Dear readers,

We would like to inform you on issue 5 of our journal that contains the traditional sections.

Clinical studies are presented in this issue by six publications. The section opens with an article by authors from India (K. Kumar et al.), who assessed the prognostic value of the plaster cast index and the three-point index in fractures of both forearm bones in children. The study included 55 patients. Having analyzed the results, the authors came to the conclusion that both indices are clinically useful tools for assessing the quality of plaster casting after closed reduction of forearm fractures in children and for predicting re-displacement in fractures of the distal forearm.

Evreinov et al. (Kurgan, Yekaterinburg) studied the main etiological factors and comorbid pathology in severe cerebral palsy in 170 children. Having assessed the results, the authors conclude that the main risk factors for the development of cerebral palsy in patients with severe motor impairments in GMFCS levels IV–V are associated with the pre- and intranatal periods. Comorbid pathology of patients with severe forms of cerebral palsy is due to severe brain damage and motor disorders that develop due to this damage.

The section continues with an article by authors from Vietnam (Khoa et al.), who studied the immediate functional results of hip arthroplasty for avascular necrosis of the femoral head and patient-related factors. The study involved 143 patients. The results of the study showed that total hip arthroplasty allows achieving good outcomes in patients with aseptic necrosis of the femoral head. The operation performed early before the onset of functional limb failure and timely and adequate treatment of concomitant diseases improve the results of total hip arthroplasty.

A team of authors from Moscow (Eremin et al.) present in their work the advantages of direct anterior approach (DAA) in combination with PENG block and lateral femoral cutaneous nerve block in hip arthroplasty. Having analyzed the results of treating 62 patients, the authors stress that low postoperative pain syndrome allows patients to be activated faster, thereby improving the outcomes of the early rehabilitation period. The use of PENG block and LCFN block in arthroplasty through DAA has clinical efficacy in the first 24 hours, contributing to the acceleration of postoperative recovery of patients.

The clinical, functional and neuropsychological status of 448 patients admitted for joint replacement was studied by authors from Kaliningrad (Dzhigkaev et al.). Almost all patients had changes in leukocyte indices, showing the presence of an inflammatory process associated with the underlying disease, osteoarthritis. Mitochondrial dysfunction and aging of the immune system contribute to the formation of the "proinflammatory status". The cognitive impairment is associated with age status and the presence of comorbid pathology, primarily cardiovascular diseases. Distress and anxiety is associated with an emotional response to surgical intervention.

Shipitsyna et Spirkina (Kurgan) show the results of studying the antibacterial effect of a semiconductor laser on the bacteria S. Aureus and P. Aeruginosa. The authors note that the effectiveness of PDT depends on the type of microorganism, the anatomical location of the infection site, as well as the properties of the photosensitizer and the laser used. Different susceptibility of bacteria to photodynamic effects was observed and depended on the structure of the cell wall.

Experimental studies in the issue are presented by Stogov et al. (Kurgan, Yekaterinburg, Tomsk), who studied the effect of zinc-containing calcium-phosphate coating on osseointegration of transcutaneous implants for limb prosthetics. A set of studies showed that the implant

with zinc-containing calcium-phosphate coating has signs of improved integration in contrast to the product without coating. The absence of serious adverse reactions to the tested products indicates acceptable tolerability and safety of its use.

The Case Reports section describes clinical cases of lateral corticotomy for impaired consolidation of extra-articular fractures of the proximal femur in a 66-year-old patient (Shafigulin et al., Kazan), arthroplasty of the talus head in the treatment of Müller-Weiss disease in three patients (Skrebtsov et al., Moscow) and treatment of periprosthetic infection and repair of Paprosky type 2C cavitary defects at the stage of installation of an articulating spacer (Rozhkov et al., Kurgan).

Four literature reviews that conclude the issue cover current approaches to temporary osteosynthesis of the tibia in the treatment of multiple and combined injuries (Khodzhanov et al., Tashkent, Uzbekistan), surgical correction of post-traumatic flexion contractures of the joints of three-phalangeal fingers of the hand (Abdiba et al., St. Petersburg), arthroplasty of the proximal interphalangeal joint of the hand (Fedotov et al., Cheboksary) and optimization of revision arthroplasty (Minasov et al., Ufa).

We hope that you find the content of this issue interesting and it will be useful in your daily practical and scientific work.

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Chief Editor of Genij Ortopedii