IMPROVING THE DIAGNOSIS, TREATMENT AND PREVENTION OF DISEASES OF THE ORAL MUCOSA IN CHILDREN

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ABSTRACT – improving the system of providing dental care to the population in various countries and maintaining it at a decent level is an urgent problem, outlined by the modern approach of society to the issue of priority of preventive medicine (1, 4, 6, 7). Today, great importance is paid to improving the quality and accessibility of dental care to the population (2, 9, 10).

Key words – the quality and accessibility of dental care, normal microflora, monoculture, pathogenic, dentist.

I. INTRODUCTION

Dental morbidity in childhood and adolescence largely determines the state of health of people in subsequent years of life. For this reason, data on the intensity of dental pathology in children are the subject of close attention of specialists (8, 9, 10).

A special place among dental diseases is occupied by diseases of the mucous membrane (SO) of the oral cavity (PR) (SOPR). They remain one of the urgent problems of therapeutic dentistry. Recently, there has been an increase in the number of inflammatory diseases of SOPR. This is due both to an increase in the number of adverse factors affecting the body, and to a decrease in the standard of living of the population. The severity and prevalence of SOPR diseases is determined by the nature of the etiological factor and the intensity of aggression (3, 7, 8, 9, 10). Moreover, in recent years, more and more research has been carried out all over the world on the problems of SOPR in various population groups, including among children (6, 10).

II. LITERATURE REVIEW

The problem of the prevalence, prevention, and treatment of immunomicrobiological aspects has not been adequately studied, including information on the age and gender characteristics of pathologies, risk factors for development have not been fully studied, and existing preventive measures have been prescribed without taking into account the territory of residence, environmental factors, and the state of local oral immunity , which made them ineffective diseases of SOPR especially in rural areas and children.

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Today, the development of preventive, diagnostic and therapeutic and organizational measures based on the study of monitoring the dental morbidity of children in different age, gender and social groups determines the relevance of the problem chosen for research, the solution of which is important for scientific and practical health care.

Purpose of the study. Improving the identification of risk factors for the formation and development, early diagnosis, treatment and prevention of diseases of SOPR in children in a hot climate.

III.   ANALYSIS

Materials and methods of research: The research was carried out in three stages:

At the first stage, the object and scope of the study were selected, it was taken into account that all the studies were randomized, age-gender differences, the group of healthy and sick people with SOPR were representative of children from 12 to 18 years old comprehensive schools (OOSH) of the city of Bukhara;

At the second stage, we determined the dental status in children according to the recommendations of VOZ experts (2005) and our additions "Map of the dental examination of the child" (Approved by the Ministry of Health of the Republic of Uzbekistan in 2019), which consists of 48 items, in addition, the medical and social aspects were studied using an evaluation questionnaire - Oral Health - Related Quality of Life (OHRQoL) proposed by John M.T. (2002) and Pahel B.T. (2007) as modified by O. Yariyeva (2019);

At the third stage of the studies, 210 healthy and 81 sick children with diseases of the SOPR conducted immune-microbiological studies using their oral fluid.

1961 children were examined were divided into the following age groups: 14–14 years old (n = 1015, 51.8%); 15-18 years (n = 946, 48.2%); by gender - boys - 1,009 (51.5%) and girls - 952 (48.5%); it was also studied according to the state of somatic status while observing the ethical principles of medical research (Helsinki, 1964; with the addition of Seoul, 2008).

Inspection of the subject and examination of the PR was carried out using fluorescent lamps, primary examination dental instruments by the generally accepted method; changes in enamel and dentin of the teeth, their size, shape, number, anomalies in the size of the jaws and others were taken into account. In addition, the intensity of dental caries was studied during the period of a replaceable bite using the index kp + KPU, during the period of a permanent bite of the KPU; the hygienic state of PR using the hygiene indices of PR CPITN; PMA (Schour, Massler); GI (Loe, Silness); OHI-S (Green, Vermillion), enamel resistance test (TER) of teeth. Based on the differences in the rate of resorption of physiological saline, a blister test was performed; Schiller-Pisarev test was used to determine the intensity of gingival inflammation; to assess the emigration of leukocytes through CO, a Yasinovsky test was used; to determine the resistance of the capillaries of the gums used Kulazhenko test.

