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SYSTEMIC GLUCOCORTICOID THERAPY OF RHEUMATOID ARTHRITIS AND JUVENILE RHEUMATOID ARTHRITIS

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Abstract
Juvenile arthritis (JA) is a chronic inflammatory joint disease that develops in children under 16 years of age. Unlike from arthritis in adults, juvenile forms have features of the course, diagnosis and treatment. The disease requires timely intervention to prevent disability, growth and quality disorders life child.

Introduction

Juvenile arthritis is a collective term that unites a group of diseases characterized by chronic inflammation of one or more joints in children. The most common form is juvenile idiopathic arthritis (JIA) - arthritis of unknown etiology, lasting more than 6 weeks in a child under 16 years old with the exclusion of other causes. One of the important problems of modern pediatric rheumatology is a chronic inflammatory disease of the joints - juvenile rheumatoid arthritis (JRA). The relevance of studying JRA is determined by its relatively high prevalence among other rheumatic diseases of childhood and the high frequency of early disability , which reduces the quality of life of the child and parents , leads to negative personal and social consequences [3, 6, 11]. In addition, in recent years there has been an increase in the primary incidence of rheumatic diseases, including JRA [2, 4]. In other words, JRA is an important medical and social problem. It should be noted that among the variants of the disease classified under the heading of JRA, a special place belongs to the polyarticular form, which is often characterized by a steadily progressive course and an unfavorable prognosis [6, 8, 11]. Despite the undeniable achievements in the field of pharmacotherapy of JRA, this problem is still one of the most complex tasks of pediatric rheumatology, requiring further study. Currently, rheumatologists have a fairly extensive arsenal of anti-inflammatory drugs. However, none of them is able to radically change the course and outcome of the disease. Therefore, the main task of pharmacotherapy of JRA is to search for

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new drugs or an optimal combination of known drugs that can quickly and effectively suppress the immune-inflammatory process and prevent disease progression. In recent years, interest in the use of glucocorticoids (GC) in rheumatoid arthritis (RA) has increased again. The "renaissance" of systemic GC therapy is explained by the fact that GCs are currently the most powerful anti - inflammatory agents and, in addition, have immunomodulatory properties [1]. At the same time, much attention from researchers is paid to studying the effectiveness of low doses of GCs. It has been shown that in RA, low doses of GCs have optimal anti-inflammatory activity and are relatively safe [2, 8, 5]. At the same time, data are accumulating on the basic (disease-modifying) effect of low doses of GCs [9, 10]. Moreover, in some patients, low doses of GCs may have an anti-osteoporotic effect by reducing the severity of inflammation and improving joint mobility [17]. It can be assumed that the use of these advantages of GCs in combination with basic antirheumatic drugs will create real prerequisites for modifying the course of JRA and improve the prognosis of the disease. However, the attitude of pediatric rheumatologists to systemic GC therapy of JRA is ambiguous. The least controversial issue is the need to use GC in the systemic form of JRA with pronounced clinical manifestations and the development of life-threatening conditions [4, 7]. At the same time, the advisability of prescribing GC to patients with the polyarticular form of JRA is a subject of discussion. Systemic GC therapy for this form of the disease is most often considered as an extreme measure after unsuccessful use of other drugs and treatment methods [4, 7, 9]. In recent years, there has been a tendency towards a wider use of GC in JRA. This is reflected in the studies on the effectiveness and safety of GC in patients with JRA. At the same time, various methods of GC therapy are proposed. In addition, the possibility of revising the indications for prescribing GC in JRA is not excluded [10]. Thus, the issue of the advisability of using low doses of GC in the form of " bridge " - TepanHH at an early stage of the disease is being considered [6, 8]. The role of hypocorticism in the pathogenesis of JRA and, in this regard, the possibility of using low doses of GC as replacement therapy are also discussed [6, 7, 12]. However, the above-mentioned aspects have not been fully developed. There is no agreed definition of the term "low dose of GC". Studies assessing the therapeutic efficacy of systemic GC therapy in the polyarticular form of JRA are rare, fragmentary, based on small clinical material and are quite contradictory. The issue

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of the effect of GC on the progression of osteochondral destruction of joints in JRA has not been sufficiently studied. The problem of the safety of systemic GC therapy remains relevant. Indications for the use of GC in the polyarticular form of JRA have not been clarified. Approaches to systemic GC therapy are ambiguous. The above justifies the relevance of further studying the therapeutic efficacy of 1 K in the polyarticular form of JRA, based on the ratio of their therapeutic and side effects.

