

Evaluation of the prevalence and intensity of caries in children with rheumatism.

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ABSTRACT: *Preservation and strengthening of the dental health of the population is one of the strategic directions of medicine. Despite modern scientific achievements, the intensity and prevalence of caries, as well as periodontal tissue diseases, have always been high. One of the important factors in the development of periodontal hard tissue diseases are systemic somatic diseases of the body. Rheumatism or acute rheumatic fever is a disease characterized by widespread inflammation of the connective tissue, mainly due to streptococcal infection. The disease most often occurs in children aged 7-15 years.*

KEY WORDS: *dentistry, children's age, rheumatism, caries.*

In childhood, caries develops faster and more rapidly. This is facilitated by: reduced resistance of the organism in children, anatomical and physiological features of the teeth, concomitant rheumatic disease, a decrease in local immunity of the oral cavity. Along with this, carious processes have a great influence on the composition of the oral fluid, which changes due to the formation of a carious process in the oral fluid. Rheumatic diseases represent an extensive group of nosological forms that are diverse in nature, the main feature of which is the presence in the patient of certain manifestations of the pathology of the musculoskeletal system [Skakodub A., 2019].

Today, the issue of providing specialized dental care to children with severe rheumatic diseases, in which, due to a decrease in local immunity in the oral cavity, dysfunction of the salivary glands and long-term use of anti-inflammatory therapy, is becoming increasingly relevant, there is a violation of the acid-base balance, leading to multiple dental caries.

The purpose of the study: to study the prevalence and intensity of primary caries and its modern and effective prevention in children with rheumatism.

Materials and methods of the study: We examined 48 children aged 6-14 years, patients with rheumatism, who are being treated in the regional Bukhara children's multidisciplinary center, in the department of rheumatology and who are on the "D" register at the place of residence in the district clinics of the city of Bukhara. Bukhara. The examined children underwent clinical and laboratory studies generally accepted in dentistry.

The age group from the age group of 7-10 years consisted of 14 children (29%), 34 children were in the age range of 11-14 years (71%). The control group was comparable to the main groups in terms of age.

Rheumatism was diagnosed by a pediatric rheumatologist. The study evaluated clinical, anamnestic, laboratory and instrumental parameters at the time of the initial examination. A comprehensive dental study included: identifying complaints of sick children, taking an anamnesis, visual examination and index assessment of KPU, GI, RMA KOSRE, cytological research methods,

professional and individual oral hygiene - the state of the oral organs. Children were examined using a standard set of dental instruments under artificial lighting.

During the examination of children, the generally accepted sequence was followed: external examination, examination of the functions of the maxillofacial region, examination of the lips and oral mucosa, examination of the state of periodontal tissues, assessment of the location of teeth, dentition and occlusion, assessment of oral hygiene, examination of hard tissues of teeth, condition of the oral fluid. The study of the condition of the teeth in the oral cavity of children began from the upper jaw from right to left, then on the lower jaw from left to right. The state of the teeth was taken into account: the absence of caries, intact teeth, carious lesions, including various forms of caries with and without complications.

Diagnosis of caries was carried out on the basis of anamnesis, clinical examination, probing, percussion. Of the additional methods, for the diagnosis of focal demineralization of enamel, the initial form of caries, staining of spots with a 2% aqueous solution of methylene blue was used according to the method of L.A. Aksamit. The term "focal enamel demineralization" refers to the initial manifestation of caries - caries in the white spot stage. This included single and multiple spots on the visible surfaces of tooth enamel.

By color, white homogeneous spots were distinguished, which, as a rule, were clearly defined, and heterogeneous spots, where chalky areas were combined with healthy enamel.

The sizes of the spots ranged from point sizes to occupying 1/3 of the tooth surface. According to the nature of the surface, spots with a shiny smooth surface were distinguished, matte rough. In some cases, a decrease in the enamel density in the area of focal demineralization was revealed, the enamel was easily scraped off by an excavator.

