# МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»



# МАТЕРІАЛИ

## 105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ присвяченої 80-річчю БДМУ 05, 07, 12 лютого 2024 року

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Матеріали підсумкової 105-ї науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) – Чернівці: Медуніверситет, 2024. – 477 с. іл.

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У збірнику представлені матеріали 105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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## Kurikeru M.A. CLINICAL AND NEUROLOGICAL STATUS OF PATIENTS IN THE ACUTE PERIOD OF TRAUMATIC BRAIN INJURY OF VARYING SEVERITY

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**Introduction**. In the structure of general traumatism, traumatic brain injury (TBI) is one of the leading causes of long-term and persistent disability. In the acute period of TBI, neuropsychiatric disorders occur, which are manifested by changes in behavioral actions and emotional sphere, which is aggravated in patients with TBI and alcohol intoxication.

**The aim of the study.** The purpose of the study is to assess the clinical and neurological status of patients in the acute period of traumatic brain injury of varying severity under conditions of alcohol intoxication.

**Materials and methods.** The study involved 600 patients divided into two groups. The main group consisted of 300 patients with TBI who were intoxicated at the time of injury detection. The comparison group consisted of 300 patients with TBI without alcohol intoxication. Patients of both groups were divided into three subgroups according to the severity of the injury: group I - patients with mild TBI; group II - victims with moderate TBI; group III - patients with severe TBI.

**Results.** It was found that in mild and moderate forms of TBI in the main group the number of patients with neurodynamic disorders increased, which was statistically significantly different from the comparison group. In severe TBI, there was no significant difference in the number of patients with neurodynamic complaints in the main group and the comparison group. As for cognitive complaints, these disorders are more pronounced in patients with TBI and alcohol intoxication, and as the severity of the injury increased, the percentage of patients with cognitive injuries increased with maximum rates in severe TBI. The frequency of focal and vegetative complaints in patients increased with increasing severity of TBI with a predominance in patients with TBI and alcohol intoxication.

**Conclusion**. Neuropsychological abnormalities in patients in the acute period of TBI consist of a tendency to increase neurodynamic, cognitive, focal and autonomic complaints, the number of which increases in the dynamics of increasing the severity of TBI and in victims who were intoxicated at the time of injury.

## Marchuk O.F.

## TREATMENT PECULIARITIES OF TRANSIENT SYNOVITIS IN CHILDREN

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**Introduction**. The topicality of the study is stipulated by the fact that transient synovitis is quite common form of short-term nonspecific inflammation of the synovial membrane of the hip, less commonly the knee joints, predominantly in boys. The development of the process is often associated with minor trauma; disease with a low subfebrile temperature, such as bacterial diseases of the respiratory tract and oral cavity (tonsillitis, pharyngitis); and with long walking.

Transient synovitis of the joints in children occurs quite often, but the pathogenesis of this disease is practically not studied. Basically, synovitis develops in children from one and a half years to the period of puberty. Commonly accepted treatment regimes include imobilization of the patient's joint and administration of antibacterial, anti-inflammatory, desensitizing therapy and physiotherapeutic procedures, as well as local treatment.

**The aim** of our work was to optimize the treatment of transient synovitis in children through individual and rational approaches to the indication of antibiotic therapy, to identify the main differences in the results of treatment with exclusion of antibiotics from the treatment regimen.

**Materials and methods.** From 2021 to 2023, 187 children with a diagnosis of "coxitis" were treated at Chernivtsi Emergency Hospital in the Department of Pediatric Traumatology, including 102 male and 85 female. The average age was  $5.0 \pm 2.3$  years. There were observed three clinical groups. The first clinical group included 95 children with transient synovitis. The second

clinical group included 15 children who had septic coxitis. The third group included 77 children with other pathology of the locomotor system.

**Results.** According to our observations, transient synovitis is characterized by an acute onset and rapid development. There is pain in the morning, active and passive movements in the joint are limited, resembling a clinic of juvenile rheumatoid arthritis. These children almost always complain of lameness and joint ache when palpated. The body temperature is usually slightly elevated and rarely is high. However, since the pathogenesis of the disease is not yet sufficiently studied, detailed diagnostics must be performed before treatment is prescribed. In 43 children with transient synovitis (from the 1st clinical group) there were no general disorders found and local symptoms were prevalent, body temperature was normal, almost complete absence of changes in the parameters in both general and biochemical blood tests, as well as indices of acute inflammation remained intact - C-reactive protein, antistreptolysin-O, sialic acids and others. Taking into account the received data, antibacterial drugs were not administered and this group was defined as a comparative one. In the analysis of both current and long-term results, no distinction was found between the main group and the comparison group. In both groups the results were negative in those cases when bacteriological investigation of synovial fluid was performed.

**Conclusion**. The optimization of complex treatment of transient synovitis in children has allowed rejection from the administration of antibacterial drugs in some of clinical cases.

### Tulyulyuk S.V.

## REGENERATION OF THE BONE TISSUE IN THE CONDITIONS OF IODINE-DEFFICIENCY REGIONS

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**Introduction**. The issues of bone regeneration are urgent in traumatology. To learn the factors affecting osteogenesis is one of the approaches to solve the problem. An important part of reparative osteogenesis is the state of a bone on the moment of injury. It depends on a number of endogenous and exogenous factors including endemic ones surrounding people. Today numerous researches evidence the effect of the thyroid hormones on the development and metabolism of the skeletal tissues. Chernivtsi region is characterized by iodine and selenium deficiency. These are elements playing a key role in a proper function of the thyroid gland. About 30% of the residents of Northern Bukovyna have subclinical and clinical signs of thyroid pathology.

The aim of our study is to present the results of the research concerning the bone tissue regeneration under conditions of iodine deficiency.

Materials and methods. The study was conducted on 63 albino 3-month rats. Iodine deficiency was simulated by means of adding sodium perchlorate to drinking water (1 mg per 100 g of the body weight) during 1 month. In this way, hypothyroidism was simulated. The control group was kept under usual conditions. Femoral fracture of rats was examined and observed for 21 days. 3 days after injury a hematoma was found in the injured area without any signs of rebuilding. Histological examination found a number of erythrocytes, leukocytes and the remains of the ruined cells between thick fibrin fibers. On the 7<sup>th</sup> day in the animals from both groups, the area between the fragments of the cortical layer was filled with the network of young bone trabeculae and fibrous-reticular tissue. Inconsiderable remains of the blood clot were detected in the granulation tissue. On the 14<sup>th</sup> day, the young bone tissue, fibrous-reticular tissue and small hematoma remains were detected in the area of the femoral defect in all the groups of the rats examined. A relative surface of the bone tissue in the area of the defect in animals receiving sodium perchlorate was found to be 1,18 and 1,32 times lower as compared to the control group. On the 21st day, the bone tissue formed in the area of the defect in rats of both control and research groups. The tissue connected the margins of the maternal bone. Nevertheless, the bone tissue of rats in the first group was worse due to the formation of microcracks, basophilia of cement lines, increased osteocinar osteolysis. It was evidenced by extended lacunae of osteocytes with uneven outlines.