

## THE CHRONIC CATARRHAL GINGIVITIS DIAGNOSIS SPECIFICS IN PATIENTS WITH RHEUMATISM

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### ABSTRACT:

It is known that rheumatism is a multifactorial autoimmune disease and in which the exogenous (viruses, bacteria, superantigens) and endogenous (type II collagen) factors development are important. The study examined patients with rheumatism in Bukhara regional multidisciplinary children's hospital, the cardiac rheumatology department, who came from different regions. Diagnostics and treatment of chronic catarrhal gingivitis in children with rheumatism is carried out. Optimized dental care was also provided to these patients.

**KEYWORDS:** rheumatism, chronic catarrhal gingivitis, dental care.

### INTRODUCTION:

Rheumatism dominates in the childhood rheumatic diseases structure. Most authors note an increase in the musculoskeletal system and connective tissues diseases prevalence, including rheumatism. Specialists of different profiles, due to joint efforts, help to improve the disease prognosis and the life quality of children. In the last years, it is known that organs pathology and the oral cavity tissues growth is difficult to stop, and sometimes even impossible. What with, it is necessary to develop and widely introduce into practice measures for the major dental diseases prevention.

The research aim was to determine the periodontal diseases prevalence in children with rheumatism and to diagnose catarrhal gingivitis by cytological methods.

### MATERIAL AND METHODS:

In connection with this goal, were examined 150 children at age 3-14 with rheumatic disease, who are being treated in Bukhara regional children's multidisciplinary center, in the rheumatology department and are registered at the "D" recording residence at the residence place in Bukhara district polyclinics.

The children age gradation according to the WHO classification. The age group from 3 to 6 years was 14 children (9.1%), the age group from 7 to 10 years was 32 children (21.4%), 83 children were in the age range of 11-13 years (55.3%) and 21 children (14.2%) are children at age 14 to 16. The control group was comparable to the main groups in terms of age.

We divided children with rheumatism into 2 groups depending on the disease form: articular and systemic rheumatism forms.

The simplest criterion for assessing oral hygiene is the tooth surface calculation covered with dental plaque, expressed in numbers. For this we used the Green-Vermillion method. To assess the periodontal tissues state in our work, we used the well-known periodontal index (PMA) modified by Parma (1960). The gums condition was assessed in each tooth after staining with Pisarev-Schiller solution. Pre-insulate with cotton rolls, dry.

For cytological studies, the gingival mucosa imprints were taken in the anterior area and chewing teeth (6 prints for each child). The literature highlights the cytological gingival mucosa characteristics, mainly in the adult. In childhood, this problem has been studied very poorly, although in adult patients, cytological gingival margin prints examinations are one of

the main indicators for assessing the gingival mucosa state.

**RESULTS:**

At the beginning, we carried out cytological studies of periodontal soft tissues in healthy children in control group. As the study result, the following cytological characteristics

of the periodontal soft tissues were established. In a healthy periodontium in children, the epithelial cells prevalence presence which equal to 81.14% was revealed, consisting of 45.71% keratinized epithelial cells, epithelial cells in the scales form nucleated spinous layer cells, constituting 35.43%.

Table 1 Cytological parameters of periodontal soft tissue imprints in healthy children of the control group

Cytological picture of cellular elements	Control group	
	1 <sup>st</sup> age group	2 <sup>nd</sup> age group
Epithelial	86,64±2,72	87,91±2,14*
1. Basal	-	-
2. Nucleated cells of the spiny layer	45,11±1,83	45,18±1,92*
3. Anucleate keratinized	41,53±1,54	42,75±1,72*
With cytopathology signs	0,59±0,02	0,58±0,01*
1. Vacuolated cytoplasm	0,18±0,01	0,19±0,03*
2. Deformed core	0,15±0,03	0,17±0,01*
3. Basophilic inclusions	0,07±0,02	0,06±0,01*
4. Contaminated	0,17±0,04	0,15±0,02*
5. Phasing	0,02±0,01	0,01±0,01
Connective tissue	18,86±1,65	18,15±1,78
1. PMNL	15,78±1,13	14,95±1,15*
2. Intact monocytes	1,65±0,22	1,59±0,22*
3. Holonuclear monocytes	1,43±0,19	1,51±0,18*

Note: This and other tables\* show significant differences relative to other age groups (P<0,05).