All stains related to focal enamel demineralization were stained with 2% aqueous methylene blue.

Results and analysis of the study: As a result of the examination of sick children, a highly significant incidence of major dental diseases in the oral cavity was established in a comparative study of patients with healthy children in the control group (Table 1).

Detection rates of major dental diseases in children with rheumatism significantly higher incidence of major dental diseases compared with healthy children in the control group.

Table 1

The prevalence of major dental diseases in sick children with rheumatism and the control group

Study Groups	Major dental diseases studied					
	dental caries		gingivitis		periodontitis	
	abs	%	abs	%	abs	%
1. Rheumatism, n=48	47	97,9	32	67	19	23
2. Control group of healthy children, n=11	7	63	3	27	-	-

Since when distributing children by age, groups 6-14 were small, for further research we selected mainly children as the largest groups of 48 children, all in-depth studies were carried out mainly with children of this age.

The study of the prevalence of dental caries in sick children compared with healthy children revealed a significant high prevalence of caries in sick children. If in the healthy group the prevalence was $48.9 \pm 1.5\%$, then in patients it was $79.5 \pm 2.20\%$. The prevalence of caries in rheumatism is significantly higher compared to the control and was respectively equal to $87.9 \pm 1.7\%$ versus $48.9 \pm 1.5\%$.

The study of the second indicator of caries, as its intensity, revealed a rather large difference in these indicators in sick children compared to healthy ones. In the first age group with rheumatism, this indicator was 4.85 ± 0.9 in contrast to the control group equal to 2.14 ± 0.5 . In the second age group, there is an increase in this indicator compared to the control group and the first age group.

The intensity of caries is highly significantly higher both in the first and second age groups, compared with the data of healthy children in the control group. In the first age group, KPU+kp was equal to 5.19 ± 0.6 , in the second - 5.21 ± 0.8 . In the control group, respectively, 2.14 ± 0.5 and 1.95 ± 0.3 .

The conducted studies prove a higher prevalence and intensity of caries indicators in both studied groups with rheumatism.

Table 2

The intensity of caries in children with rheumatism

The course of the disease	Children's age					
	6-10 age			11-14 age		
	Milk teeth	Permanent teeth	Sum	Milk teeth	Permanent teeth	Sum
1. Articular form of rheumatism	$2,4 \pm 0,3$	$2,45 \pm 0,07$	$4,85 \pm 0,9$	$2,37 \pm 0,2$	$2,52 \pm 0,6$	$4,89 \pm 0,4$
2. Systemic form of rheumatism	$2,6 \pm 0,4$	$2,59 \pm 0,2$	$5,19 \pm 0,6$	$2,48 \pm 0,3$	$2,73 \pm 0,1$	$5,21 \pm 0,8$
3. Control group	$1,45 \pm 0,2$	$0,69 \pm 0,1$	$2,14 \pm 0,5$	$0,75 \pm 0,03$	$1,2 \pm 0,4$	$1,95 \pm 0,3$

Note: * - the significance of differences in relation to the control group was noted, $P < 0.05$.

It should be noted that caries in both milk and permanent teeth is characterized by an early and aggressive course, short-term development of caries complications, pulpitis and periodontitis, and almost asymptomatic against the background of powerful, anti-inflammatory therapy of the underlying disease. It was found that the onset of carious disease during the eruption of permanent teeth or in the first years after eruption, as well as the presence of several carious surfaces on the crown of permanent teeth. A feature of dental caries in sick children is its multiple nature, the presence of several carious cavities in 1 tooth (up to 3-4). Localization of caries not only in typical places for it, but also in the cervical region.

As a result of the study, it was found that in the studied KPU index in children with rheumatism, the shares of "K" (caries) and "U" (removal) were expressed, as well as its multiple complications in the form of pulpitis and periodontitis.

Conclusions: The conducted studies prove a higher prevalence and intensity of caries indicators in both studied age groups in rheumatism.

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