



Choice of Treatment Tactics for Recurrent Forms of Chronic Osteomyelitis in Children

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Abstract: Chronic osteomyelitis in children is a complex and pressing problem in pediatric surgery and orthopedics. This disease is characterized by a prolonged course with persistent infectious-inflammatory process in bone tissue and destruction of bone structures. The recurrent forms of the disease present a particular complexity, requiring a comprehensive approach to diagnosis and treatment. Delay in diagnosis and adequate therapy can lead to serious complications, including limb deformities, functional disorders, and even systemic consequences of infection.

Key words: Chronic osteomyelitis, recurrent forms, children, treatment methods, antibiotic therapy, surgical intervention, rehabilitation, physiotherapy, orthopedics.

Introduction. Chronic osteomyelitis is a serious infectious disease of bone tissue that often occurs in children and requires a long, comprehensive approach to treatment. One of the most complex forms of this pathology is recurrent variants, which presents a challenge for both doctors and patients. Recurrences of chronic osteomyelitis usually occur after initial treatment, when the infection has not been completely eliminated, or when there are anatomical or physiological prerequisites for the recurrence of the disease.

Recurrent forms of osteomyelitis can lead to serious complications, including limb deformation, chronic pain, and limited movement, which significantly reduces children's quality of life. In addition, chronic inflammation and the outflow of infection beyond the bone tissue can trigger systemic reactions that worsen the body's overall condition. In this regard, it is necessary to carefully consider treatment strategies that can include both conservative and surgical methods.

Traditionally, the treatment of chronic osteomyelitis is based on combined antibiotic therapy and surgical intervention aimed at removing necrotic tissue and sanitizing the infection site. However, in cases of recurrence, these approaches may not be sufficiently effective. Therefore, there is a need to develop a more targeted and individualized therapy strategy that takes into account the nature of the infection, the condition of bone tissue, and the characteristics of the patient's immune system.

In addition, the use of modern methods, such as the use of antibacterial cements and the modification of surgical techniques, as well as rehabilitation and physiotherapy to restore limb function after the main treatment, is relevant. These measures can help reduce the likelihood of relapse and improve outcomes for children suffering from chronic osteomyelitis.

Chronic osteomyelitis in children is a serious and multifaceted problem that requires a multidisciplinary approach to treatment. The high frequency of relapses and the complexity of the clinical situation determine the need to develop effective treatment methods. The presence of recurrent forms of the disease is associated with the risk of serious complications, making this topic particularly relevant for pediatric surgery and orthopedics. Systematizing existing data on treatment methods and analyzing the effectiveness of various strategies can significantly improve outcomes for children with this disease. Chronic osteomyelitis is an inflammatory disease of the bone tissue that can occur in children as a result of infections, injuries, or surgeries. Recurrent forms of this pathology



represent a special category, requiring careful assessment of the clinical situation and selection of optimal treatment tactics. In children, chronic osteomyelitis often begins with an acute process, which is due to insufficient diagnostic preparation and complexities in treatment.

Recurrent forms of osteomyelitis can develop due to incomplete removal of the infectious focus, anatomical features, and the state of the child's immune system, which creates additional difficulties in treatment. The main aspects of therapy are not only eliminating the infection but also restoring the functions of the affected limb, which requires the integration of surgical, conservative, and rehabilitation methods.

Current approaches to treating recurrent chronic osteomyelitis include the prescription of antibiotics, surgical interventions to remove necrotic tissue, the use of bone grafts, as well as physiotherapy and rehabilitation measures. However, treatment approaches may vary depending on the clinical case and patient's condition, which emphasizes the need for an individual approach to each specific case. Recurrent osteomyelitis in children develops, as a rule, against the background of undertreated acute osteomyelitis, improper therapy, or the presence of factors contributing to the recurrence of infection. A high propensity for recurrence is due to the anatomical features of the child's body, the size of the primary inflammatory focus, and the involvement of nearby soft tissues in the process. At the same time, osteomyelitis can be combined with other diseases such as diabetes, blood disease, and various autoimmune disorders, which also complicates its treatment.

Choosing the treatment tactics for recurrent forms of chronic osteomyelitis in children is a complex task, as it requires an individual approach, taking into account many factors. The main goals of treatment are to eliminate the infection, restore the normal function of the affected limb, minimize relapses, and improve the patient's quality of life. In modern conditions, a variety of treatment methods are used, including conservative therapy, surgical intervention, play therapy, as well as the use of specialized methods such as external fixatives and the application of antibacterial cements.

The main points in choosing treatment tactics are the degree of bone destruction, the presence of a pathological process in the surrounding soft tissues, as well as the child's general condition and the presence of comorbidities. It's also important to consider psychological aspects, as the prolonged course of the illness and numerous procedures can negatively impact the emotional state of the child and their family.

To date, there are no unified recommendations covering all clinical situations, which necessitates further research in this area. There are opinions about the importance of a multidisciplinary approach, which includes not only surgeons but also infectious disease specialists, orthopedists, rheumatologists, and rehabilitation specialists. The synergy of various specialists helps to develop the most effective treatment strategy based on the latest achievements in medicine.

Conclusions: Treatment of recurrent forms of chronic osteomyelitis in children requires a comprehensive approach and systematization of knowledge about effective methods. It is important to consider the specifics of the clinical situation, regularly monitor the patient's condition, and adapt the therapy to the dynamics of the disease. The choice of effective treatment methods should be based on modern scientific data, clinical experience, and multidisciplinary collaboration between specialists, which minimizes the risk of recurrence and improves the quality of life of children suffering from this disease.

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