Microbiological studies were conducted in a traditional style; sampling of biological material and its delivery to the bacteriological laboratory according to the methods of M.N. Zubkov, 2004, sowing of biological material (oral liquid) was carried out according to Gold, identification was carried out according to Bergy's Manual Systematic Bacteriology (1997); To study the antimicrobial resistance, the disk diffusion method was used (Iskhakova Kh.I. et al. 2015) and the results were interpreted according to MUK 4.2.1890-04. Sensitive (S),

conditionally resistant or intermediate (SR), resistant (R) strains according to the diameter of growth on a nutrient medium.

Determination of the concentration of immunoglobulins of the main three classes of IgA, IgG, IgM in the blood serum of healthy and sick children involved in the examination was carried out by the conventional method of radial immunodiffusion according to Mancini (1964); determination of the level of total IgE was carried out in blood serum by enzyme-linked immunosorbent assay (IFA); sIgA content was determined by IFA by conventional methods; the determination of lysozyme in saliva was carried out using the methods proposed by Kagramanova K.A. and Ermolieva Z.V. (1966), in the modification of A.M. Bektimirov. and Adylova Sh.K. (1987); the level of lactoferrin was determined on a two-site solid-phase IFA using a test system manufactured by Vector Best (RF); determination of the cellular composition of the gums according to the method of Leonov L.E. et al. (2002).

IV.   RESULTS

The results were processed by generally accepted statistical methods for biomedical research according to Student and Fisher, for the arithmetic mean number (M), the average error (m), the reliability criterion (t) followed the principles of evidence-based medicine.

It was found that most often children had ORVI (95.4%, n = 1870), diseases of the LOR organs (24.9%, n = 488) and allergic reactions to medicines and food products (11.0%, n = 216) ; of the children and their parents surveyed indicated that their performance was good and excellent (86.3%, n = 1692), and similar results were in the answers about the success of children in physical education and sports - 88.5% (n = 1735) .

At risk for children, such as "Abuse of the father or mother with alcohol and smoking," which were identified in 100 (5.1%) and 582 (29.7%) cases, respectively; "The presence of closely related or close-knit marriages of the parents of the examined children," which closely related marriages were found in 5.1% (n = 100), and close-knit marriages in 10.4% (n = 204) cases were noted. In the remaining cases (84.5%, n = 1657), the parents did not have family ties.

According to the factors, the course of the pregnancy of the mother and the disease; 51.5%, n = 1010 in women during pregnancy had toxicosis in the first or second half of pregnancy and some diseases were noted in women during pregnancy - as anemia of various degrees - 9.5%, n = 186 and ORVI -13.5% , n = 264. More than 90% of the mothers (n = 1769) of the examined children gave birth normally, and 80.7% of the respondents (n = 1582) gave birth naturally, without outside interference, in other cases (19.3%, n = 379) there was an intervention from the side - surgical intervention, stimulation of labor, placement of forceps and others. In addition, it was found that mothers most often used vitamins, iodomarin and vitrum during pregnancy - 25.1%, respectively, n = 492; 10.6%, n = 208 and 7.1%, n = 139; of antibiotics, penicillin, ampicillin, amoxil were most often used - 8.7%, respectively, n = 171; 6.9%, n = 135 and 6.5%, n = 127. In addition, artificially established feeding from the moment of birth was observed in 137 children (7.0%), in other cases (93.0%, n = 1824), breast-feeding was noted for different months from 1 to 12 months.

