Dear friends,

In this issue you will find:

The section Clinical studies opens with a study by a team of authors from Moscow and Tyumen (Belyak et al.), in which the authors conducted a comparative analysis of the methods of fully endoscopic decompression of the brachial plexus and minimally invasive techniques with endoscopic assistance in the treatment of patients with traumatic brachioplexopathy. Based on the results of treatment of 22 patients, the authors concluded that the method of endoscopic neurolysis of the brachial plexus in combination with arthroscopy of the shoulder joint is equally effective in the treatment of brachioplexopathies in comparison with isolated minimally invasive neurolysis of the brachial plexus under video endoscopic assistance.

Authors from St. Petersburg (Fedorova et al.) explored clinical and radiological features of the forearm in 92 children with congenital radioulnar synostosis. The authors identified statistically significant direct correlations between complaints and the position of the forearm; subluxation of the head of the ulna and the position of the forearm; arcuate deformity of the radius, position of the forearm and subluxation of the ulnar head, as well as between the length of the forearm bones and arcuate deformity of the radius. A statistically significant inverse correlation was revealed between complaints and scores reflecting the general state of health according to the PedsQL questionnaire. There was a statistically significant decrease in the lumen of the medullary canal in the middle third of the ulnar shaft with the radius lumen being unchanged. Dorsal subluxation of the ulnar head was detected in 30 % of cases. Based on the data obtained, the authors conclude that the dependence of the patient's predicted complaints on the position of the forearm must be taken into account in the classification and when determining indications for surgical treatment, distinguishing functional (< 45° pronation) and dysfunctional (⩾ 45° pronation) options.

Fedotov et al. (Cheboksary) assessed the long-term results of the proximal interphalangeal joint arthroplasty of the hand in 64 patients. Having analyzed the data obtained, the authors conclude that arthroplasty of the proximal interphalangeal joint of the hand with various types of implants provides increased mobility of the upper limb, pain relief and improvement in its functional state evaluated subjectively. The effectiveness of the operation was statistically confirmed for all types of implants. However, in all parameters, the reliability of changes is more pronounced in application of unconstrained implants.

Authors from Iraq (Jasim and Saeed) conducted a clinical study to identify non-obvious and obvious signs of pathology of the thoracic spine in a large cohort of patients (114 individuals) and note that non-local symptoms in the thoracic spine pathology are quite common. Complicated and multifocal low back pain is more frequent than isolated pain in the back or thoracic spine. Older age, female gender, obesity, and co-morbidities are predictive risk factors for developing low back pain. Paresthesias are the most common neurological manifestations, while kyphosis and scoliosis are the primary manifestations of thoracic pathology.

The effectiveness of ankle joint arthrodesis options was assessed by authors from Kazan, Ulan-Ude and China (Wang et al.). After analyzing the results of treatment in 82 patients, the authors concluded that despite the various complications that arise with ankle arthrodesis, it remains effective for most patients. The Ilizarov apparatus is more suitable for patients with compromised conditions in the surgical area. Each method of surgical fixation has its own advantages and disadvantages, but the difference in long-term effectiveness is small. The choice of surgical method is still subject to the principle of individualization.

The team of authors from the Pirogov Clinic for High Medical Technologies from St. Petersburg State University (Akulaev et al.) tested the Russian version of the SEFAS questionnaire for assessing the condition of the foot and ankle joint in surgical patients with pathology of the forefoot and noted that the study demonstrated reliability, validity and sensitivity of the Russian version of the SEFAS questionnaire. The questionnaire is an informative and clinically interpretable tool for assessing the condition of the foot in adult surgical patients with foot pathology. The SEFAS questionnaire can be recommended for use in domestic institutions of traumatology and orthopaedics to have the patient's opinion of assessing the condition.

The gait features of children with spastic hemiplegia were studied by authors from Kurgan (Mamedov et al.). The authors conclude that movement pathology is present in all three planes of measurement in gait types 2a, 3, 4 according to the Rodda et Graham classification. The most pronounced deviations were identified in gait type 3. Rotational turn of the pelvis is initially a compensatory mechanism due to intratorsional deformity of the femur. Isolated triceps lengthening operations performed at an early age lead to a decrease in plantar push force, an increase in compensatory work of the knee extensors, and most probably do not prevent the orthopaedic pathology that occurs in gait type 4 according to Rodda et Graham.

A series of clinical cases of impaction bone grafting (IBG) for filling acetabular defects in revision hip arthroplasty was presented by authors from Barnaul and Novosibirsk (Golnik et al.). The analysis of the results showed that the use of impaction bone grafting during revision arthroplasty can be especially effective for small acetabulum sizes. Combining IBG with trabecular metal augments significantly expands the application possibilities of this technology. The use of IBG improves the bone stock in the defect area, and creates more favorable conditions for inevitable repeated revision interventions.

Authors from India (Yadkikar et al.) presented a series of six cases of treatment of soft-tissue joint contractures of various etiologies using the Ilizarov method. In all cases, an acceptable functional result was obtained without deformity recurrence. All patients move independently. The authors conclude that the Ilizarov method can be used to treat joint contractures caused by traumatic and non-traumatic pathology.

Six review articles discuss the problems of using promising osteoplastic materials and surgical technologies in the reconstructive treatment of patients with pseudarthrosis and bone tissue defects (Borzunov et Gilmanov, Ekaterinburg), treatment of patients with contractures of the elbow joint, caused by ossification (Petlenko et al.; Sankt-Petersburg), diagnosis and treatment of transitional lumbosacral vertebrae in children and adolescents (Skryabin et al.; Tyumen), orthopaedic complications of hemiparetic cerebral palsy of lower extremities (Mamedov et al.; Kurgan), tactical approaches to length discrepancy correction of the lower extremities (Novikov et al.; Kurgan) and arthroplasty of the 1st metatarsophalangeal joint (Kotelnikov et al.; Samara).

We invite you to get acquainted with the materials presented in this issue and hope that they will interest you and will be useful in your practical and scientific work.

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