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 Hematoxillin-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 debri 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 it`s 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