FEATURES OF THE COURSE OF VARIOUS CLINICAL FORMS OF CHRONIC JUVENILE RHEUMATOID ARTHRITIS IN CHILDREN DEPENDING ON AGE

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Abstract. *Juvenile idiopathic arthritis (JIA) is a common chronic inflammatory disease of the joints in children of a multifactorial nature, which is characterized by a long progressive course, similar structural, morphological and functional changes, leading to the development of contractures and loss of joint function. Rheumatoid arthritis is characterized by a duration of more than three months, the onset of the disease before the age of 16 years, and the exclusion of non-rheumatic articular pathology are the main criteria for establishing the diagnosis of juvenile arthritis. The disease 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.*

Keywords: *arthritis, muscular atrophy, osteoporosis, JRA.*

MATERIALS AND RESEARCH METHODS

We observed 65 sick children diagnosed with chronic juvenile rheumatoid arthritis who were admitted for treatment to a children's clinical hospital. (2.5)

The diagnosis of chronic juvenile rheumatoid arthritis was verified on the basis of a thorough study of anamnestic data, identification of factors provoking the development of the disease, duration of the disease, and generalization of the clinical manifestations of the pathological process. All patients underwent the full range of laboratory and instrumental studies, including x-ray and biochemical studies. (1,3,4,7,9).

In our studies, we took the standard diagnostic criteria as the basis for the diagnostic criteria for JRA:

1. Arthritis lasting 3 months or more;
2. Arthritis of the second joint, occurring after 3 months and later;
3. Symmetrical damage to small joints;
4. Contractures;
5. Tenosynovitis or bursitis;
6. Muscular atrophy;
7. Morning stiffness;
8. Rheumatic eye damage;
9. Rheumatic nodules.

X-ray examination determines:

1. Osteoporosis, small cystic reconstruction of the bone structure of the epiphysis;
2. Narrowing of joint spaces, bone erosion, ankylosis of joints;
3. Impaired bone growth;
4. Damage to the cervical spine.

Laboratory signs:

1. Positive rheumatoid factor;

2. Positive findings from synovial membrane biopsy.

- If 3 signs are present, the diagnosis of JRA is probable;
- If 4 signs are present, the diagnosis of JRA is definite;
- If 8 signs are present, the diagnosis of JRA is classic.

The diagnosis of the disease was confirmed based on the results of clinical laboratory, functional, biochemical and radiological research methods. Generalizations of the clinical manifestations of the disease, a detailed study of anamnestic data and hereditary burden were taken into account. (9)

The contingent of observed children is divided into 3 age groups, separated by gender.

3-6 years – 19

7-10 years –23

11-14 years old –23

Table 1. Gender and age of children

Total number	Age	3-6 years		7-10 years		11-14 years	
	Gender	boy	girl	boy	girl	boy	girl
n-65 (100%)	B – 30 46,2% G – 35 53,8%	9 (13,9%)	10 (15,47%)	11 (16,9%)	12 (18,4%)	10 (15%)	13 (20%)

RESULTS AND DISCUSSION

Studies have shown that chronic juvenile rheumatoid arthritis was diagnosed in girls more often than in boys, and these were mainly children of preschool and primary school age. These children had a history of chronic focal infection in the form of a decompensated form of chronic tonsillitis, adenoid vegetations and caries of moderate and high activity. In early childhood they suffered an acute viral infection, rubella, measles, and chickenpox (6,7,9).

The classic clinical picture of juvenile rheumatoid arthritis is characterized by pain, often occurring with passive or active movements in the joints, while children at rest, as well as at night, do not complain of pain in the joints. In young children, when small joints of the hands and feet are affected, the pain syndrome may be completely absent. Morning stiffness, defined as a short-term lameness with sensations of severe tenderness in one or more joints, is a classic manifestation of a chronic inflammatory process involving the tendon-ligament apparatus. The degree of joint defiguration depends on the type and nature of the inflammatory process, namely exudative or exudative-proliferative synovitis, which is usually characterized by an increase in the volume of the joint. Edema can occur with any type of synovitis and, as a rule, is not strictly local in nature. Children are not always able to localize pain in the joint; swelling of the joint area may be poorly defined. Any joint can be the target of juvenile arthritis, but large and medium-sized joints are most often affected, namely the knee, ankle, wrist, elbow, and hip; less often - small joints of the hands and feet. In severe variants of the disease, the “synovial joints” of the cervical spine and the temporomandibular joint are involved with the formation of arthrosis. The formation of contracture is progressive and in the early onset of the disease, a significant limitation in the range of motion is usually not typical.

In childhood, oligoarthritis is most often observed, when in the dynamics of the disease other joints are involved in the process. Oligoarthritis can be persistent or have a spreading form

when new joints are involved (≥ 5 in total) 6 months after the onset of the disease. It should be taken into account that comorbid pathologies are added to the dynamics: cardiovascular diseases, diabetes mellitus, osteopenia, respiratory diseases, damage to the digestive tract [10].

