

Characteristics of the clinical manifestation of rheumatism in children in the present conditions of Yakutia

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The problem of rheumatism is still relevant. Rheumatic carditis is one of the main causes for the formation of acquired heart diseases. As a result, the analysis of the clinical finding of rheumatic fever among children and adolescents found that the patients with sub-acute and latent onset are predominating. In total, erased clinical course of the rheumatism led to late diagnosis and inadequate therapy and was the reason for the formation of valvular defects.

Keywords: rheumatism, clinical course, acquired heart diseases, children.

Introduction: acute rheumatic fever (ARF) and chronic rheumatic heart disease (CRHD) registered in all countries of the world in various climatic zones. Throughout the XX century there were regular decrease in the average incidence and prevalence of rheumatic fever. However, according to WHO, valvular defects, associated with rheumatism, remain one of the most common causes of deaths after cardio - vascular disease among patients under 35 years old in the developing countries, surpassing even the deaths of diseases such as hypertension and coronary heart disease [1, 5, 6, 11].

The Russian Federation has a five-year (1999-2003) analysis of the incidence of acute rheumatic fever, chronic rheumatic heart diseases and rheumatic heart diseases which found that the total number of patients with acute rheumatic fever and relapse was reduced by 28-30%, and the number of newly diagnosed rheumatic heart disease was increased by 28% [9].

In recent decades, the intensity of clinical presentations of acute rheumatic fever has significantly decreased; severe course of rheumatic endomiocarditis is uncommon nowadays, and there is a tendency of the transformation of the disease into mono - and oligosymptomatic forms, frequency of latent forms of the disease. In the literature there is a discussion of the possibility of "smoldering" rheumatic activity typical for latency of the disease, which often leads to the formation of heart disease [1, 5, 6, 9, 11]. Therefore, existing now clinical diagnostic criteria do not always help to clarify the disease in time.

Many authors have noted that the harsh climate of the North creates the conditions for chronic course of the diseases, including angina, leading to serious complications like rheumatic fever, hemorrhagic vasculitis, nephritis [7]. The problem of rheumatism in Yakutia closely associated with chronic tonsillitis. In the 70-80-ies authors MV Khandy, KF Golberg, A. Solovieva examined the prevalence and clinical features of rheumatic fever among children in Yakutia. According to M. Handa in childhood subacute course of acute rheumatic fever is the most often. In adolescence, prevailed the latent form with a high percentage of heart disease [4, 8, 10].

According to the data of the committee of 2009, the adult primary incidence of acute rheumatic fever in the Republic of Sakha (Yakutia) exceeded Russian 5.4 times, chronic rheumatic heart disease - 3.5 times, rheumatic heart disease - 2.6 times. According to the researches of IP Govorova (2008) rheumatic heart disease among children forms 40.3% of the total number of acquired heart diseases [2, 3].

Thus, rheumatism in Yakutia is still an urgent problem requiring further researches.

Purpose: analyze the clinical presentations of rheumatic fever among children, at the



present conditions of the Republic of Sakha (Yakutia).

Materials and Methods: was made a retrospective analysis of medical records of 72 children diagnosed "acute rheumatic fever", "chronic rheumatic heart disease" at the age of 4 to 17 years, passed the examination and treatment in cardiorheumatological department of Republic Hospital № 1 – National Medical Centre and Yakutsk Children's Hospital, Pediatric Department of city clinic #1 from 2001 to 2011. The diagnosis of "acute rheumatic fever", "chronic rheumatic fever" verified according to the criteria of Jones (American Cardiological Association, the revision of 1992) and the classification of acute rheumatic fever (Association of Rheumatologists of Russia, 2003). Statistical significance of differences was determined by non-parametric statistical criteria (Pearson χ^2 , Fisher). As a significant level of significance was considered $p < 0.05$.

Results and discussion: was analyzed data of 42 patients firstly enrolled in cardiorheumatological department, and also 30 children enrolled iteratively. By sex as follows: 44 (61%) girls and 28 (39%) boys. Children from the countryside made up 46 (64%) and 26 (36%) made up children out of the city.

