off 20 mm above the DML center or 30 mm distally to it. In most of the cases the medial calcaneal branch (MCB) originated from the TN proximal to the bifurcation. Possible entrapment spots for the medial and lateral plantar nerve (MPN, LPN), the BN and the MCB are found within a circle of 5 mm radius with a probability of 80, 83 and 84%, respectively. In 10 out of 10 feet the US guided injection was precisely allocated around the BN.

Conclusions. Our detailed mapping of the TN branches and their osteofibrous tubes at TT might be of importance for foot and ankle surgeons during minimally invasive procedures in HPS such as ultrasound-guided ankle and foot decompression surgery.

INFLUENCE OF LASER RADIATION AT THE REGENERATION OF SOFT TISSUES OF MAXILLOFACIAL REGION

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Key words: *laser, maxillofacial area, rehabilitation, dental diseases*

Background. Traumatism of surgical operations in dentistry dictates the need to search for minimally invasive methods of tissue alteration. The use of lasers can solve this problem, since laser radiation is characterized by a lower operational injury, selective action and activation of reparative processes in the wound.

Aim. Improving the efficiency of surgical treatment of patients with dental diseases using Nd:YAG laser.

Material and Methods. We used Nd:YAG laser of wave length 1064 nm. In the experiment, we done histological examination of biopsy of the rabbit oral mucosa in different stages of healing. All rabbits were divided into 4 groups, depending on the method of defect formation: cutting tool, laser radiation power of 1.6 W, 2.4 W and 3.2 W, respectively. In the clinic Nd:YAG laser was used for surgical treatment of 183 patients with different dental diseases.

Results and Discussion. On the results of the experimental and histological study, wound defect, caused by laser, compared to scalpel, much faster goes through all the stages of the wound healing process. The alterative processes and disorders of microcirculation, the intensity of inflammatory processes are less pronounced, reparation starts earlier and have more intensity: fibroblast proliferation, angiogenesis, collagen production, fibrillogenesis, maturation and fibrous cicatricial granulation tissue transformation, wound surface epithelialization. Analysis of clinical data showed that the using of Nd:YAG laser contributed to the unexpressed pain response, minor collateral edema in the postoperative period, reduction of healing terms.

Conclusions. The using of Nd:YAG laser enhances the effectiveness of surgical treatment of patients with dental diseases due to reducing of rehabilitation terms.

MACROSCOPIC AND HISTOLOGICAL CHANGES OF THE LIVER DURING HSV-1

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Key words: *liver, herpes simplex virus, morphological study*

Aim. Herpes simplex virus (HSV) infection is quite prevalent in general population. HSV-1 can be reactivated in nerve system, but the question of herpetic damage of the liver remains open. Aim — the morphological study of liver during HSV-1 infection.

Material and Methods. 30 BALB/c line mice weighing 18–20 g were infected by HSV-1 (strain VC, specifically adapted to studies on laboratory mice) in the amount of 4.0 lg LD_{50}. On day 5, 10 and 30 animals were removed from the experiment. The mice liver was collected on a histological study and weighed. Additionally, the visual assessment of the state of the liver: color, blood supply, consistency.

Results. The liver mass in animals with HSV-I was decrease at 20.2% for 10 days and 22.5% for 30 days ($p<0.05$). On day 5 and 10 after infection the histological structure of liver was not distorted, but hepatocytes had marked cytopathological signs (cells hypertrophy, swelling around the hypertrophied nuclei). The macrophage infiltration was observed in the lobular hemocapillaries. On day 30 the density and area of infiltration of mononuclear phagocytes and lymphocytes were significant increased. Thed hyperemia of hemocappilaries and central veins and local hemorrhages were observed. Cytopathology of hepatocytes were diffuse or focal diffuse. Moreover, the degree of damage was lower compared to the early period of the study.

Conclusions. HSV-1 causes dystrophic and lithic changes in hepatocytes, which affects the reduction