

## FEATURES OF THE COURSE OF ACUTE RHEUMATIC FEVER IN CHILDREN OF THE SAMARKAND REGION

*Kuldashev Sardor Furqatovich*

*Samarkand State Medical University*

*Makhammatov Azamat Alikulovich*

*Samarkand branch of the Republican Scientific Center for Emergency Medical Care*

### ABSTRACT

The problem of acute rheumatic fever in children caused by group A beta-hemolytic streptococcus (GABHS) is still relevant. Adequate primary prevention of rheumatism is still based on timely diagnosis and rational antimicrobial therapy of GABHS - tonsillitis / pharyngitis. Objective of the study: to determine the incidence of complications and to evaluate the effectiveness of various penicillin treatment regimens. For the study, a retrospective analysis of the medical history of 130 children 5-16 years old, hospitalized in the 1st clinic of SamMI in 2018, was carried out. In the study of rheumatic fever, anamnestic, clinical, laboratory and instrumental methods were used.

**Key words:** Kiselya-Johnson criteria, antibacterial therapy, penicillins, treatment, prevention

### ОСОБЕННОСТИ ТЕЧЕНИЯ ОСТРОЙ РЕВМАТИЧЕСКОЙ ЛИХОРАДКИ У ДЕТЕЙ САМАРКАНДСКОЙ ОБЛАСТИ

### АННОТАЦИЯ

Проблема острой ревматической лихорадки у детей, вызванная бета-гемолитическим стрептококком группы А (БГСА), по-прежнему остается актуальной. Адекватная первичная профилактика ревматизма по-прежнему основывается на своевременной диагностике и рациональной антимикробной терапии БГСА - тонзиллита / фарингита. Цель исследования: определить частоту осложнений и оценить эффективность различных схем лечения пенициллином. Для исследования проведен ретроспективный анализ истории болезни 130 детей 5-16 лет, госпитализированных в 1-ю клинику СамМИ в 2018 году. В диагностике ревматической лихорадки применялись анамнестические, клинические, лабораторные и инструментальные методы.

**Ключевые слова:** критерии Кисель-Джонсона, антибактериальная терапия, пенициллины, лечение, профилактика.

Background: Acute rheumatic fever (ARF) and its sequelae cause significant morbidity and mortality in developing countries but are not considered a global health problem [1]. Although the incidence of rheumatism seems to have decreased in recent decades, the problem of its effective control remains. The clinical picture of rheumatism in economically developed countries has changed. The disease has lost the classic features of OPJI: acute onset, high fever, acute polyarthritis and pancarditis [2]. Currently, prevention of relapses of group A beta-hemolytic streptococcal pharyngitis is the most effective method for preventing the development of severe rheumatic heart disease. However, the evidence for these recommendations is weak and is based on studies conducted more than 50 years ago [3]. Recent studies have confirmed the importance of studying the complications of this disease in children and its prevention to prevent complications. The aim of the work is to identify the frequency of complications associated with acute rheumatic fever, detected during follow-up, and to evaluate the effectiveness of different penicillin treatment regimens in patients with acute rheumatic fever.

Today, ARF is not a mass disease, but it is a serious problem associated with heart damage. After several episodes of ARF, CHD may develop, often complicated by heart failure, which can lead to premature death. Worldwide, RHD is associated with the main economic and social damage from GAS infection. [4].

RL causes general inflammation affecting the heart, joints, skin and brain, either simultaneously or selectively. RL can usually cause rheumatic heart disease later in life.

Materials and methods. A retrospective analysis was made of 130 case histories of children with ARF and BRF aged 6 to 16 years hospitalized in the pediatric department of the 1st clinic of SamMI in 2018.

Results obtained. In the acute period of the disease, streptococci from a throat smear were detected in 72% (93 patients) of those examined. It should be emphasized that the highest incidence rate was noted in the winter-spring period, which coincides with literary data [4,5]. 65% (85 patients) had catarrhal symptoms (hyperemia of the pharynx and pharyngeal walls). Fever from 3 (71%) to 5-6 (18%) days was detected in 76% of patients. The remaining children had no fever. ARF diagnostics were based on the Kissel-Jones criteria, which are a unique diagnostic tool.

The first "major" diagnostic criterion and leading syndrome of ARF is rheumatic carditis, which determines the severity of the course and outcome of the disease. In our study, rheumatic carditis was detected in 30% of children with recurrent rheumatic fever.

Rheumatic polyarthritis remains one of the leading clinical syndromes of the first attack of ALR. In 60% of children, joint damage was benign and variable, with predominant damage to large and medium joints over 2–3 weeks. Under the influence

of modern anti-inflammatory therapy, this period is reduced to several hours or days [6].

