# FEATURES OF THE CONTINUOUSLY RELAPSING COURSE OF JUVENILE RHEUMATOID ARTHRITIS IN CHILDREN IN THE AGE ASPECT

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***Abstract.*** *This article will focus on main features of juvenile rheumatoid arthritis and the related arguments to discuss with medicines and types.*

***Keywords:*** *rheumatoid, arthrotropic, drugs, lymphadenopathy, proteinuria.*

## INTRODUCTION

Juvenile rheumatoid arthritis is the most common inflammatory disease, which is based on a chronic progressive inflammatory process of the inner layer of the joint capsule (synovium), which leads to the destruction of cartilage and bone tissue. JRA is a fairly common disease in childhood (7,8,9).

To date, the definitive factor contributing to the development of juvenile rheumatoid arthritis has not been established. Among the causes of the development of the disease, viral infections, hereditary predisposition, and the development of immune inflammation with long-term persistence of arthrotropic types of viruses (retroviruses, parvoviruses) are still discussed (1,2,3,8)

Certain changes have been made to drug therapy for JRA.

The early threat of disability in patients with JRA, a significant decrease in the quality of life of a sick child, dictates the need to introduce drugs developed on the basis of modern technologies into treatment. These are genetically engineered biological drugs: infliximab, retuximab, plocilizumab, etc., but not in all cases the use of these drugs gives the desired effectiveness and not in all cases the use of these drugs is permissible, taking into account their side effects.

Despite great efforts in the treatment of severe systemic variants of juvenile rheumatoid arthritis, it is not possible to achieve complete control over the articular syndrome. It is especially difficult to treat a continuously relapsing course in the systemic variant of JRA. (4,5,6)

## MATERIALS AND RESEARCH METHODS

In 17 children aged 3-14 years with juvenile rheumatoid arthritis, the course of the disease was monitored over time.

The first group consisted of children aged 3-7 years (10), the second included patients 12-14 years old (7). All patients underwent a complete laboratory and instrumental examination. According to the results obtained, taking into account diagnosed with juvenile rheumatoid arthritis. All patients included in the first age group (3-7) were admitted to the hospital with a high body temperature of 39-40 C and severe joint pain (100%).

## RESULTS AND DISCUSSION

A detailed study of the children's anamnesis did not show any special abnormalities; the allergic anamnesis was also calm. From the anamnesis it was established that almost all of the children were from normal pregnancies of the second and third births at term. In 100% of cases,

the early childhood period was uneventful; preventive vaccinations were carried out according to the schedule without complications. Heredity is not burdened (100%).

The onset of the disease in 2 (20%) patients was associated with previous bacterial infections and in 3 (30%) with a virus. The disease began with increased body temperature up to 40C, soreness, swelling of the wrist and ankle joints, an increase in the size of the liver and spleen - and lymphadenopathy was observed in almost all patients. JRA, systemic form, was diagnosed.

The complex treatment of children in this group with the inclusion of non-steroidal drugs in combination with prednisone no more than 7.5 ml/day gave a positive effect. The duration of hormonal therapy with subsequent reduction was 3 months. After discontinuation of the drug, exactly one month later, an exacerbation of the disease was observed. The onset of the disease again was with an increase in temperature to 40C, which persisted at night, sometimes in the morning. The deterioration of the general condition was accompanied by increased morning stiffness and progression of the articular syndrome.

In addition to the ankle and wrist, knee, elbow and hip joints with exudative manifestations were involved in the pathological process; liver hepatosplenomegaly was noted - 3.5 cm, spleen - 1.0 cm.

The activity of the inflammatory process was high – ESR-60mm/h. Proteinuria of variable nature was detected in the urine. Taking into account the severity of the condition, non-steroidal anti-inflammatory drugs were included in the therapeutic complex with an increase in the dose of prednisolone by 2.5 mg - i.e. 10 mg/day to somewhat stabilize the condition of patients. With this therapy, there was an improvement in the general condition of the patients, an increase in activity, and morning stiffness did not disappear.

Body temperature decreased, and the severity of exudative manifestations in all joints clearly decreased. Inflammatory activity decreased to 30 mm/h, but clinical signs of Cushing's syndrome appeared more clearly.

Subsequently, a reduction in the dose of prednisolone by 2.5 mg/day caused an exacerbation of the underlying disease. This exacerbation was manifested by a serious condition, high fever, increased morning stiffness and clinical signs of Cushing's syndrome, enlargement of all groups of lymph nodes, malnutrition, aminotrophy of the muscles of the legs, hands and forearms. An increase in the size of the liver (+4 cm) and spleen (+1.5) was determined.

There was almost damage to all large and small joints, both hips groups of lymph nodes with pronounced thickening of the content. The fever took on a hectic character.

Changes in blood tests were characterized by a decrease in hemoglobin level - 65 g/l and an increase in inflammatory activity to 65-70 mm/hour.

Due to the progressive deterioration of the patients' condition, it was decided to increase the dose of prednisolone by 5 mg/day. Treatment was carried out by prescribing prednisolone up to 15 mg/day reg. At the same time, intramuscular administration of up to 45 mg/day was prescribed.

In the age group of 12-14 years (7), the exacerbation of the disease began after an acute respiratory viral infection. All observed patients initially experienced an increase in body temperature to 40C, which persisted throughout the day, general weakness and the presence of a maculopapular rash on the skin of the torso and both extremities. At altitude, fever was noted by the settling of rashes in 3 patients.

In 100% of cases, patients complained of pain in the elbow, hip, knee and ankle joints and small joints of the hand. The anamnesis of all observed children was relatively calm. 3 children were from the fourth birth and two were from the fifth. The period of early development, up to almost 3 years of age, proceeded without any special features. Preventive vaccinations were carried out on time, the result was without complications. Before the onset of the disease, allergic reactions were not observed in children.

The disease began at 7-8 years of age, the onset of the disease proceeded as an allergic septic syndrome (Wiesler-Fanconius allergosepsis). The duration of remissions was short. Without any particular reason, the absence of an acute respiratory disease, an exacerbation of the underlying disease was again noted - fever 39-40C, arthralgia, the appearance of a mild rash on the skin of the torso. Hormone therapy with prednisone at a rate of 60 mg/day contributed to the sharp development of pronounced signs of Cushing's syndrome, which necessitated the need to reduce the dose of prednisone to 10 mg/day. At the same time, an exacerbation of the clinical picture of the underlying disease was again observed.

The exacerbation was manifested by severe fever and polyarthritis. Polyarthritis appeared with limitation of movement and an exudative component. in all large and small joints, increased inflammatory activity in the blood test - ESR - 70 mm/h, decreased hemoglobin level to 35 g/l, increased proteinuria in the urine. This was the basis for increasing the dose of prednisolone by 2.5 mg and amounted to 12 mg/day in combination with intra-articular steroids. The duration of remission after this treatment was relatively short. At the next exacerbation of the underlying disease, the dose of prednisone was increased to 15 m/day in combination with local injection of hydrocortisone into the ankle and radial joints. For this exacerbation of the underlying disease, methotrexate 10 mg/kg once a week was included in the therapeutic complex. Also, during this therapy, the daily dose of prednisolone was reduced exactly 2 times to 7.5 mg/day. The blood test showed an increase in ESR - up to 55 mm/h. A biochemical blood test showed an increase in transaminase activity, probably associated with methotrexate intake.

## CONCLUSION

Thus, an analysis of clinical observations demonstrating a severe relapsing course of juvenile rheumatoid arthritis characterizes clear resistance to glucocorticoid therapy in all age groups.

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