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CHARACTERISTICS OF GENETIC PREDISPOSITION TO THE DEVELOPMENT OF JUVENILE IDIOPATHIC ARTHRITIS IN CHILDREN

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Summary: *The article presents clinical laboratory features and prognostic criteria of juvenile rheumatoid arthritis. The clinical characteristics of the disease and the results of laboratory analysis are important in choosing an effective treatment method. Medicinal and surgical treatment of joints is recommended, depending on the severity of the disease, the characteristics of the clinical flow and the results of the functional laboratory analysis.*

Keywords: *juvenile rheumatoid arthritis, diagnostics, prognosis.*

Relevance.

Juvenile rheumatoid arthritis (JRA) is a destructive inflammatory disease of joints with unknown etiology, complex immunogenic pathogenesis, characterized by symmetric chronic arthritis, systemic lesions of internal organs, which leads to the disability of sick children. Improving the effectiveness of treatment for this disease is therefore a highly topical issue in terms of both scientific and practical pediatrics. There are many factors that trigger the disease. The most frequent are viral or mixed bacterial-viral infection, joint injury, excessive or supercooling insolation, prophylactic inoculations carried out against the background or immediately after the acute respiratory infection of a viral or bacterial nature [3,11].

Corticosteroids attract the most attention among daily rhythms. It was for these hormones that a simulation method was developed, as it was found that minimal changes in adrenal corticosteroid function are observed when assigned corticosteroids only in accordance with the natural daily rhythm of their secretion. The treatment of corticosteroids takes into account the opposite direction of action in cortisol and

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aldosterone. Therefore, the activity of mineralocorticoids (pro-inflammatory hormones) can be suppressed by the introduction in the afternoon of an adequate dose of glucocorticoids (anti-inflammatory hormones). Based on information on the daily rhythm of inflammatory and anti-inflammatory hormones in the body, it can be assumed that Nsaids have a more pronounced effect in the afternoons and evenings. According to Y.E. Veltisheva and co-op. (1995) The one-time appointment of ibuprofen to children with glomerulonephritis in the evening, one to two hours before the acrophase of Transamidinase, increases their efficiency and significantly reduces side effects. An analysis of the literature shows the aggressiveness and high probability of disability of children with JRA. Traditional disease therapy is far from being effective, necessitating the search for new and effective treatments for the disease. The chronotherapy method makes it possible to increase the effectiveness of the treatment while simultaneously reducing the doses of the drugs used, thereby reducing their side effects and making the treatment cheaper.

Purpose of the study. Study clinical and laboratory manifestations of juvenile rheumatoid arthritis and determine predictive outcome criteria.

Material and methods.

Eighty-four children between the ages of 3 and 16 (average age 11) with rheumatoid arthritis were monitored, of whom 74 (per cent) were articular and 10 (per cent) were systemic. Of the cases examined, 47 (56 per cent) were boys and 37 (44 per cent) were girls. The patients were divided into two groups depending on the treatment provided: 54 patients constituted the main group that received chronotherapy by nimesulide and 30 patients with traditional therapy Nsaids formed a comparison group. The control group consisted of 20 practically healthy children.

As can be seen from the table, the vast majority of the patients we examined had 3-month arthritis. And more, the morning shudder, the arthritis of the second joint, which appeared after three months. and later, symmetrical small joint lesions, effed into the joint cavity. The joint suffered pain, swelling, deformation and restriction of movement, and increased skin temperature. More frequent were the

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large and middle joints - knee, ankle, radius, ulna, hip. In 10 (11.9%) patients suffered a lesion of the cervical spine.

Result and discussion

The polyarticular variant of the JRA was observed in 35 patients examined, of which 6 were seropositive for the rheumatoid factor. In the seropositive subtype, the start with symmetric polyarthritis was noted. The wrist and foot joints were usually affected. Structural changes in the joints developed during the first six months of the disease. By the end of the first year, diseases in the joints of the wrist formed ankylosis in two patients. One patient developed destructive arthritis. According to literature, this form of JRA is the early debut of adult rheumatoid arthritis.

The seronegative subtype had a sub-prime, with symmetric polyarthritis. The arthritis flow was relatively benign.

Four patients suffered from kidney damage, three suffered from heart damage, one suffered from lung damage and two suffered from a combination of internal injuries. One preschool girl had Still syndrome, and one boy had Wissler-Fancony syndrome. In systemic forms, articular syndrome also had its own distinctive features. For example, in one patient with an allergy-septic variant, the disease began with persistent arthralgia in large (knee, hip) and medium (ankle, radius and ulna) joints without any visible changes. The length of the period of arthralgia without clear signs of arthritis was 1.5 months for the patient. Then came the exudative and productive changes in joints with the rapid development of the usures and erosion. The most comprehensive presentation was of articular syndrome under Still's disease. One sick girl developed generalized articular syndrome at the earliest stages, involving the joints of the hand, foot, cervical spine, jaw-temporal, and larger joints. The initial exudative phase was quickly replaced by two to three months of production, erosion, and destruction of cartilage, which led to early ankylosis in the radial joints.