Thus, the above comparative analysis of identifying risk factors for the formation and development of SOPR diseases in children of high school age shows that factors related to the history of the examinee's life, past illnesses, academic performance and physical education, and parents' lifestyle; that all these parameters can hardly

be risk factors, and therefore they were excluded as the main risk factors for the development of SOPR diseases in children.

The aim of this stage was to study and identify the main risk factors for SOPR diseases in children of senior school age in order to develop comprehensive preventive measures to prevent these diseases.

We also found that 63.7% have a dentist at the place of study, in 36.3% of cases there is no dentist at the place of study. Only 7% of the examined children were registered at the dentist, 93% of the students were not registered at the school dentist. The main reason for this low coverage is that children mainly sought help after the development of dental diseases, including SOPR. Preventive measures, including regular mass preventive examinations, were practically not carried out, and therefore it was not possible to establish a true picture of the incidence. Given these difficulties, we propose a comprehensive approach to identifying various risk factors for the formation and development of SOPR diseases in children; Based on this, the presence of inflammatory diseases of the dentition has been further analyzed in the examined children; most often pulpitis was detected - in 37.3%, in addition, periodontitis 3.3%, abscesses and phlegmon 0.4%, periostitis 0.7%. The analysis also revealed that milk teeth changed on time in 83.2% of the examined, malocclusion in 14.5% of children; tooth hypoplasia was found in 8% of cases. The results show that, the condition of the hard tissues of the teeth was also basically normal, that the dental incidence was not high.

Particularly noteworthy are the indicators of the state of SOPR in the examined children of senior school age; it was found that in 78.7% of the examined signs of SOPR lesion were not detected, gingivitis was found in 15.1%, stomatitis 8.0% and candidiasis PR 0.8%.

The parameters for the state of SOPR showed that in the examined children 12-14 years old (n = 1015), the most often established "satisfactory condition" was the SOPR (25.8%, n = 505). Noteworthy is the fact that almost one in ten children (9.5%, n = 186) showed an unsatisfactory state of the oral cavity, including SOPR. These data completely coincide with the presence of pathological conditions in the SOPR in the examined children.

According to the study of PR hygiene in the examined children, it was found that PR hygiene was good in 27.7% of cases, and in 68.7% of the examined it was rated as satisfactory, and in 3.6% of the cases it was rated as unsatisfactory. At the same time, a close, direct relationship was established between the state of PR hygiene and the development of pathological processes in SOPR in both age groups of children - in children 12-14 years old ($\rho = 0.51$) and 15-18 years old ($\rho = 0.64$), and it can be seen that the older the children, the closer the relationship between the compared indicators in children. At the same time, it must be emphasized that the state of PR hygiene can be used as risk factors for the development of SOPR diseases in children of senior school age. Evaluation of this indicator as other risk factors for development can be used in the planning and implementation of preventive measures for the prevention of SOPR diseases in children of senior school age.

As can be seen from table No. 1, a number of samples functional state of the PR as GI, PI, Schiller Pisarev test, Kulazhenko test, Yassinovsky test and blister SOPR test worsens in parallel with age and with SOPR pathologies. These data states that the functional state and mobility of the fluid in the organs and tissues of the oral cavity is associated with the states of SOPR.

Table 1: Samples assessing the clinical and functional state of the oral cavity in patients examined by pathologies and by age comparison of SOPR (in%).

Indicators		Norm	Healthy children	SOPR diseases	12-14 years old	15-18 years old
GI, score		1	4,1±0,02	5,0±0,1	3,9±0,02	4,2±0,02
PI, score		0-1	3,3±0,04	5,0±0,09	3,1±0,04	3,4±0,05
Schiller-Pisarev, %		0	40,8±1,1	50,3±1,8	38,9±1,2	42,7±1,0
Kulajenko, seconds		50-60	38,6±1,4	19,8±1,9	37,4±1,3	39,7±1,5
Yasinovsky, in 1 mkl	**Ley.**	80-120	91,4±3,3	89,5±2,9		
	EC	25-100	47,8±2,0	46,1±2,0	93,2±3,7	
Волдыр.проба, минут		25-60	33,6±1,6	15,6±0,7	49,5±2,1	

Note: Ley - white blood cells in 1 mkl; EC - epithelial cells.