Among the firstly enrolled 42 children, only 14 (33%) were with the primary attack of rheumatic fever, 15 (36%) enrolled with the repeated attacks, and 13 (31%) were out of aggravation for further diagnosis. Directional diagnosis "rheumatism" was settled only in half of the patients 24 (57%) of 42, in most cases was diagnosed reactive arthritis or chronic bacterial endocarditis.

Analysis of the anamnesis of the patients showed that 17 (23.6%) patients out of 72 children were from problem families. 9 (12.5%) patients had rheumatism among first-order relatives, 6 had rheumatic diseases in their genera, and 9 patients indicated relatives suffering from cardiovascular diseases. The vast majority of patients (64, 89%) had links with an angina.

The debut of the disease analyzed retrospectively of 51 (70%) patients. Left 21 (30%) of patients has unknown onset of the disease.

Age at onset varied from 4 to 16 years, and the average - $9,34 \pm 3,6$ years. Most children had the first attack of acute rheumatic fever between the ages of 7 and 14 in 64% of cases. Acute onset of the disease with activity of II-III degree with fever, arthritis, rheumatic heart disease, high laboratory parameters were observed in 16 (31.4%) of 51 patients, the disease is mainly diagnosed at the first month of the disease. 13 (25.5%) children had sub-acute onset with less bright symptoms – sub-febrile temperature, monoarthritis, oligoarthritis with mild laboratory changes. Most diseases were diagnosed late, after an average of $2,42,4 \pm 3,1$ months. Half of the children with sub-acute disease diagnose was not updated promptly. Appeals to cardiologists mainly were due to heart failure on a background formed heart disease. The onset of disease of 12 (23.5%) patients was considered primary chronic, latent, as a disease was diagnosed only after the presentation of heart failure on a background formed heart disease. In anamnesis there were no symptoms indicating an episode of acute rheumatic fever. Diagnosis refined in a $12 \pm 10,6$ months in average. 10 (19.6%) children have during recurring course of disease.

Articular syndrome of the majority of patients with known debut was in the form of arthralgia, severe clinic of arthritis was in anamnesis was of 18 (35.2%) children out of 51. Erythema annulare discovered against acute disease of 6 (12%) patients. It should be noted that with rheumatic chorea was only 5 (10%) children, two of them had an isolated rheumatic chorea.

57 (79%) out of 72 patients have had formed rheumatic heart disease. One fourth of the patients (18, 25%) had compound valvular defects combined with insufficiency of mitral valve to 3-4 degrees. Moreover, the overwhelming majority of the children 35 (83.3%) of 42 for the first time admitted to a specialist department already had rheumatic heart disease, including 4 children, who had compound severe heart disease. It should be noted that the vast majority of the children 26 (74.2%) out of the 35 who with a formed heart disease were from the countryside area. The most compound defects were formed among children with recurrent and latent course of disease (Table 1).

Conclusion: The analysis of clinical presentations of rheumatic fever of children at the present conditions showed that with the acute onset of the disease was only one third of patients, the rest were observed sub-acute and latent course. Majority of children at the first admission to a specialized medical department have already certified formed rheumatic heart disease, which is associated with late diagnosis and delayed treatment of the disease. The most compound defects diagnosed among children with latent and relapsing course of the disease.

Thus, at the present conditions there is a tendency to alter the course of rheumatic fever in the direction of a lighter and worn out, which is the main reason for the formation of valvular defects.

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Table 1

Outcome of rheumatism in children depending on the course of rheumatic fever

	Acute course n=16		Subacute course n=13		Latent course n=12		Recurrent course n=10	
	number	%	number	%	number	%	number	%
Mitral valve prolapse	2	12,5	3	15	2	13,3		
Isolated heart defects	10	62,5	9	45	6	40	2	20
Combined heart defects	4	25	1	5	4	26,6	8	80*

*- statistically significant differences between comparison groups

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