In the laboratory diagnostics of the JRA, we were based on a clinical blood test, a determination of the rheumatoid factor. The level of activity of the JRA according to the laboratory criteria proposed by Nasonova V.A., (1997) was estimated as follows: 0-OCE up to 12 mm/h, DRR not determined, I-OCE 13-20mm/h, DRR

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slightly positive (+), II-OCE 21-39 mm/h, DRR positive (++), III-OCE 40 mm/h and above, BDS is strongly positive (++, ++++).

We have conducted an X-ray examination of the instrumentation methods, which makes it possible to determine the degree of joint damage and to determine the stage of anatomical changes according to the Steinbrocker criteria. In the first months of the disease, the main radiological indicator is epiphyseal osteoporosis, a fine-cystic reconstruction of bone structure of epiphysis. Then you get erosion. The frequency of occurrence of the JRA x-ray criteria according to the Steinbrocker criteria is given in Table 3.3.2.

Table 4.

Frequency of JRA x-ray criteria

Stages	**Signs**	**abs.**	**%**
1	Epiphyseal osteoporosis	53	63.1
2	Joint cleft constriction, single erosion	27	32.1
3	Destruction of cartilage and bone	3	3.6
4	Fibrous and bone ankylosis	1	1.2

As can be seen from the table, half of the patients we examined had the first stage of anatomical changes for Steinbrocker, i.e. epiphyseal osteoporosis, and in 1/3 patients we found that the joint slit was constricted and that there was single erosion. Destruction of cartilage and bone occurred in three patients with a disease lasting more than three years. Ankylosis formed in a sick girl with Still syndrome.

The treatment of various forms of ADR, particularly severe and progressive, is a complex task requiring the joint efforts of the doctor, the sick child, his parents and the family as a whole. Effective therapy leads to the achievement of remission of the disease and improvement of the patient's quality of life. The emergence in recent years of new biological agents (infilksimab, ethanercept, rituksimab, adalimumab, etc.) that have a significant impact on the course of the disease, and the first experience with some of them offers hope for improving the outcome of the disease.

In the presented algorithms, about 5% of the prediction error is planned. The difference between the forecast and the reality is due to two reasons. First, all factors are not taken into account at the time of projection; Second, the health of the child is affected by factors that have subsequently joined, are not in force and therefore are not taken into account at the time of projection. It is understandable that if a physician can take these factors into account and foresee their occurrence from the first stage of the examination, the accuracy of the forecast increases.

Conclusions.

1. On the basis of the complex of clinical-laboratory and instrumental and functional methods of investigation, the clinical variant of the disease, the level of its activity and the features of the current have been clarified. This is the basis for the development of a range of treatment measures.
2. Applying a predictive approach to determining the threat of adverse outcome of the ADP is a modern and effective way of preventing disease progression and choosing the most appropriate therapeutic tactic option.

REFERENCE LIST.

1. Beutler BA The role of tumor necrosis factor in health and disease. J Rheumatol Suppl 1999;57:16 –21.
2. McDevitt H., Munson S., Ettinger R., Wu A. Multiple roles for tumor necrosis factor-alpha and lymphotoxin alpha/beta in immunity and autoimmunity. Arthr Res 2002;4(Suppl. 3):S 141–S152.
3. Sfikakis PP, Kollias G. Tumor necrosis factor biology in experimental and clinical arthritis. Curr Opin Rheumatol 2003;15(4):380–6.
4. Dekker L., Armbrust W., Rademaker CM et al. Safety of anti- TNFalpha therapy in children with juvenile idiopathic arthritis. Clin Exp Rheumatol 2004;22(2):252–8.
5. Giannini EH, Ilowite NT, Lovell DJ et al. Long-term safety and effectiveness of etanercept in children with selected categories of juvenile idiopathic arthritis. Arthr Rheum 2009;60(9):2794–804.
6. Horneff G., Schmeling H., Biedermann T. et al. The German etanercept registry for treatment of juvenile idiopathic arthritis. Ann Rheum Dis 2004;63(12):1638–44.

7. Horneff G., De Bock F., Foeldvari I. et al. Safety and efficacy of combination of etanercept and methotrexate compared to treatment with etanercept only in patients with juvenile idiopathic arthritis (JIA): preliminary data from the German JIA Registry. Ann Rheum Dis 2009;68(4):519–25.

