Dear colleagues,

Welcome to the new issue of the journal Genij Ortopedii!

The Clinical Studies section opens this issue and comprises 7 works.

An algorithm for surgical treatment of patients with diaphyseal defects of the forearm bones after gunshot injuries is presented in the work of Davydov et al. (Moscow, Ingushetia). The authors used the developed algorithm to treat 178 patients with gunshot fractures of the forearm, including accompanied by extensive defects, and came to the conclusion that the algorithmt allows considering anatomical changes, drawing up an operation plan based on the reconstruction vector and choosing optimal surgical techniques.

The authors from Kurgan (Kuttygul et al.) show the results of using a modified technique for resection of the proximal row of carpal bones in adaptive wrist collapse in eight patients. Analysis of the immediate results of using the modified PRC technique showed that it decreases the invasiveness of the operation, improves its esthetic result, and provides pain relief, satisfactory range of motion and grip strength.

The results of a prospective comparative study on the use of two approaches in total knee arthroplasty in 60 patients are presented in the work of the authors from Egypt (Badawi et al.). Having analyzed the outcomes, the authors came to the conclusion that the advantage of the subvastus approach over the parapatellar approach is the preservation of the integrity of the quadriceps muscle and intact extension mechanism after surgery. Moreover, the subvastus approach causes less intensive pain, less intraoperative blood loss and fewer complications.

The effect of elastic intramedullary nailing on the lengthening of lower limbs with acquired shortenings was studied by authors from Kurgan (Tropin et al.). Having analyzed the results of treatment of 64 patients, the authors came to the conclusion that in the conditions of lower limb shortening of acquired etiology, the use of a combined technique of bone lengthening (an external fixator in combination with elastic intramedullary nailing) provides good and excellent results without serious complications.

Vlasov and Musikhina (Nizhny Novgorod) discuss risk factors associated with congenital clubfoot in children in their work. The authors note that the greatest sensitivity, specificity and causal relationship with the congenital clubfoot development were risk factors associated with the unfavorable impact of external factors during pregnancy, such as nicotine addiction in women; along with family heredity for congenital foot pathology in blood relatives.

A comparative analysis of the results of surgical treatment of osteoporotic burst fractures of vertebral bodies of the thoracolumbar spine with conventional methods and an original method was carried out by the authors from Novosibirsk (Sinyavin and Rerikh). The authors note that the method of correction of local kyphotic deformity developed for treatment of osteoporotic burst fractures of vertebral bodies in comparison with circular and hybrid stabilization demonstrates satisfactory correction of local kyphosis, reduces the risks of complications and poor outcomes.

Peri-implant infection in patients with rheumatoid arthritis is a topic for discussion in the work of the authors' team from Cheboksary (Lyubimova et al.). The results of treatment of 35 patients were studied. The studies showed that culture-negative infection is the leader in the cases of peri-prosthetic infection in this patient’s group. Outcomes of surgical treatment were positive after two-stage management. Markers of ESR, CRP and D-dimer at the stages of diagnosis and surgical debridement of the infection focus did not reach normal values, which indicates the inapplicability of standard diagnostic criteria of peri-prosthetic infection in patients with rheumatoid arthritis.

Experimental studies are presented in two works of this issue. Korobeynikov et al. (Kurgan) assessed the effect of osteosynthesis wires on the structural reorganization of the metaepiphyseal cartilage in 18 lambs. Kirschner wires, titan wires, and poly-L-lactic acid pins were used. Histomorphometric

characteristics of the growth zone reliably showed that the insertion of wires/pins, regardless of their material, was not accompanied by inhibition of the bone-forming function of the distal metaepiphyseal cartilage of the femur.

The features of regeneration of the Achilles tendon after its transverse tenotomy with preservation of the peritenon and its structures were studied in an experiment on 20 rabbits by Vlasov et al. (Nizhny Novgorod). The authors note that the processes of reparation of the Achilles tendon after its dissection with preservation of the peritenon and its vessels and nerves occur under optimal conditions, under which the tendon tissue is formed in a short term (already 3 months after the intervention), which has maximum similarity with the original.

Two case reports presented in the issue are dedicated to the peculiarities of fixation of the rotator cuff tendons in case of complete lysis of the greater tubercle of the humerus (Makovsky et al., Moscow) and the use of a multidisciplinary approach in the treatment of complicated intra-articular fractures of the distal radius (Khromov et al., St. Petersburg).

The two literature reviews cover current trends in the diagnosis and treatment of nerve injuries during shoulder surgery (Tuturov et al., Moscow) and the influence of non-surgical factors on the treatment outcomes of patients with idiopathic scoliosis according to SRS-22 data (Molotkov; Kurgan, Moscow, St. Petersburg).

We hope that you will find this issue interesting and useful. We invite to submit your studies.

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Chief Editor of Genij Ortopedii