We know that a healthy person normally has a balance between constant and transient microflora of PR, and between microorganisms colonizing PR and local immunity factors. Violation of this balance in humans, especially in children, can lead to various dental diseases, including SOPR diseases.

V.   DISCUSSION

The aim of the study and assessment of the relationship of normal microflora (NM) and local immunity PR in 210 healthy and 81 sick children with SOPR diseases was studied. Conducted microbiological studies have shown that not only representatives of the normal microflora PR, but also opportunistic microflora (UPM) were sown in the examined healthy children of senior school age. It must be emphasized that the specific gravity of NM representatives in children 12-14 years old exceeded the specific gravity of UPM in qualitative and quantitative aspect.

Table 2: Comparative parameters of the microbial landscape of the oral cavity in healthy children of senior school age

Microorganisms	12-14 years old, n=105		15-18 years old, n=105	
	Abs	**%**	**Abs**	**%**

Streptococcus spp (not pathogenic)	87	82,9	71	67,6
S.epidermidis	24	22,9	31	29,5
S.aureus	17	16,2	19	18,1
S.saprophyticus	13	12,4	12	11,4
Neisseria spp (not pathogenic)	37	35,2	32	30,5
Enterococcus spp	14	13,3	16	15,2
Veilonella spp	76	72,4	72	68,6
E.coli	20	19,0	24	22,8
Др. роды семе-ва Enterobacteriaceae	13	12,4	13	12,4
Pseudomonas spp	23	21,9	25	23,8
Bacteroides spp	12	11,4	13	12,4
Peptostreptococcus spp	33	31,4	32	30,5
Candida spp	34	32,4	30	28,6
Actinomices spp	37	35,2	32	30,5
Lactobacillus spp	13	12,4	12	11,4
Total seeded strains	453		434	

It was found that in children of both age groups, non-pathogenic representatives of the Streptococcus genus were sown more often - in 87 of 105 (82.9%) of children 12-14 years old and 71 of 105 (67.6%) of children 15-18 years old. In the following places were Veilonella spp (respectively in 72.4% and 68.6%), non-pathogenic Neisseria spp (respectively in 35.2% and 30.5%), Actinomices spp (respectively in 35 , 2% and 30.5%). In a comparative analysis of the study of the microbial landscape of PR in healthy older children, the following features were established:

firstly, representatives of NM PR were sown relatively more in healthy children 12-14 years old, in relation to healthy children 15-18 years old;

secondly, UPM strains were sown more in healthy children 15-18 years old compared with these parameters of children 12-14 years old;

thirdly, almost identical results were obtained from the biological material of anaerobes (Bacteroides spp and Peptostreptococcus spp);

fourthly, fungi of the genus Candida are relatively more found in biomaterials from PR in children 12-14 years old, compared with a group of 15-18 years old. By studying the seeding of microorganism strains from PR of the examined children, depending on the identification of microorganisms as a monoculture and association.

Table 3: Indicators of the microbial landscape of the oral cavity in children of high school age, depending on the number of strains. (n = 887)

Pathogens	Monoculture		Association of microorganisms	
	Абс	%	Абс	%

Streptococcus spp (not pathogenic)	30	3,4	128	14,4
S.epidermidis	21	2,4	34	3,8
S.aureus	26	2,9	10	1,1
S.saprophyticus	5	0,6	20	2,3
Neisseria spp (not pathogenic)	8	0,9	61	6,9
Enterococcus spp	12	1,4	18	2,0
Veilonella spp	36	4,1	112	12,6
E.coli	20	2,3	24	2,7
Др. роды семе-ва Enterobacteriaceae	12	1,4	14	1,6
Pseudomonas spp	30	3,4	18	2,0
Bacteroides spp	11	1,2	14	1,6
Peptostreptococcus spp	29	3,3	36	4,1
Candida spp	21	2,4	43	4,8
Actinomices spp	12	1,4	57	6,4
Lactobacillus spp	2	0,2	23	2,6
Total seeded strains	275		612	