Objective of the work

To evaluate the effectiveness and safety of systemic GC therapy in the complex treatment of patients with the polyarticular form of JRA.

Objectives of the study: To evaluate the clinical efficacy of GC in the complex therapy of the polyarticular form of JRA. To evaluate the frequency and nature of side effects of long-term therapy with low doses of GC. To determine the indications for the appointment of systemic GC therapy for the polyarticular form of JRA.

Research results:

For the first time in pediatric rheumatology, the clinical efficacy of GC in polyarticular JRA has been substantiated based on a long-term comparative study . Slowing of the progression of osteochondral joint destruction has been established against the background of long-term therapy with low doses of GC in combination with methotrexate (MTX). It has been shown that the initial dose of GC (0.3-0.6 mg/kg body weight per day for prednisolone) prescribed for a limited time and a low maintenance dose of GC (0.1-0.2 mg/kg body weight per day for prednisolone) used for a long time according to an alternating scheme are practically safe. The indications for prescribing GC in polyarticular JRA have been determined disease activity of stage II-III, lack of effect from previous treatment with non-steroidal anti-inflammatory drugs (NSAIDs) and basic agents. The tactics of systemic GC therapy have been optimized: use of a small initial dose of GC for a limited time and long-term use of a low maintenance dose of GC according to an alternating scheme. In patients with the polyarticular form of JRA, systemic GC therapy is indicated for grades II-III of disease activity, absence of effect from previous treatment with NSAIDs and basic agents. For systemic GC therapy, it is

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recommended to use small doses of GC. In this case, the initial dose of GC (0.3-0.6 mg/kg of body weight per day for prednisolone) should be prescribed for no more than 2-3 weeks. Upon achieving a therapeutic effect (reduction in the duration of morning stiffness, the number of swollen and painful joints, ESR and CRP levels), it is necessary to begin a slow reduction of the GC dose. Moreover, in case of using (according to indications) a higher initial dose of GC (0.5-0.6 mg/kg of body weight per day), the daily dose of the drug should be reduced by 1.25-2.5 mg every 5-10 days until reaching a daily dose equivalent to 10-12.5 mg of prednisolone. In the future, it is necessary to switch to an alternating scheme: reduce the daily dose of GC by no more than 1.25 mg every 2-4 weeks only on even (or odd) days. When using a lower initial dose of GC (0.3-0.4 mg/kg of body weight per day), it is advisable to reduce the dose of the drug using the alternating method by no more than 1.25 mg every 2-4 weeks. A low maintenance dose of GC (0.1-0.2 mg/kg of body weight per day for prednisolone) is recommended to be used according to the alternating scheme for a long time (for 12-18 months or more). In case of persistent stabilization of the pathological process (absence of morning stiffness, swollen and painful joints, normal ESR and CRP values), GC should be discontinued. It is advisable to combine GC with a basic drug (in particular, MT) and NSAIDs. When conducting systemic GC therapy, it is necessary to carefully monitor possible side effects of GC. To minimize complications, short-acting drugs (prednisolone, methylprednisolone) should be used, if possible, GC should be prescribed no more than 1-2 times in the morning, during maintenance treatment with GC, use an alternating regimen, and conduct antiosteoporotic therapy.

Conclusions:

Systemic GC therapy (initial dose - 0.3-0.6 mg/kg body weight per day for prednisolone , low maintenance dose - 0.1-0.2 mg/kg body weight for prednisolone) is an effective method for treating the polyarticular form of JRA. Very good and good results of therapy were noted in 58.7% and 41.3% of patients treated with GC in combination with MT and NSAIDs, respectively, compared with 18.6% and 30.2% of patients receiving MT and NSAIDs ($p < 0.001$). Inclusion of GC in the therapeutic complex made it possible to significantly reduce the frequency of intra - articular GC injections ($p < 0.001$), and 58.7% of children did

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not require local GC therapy. Effective suppression of rheumatoid inflammation allowed to discontinue NSAIDs in 43.5% of patients after an average of 8.8 months and GCs in 28.3% of children after an average of 16.1 months. Slowing of progression of osteochondral destruction of joints was established in 89.1% of patients receiving low doses of GCs in combination with MT, compared with 62.8% of patients treated with MT only ($p < 0.01$). The initial dose of GCs prescribed for a limited time and the low maintenance dose of GCs used for a long time according to the alternating scheme are practically safe. Indications for prescribing systemic GC therapy for the polyarticular form of JRA are disease activity of stage II-II, lack of effect from previous treatment with NSAIDs and basic agents.

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