DEPUTY EDITOR-IN-CHIEF'S PREFACE TO ISSUE 5, 2023

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Dear readers!

Here is the latest issue of the Acta Biomedica Scientifica, which includes works on topical issues of Russian medical science and practical healthcare.

The leading article in this issue, in my opinion, is the article by V.A. Koryak et al. (Irkutsk) "Assessing socio-economic damage caused by coxarthrosis in the population" which examines an important problem – assessing the value and structure of economic damage in connection with the provision of medical and social care to the patients with coxarthrosis at the state level of the Russian Federation. Using the example of the Irkutsk region, the authors showed that the average annual socio-economic damage from coxarthrosis reaches 0.1 % of the gross regional product. At the same time, the most of the damage (64.4 %) consists of indirect costs due to disability. The results of the study confirm the economic feasibility of surgical treatment of coxarthrosis, especially in patients of working age.

The largest section of the journal is devoted to the problems of traumatology and orthopedics. Among these articles, the work by D.V. Menshova et al. (Irkutsk) "Assessment of the effectiveness of surgical treatment of patients with massive tears of the rotator cuff tendons using arthroscopically assisted transposition of the latissimus dorsi tendon" is of great interest. It demonstrates an original method of treatment of this severe pathology. World experience in treatment of massive rotator cuff tears is summarized in the articles of D.V. Menshova (Irkutsk) and E.N. Slaikovskiy et al. (Irkutsk).

Traditionally, our journal publishes scientific reviews. In this issue, we should highlight a review concerning the rehabilitation of patients with unstable injuries of the pelvic ring by A.A. Melkostupov et al. (Irkutsk). The possibilities of verticalization of patients and using axial load on the lower extremities in the postoperative period are considered as the main rehabilitation measures. It is noted that when resolving the issue of axial load in case of unstable pelvic ring injury, the value of the load and the timing of its start should be determined individually, depending on the physical condition of the patient, the characteristics of the injury and the presence of concomitant injuries.

N.A. Sholokhova et al. (Moscow) in their article "The current state of the issue of using cone beam computed tomography in the diagnosis of musculoskeletal diseases" showed that cone-beam computed tomography is a modern and promising technique which can contribute to the assessing the shape and contour of the bone, the solution of continuity of the bone and the position of bone fragments, the structure of bone tissue and the pathological processes in it (destruction, osteoporosis, osteosclerosis), joint congruence and changes in articular surfaces surrounding soft tissues. The authors believe that this technique will find wide application in traumatology and orthopedics.

M.L. Lebed et al. (Irkutsk) in the article "Acute kidney injury after primary total hip replacement" established that acute kidney injury was detected in 7.3 % of patients who after primary total hip replacement. Low initial blood hemoglobin concentrations have been identified as risk factors for the development of this complication, which may indicate a prerenal mechanism for the pathogenesis of this condition.

In the article by A.I. Plakhov et al. (Irkutsk) "Microcirculation parameters of the damaged segment of the lower extremity after treatment of diaphyseal fractures using a locked intramedullary nail", the authors studied microcirculation parameters of injured leg bones during fragments fixation with locked intramedullary nail in the early postoperative period. A disorder in local circula-

tion of the ischemic type with compensation due to the anastomoses inclusion was revealed.

V.E. Potapov et al. (Irkutsk) in their article raise the problem of treating dysfunction of the dynamic stabilization system in the lumbar spine. The study shows that in a number of patients, discectomy and dynamic stabilization of the spine with the Coflex system are followed by failure and heterotypic ossification of the implant, and development of neoarthrosis. Implantation of a lumbar peek cage while maintaining the Coflex device allows for the formation of a rigid interbody fusion, that is, it is a sufficient and well-grounded surgical technology for treating the failure of the dynamic stabilization structure.

