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METABOLIC AND IMMUNE STATUS OF ORTHOPEDIC PATIENTS WITH COMBAT TRAUMA OF LARGE JOINTS: A MODERN PERSPECTIVE ON THE PROBLEM

МЕТАБОЛІЧНИЙ ТА ІМУННИЙ СТАТУС ОРТОПЕДИЧНИХ ПАЦІЄНТІВ З БОЙОВОЮ ТРАВМОЮ ВЕЛИКИХ СУГЛОБІВ: СУЧАСНИЙ ПОГЛЯД НА ПРОБЛЕМУ

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An important issue of modern orthopedics is the role of metabolic disorders and the state of the immune system in the development

of complications during hip joint replacement, in particular, after combat trauma [1, p. 393].

Surgical intervention and stress, which affects the immune system, is a powerful factor that creates prerequisites for the development of severe metabolic disorders and secondary immunodepression. Against this background, the probability of developing early and late postoperative complications is quite high, due to which the frequency of endoprosthesis of large joints is steadily increasing [2].

Ensuring the stability of the endoprosthesis is extremely important during total hip arthroplasty. Research conducted in recent decades has established the involvement of polypeptide growth factors – cytokines – in the processes of osteogenesis and bone resorption [3, p. 1047]. Therefore, issues of prevention and correction of bone loss with the use of modern pharmacological drugs are important in the aspect of the considered problem.

Infectious ones are considered to be no less significant complications during hip arthroplasty, which is quite relevant especially for combat injuries [4, p. 25]. There is no doubt that the infectious wound process is the result

of the interaction of macro- and microorganisms, while one of the leading roles in this process is assigned to the immune system. Among the measures for the prevention of postoperative complications, their prediction comes to the fore, which allows you to determine the correct tactics of operative treatment, conduct a complex of preparatory and rehabilitation measures in a timely manner, and improve the results of treatment and the quality of life of patients.

The use of immunological methods allowed researchers to identify criteria and develop methods of predicting the development of complications during endoprosthetics. However, the proposed methods do not always allow taking into account the individual susceptibility of the body to various types of infectious agents; most of them are based on the determination of a number of specific, rather time-consuming indicators. A significant drawback is the need to conduct research before the operation and at various times in the postoperative period to determine the dynamic dependence of changes in laboratory parameters. This requires long enough observation of the patient to obtain information about the prognosis of the results of endoprosthesis. Therefore, further development and use of new methods of early prediction of the development of complications after hip arthroplasty will undoubtedly improve the results of surgical treatment of patients with severe forms of coxarthrosis and combat trauma of large joints.

Another important problem of the metabolism of patients is the diagnosis of disorders of the mineral density of bone tissue, complications during endoprosthesis of joints against the background of osteoporosis [5, p. 177].

Among patients with deforming osteoarthritis of the knee joint, 14–21% are people with osteoporosis [6, p. 17]. Currently, there are no clear approaches to the selection of patients with osteoporosis for total hip arthroplasty. The example proves that systemic osteoporosis established before surgery is a risk factor for bone mass deficiency around the hip joint endoprosthesis, which creates prerequisites for the development of aseptic instability of its components. Thus, the study of metabolism and the state of the immune system in patients with combat trauma of large joints is an important area of modern arthrology.

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