As an association of microorganisms with respect to monoculture, Lactobacillus spp (0.2% and 2.6% respectively, 13.0 times different), non-pathogenic Neisseria spp (0.9% and 6.9% respectively) were sown , a difference of 7.7 times), Actinomices spp (respectively 1.4% and 6.4%, a difference of 4.6 times), non-pathogenic Streptococcus spp (respectively 3.4% and 14.4% , the difference is 4.2 times), Veilonella spp (respectively 4.1% and 12.6%, the difference is 3.1 times), Candida spp (respectively 2.4% and 4.8%, the difference 2.0 times) and others.

However, it must be emphasized that the strains of UPM practically did not differ from each other; So, Enterococcus spp (respectively in 1.4% and 2.0%), E.coli (respectively in 2.3% and 2.7%) and other genera of the Enterobacteriaceae family (respectively in 1, 4% and 1.6%) were sown almost at the same level. But, pathogenic microorganisms such as S.aureus were more often sown as a monoculture - respectively 2.9% and 1.1% (a difference of 2.6 times).

Thus, the analysis of the data of the microbial landscape of PR in children of primary school age, depending on the number of strains, showed that representatives of NM PR were more often seeded as an association of microorganisms, and pathogenic strains were more often detected as a monoculture of strains.

In a comparative analysis of the microbial landscape of PR in healthy and sick children with SOPR, it was found that in children with SOPR diseases, the sowing rate of representatives of HM was significantly lower compared with the parameters of sick children with SOPR diseases of the same age.

Table 4: Comparative Parameters of the Microbial Landscape of the Oral Cavity in Healthy and Patients with SOPR of Older School Children

Pathogens	Healthy children n=210		SOPR diseases n=81	
	Abs	%	Abs	%
Streptococcus spp (not pathogenic)	158	75,2	49	60,5
S.epidermidis	55	26,2	37	45,7
S.aureus	36	17,1	32	39,5
S.saprophyticus	25	11,9	9	11,1
Neisseria spp (not pathogenic)	69	32,9	12	14,8
Enterococcus spp	30	14,3	19	23,5
Veilonella spp	148	70,5	64	79,0
E.coli	44	21,0	28	34,6
Др. роды семе-ва Enterobacteriaceae	26	12,4	23	28,4
Pseudomonas spp	48	22,9	28	34,6
Bacteroides spp	25	11,9	12	14,8
Peptostreptococcus spp	65	31,0	31	38,3
Candida spp	64	30,5	45	55,6
Actinomices spp	69	32,9	32	39,5
Lactobacillus spp	25	11,9	12	14,8
Total seeded strains	887		433	

This concerns the inoculation of non-pathogenic Streptococcus spp (75.2% and 60.5%, respectively), non-pathogenic Neisseria spp (32.9% and 14.8%, respectively). But the sowing rate of UPM and PM was significantly greater in sick children with SOPR diseases. This mainly applies to gram-positive cocci, gram-negative bacteria and fungi of the genus Candida. Anaerobes with a small difference, but still sown more in children of patients with SOPR diseases.

Thus, in sick children with SOPR diseases, the sowing rate of UPM and PM was significantly greater in relation to representatives of the oral cavity NM. This is assessed as a violation of the microbiocenosis of this biotope in children with diseases of SOPR, which manifests itself as a dysbiotic state of PR. This condition can be one of the risk factors for the formation and development of SOPR diseases in children, and can also contribute to the further colonization of UPM and pathogenic microorganisms.