In second place in terms of quantity, connective tissue cells should be noted that they were quite fewer than epithelial cells and amounted to 18.86% (Table 1). The PMNL content was 15.78% that from intact monocytes were 1.65%, and from naked monocytes was 1.43%. It should be noted that the minimum epithelial cells number with cytology signs is equal to 0.59%. Also, cells with vacuolated

cytoplasm were found - 0.18±0.01%, cells with a deformed nucleus were detected in 0.15±0.03%, with basophilic inclusions in 0.07±0.02%, phaging in 0.02±0,01%, cells with cantomized microorganisms in 0.15 ± 0.04% (Table 1).

Control group

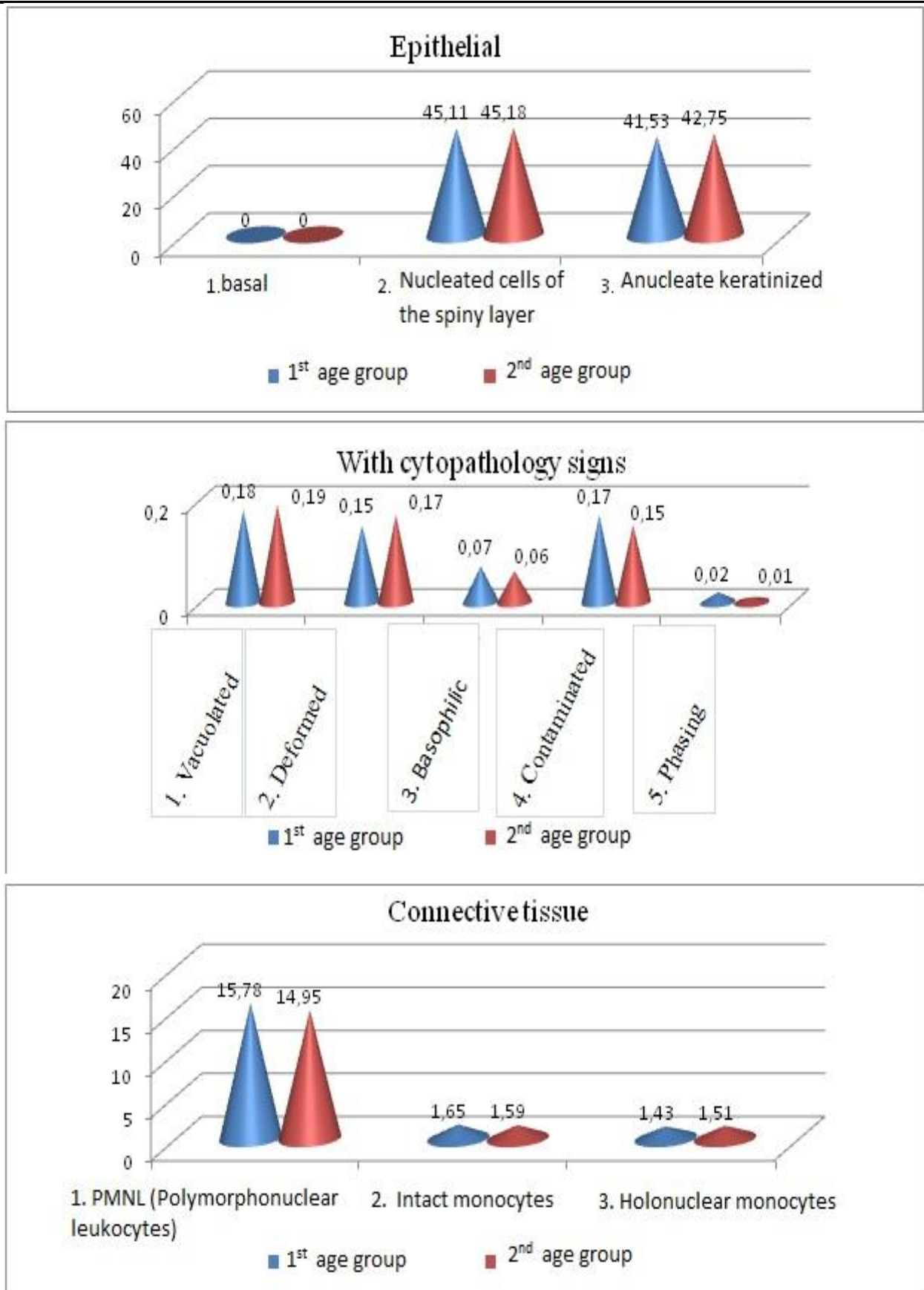


Figure 1. Cytological parameters of periodontal soft tissue imprints in healthy children of the control group

