Letter from the Editor

Dear Colleagues,

We briefly introduce you the next issue of our journal, which, by tradition, opens with the *Traumatology* section that includes two publications. A team of authors from Saratov (Bazhanov et al.) acquaints our readers with the results of using various methods of surgical treatment in patients with closed traction injuries of the brachial plexus. The authors have shown a significant effectiveness of the technique of microsurgical neurolysis in combination with electrical stimulation of the damaged nerve trunk and segmental apparatus of the spinal cord that improves the results of treatment.

The study by Grankin et al. (Samara) is devoted to a severe complication of injuries and surgeries on the lower limb bones, fat embolism. The authors state that the incidence of fat embolism syndrome is quite high. The best way to prevent it is to take hepatoprotectors in the first days after the injury. The optimal method of treatment is osteosynthesis under spinal anesthesia.

The section *Orthopedics* opens with a publication by authors from India (Yadkikar et al.) on the results of arthrodesis using the Ilizarov apparatus in severe osteoarthritis of the ankle joint. Arthrodesis was performed in five patients aged 40 to 65 years. The authors opine that the Ilizarov method can be considered as a universal, biomechanically stable, minimally invasive method for ankle arthrodesis in severe ankle joint arthrosis associated with poor soft tissue condition, post-traumatic arthrosis, infection, deformity, osteoporosis, Charcot arthropathy.

Golyana et al. (St. Petersburg) share their experience of using microsurgical autologous transfer of the fibula to close large bone defects in children with neurofibromatosis. Having studied the results, the authors conclude that microsurgical autologous transfer of a blood-supplied fragment of the fibula is an effective and sometimes indispensable method of bone grafting of long bone defects in children with type 1 neurofibromatosis. Bone defects of 5 cm or more are an indication for the use of free autografting of a vascularized fragment of the fibula. This method, used in combination with traditional orthopedic methods for the treatment of children, allows obtaining good anatomical and functional results.

Authors from Ufa and Kurgan (Fatkhulislamov et al.) conducted a cross-sectional study to assess the condition of 73 patients aged 17-18.5 years with spastic cerebral palsy in the period of their transition to adult medical institutions. After analyzing the data obtained, the authors conclude that the impairment of motor abilities, quality of life, and the incidence of the crouch gait pattern in patients with spastic cerebral palsy are close between the subgroups of children at the time of transition to adult medical and diagnostic institutions. The quality of life and motor status after multilevel interventions improve and remain stable by the end of childhood. Early surgical interventions for lengthening the triceps, fibromyotomy reduce motor potential in the long term, cause the iatrogenic pattern of crouch gait, and reduce the quality of life of adolescents with mild neurological disorders.

The diagnostic significance of the lymphocyte-monocyte index in Dupuytren's contracture was studied by the authors from Kurgan (Shchudlo et al.). According to the results in the sample of patients studied, the lymphocyte-monocyte index is a useful additional laboratory indicator for identifying the risk group for severe course of fascial fibromatosis, which can be used in clinical practice at no additional cost along with known criteria for identifying a risk group for the progression of Dupuytren's contracture.

The *Purulent Osteology* section includes three publications. Sudnitsyn et al. (Kurgan) analyzed the use of transosseous osteosynthesis in the treatment of 49 patients with diabetic osteoarthropathy (DNOAP) complicated by chronic osteomyelitis. The study, conducted by the authors on the basis of X-ray morphological criteria for assessing bone quality, showed a decrease in optical and densitometric bone density in patients suffering from complicated chronic osteomyelitis, in comparison with the norm. The use of a wire-based apparatus does not provide sufficient conditions for solving the set surgical tasks in this category of patients. The introduction of half-pins into the apparatus system provides the necessary fixation time with the possibility of functional load on the operated segment in patients in the postoperative period.

The organotopic remodeling of bone tissue and implanted osteoplastic material in Charcot's neuro-osteoarthropathy were studied by authors from Moscow, Togliatti and Yekaterinburg (Osnach et al.). Based on the results obtained, the authors revealed that the allobone in the composition of the combined bone graft does not reduce the likelihood

of complete remodeling of the newly formed bone tissue. A higher bone density in filling a bone defect with a graft is a difference from distraction regenerates that have an initially low bone density. Before performing surgical treatment, CT and MRI are highly effective and informative diagnostic methods. In reconstructive interventions in patients with Charcot's foot under the conditions of transosseous osteosynthesis, computed tomography is preferred among the radiological methods of study.

The role of culture-negative infection in the structure of infectious complications after knee arthroplasty is discussed in the publication by Lyubimova et al. (Cheboksary, St. Petersburg). The authors conducted a retrospective analysis of treatment outcomes in 103 patients. According to the authors, the success rate of a two-stage method for the treatment of a periprosthetic knee joint with changing the components and empiric broad-spectrum antibiotic therapy at a two-year follow-up period was higher in the culture-negative infection group. The negative result of the microbiological study in this group was probably due to the use of antibacterial drugs prior to the diagnosing periprosthetic infection.

The issues of biomechanics are presented by the publication of the authors from Novosibirsk (Peleganchuk et al.), who studied the variants of the location of the axis of the acetabulum and the axis of the ischial tuberosities during the transition from a standing position to a sitting position. Based on the obtained data, the authors came to the conclusion that as a result of the contact interaction of the pelvic bone with the surface of the chair, when the skeleton moves from a standing position to a sitting position, a new axis of rotation arises, the ischial axis. The axis of the acetabulum rotates by 7.1° relative to the ischial axis and, at the final moment, shifts in the horizontal direction relative to the acetabular axis by almost 9 mm.

In the *Case Reports* section, the authors from Arkhangelsk (Iskusov et al.) describe a clinical case of treating a 36-year-old patient with a partial traumatic amputation of the hindfoot and damage to the posterior tibial artery. A positive result of treatment was achieved, restoration of the anatomy and function of the right foot.

A case of Kirschner's wire migration into the spinal canal after restoration of the acromioclavicular joint in a 36-year-old patient is described by A.O. Farion with co-authors (Tyumen, Salekhard). The authors show the risk of migration of Kirschner wires into the spinal canal during fixation of fractures and dislocations. The technique requires dynamic observation of the patient during the entire period of treatment. After fracture healing or dislocation reduction, the wires should be removed. The implementation of these recommendations minimizes the possibility of fracture and migration of the Kirchner wires.

A multidisciplinary approach to the treatment of two patients with periprosthetic infection of the hip joint complicated by injuries to the large vessels was described by a team of authors from Moscow (Oshkukov et al.). The authors stress that careful preoperative preparation in patients with instability of the components of the hip endoprosthesis, including the migration of the acetabular component into the pelvic cavity in combination with periprosthetic infection, helps to avoid such a serious complication as damage to large vessels.

The final *literature review* is devoted to a comparative assessment of the clinical efficacy and safety of various surgical approaches in performing hip arthroplasty (Eremin et al., Moscow).

We hope that you find this issue interesting and useful. We wish you good luck and invite you submit your studies for publication.

A.V. Burtsev, MD
Chief Editor of Genij Ortopedii