When studying the factors of non-specific protection of PR in children of senior school age; it was found that the percentage of lymphocytes among both age groups showed practically no significant differences - $1.3 \pm 0.1\%$ and $1.4 \pm 0.1\%$, respectively (P>0.05). According to the content of monocytes, various forms of neutrophils, there were also no significant differences between these age groups of children (P>0.05). The same parameters were determined in healthy and sick children with SOPR diseases of the same age. The results show that the parameters of lymphocytes and monocytes in children with SOPR diseases were significantly reduced in relation to the data

of healthy children - $1.0 \pm 0.1\%$ and $1.3 \pm 0.1\%$, respectively; $2.0 \pm 0.1\%$ and $2.7 \pm 0.1\%$ (P <0.05): The parameters of stab neutrophils, on the contrary, were increased in sick children with SOPR compared with healthy children - $3.8 \pm 0, 4\%$ and $2.9 \pm 0.4\%$.

Thus, it was found that in children with SOPR diseases of the same age, a significant decrease in the% content of lymphocytes and monocytes was noted, as well as an increase in the level of stab neutrophils. This imbalance is a consequence of the development of the pathological process in SOPR in children, which may be an additional criterion for the diagnosis of this condition.

The results on the content of oral fluid immunoglobulins show IgA detected 1.1 times significantly more in children 15-18 years old compared with children 12-14 years old - 1.51 ± 0.16 g / l and $1.43 \pm$ respectively 0.12 g / l (P <0.05); almost the same trend in IgM level (respectively 1.30 ± 0.14 g / l and 1.21 ± 0.10 g / l, the difference is 1.1 times, P <0.05) and IgG (respectively, 15.92 ± 0.74 g / l and 14.79 ± 0.46 g / l, the difference is 1.1 times, P <0.05). The content of sIgA was 1.1 times higher in healthy children 15-18 years old compared with healthy children 12-14 years old - 4.87 ± 0.42 g / l and 4.58 ± 0.27 g, respectively / l Although the indicators do not significantly differ from each other (P>0.05), the data are noteworthy.

The results show that no significant differences were found in the oral lysozyme content of healthy children of senior school age; accordingly, in children 12-14 years old 4.11 ± 0.53 μg / l; in children 15-18 years old 4.90 ± 0.61 μg / l; the content of lactoferrin in healthy children was 1977.35 ± 16.18 ng / ml, and in healthy children 15-18 years old 1995.16 ± 19.07 ng / ml (P>0.05). According to the results, comparative parameters of factors of non-specific resistance of PR in healthy children of senior school age showed that, according to the content of IgG, IgA, IgM, sIgA, lysozyme and lactoferrin, there were no age-related differences between healthy children of senior school age.

A study of factors of nonspecific resistance in healthy and sick children with SOPR diseases revealed that the content of immunoglobulins of the three main classes (IgA, IgM, IgG) in the oral fluid in patients with SOPR diseases changed in different directions; the content of IgA and IgM was reduced, respectively, 1.4 times (1.47 ± 0.14 g / l versus 1.06 ± 0.07 g / l, P <0.05) and 1.3 times ($1 , 26 \pm 0.12$ g / l versus 0.98 ± 0.06 g / l, P <0.05), then the IgG content was increased by 1.3 times in sick children in relation to the data of healthy children ($15, 36 \pm 0.60$ versus 19.34 ± 0.72, P <0.05).

Practically the same tendency of changes concerned the contents of lysozyme and lactoferrin in the oral fluid of the examined healthy and sick children in a comparative analysis; healthy ones averaged 4.51 ± 0.57 μg / l, then the parameters with SOPR diseases were 1.4 times significantly less - on average 3.15 ± 0.28 μg / l (P <0.05); and lactoferin (respectively 1986.26 ± 27.63 ng / ml versus 1065.89 ± 19.25 ng / ml, P <0.001), with the only difference (a decrease of 1.9 times).

