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To Develop an Arthroscopic Classification of Forms of Degenerative Meniscal Lesions in Patients with Post-Traumatic Gonarthrosis

Akramov Vohidjon Rustamovich, Otaqulov Sherzod Soyibovich
Bukhara State Medical Institute Named After Abu Ali Ibn Sino. Bukhara, Uzbekistan,
e-mail: akramov.vohidjon@bsmi.uz

Relevance. Osteoarthritis occupies a large place in the structure of joint diseases. Gonarthrosis refers to gradually progressive chronic diseases requiring long-term treatment, the immediate results of rehabilitation of which are considered unsatisfactory in 14% of patients, and long-term - in 48%. Further progression of knee joint OA leads to persistent moderate and pronounced impairments of static-dynamic function, and, as a result, to a decrease in the patient's "quality of life", and in some cases even to disability. A significant proportion of joint diseases are the consequences of injury. It is believed that the pathogenesis of the onset and progression of this pathology are based on immunological factors. However, they have been studied in fragments, and specific "biological markers" reflecting the course of the degenerative process in OA have not been developed. This does not yet allow the use of immunological research data in clinical practice when making a diagnosis and monitoring the course of post-traumatic OA. As a result, none of the international systems for assessing the course of post-traumatic joint diseases and the results of rehabilitation measures in patients with OA take into account the severity of immunological disorders and their dynamics. There are diametrically opposed opinions in the literature about the effectiveness of the use of most long-acting structural modifying drugs that form the basis of therapy for patients with post-traumatic OA. The role of regenerative therapy and surgical treatment techniques aimed at stimulating reparative processes in articular cartilage in complex therapeutic and preventive measures in patients with the initial stages of OA is also underestimated, and their development is one of the unresolved problems in the treatment of this pathology. In connection with the above, the relevance of the problem of developing a comprehensive system of diagnostic and therapeutic measures in the aspect of immunological disorders in mature patients with post-traumatic gonarthrosis stages I - II is beyond doubt.

To develop indications for performing therapeutic and diagnostic arthroscopy of the knee joint in patients with post-traumatic gonarthrosis of stages I - II in adulthood. To determine the indications, as well as to study the immediate and long-term results of the use of cold plasma ablation and subchondral spoke tunneling techniques during therapeutic and diagnostic arthroscopy of the knee joint in elderly patients with post-traumatic gonarthrosis of stages I - II with predominant I -II degree of joint cartilage injury. To develop indications, as well as to study the immediate and long-term results of the experimental use of regenerative cytotherapy in the complex treatment of simulated post-traumatic gonarthrosis. For the first time, an arthroscopic classification of forms of degenerative meniscal lesions in patients with post-traumatic gonarthrosis has been developed, which makes it possible to determine the severity and prevalence of the pathological process in them, and based on this, to justify the scope and features of further surgical treatment. The correspondence of the immunological picture of the disease in blood serum and synovial fluid was studied in patients with post—traumatic gonarthrosis of stages I - II with predominant I - II degree of XM of articular cartilage. For the first time, it was revealed that the inflammatory component plays one of the most important roles in the immunopathogenesis of the onset and progression of V post-traumatic gonarthrosis of the 1st stage. Research methods: Clinical (assessment of pain, joint function). Instrumental (X-ray, MRI, CT). Laboratory (hormones, inflammatory markers, bone metabolism). Statistical analysis. Expected results: New approaches to early diagnosis. Improvement of treatment

outcomes, reduction of progression rates. Individualization of therapy It has been proven that destructive changes in cartilage tissue in post-traumatic gonarthrosis of the 1st stage mainly occur due to activation of apoptosis processes. A comprehensive system of diagnostic measures and monitoring of the development of the early stages of post-traumatic gonarthrosis in mature patients has been created, taking into account the immunological aspects of the onset and progression of the disease. Indications for the use of cold plasma ablation and subchondral spoke tunneling techniques in performing therapeutic and diagnostic arthroscopy of the knee joint in patients with post-traumatic gonarthrosis stages 1-11 have been developed. Indications for the use of regenerative cytotherapy in the complex treatment of post-traumatic gonarthrosis have been developed. For the first time, regenerative cytotherapy was used in experimental gonarthrosis, which allowed not only to improve the results of therapeutic measures, but also to effectively stop the growth of pathomorphological changes in the tissues of the knee joint, as well as to achieve regression of the latter. Practical significance of the research.

The use of the newly developed arthroscopic classification of forms of degenerative meniscal lesions in patients with post-traumatic gonarthrosis makes it possible to avoid making wrong decisions in choosing the volume of partial meniscectomy. For the first time, as an indication for early use in therapeutic and diagnostic arthroscopy of cold plasma ablation and subchondral spoke tunneling techniques in patients with the initial stages of post-traumatic gonarthrosis, specific values of the immunological indicator — lactoferrin levels (in serum 2000 ng/ml and above, in synovial fluid - 200 ng/ml and above) have been proposed. For the first time, it was recommended for performing therapeutic and diagnostic arthroscopy in patients with post-traumatic gonarthrosis of stages I - II with a predominant I - II degree of XM of articular cartilage, the early use of cold plasma ablation and subchondral spoke tunneling techniques, which allows to slow down the development of degenerative changes in articular cartilage and improve treatment results. For the first time, regenerative cytotherapy has been successfully used in experimental modeling of post—traumatic gonarthrosis of stages I - II with predominant grade III - IV XM of articular cartilage in laboratory animals, which makes it possible to recommend it for the treatment of patients with this pathology.

Conclusion. Gonarthrosis (knee arthrosis) is common in women during this period due to hormonal changes, and requires an integrated approach, including early diagnosis (X-rays, MRI, CT scans, tests) and modern treatment methods (medications, physical therapy, physiotherapy, if necessary, arthroplasty), with an emphasis on the female characteristics of postmenopause. To develop a dissertation, it is important to study the effects of estrogen deficiency, concomitant metabolic disorders, and develop individual therapy protocols.

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