACTS WITH GREAT CONSEQUENCES!

Feigl G. [1], *Schmid M.* [1], *Avila Gonzalves C.* [2], *Litz R.* [2]

[1] Department of Macroscopic and Clinical Anatomy, Gottfried Schatz Research Centre, Medical University of Graz, Austria; [2] Department of Anaesthesiology and Intensive Care BRG Bergmannsheil Bochum, Germany

Key words: *leg, nerve, regional anesthesia, ultrasound-guided blockade*

Background. Problems and failures in regional anesthesia procedures distal to the popliteal region might occur although blocks of the sciatic and femoral or saphenous nerve were performed successfully.

Aim. One of the reasons for failures could be the posterior femoral cutaneous nerve (pfcen) with a much more distal innervation area as described.

Material and Methods. In total 123 lower extremities embalmed with Thiel's method were investigated by dissection. The course of the pfcn was documented from the subgluteal fold to the most distal macroscopical dissectable branch. In a large subgroup (83 of 123 extremities) the topography in regards to other structures, such as the small saphenous vein, was also inspected and documented.

Results and Discussion. The pfcn ended in the popliteal fossa or the proximal leg in 78 of the 123 (63.4%) dissected legs. The remaining 45 nerves (36.6%) extended further distally and were divided into several subgroups depending on their distance from the tip of medial malleolus. In two cases to the innervation of periosteum were found (one on the fibula, one on the calcaneus).

Conclusions. The guidelines for regional anesthesia procedures distal to the popliteal fossa should be revised. The pfcn is a relevant nerve that plays a much greater role in the skin innervation of the leg than previously thought. Ultrasound-guided blockade of the pfcn should be routinely implemented.

ULTRASOUND-GUIDED ANKLE DECOMPRESSION SURGERY (UGADS) — A MINIMALLY INVASIVE APPROACH FOR THE PROXIMAL TARSAL TUNNEL SYNDROME: A CADAVERIC STUDY

Fernández-Gibello Alejandro [1, 2], *Camuñas Gabriel* [1, 2], *Moroni Simone* [2], *Montes Rubén* [1, 2], *Zwierzina Marit* [3], *Fritsch Helga* [3], *Sañudo José* [4], *Vazquez Teresa* [4], *Konschake Marko* [5]

[1] Faculty of Health Sciences, Department of Podiatry at University of La Salle, Madrid; [2] Department of Podiatry, Clinic Vitruvio, Madrid; [3] Department of Plastic, Reconstructive and Aesthetic Surgery, Center of Operative Medicine, Medical University of Innsbruck, Austria; [4] Department of Anatomy and Human Embryology I , Complutense University of Madrid; [5] Department of Anatomy, Histology and Embryology, Division of Clinical and Functional Anatomy, Medical University of Innsbruck, Austria
alejandrofernandezgibello@gmail.com

Key words: *ultrasound-guided surgery, tarsal tunnel syndrome, anatomy*

Aim. The aim of this study, is to provide a safe ultrasound-guided minimally invasive surgical approach, for the proximal tarsal tunnel (PTT) release concerning nerve entrapments.

Material and Methods. The study was carried out on 10 fresh-frozen feet. All of them were examined by US at the medial ankle region. The surgical entry point was marked throughout the course of the lancinate ligament (flexor retinaculum). Once the previous steps had been carried out, the flexor retinaculum release technique was carried out with a 2 mm entry.

Results and Discussion. As a result, an effective and safe release was obtained in all fresh-frozen feet. The ultrasound (US) has proven to be a useful tool in diagnosis and invasive and surgical treatment. The etiology of PTT syndrome (PTTS) is still unclear, but the studies show how scars and fibrosis are one of the causes. However, the open surgery that we perform in this pathology has as main complication these risk factors. Therefore, we propose this decompression surgery of the tarsal canal, which minimizes the adverse effects and complications of this surgery.

Conclusions. The results of our anatomic study indicate that our novel US-guided minimally invasive surgical approach, for the release of the flexor retinaculum, might be an effective, safe, accurate and quick decompression technique treating patients with a PTTS.