Thus, in a comparative study of the content of local immunity factors, it was found that in elderly children of school age with SOPR diseases these indicators change in different directions, if IgG is increased in patients, then IgA and IgM were reduced in relation to the parameters of their healthy peers. Other parameters (sIgA, lysozyme and lactoferrin) also turned out to be reduced compared to control values (healthy children).

This situation, apparently, is associated with the compensatory-adaptive capabilities of the factors of the immune system, the mutual complement of factors of local immunity PR. If one indicator of the immune system

decreases, then this deficit is compensated by an increase in another indicator and creates an immunological balance, ensuring the full functioning of local immunity.

It is known that planning dental care, evaluating its effectiveness, determining the quality of life of patients must be carried out on the basis of data on the dental incidence of the population of the region, which are obtained by conducting a mass dental examination (Kuzmina E.M. et al., 2009; Schiffner U. et al., 2009).

These studies were mainly conducted in the adult population, but there were studies on the incidence of caries, assessing the quality of life in children of various age groups with this diagnosis (S. Gafforov. et al. 2018; Yariyev O.O., 2019).

The development of preventive measures is very difficult without determining the quality of life of sick children, since the subjective attitude to health and illness determines the medical and social condition of children.

The obtained results of assessing the quality of life allowed us to solve many clinical and medical-social problems, including;

- provide monitoring of the patient's condition in the dynamics of treatment;

    - definition and assessment of the effectiveness of state monitoring;

- assess the need for changes in treatment regimens.

According to the result, this "Card of the child's dental examination", which was determined by the obligatory participation of the Dental School dentist and was accompanied by filling in the cards and questionnaires. Based on the studies we have developed a simplified assessment of the quality of life of the child for mass dental research, with which these studies can be used to determine the quality of life of the children examined, after which the dentists should work with psychologists with the involvement of the parents of these children. The emotional and social status, as well as indicators of family well-being, were studied by asking specific questions from the OHRQoL questionnaire above.

The results show that the emotional state of the examined children 12-14 years old, depending on the presence of dental problems, was successful in 89.16% of cases (n = 905) of the total number of children of this age. In 10.84% of children of this age, conditionally safe and unsuccessful emotional state (n = 110) was noted, associated with the presence of irritability and a sense of anxiety due to dental problems in these children. We noted somewhat distinctive parameters in children aged 15-18, where the parameters of conditional well-being and non-well-being were significantly greater than those of the compared group (12-14 years).

The social condition of the examined children of high school age, depending on the presence of dental problems, including diseases of SOPR, has certain significance for assessing the quality of life, the results obtained on a favorable social condition were 1.12 times more in the group of children 12-14 years old in relation to children 15-18 years old (88.67%, n = 900 and 79.49%, n = 752, respectively).

Therefore, the studied parameters of conditional well-being and non-well-being, which determine the quality of life, were greater in children 15-18 years old - 1.84 times (9.66%, n = 98 versus 17.76%, n = 168), respectively. 1.65 times (1.67%, n = 17 versus 2.75%, n = 26).

Estimates of the quality of life of the examined children by studying the parameters of the child's family well-being show that the children noticed that their parents are always upset when their children have dental problems, in particular SOPR: If the conditionally favorable family condition was 12-14 for children of high school age years of 8.47% (n = 86) cases, then this parameter in children 15-18 years old was 1.3 times less (6.45%, n =

61); indicators of unsatisfactory marital status had the same tendency to change - 2.56% (n = 26) and 1.16% (n = 11), respectively.

The indicators of the influence of the financial costs of parents to solve dental problems in their children of senior school age on the quality of life of their children (family well-being), which are given in table. 5 are also assessed as prosperous, conditionally prosperous and not prosperous.