Analysis of the results of the studies found that in our observations, patients with systemic manifestations amounted to 39%, with articular forms were significantly higher - 61%. Basically, the higher frequency coincided with the age periods of 3-6 years and 11-14 years, and was associated in most cases with girls. When studying the duration of the disease, it was noted that the largest share is the articular form - 25.1%.

Analysis of the burdened heredity of children with juvenile chronic arthritis, depending on the form of the disease, showed a strong association of the parents' disease - both rheumatoid arthritis and chronic arthritis. arthritis, arthropathy and osteochondrosis in the articular form. In children with systemic manifestations of the disease, hereditary burden was associated with diseases such as allergic dermatoses and systemic connective tissue diseases. In the clinic of the articular form of the disease, polyarthritis (41%), oligoarthritis (19.4%) and monoarthritis 3.9% were noted. These were mainly children of junior and senior school age. Upon admission to the hospital, lesions were detected in the ankle (32.7%), wrist (30.0%), proximal (40.3%) and knee joints (44.3%).

The results of X-ray studies of joints in this form were characterized as follows:

Stage I – 12.4%

Stage II – 36.7%

Stage III – 12.2%

Stage IV -14.8%

In 24.6% of cases, no radiological changes in the joints were detected.

In the systemic form of the disease, radiological changes in the joints were pronounced compared to the articular form in 4.07% and 14.7% of cases, respectively.

We noted eye lesions in children with juvenile chronic rheumatoid arthritis as one of the features of the articular form. Eye damage occurred in the form of iridocyclitis, cataracts and corneal dystrophy and occurred mainly in the age periods of 7-10 and 11-14 years. In the systemic form, in our cohort of patients, eye damage occurred in 3 cases in the age group of 11-14 years.

The systemic form of juvenile chronic rheumatoid arthritis was clinically more often manifested by the development of Still's syndrome. In this form of the disease, allergic septic syndrome was also diagnosed, and there were also patients with limited visceritis. Especially Still's syndrome was diagnosed in the age group of 3-6 years (54.6%). Patients with limited visceritis were in the age group of 11-14 years (58.2%). This group also included children with allergic septic syndrome, but the incidence was significantly lower.

The main clinical manifestations of the disease include hyperthermic syndrome. In our observation, it was especially pronounced in the systemic form and was distinguished by its severity and duration. (100%).

CONCLUSION

Thus, our observations showed that the articular form of chronic juvenile arthritis is diagnosed more often in the group of children aged 7-10 years and 11-14 years. The disease clinically occurs in the form of polyarthritis and eye damage.

Systemic form of the disease in all age groups. The onset of the disease coincided with the age of 5-6 years. According to our observations, Still's syndrome was a frequent clinical manifestation of the disease.

REFERENCES

1. Alekseeva A.P., Litvitsky P.F. Juvenile rheumatoid arthritis: etiology, pathogenesis, clinical picture, diagnostic algorithm. A guide for doctors/edited by Baranov.M.:Vedi:2007;211
2. Belyaeva L.M. Pediatric cardiology and rheumatology: A practical guide / L.M. Belyaeva - M.: Medical Information Agency, 2011.- 584 p.
3. Dauksh I.A., Muratkhodzhaeva A.V., Pirnazarova G.Z. and others/Clinical manifestations of juvenile rheumatoid arthritis in children at the present stage. "Health of mother and child." Bishkek. Kyrgyzstan. 2013. Volume 5. No. 1. – P.37-40.
4. Dauksh I.A., Muratkhodzhaeva A.V., Pirnazarova G.Z. Extra-articular manifestations of idiopathic rheumatoid arthritis in children / Pediatrics. No. 3-4. 2014. – P.83-85.
5. Cardiology and rheumatology of childhood: a guide for doctors / Paul, edited by G.A. Samsygenoy; M.Yu. Shcherbakova.-M.: Medpraktika, 2004-744p.
6. Kravtsova O.N., Bagirova G.G. Epidemiology of arthritis among adolescents. Current problems of modern rheumatology. Collection of scientific works. Ed. Academy of Russian Medical Sciences, prof. A.B. Zborovsky, 2008; 25-53.
7. Kuzmina N. N., Salugina S. O., Nikishina I. P. Juvenile arthritis. XXI Century. How we understand terminological and classification aspects today. Scientific and practical rheumatology. 2006. No. 4. pp. 86–96.
8. Murathodzhaeva A.V., Dauksh I.A., Akilova F.A. and others. Treatment of idiopathic rheumatoid arthritis in children./Pediatrics. Tashkent.No. 3-4. 2014. – P.139-141.
9. Nasonov E.L. Achievements of rheumatology in the 21st century. / E.L. Nasonov // Scientific and practical rheumatology. – 2014. – T. 52, No. 2. – P. 133-141.
10. Nasonov E.L., Karateev D.E., Chichasova N.V. EULAR recommendations for the treatment of rheumatoid arthritis - 2013: general characteristics and controversial issues // Scientific and practical rheumatology. – 2013. – No. 6 (51). – pp. 609–631.