Table 2 Cytological periodontal soft tissue imprints indicators in sick children with rheumatism

Cytological picture of cellular elements	Articular form		System form	
	1 <sup>st</sup> age gr	2 <sup>nd</sup> age gr	1 <sup>st</sup> age gr	2 <sup>nd</sup> age gr
Epithelial	71,43±2,13	71,38±3,18	69,71±2,18*	69,52±2,35*
1. Basal	0	0	0	0
2. Nucleated cells of the spiny layer	38,17±1,74	36,71±2,15	37,56±1,91*	36,41±2,16*
3. Anucleate keratinized	33,26±1,92	35,17±1,53	32,15±1,36*	33,11±1,92*
With cytopathology signs	1,45±0,7	1,53±0,9	1,77±0,5*	1,88±0,6*
1. Vacuolated cytoplasm	0,35±0,01	0,41±0,02	0,46±0,02*	0,48±0,01*
2. Deformed core	0,49±0,03	0,48±0,01	0,51±0,01*	0,54±0,01*
3. Basophilic inclusions	0,20±0,02	0,07±0,01	0,05±0,01*	0,04±0,02*
4. Contaminated	0,38±0,05	0,39±0,03	0,47±0,02*	0,48±0,08*
5. Phasing	0,15±0,03	0,17±0,01	0,22±0,01*	0,23±0,02*
Connective tissue	43,86±1,65	43,58±4,1	48,14±5,21*	49,09±3,52*
1. PMNL	37,40±2,1	37,91±1,93	41,57±2,1*	42,11±1,78*
2. Intact monocytes	2,87±1,32	2,95±1,25	2,93±1,31*	3,15±1,24*
3. Holonuclear monocytes	3,29±1,74	2,98±1,52	3,64±1,46*	3,78±1,32*
4. Fibroblast-like	0	0	0	0

Note: \* - it was noted the differences reliability between articular and systemic rheumatism forms. (P<0,05)

The control group comparison of healthy children with children with rheumatism, both with articular and systemic forms, the sick children cytological indicators did not coincide with the average cytological imprints indicators of the healthy children control group gums, which indicates this research method high sensitivity to the course inflammatory reaction in the periodontium soft tissues. Thus, periodontal disease state studies in sick children revealed significantly significant changes in cytological examination compared with the control group. In sick children, cytological indicators clearly showed and proved the presence and inflammatory prevalence and destructive changes in the soft periodontium tissues.

It should be noted that the comparative cytological indicators analysis of both age groups is approximately the same indicators mainly for all studied cytological prints indicators from the periodontium soft tissues (Table 2), the difference is very close to each

other and not reliable (P> 0.05). This served as the basis for further research on sulimor parameters in both age groups.

The comparative characteristics study of gingival prints cytogram in children with rheumatism in comparison with the corresponding cytological healthy children indicators in the control group revealed quite significant changes in the cytogram parameters in sick children compared to the control group (Tables 1, 2).

Thus, a highly significant decrease in the epithelial cells pool was found, both in the articular form and in the systemic form, and even more pronounced in the systemic form in both studied age groups.

Thus, analyzing the data obtained during the cytological gingival prints examination, they characterize significant changes in the containing various cellular elements types, chronic catarrhal gingivitis development characteristic in sick children. Chronic catarrhal gingivitis in children with rheumatism during

visual examination and other periodontal tests is poorly manifested clinically, probably due to the large intake non-steroidal anti-inflammatory drugs doses and hormones by sick children in the rheumatism underlying disease treatment.

#### **CONCLUSIONS:**

Analyzing the data obtained, it can be concluded that in rheumatism, regardless the clinical course form, cytological periodontium soft tissue studies imprints revealed criteria characteristic of the chronic gingivitis development, but clinically weak or not expressed, in connection with the rheumatism underlying disease treatment with corticosteroids and high non-steroidal anti-inflammatory drugs doses (NAID).

Therefore, in children with rheumatism, during dental examination, it is necessary to use cytological imprints examination of the periodontium soft tissues to determine the inflammatory reactions presence that do not appear during clinical visual examination. The cytology method is easy to use, it gives visual pathological changes characteristic that is not always clinically manifested or have indistinct manifestations.

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