8. Quartier P., Taupin P., Bourdeaut F. et al. Efficacy of etanercept for the treatment of juvenile idiopathic arthritis according to the onset type. Arthr Rheum 2003;48(4):1093–101.

9. Eberhard BA, Ilowite NT Response of systemic onset juvenile rheumatoid arthritis to etanercept: is the glass half full or half empty? J Rheumatol 2005;32(5):763–5.

10. Mallaev Sh.Sh, Alimov A.V. Comparative effectiveness of traditional therapy and chronotherapy in the treatment of juvenile rheumatoid arthritis. // New day in medicine - 2020. - T. 1. No. 1 - P. 258-262.

11. Mallaev Sh.Sh, Alimov A.V. Clinical course of juvenile rheumatoid arthritis and its treatment optimization // journal "Pediatrics" No. 2 Tashkent 2020. P. 200-203.

12. Mallaev Sh . Sh ., Alimov A . IN . Clinical course of juvenile rheumatoid arthritis and its treatment optimization // Tibbiyotda yangi kun . – 2020. - №4 (32). – P. 68-71. (14.00.00. - No. 22) .

13. Mallaev Sh.Sh. , Alimov AV Clinic - laboratory manifestation of juvenile rheumatoid arthritis // European vestnik pediatrii . – 2020. - No. 3 – P. 56-60.

14. Mallaev Sh.Sh. Modern features of the course of clinical variants of juvenile rheumatoid arthritis // Interuniversity Scientific Congress "Higher School: Scientific Research" Moscow, 2020. - P. 64-65.

15. Mallaev Sh.Sh. Justification of the chronopharmacological approach to the treatment of diffuse connective tissue diseases in children // Interuniversity Scientific Congress "Higher School: Scientific Research" Moscow, 2020. - P. 66-67.

16. Mallaev Sh.Sh., Alimov A.V. Functional state of the adrenal glands in children with juvenile rheumatoid arthritis // Collection of articles based on the materials of

the XXXI international scientific and practical conference No. 1 (28) Moscow 2020. - P. 76-80.

17. Mallaev Sh.Sh., Alimov A.V. New approaches to the treatment of juvenile rheumatoid arthritis // Collection of articles based on the materials of the XXXI international scientific and practical conference No. 2 (62) Moscow 2020. - P. 18-22 .

18. Muxtorov MG, Yunusova RT Bolalarda C ovid-19 dan keyings davrda biriktiruvchi to'qimaning tizimli kasalliklarining laborator va clinic xususiyatlari // Journal of Academic Research of New Uzbekistan. – 2024. – T. 1. – No. 6. – pp. 33-35.

19. Muxtorov M. et al. Biriktiruvchi to' qimaning tizimli kasalliklari bor bolalarda Covid-19 ning uchrash chastotasi //Theoretical aspects in the formation of pedagogical sciences. – 2024. – T. 3. – No. 10. – S. 149-151.

20. Fayziev, N. N., Mallaev , Sh. Sh., Sultanova, N. S., & Bobomuratov , T. A. Changes in the hemostasis system in children with pneumonia and optimization of their treatment. Academic Research in Educational Sciences Volume 4 | Special Issue 1 | 2023 ISSN: 2181-1385

21. Bobomuratov T. A., Fayziev N. N., Mallaev Sh. Sh. Coronavirus infections in children, clinical features, diagnostics, treatment in children. Bulletin Tashkent medical academy № 5 2022. P. 21-23

22. Mallaev Sh. Sh., Fayziev N. N., et al. Features of the clinical course of coronavirus infection in children (literature review) // JOURNAL OF HEPATO-GASTROENTEROLOGICAL RESEARCH. - 2022. - No. SI-2.

23. Sultanova , NS, Avezova , GS, Mallaev , SS, & Fayziyev , NN //COMPREHENSIVE CHARACTERISTICS OF THE STATE OF HEALTH OF CHILDREN IN DIFFERENT AGE PERIODS, DEPENDING ON THE TYPES OF FEEDING AND CARE //British Medical Journal. – 2023. – T. 3. – No. 2.

24. N.N. Fayziev , Sh.Sh. Mallaev , N.S. Sultanova, T.A. Bobomuratov // Changes in the system hemostasis in children with pneumonia and optimization their treatment //Academic research in educational sciences, 2023 No. 1 P 180-187

ISSN 3060-4567

25. Mallaev Sh Sh , NS Sultanova , GS Avezova , NN Faiziev . //Molecular-Genetic Mechanisms of the Development of Juvenile Idiopathic Arthritis in Children./ / Texas Journal of Medical Science. – 2023 31-34

26. TA Bobomuratov , NN Fayziev GENETIC FEATURES OF THE HEMOSTASIS SYSTEM IN CHILDREN WITH PNEUMONIA Bulletin of the Tashkent Medical Academy No. 9 2023. P. 29-30 .