

identification of a nrILN; a clear and understandable anatomic mapping of the inguinal region and the spermatic cord sheaths by means of anatomic dissection, ultrasound guided visualisation of all three inguinal nerves are presented; for migraine surgery research, the supratrochlear (STN) and supraorbital nerve (SON) were macroscopically identified and their relationship to the corrugator supercilii muscle (CSM) was investigated by dissection and ultrasonography.

Results and Discussion. IONM-signals during thyroid surgery, derived from the vagus nerve were positive if derived proximal to and negative if derived distal to the branching off a nrILN. By ultrasonographic identification of a normal brachiocephalic trunk, a nrILN could be excluded. In frontal migraine patients a new possible compression point of the STN passing through the orbital septum could be identified. Also previously described compression points of both STN and SON could be verified. Osteofibrous channels used by the STN and SON were found constantly. An algorithm for ultrasound visualization of this peripheral, supraorbital neurovascular bundle could be worked out. The anterior-superior iliac spine, pubic tubercle, Camper's fascia, external oblique aponeurosis, superficial inguinal ring, external spermatic fascia, cremasteric fascia with cremaster muscle fibers, internal spermatic fascia, cremasteric vein (=external spermatic vein="blue line"), ductus deferens, pampiniform plexus and the inferior epigastric artery are the main surgical landmarks for an open inguinal hernia repair, likewise for ultrasound guided representation

Conclusions. IONM and preoperative ultrasonography can be reliable tests in recognizing peripheral nerves and their variants. Translational anatomic research and its application on peripheral nerves, such as IONM and ultrasonography, improves surgical outcomes and therefore individual patient quality of life — from «bench-to-bedside». This is achieved by increasing individualizing, enlightening under-investigated anatomic details and optimizing surgical procedures.

MORPHO-HISTOLOGICAL FEATURES OF OLD BRUISES: A QUALITATIVE STUDY

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Key words: bruises, morpho-histological features, microscopic analysis

Background. As common skin lesions bruises have important significance in forensic expert reports

in determining the time of death in many cases of domestic violence or child abuse.

Aim. The purpose of this study was to note the features in old bruises, by evaluation of their morpho-histological features.

Material and Methods. The study was performed on 30 human skin samples divided into control and experimental group. The experimental group included bruised human skin with bruises aged >10 days. Paraffin sections of the skin were stained with Hematoxylin-eosin and Perl's Prussian Blue methods of staining, evaluated by light microscopy.

Results and Discussion. Morphological analysis of the skin in the experimental group featured formations with yellow to pale yellow coloration, with blurred edges, that responds to the field of bleeding. Qualitative histological analysis demonstrated presence of dilated fibrous septa in dermis and hypodermis with debris of extravasated erythrocytes due to ruptured blood vessels, infiltration with macrophages and presence of hematoidin granules in the area of bleeding.

Conclusions. Morphological results have shown changes in the skin coloration, without damage of its integrity. Histological findings showed hemosiderin-laden macrophage infiltration in the area of bleeding, together with tissue debris and hematoidin particles. These histological features appear in direction of healing of the bruise, as a result of phagocytosis of the erythrocytes and removing of the tissue debris.

METABOLIC PROFILES IN OBESE CHILDREN AND ADOLESCENTS WITH INSULIN RESISTANCE

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Key words: childhood obesity, obesity in adolescents, insulin resistance, homeostatic model assessment of insulin resistance, metabolic parameters

Aim. To investigate the frequency of insulin resistance and to evaluate the metabolic profile of insulin resistant and non-insulin resistant obese children and adolescents.

Material and Methods. The study comprised 96 (45 boys, 51 girls) obese children and adolescents aged 4–17 years (10.50±0.29 years). Only participants with Body Mass Index ≥95 percentile were included. We analyzed sera for: fasting insulin levels

(FI), fasting serum triglycerides (TG), total serum cholesterol (TC), fasting plasma glucose (FPG) and plasma glucose 2 hours after the performance of the oral glucose tolerance test (2-h G). Homeostatic model assessment for insulin resistance (HOMA-IR) index was calculated as fasting insulin concentration (microunits per milliliter) x fasting glucose concentration (milimolar)/22.5.

Results and Discussion. 58.33% of study participants had insulin resistance. Insulin resistant participants had significantly higher level of 2-h G, FI level as well as TG levels ($p < 0.05$), compared to non-insulin resistant group. Strikingly, 70.73% of the pubertal adolescents were insulin resistant in comparison to 49.09% of the preadolescents ($p = 0.03$). Significantly higher percentage of insulin resistant participants were girls ($p = 0.009$). Our study results also showed positive, but weak, correlation of HOMA-IR with the age, FPG, TG and BMI of the participants ($p < 0.05$).

Conclusions. In general, insulin resistant obese children and adolescents tend to have worse metabolic profile in comparison to individuals without insulin resistance. It is of note that the highest insulin resistance was also linked with the highest concentrations of triglycerides.

MANAGING MICROCIRCULATORY DISORDERS IN MOUSE MODEL OF ILEUS WITH OPIOID PEPTIDE

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Key words: ileus, opioid peptide, lymphatic system, mouse model

Background. Ileus is a formidable complication of various diseases of the abdominal cavity organs and the cardiovascular system and may require surgical treatment.

Aim. The pathogenesis involves a violation of the microcirculation of the intestinal wall that is rich in lymphatic vessels.

Material and Methods. Studies were carried out on white mongrel male rats ($n = 219$) weighing 50–250 g underwent surgical removal of small intestinal obstruction after intraperitoneal injection of a lymph-stimulators direct agonist delta opioid receptors, peptide number 171 in the anastomosis and adjacent tissues and the control group. Biomicroscopy of mesentery of small intestine of rat and registration of contractile activity of lymphatic microvessels was carried out using luminescent microscope.

Results and Discussion. The use of peptide number 171 in treatment of ileus restored microcirculation, reduced edema and damage to the tissue of the

small intestine and allowed to increase the survival rate of animals irrespective of weight.

Conclusions. Lymph-stimulators direct agonist delta opioid receptors, peptide number 171, helps to reduce the manifestations of ileus, improves microcirculation, prevents damage to the wall of the small intestine. The use of peptide number 171 increases the survival rate of animals with its preliminary introduction.

COMPILATION OF OSTEOSYNTHESIS METHODS IN LARGE LIMB SEGMENTS REPLANTATION

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Key words: replantation, osteosynthesys, reconstructive surgery, traumatology

Aim. To compare metalosteosynthesys methods during large limb segments replantation and to discover the most accessible and convenient method of bone fragments fixation which is able to achieve adequate bone consolidation.

Conclusions. Replantation technique has been in use in our country for many years, demonstrating great outcomes. Research relevance is due to necessity of comparing different osteosynthesys methods, considering adequacy of fracture consolidation, as well as comfort ability of use during different operational phases, incidence of complications, quality and afford ability of used techniques. Comparative analysis of articles, which were released during last 15 years, was made. General techniques which are being used in present day limb replantation were selected, their advantages and disadvantages were ascertained with use of specially selected criteria. Patient stability, condition, age, ability of using another methods, and time of limb ischemia (different groups of patients was made) have been taken into account. All these information is comprised into graphic charts and spreadsheets.

ENDOSCOPIC MUCOSAL RESECTION OF METASTATIC GASTRIC MALIGNANT MELANOMA

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Key words: endoscopic resection, melanoma, surgical treatment, EMR

Background. Gastrointestinal malignant melanoma is a rarely observed condition. There is no gold standard of metastatic melanoma treatment. By