total value of the index above 47,3% is a good prognostic sign, suggesting a low degree of probability of infectious complications development in these patients.

Conclusion: a method of early prediction of infectious complications development in patients with severe trauma and severe hypoxia, which includes the identification of integration index (the percentage of apoptotic DNA-comets, necrotic DNA-comets and DNA single-, double-strand breaks of leukocytes) by DNA comet assay was suggested.

RECONSTRUCTIVE SURGERY FOR TUMOURS OF THE BONE SHOULDER AND KNEE JOINTS

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Over the past 50 years in orthopedic oncology the concept of organ-treatment of bone tumours was introduced. All this was made possible due to improvements in surgical techniques, the use of new schemes of chemotherapy, radiation therapy, hormone therapy and immunotherapy and. The use of grafts and stents allowed some patients to perform organ-surgical treatment for tumour localization in the long bones.

The aim of the work. To show the advantages of organ-surgical treatment of tumours of long bones.

Material and methods. 17 patients (21.5%) with tumours of the proximal humerus underwent surgical treatment. If it affects the bones of the shoulder girdle after resection Tihova-Limberg a reverse shoulder prosthesis in 13 patients was performed and arthrodesis of the shoulder joint using vascularized fibular autograft — in 4 patients. Knee arthroplasty was performed in 62 (78.5%) patients, of which after resection of the distal femur in 40 proximal tibia tumour — 22.

Results and Discussion. After resection of the proximal humerus and shoulder joint arthroplasty of the shoulder joint function restored in 13 patients with arthrodesis with vascularized fibular autograft from the shoulder joint function restored in 3 patients. After knee replacement, joint function restored in 59 (95,2%) patients. Postoperative complications were observed in 14 (22,6%) patients with a median follow-up of 36 months. Of these, in 8 patients infectious complications were identified, in 2 — broken leg prosthesis, in 4 — aseptic loosening of the prosthesis stem. In 11 cases revision cases were performed. In 3 cases, the prosthesis was removed and knee arthrodesis using external fixation devices was performed. Length regenerate formed from 10 to 25 cm. After knee arthrodesis limb supporting ability restored in 2 patients. Amputation were performed in 2 patients with recurrent tumours.

Findings. Each type of reconstruction should be preceded by a thorough analysis of the particular case and selection of patients with the cancer and orthopedic aspects, as well as emotional and psychological status of the patient. Organ-surgical treatment for tumours of the bone helps to restore function and support ability of limbs and therefore improve the quality of life of these patients.

THE ANALYSIS OF MORTALITY CAUSES IN PREHOSPITAL AND HOSPITAL PERIODS IN SEVERE TRAUMATIC BRAIN INJURY

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Traumatism in people of young and active adult age has particular social significance among numerous problems of modern clinical medicine. According to the data of Konovalov AN et al., 2001, Klevno et al., 2001 and Sabirov DM et al., 2011, severe traumatic brain injuries (STBI) are 40 up to 50% of all injuries and is in the leading position in the structure of general

traumatism. Mortality even in mild traumatic brain injury reaches 5–10%, while in severe injuries it ranges from 41 up to 85%. After performing comparative analysis, we can say that mortality has not decreased in last years despite of many researches in pathogenesis of primary and secondary injuries of the brain, development of modern diagnostic methods, treatment and rehabilitation of patients with STBI. The importance of the problem does not raise doubts as more than one third of injures people die on accident place before the arrival of emergency aid or during transportation to the hospital.

Objective: reveal dominant causes of prehospital and hospital mortality in patients with severe traumatic brain injury.

Materials and methods. We have analyzed 362 medical cases of the patients with STBI admitted to Republic Center of Emergency Medicine in last 2 years. 80% was men and 20% was women. Glasgow coma score was 8±3. Among these patients 55 died in different periods after admission. Mortality was 15.2% and 73% of them were men.

In prehospital and hospital periods after getting trauma during the first day 12 patients died (21.8%), during the first week 25 patients died (45.4%) and in later periods 18 patients died (32.7%).

Results and discussion. The cause of death in the first group patients (mean hospital stay duration was 18.7±5.5 hours; GCS in admittance 5±2) was cerebral edema because of brain contusion (n=6) with brain dislocation (n=4). In some cases edema was of destructive character and when brainstem was involved, the trauma was incompatible with life (n=2).

Mean hospital stay duration of patients of the second group was 45.6±15.9 hours and GCS was 7±3. The morphology manifested with the initial stages of necrotized brain tissue resorption, occurrence of active vascular-mesenchymal and glial reaction to the injury and hemorrhage resorption.

In later posttraumatic periods of STBI (mean hospital stay duration – 249.6±34.7 hours; SCG – 8±3) morphological picture was diverse. It was progressive development of secondary infection resulted in cardiac-pulmonary failure (81%), rarely multiple organ failure (13%) and endotoxicosis (6%).

Conclusions.The outcome of treatment of patients with STBI substantially depends on degree and quality of medical aid in prehospital and hospital periods.

THE MECHANISMS OF BACK PAIN FORMATION AND PATHOGENETIC TREATMENT

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Abstract. The author describes a new version of the pathogenesis of pain in the spine where the pain occurs during stimulation of bone receptors in conditions of circulatory disorders of bone tissue. The method for the recovery of the microcirculation is developed by interstitial electrostimulation. The complete elimination of back pain was proved in 90 % of patients.

Keywords: interstitial electrostimulation, back pain, pain pathogenesis, spinal osteochondrosis.

Introduction. Back pain is the most common complaint among adults. Thus, the duration of incapacity for work increases each year. This indicates that the quality of treatment does not become better. The new methods of treatment are created, but they are based on the old approaches and are the analogues of existing ones. These methods do not create a significant improvement of quality care.

Modern radiation diagnosis often does not correspond to the clinical picture. How-ever, pathophysiological and functional changes can be detected long before the appear-ance of pain. Reasons of pain appearance do not often associated with hernial protrusion .

Recent decades physiologists explored new important players in the pathogenesis of the disease. Previously it was believed that the source of pain was the compression of the nerves exiting the spine bone, then the tension of the muscles. Many believe that periosteum is the reason of the formation of reflexory pain syndrome. In recent years, a lot of data have been accumulated to argue that the source of pain is the bone itself with its osteoreceptors that belong to the sympathetic nervous system.