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Article

Features of The Clinical Course and Risk Factors of Rheumatism in Adolescents

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Abstract: This article presents the results of a retrospective analysis of 38 clinical cases of adolescent children registered with a rheumatologist. The incidence pattern by gender and age is analyzed, and key risk factors and typical complications are identified.

Keywords: Acute Fever, Adolescents, Clinical Symptoms, Diagnosis

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Introduction

Acute rheumatic fever (ARF) and chronic rheumatic heart disease remain a serious problem in pediatrics. Adolescence (12–17 years) is characterized by high activity of the neuroendocrine system, which can alter the classic clinical picture of the disease and contribute to rapid disability.[1] Rheumatic fever in children is an acute infectious-allergic disease that manifests itself as persistent damage to both joints and other structures, including the heart, lungs, liver, skin, eyes, and other body systems.[2] The disease is systemic, has a tendency to relapse, and can cause life-threatening complications. Acute rheumatic fever is a completely preventable disease. The relevance of this topic today lies in the transition from simple symptomatic treatment to a strategy for global streptococcal infection control and early echocardiographic diagnosis of cardiac lesions.[3] The Kissel-Jones criteria, which were last significantly revised in 2015, are used worldwide to diagnose acute rheumatic fever.[4] The current approach divides patients into low-risk and intermediate/high-risk groups ,the latter includes populations where the incidence of ARF remains high. To establish a diagnosis in the initial episode, the following must be present: 2 major criteria OR 1 major and 2 minor criteria. 1. Major criteria: These are specific clinical manifestations that have the greatest diagnostic weight: Carditis: Damage to the membranes of the heart (primarily the endocardium).[5] Today, not only overt clinical carditis (murmurs) is taken into account, but also subclinical carditis detected only by echocardiography (Dopplerography). Polyarthritis: For low-risk groups, this is the classic migratory major polyarthritis.

For high-risk groups, even monoarthritis or polyarthralgia may be considered a criterion. Chorea (Sydenham's chorea minor): Involuntary movements, muscle weakness, emotional lability. Often appears late, when other signs have already disappeared.[6] Erythema annulare: Pink, ring-shaped rash on the trunk and proximal parts of the extremities (rare, <5% of cases). Subcutaneous rheumatic nodules: Firm, painless formations over bony prominences. 2. Minor criteria Additional signs that help in diagnosis, but are not specific: Fever- temperature 38.5 °C (for high riske 38.0 °C). Arthralgia: Joint pain without signs of inflammation (swelling, redness). Changes in blood tests: Increased ESR (60 mm/h) and/or C-reactive protein (3.0 mg/l). Prolongation of the PR interval on the ECG, таking into account the patient's age.[7]

Objectives and Tasks

To study the clinical and statistical parameters of rheumatism in adolescents at a polyclinic and dispensary group.[8]

Mterials and Method

We analyzed the outpatient records of 38 patients aged 12 to 17 years, registered for regular medical care. We used clinical examination, laboratory diagnostics (ASLO, CRP, RF), and instrumental examinations (echocardiography, ECG). Statistical data processing was performed using mean value criteria.[9]

Results and discussion

The Table 1. study determined the distribution of patients by gender and age.

Table 1. Distribution of patients by gender and age (n=38)

№	Age group	Boys (n)	Girls (n)	Total (%)
1.	12–14 years	8	12	20 (52,6%)
2.	15–17 years	6	12	18 (47,4%)
3.	Total	14 (36,8%)	24 (63,2%)	100%

The table data shows a predominance of females across all age subgroups, which correlates with global statistics on autoimmune processes. Risk factors: During the anamnesis, the main triggers preceding the exacerbation of this pathology were identified.[10] The Table 2. following causes were identified: infectious factors (a history of tonsillitis or pharyngitis 2-4 weeks before the illness) (78% of cases); genetic predisposition; the presence of rheumatic diseases in first-degree relatives (24%); and social and living conditions, such as chronic hypothermia. Unfavorable living conditions also accounted for 15% of cases.[11]

Table 2. Frequency of complications among subjects.[12]

№	Complication	Number of children	Percentage (%)
1.	Formation of heart defects (mitral, aortic)	12	31,6%
2.	Chronic heart failure, stages I-II	7	18,4%
3.	Rheumatic chorea, chorea minor	3	7,9%
4.	Persistent arthralgia	16	42,1%

The analysis revealed that rheumatic fever in adolescents often involves the cardiovascular system, with carditis detected in the majority of patients.[13] The high incidence of heart defects (31.6%) indicates an aggressive progression of the disease during puberty.[14] Complications such as chorea are less common but require long-term rehabilitation.[15] Joint pain, or arthralgia, was observed in 16 adolescents, or 42.1%.

Conclusion

Thus, rheumatic fever in adolescence most often affects girls (63.2%). Streptococcal nasopharyngeal infection remains the key risk factor. The high incidence of cardiac complications

necessitates strict adherence to secondary prevention protocols, including bicillin prophylaxis and regular echocardiography monitoring.

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