Rheumatic lesions of the nervous system, such as minor chorea, occurred in 23% of cases, mainly in children aged 8-10 years, less often in adolescents. Annular erythema and rheumatic nodules were not detected in our study.

Laboratory tests showed positive C-reactive protein in all patients, fibrinogen values ranged from 232 to 463. At the same time, an increase in antistreptolysin-O titers was observed in 80% of patients. Biochemical tests. Liver function tests were performed at the onset of the disease and every 6-8 weeks. The examined pediatric patients showed virtually no changes in biochemical parameters.

During the examination by instrumental methods, ultrasound revealed bilateral pyelonephritis in 12 patients. Abdominal pain, tachycardia not associated with fever, malaise, and sore throat were also observed in children and adolescents with ARF. Since these symptoms are characteristic of many diseases, they are not part of the diagnostic criteria, but can serve as additional confirmation of the diagnosis of ARF (4,7).

Changes in the ECG were not observed in all children. Tachycardia was most often observed - in 28% of children, sinus arrhythmia - in 4%, bradycardia - in 14% of children. A decrease in voltage was observed in 17 (4%) children. As a concomitant disease, anemia of the first and second degree was detected in almost all (93%) patients.

All children received complex pathogenetic therapy: benzylpenicillin, nonsteroidal anti-inflammatory drugs and glucocorticosteroids. The use of prolonged-release penicillins, especially bicillin-5, played a huge role in preventing recurrent attacks of ARF. Although patients received bicillin after discharge from the hospital, patients experienced recurrent attacks of the disease, indicating lack of effectiveness in 33% of patients. According to the literature, one of the reasons for the ineffectiveness is the low concentration of penicillin in the blood serum of patients after intramuscular administration of generally accepted prophylactic doses of bicillin-5 (1,500,000 units) [8].

**Conclusions.** The development of ARF is caused by a violation of secondary prevention of rheumatism. Laboratory data play an important role in monitoring and predicting ARF disease. The difficulties of differential diagnostics at the prehospital stage and late hospitalization of children with ARF indicate low alertness of primary care physicians. Thus, the obtained results indicate the need for further examination of children with rheumatic fever in order to develop and improve treatment and preventive measures.

#### List of references

1. Умарова, С., Мухаммадиева, Л., Рузматова, С., & Кулдашев, С. (2021). Особенности течения острой ревматической лихорадки у детей

- Самаркандской области. Журнал гепато-гастроэнтерологических исследований, 2(3.2), 15-17.
2. Kuldashiev, S. F., Belykh, M. L., NA, R., & SU, U. SS (2022). Influence of features of macrot in acute and recurrent bronchitis in children. *Journal of Hepato-Gastroenterological Research*, 2(3.1), 33-35.
  3. Furqatevich, K. S., & Botiraleyevich, N. B. (2023). State of Sexual Development of Boys with Bronchial Asthma. *Global Scientific Review*, 15, 60-64.
  4. Угли, Ш. Н. М., Закирова, Б. И., Кулдашев, С. Ф., & Хусаинова, Ш. К. (2020). Оптимизация терапии рецидивирующего течения бронхообструктивного синдрома у детей. *Достижения науки и образования*, (3 (57)), 58-62.
  5. Кулдашев, С., Мухаммадиева, Л., Белых, Н., Рузметова, С., & Умарова, С. (2021). Влияние особенностей макрота при острых и рецидивных бронхитах у детей. *Журнал гепато-гастроэнтерологических исследований*, 2(3.1), 33-35.
  6. Furqatovich, K. S., Botiraliyevich, N. B., & Alikulovich, M. A. (2023). MODERN PROSPECTS FOR THE DIAGNOSIS AND TREATMENT OF ACUTE RHEUMATIC FEVER. *World Bulletin of Public Health*, 27, 19-22.
  7. Кулдашев, С. Ф., & Мухаммадиева, Л. А. ЗНАЧЕНИЕ ОСОБЕННОСТЕЙ МОКРОТЫ В ДИАГНОСТИКЕ И ПРОГНОЗИРОВАНИИ ТЕЧЕНИЯ ОСТРОГО И РЕЦИДИВИРУЮЩЕГО ОБСТРУКТИВНОГО БРОНХИТА У ДЕТЕЙ.
  8. Quldashiev, S. (2021). ROLE OF SCIENTIFIC WORKS OF ABU RAYHAN BERUNI IN STUDYING ETHNIC HISTORY OF THE UZBEK PEOPLE. In *ИННОВАЦИОННЫЕ ПОДХОДЫ В СОВРЕМЕННОЙ НАУКЕ* (pp. 14-18).