Table 5: Indicators of the influence of parents' financial costs for solving dental problems in their children of senior school age on the quality of life of their children (family well-being)

Indicators	12-14 years old, n=1015	15-18 years old, n=946	Total, n=1961
Never wasted (well-being)	800 / 78,82	720 / 76,11	1520 / 77,51
Rarely spent (relatively prosperous)	178 / 17,54	182 / 19,24	360 / 18,36
Often spent (not prosperous)	37 / 3,65	44 / 4,65	81 / 4,13

Note: in the numerator, absolute, in the denominator, relative (%) indicators.

The results showed that the quality of life of children also depends on the financial costs of parents to solve dental problems, including for the treatment of diseases of SOPR. It is noteworthy that, according to this indicator of family well-being, there were practically no differences between the two age groups. Children and parents noted that for every fifth child examined, certain financial resources were spent. These indicators were significantly higher than other parameters of family well-being. In addition, the quality of life can be determined on the basis of three main components: functional ability; perception; symptoms and their consequences.

VI.   CONCLUSION

1. The above comparative analysis to identify risk factors for the formation and development of SOPR diseases in children of high school age shows that factors associated with the history of the examinee's life, past illnesses, academic performance and physical education, parents 'lifestyle; that is, the results showed that all these parameters can hardly be risk factors, and therefore they were excluded as the main risk factors for the development of SOPR diseases in children.

2. Between the state of PR hygiene and the development of pathological processes in SOPR, a close, direct relationship was established in both age groups of children - in children 12-14 years old ($\rho = 0.51$) and 15-18 years old ($\rho = 0.64$), moreover it can be seen that the older the children, the closer the relationship between the compared indicators in children.

3. In a comparative analysis of the results of studying the microbial landscape of PR in healthy children of senior school age, the following features were established; firstly, representatives of NM PR were sown relatively more in healthy children 12-14 years old, in relation to healthy children 15-18 years old; secondly, UPM strains were sown more in healthy children 15-18 years old compared with these parameters of children 12-14 years old; thirdly, almost identical results were obtained from the biological material of anaerobes (Bacteroides spp and Peptostreptococcus spp); fourthly, fungi of the genus Candida are relatively more found in biomaterials from PR in children 12-14 years old, compared with the age group 15-18 years old; the microbial landscape of PR in children of high school age, depending on the number of strains, was sown more often as an association of microorganisms, and pathogenic strains were more often identified as a monoculture of strains.

4. In sick children with SOPR diseases, the sowing rate of UPM and PM was significantly greater in relation to representatives of NM PR. This is assessed as a disruption of the microbiocenosis of this biotope in children with SOPR diseases, which manifests itself as a dysbiotic state of PR and this condition can be one of the risk factors for the formation and development of SOPR diseases in children, and can also contribute to further colonization of UPM and pathogenic microorganisms.

5. Comparative parameters of factors of nonspecific resistance of oral fluid in healthy children of older school age showed that the content of IgG, IgA, IgM, sIgA, lysozyme and lactoferrin did not reveal inter-age differences between healthy children of older school age; When comparing local immunity factors, it was found that in patients with high school age children with SOPR diseases these indicators change in different directions; if IgG is increased in patients, then IgA and IgM were reduced in relation to the parameters of their healthy peers.

6. The proposed recommendations for the determination of the microbiocenosis of PR and local immunity factors for early diagnosis and prediction of the outcome of the disease of SOPR allows substantiating the optimal etiotropic treatment.

7. Thus, it was found that the emotional state associated with irritability and anxiety due to dental problems is more manifested in children 15-18 years old compared with children 12-14 years old. This fact means that the older the children, the higher their emotional state associated with increased irritability and anxiety due to dental problems in various life situations, especially at school and when communicating with peers. The conditionally safe and unsuccessful social condition of the examined children, depending on the presence of dental problems, including on the problems of SOPR, was significantly greater in children 15-18 years old compared with the compared group of children (12-14 years old). In addition, the parameters of family well-being associated with dental problems of children also affect the quality of life of the children examined. Conditionally prosperous, let alone unsafe marital status leads to a deterioration in their quality of life.

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