V.G. Fedorov and I.V. Kuzin (Izhevsk) in the article "The results of treatment of femoral diaphysis fractures using locked intramedullary osteosynthesis and extramedullary osteosynthesis (results for 10 years)" showed the undeniable advantage of using locked intramedullary osteosynthesis compared to external osteosynthesis in the treatment of femoral fractures.

V.M. Prokhorenko and Yu.A. Afanasiev (Novosibirsk) in their article present surgical treatment of intra-articular fractures of the proximal humerus using autoplasty with a non-free osteomuscular graft from the coracoid process and demonstrate its effectiveness.

Among the articles describing clinical cases, we can highlight an article by L.K. Skuratova et al. (Novosibirsk) "The possibility of a favourable outcome and reversibility of severe ankle joint damage on the example of a clinical observation" which demonstrated the possibility of early diagnosis of aseptic necrosis of the talus and regression of pathological changes.

The article by A.E. Medvedchikov et al. (Novosibirsk) presents a clinical example of using a new technique of reinsertion with two cortical buttons in complete rupture of distal biceps.

An interesting case of successful stepwise treatment of a rare foot pathology – bilateral brachymetatarsia with shortening of the third and fourth metatarsal bones in combination with valgus deviation of the first toe – is presented in the article of I.V. Usoltsev et al. (Irkutsk).

The work of K.B. Lelyavin et al. (Irkutsk) from the "Oncology" section is devoted to demonstrating clinical observation of a case of testicular diffuse large B-cell lymphoma.

The section "Neurology and Neurosurgery" is represented by an article by V.A. Sorokovikov et al. (Irkutsk) "Experience of unilateral and bilateral transpedicular fixation in degenerative diseases of the lumbar spine", which demonstrates that unilateral decompressive and stabilizing interventions in patients with posterolateral and foraminal hernias of the lumbar spine can reduce the duration of the surgery and the severity of pain in the postoperative period due to adequate decompression of the neurovascular formations of the spinal canal and stabilization of the spinal motion segment, which prevents relapse of the disease and ensures early rehabilitation of patients.

The "Surgery" section opens with an article by A.G. Muradov et al. (Krasnoyarsk) "Short-term and long-term results of bimammary bypass surgery in patients with multivessel coronary disease and type 2 diabetes mellitus after propensity score matching" which proved that bimammary bypass surgery in patients with type 2 diabetes mellitus is a safe and effective method of surgical treatment for coronary heart disease both in the short and long term and can be the operation of choice in patients with multi-vessel disease.

The article by E.A. Ilyicheva et al. "Quality of life of patients with single and multigland parathyroid disease in sporadic primary hyperparathyroidism before and after surgical treatment" has proved that surgical tactics aimed at reducing the frequency of persistence of hyperparathyroidism can achieve an improvement in the quality of life in most patients with multigland parathyroid disease in case of primary hyperparathyroidism. The second work of these authors is also devoted to the problem of morphological diagnosis of hyperparathyroidism, and it was established that multigland parathyroid disease in any clinical variant of hyperparathyroidism is characterized by a predomi-

nance of hyperplasia: 80 % in primary and 100 % in secondary and tertiary hyperparathyroidism.

The article by E.A. Anastasieva et al. (Novosibirsk) "Restoration of X-ray bone density when replacing cortical plate defects with a tissue-engineered construct in the experiment" is undoubtedly of great interest to readers; it was experimentally proven that the use of a tissue-engineered construct based on deproteinized cancellous bone with a stromal-vascular fraction of adipose tissue to fill perforation defects in the cortical plate of the rabbit femur results in to early restoration of X-ray bone density in the defect area.

Readers can also be interested in scientific reviews by A.V. Nevezhina and T.V. Fadeeva (Irkutsk), dedicated to the study of the antimicrobial potential of iodine-containing substances and materials, and N.N. Dremina et al. (Irkutsk), considering the use of natural components as the structure of hydrogels for cell therapy and tissue engineering.

Here's another issue for you!

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