EFFECT OF TOPICAL APPLICATION OF PLATELET-RICH BLOOD PLASMA AND HYDROIMPULSIVE SANATION IN THE TREATMENT OF SKIN WOUNDS ON THE REACTION OF SENSORY NEURONS

Fetisov S. O., Anokhina Zh. A., Soboleva M. Yu., Nasonova N. A.*

N. N. Burdenko Voronezh State Medical University, Voronezh, Russia
* fetisovbiol@yandex.ru

Key words: *blood plasma, skin, application, sensory neurons*

Aim, Material and Methods. In an experiment on 300 white male rats evaluated the reactions of neurons of the dorsal root ganglions innervating the regeneration zone of the skin wound of the thigh, with its natural healing and in the case of infection with Staphilococcus aureus sp., using isolated and combined use of platelet-rich blood plasma (PRP) and hydroimpulsive sanation of the wound defect (HIS).

Results and Discussion. The appearance of the neuron groups with various features of morphofunctional changes is noted: reversible by dystrophic and compensatory reactions and irreversible by degenerative changes. The introduction, after the HIS treatment, of PRP in the wound defect resulted in increasing the regenerative effects in the neurons already from the 7th day of the experiment and a significant reduction in cell destruction. The introduction of PRP without pretreatment of the wound defect led to a delay in regeneration and increased the number of destructively altered neurons even in comparison with the spontaneous course of the wound process. Using the multivariate correlation analysis evaluated the relationship between indicators of protein-synthesis activity (optical density of protein and RNA), basic morphometric characteristics (area and nuclear-cytoplasmic index) and condition of perineuronal glial environment.

Conclusions. The combined use of HIS and PRP had the most harmonious effect and a high positive correlation, which can be regarded as the most adequate combination of methods of regional influence in the purulent form of wound healing process.

NEUROIMAGING OF THE STYLOHYOID AREA AS A DIAGNOSTIC TOOL IN CLINICAL PRACTICE

Fokina N. M. [2], *Vasiliev Y. L.* [1], *Dydykin S. S.* [1], *Tabeeva G. T.* [1]

[1] Sechenov First Moscow State Medical University, Moscow, Russia; [2] A. I. Yevdokimov Moscow State University of Medicine and Dentistry, Moscow, Russia
y_vasiliev@list.ru

Key words: *stylohyoid area, pain, diagnostic, face*

Aim. definition of clinical and anatomical patterns in the diagnosis of painful face syndrome

Material and Methods. In the neurology clinic, 20 patients of both sexes aged 35–63 years with suspicion of neuralgia of the 2nd and 3rd branches of the trigeminal nerve were examined. All patients underwent a clinical neurological and dental examination. In anamnesis, all patients had primary headaches in the form of migraine (simple form n=8) and tension headache episodic form involving pericranial muscles (n=12). Against the background of changes in the dental system (extraction, prosthetics), a change in the course of the underlying disease towards the deterioration (transformation with chronization) was detected with a decrease in the effectiveness of the usual drug therapy. With the diagnostic purpose, CT examination of the craniofacial region was carried out by patients, using the T-scan system, occlusal disorders were determined in norm and with forced compression of the jaws.

Results and Discussion. In 78% of cases, the relationship between occlusive disorders and imitation of pain manifestations of a neuralgic nature was revealed. In this case, according to CT, in 5 patients, according to CT, elongation of the styloid process (SP) was revealed; 2 — anomaly of ossification with fragmentary inclusions of cartilage; in 1 patient — with pathological fracture of SP with displacement.

Conclusions. Conducting CT with a diagnostic purpose in patients with persistent neuralgic pain symptoms contributes to the possible identification of the stylohyoid syndrome. With the addition of secondary HA with trigeminal neuralgia to the course of the underlying disease, it is also necessary to perform neuroimaging of the styloid subclavian area to detect this syndrome.

PIROGOV'S «ICE ANATOMY» IN SURGICAL ANATOMY INJURIES RESEARCH OF MINE AND BLAST OF LIMBS

Fomin N. F.

S. M. Kirov Military Medical Academy, St. Petersburg, Russia
fominmed@mail.ru

Key words: *ice anatomy, surgical anatomy, bomb, Pirogov*

Of the many methods that N. I. Pirogov perfected in creating the atlas «Topographic anatomy of cuts