REQUENCY TOOTHMAXILLARY OF ANOMALIES AT CHILDREN LIVING IN VARIOUS ECOLOGIC CONDITIONS AND RENDERING OF THE PREVENTIVE HELP BY IT

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Abstract: *to date, extensive experience in the treatment and prevention of dental diseases. It is proved that embryonic prophylaxis of dentoalveolar anomalies is possible during complex measures aimed at preventing and eliminating etiological and pathological factors. In this case, the most difficult is the adequate impact on the general condition of children, the elimination of factors negatively affecting the fetus and its dentition in the antenatal period. 2248 children of Bukhara and Zarafshan are examined. Results of research has revealed, that in a Zarafshan Toothmaxillary anomalies, illnesses paradontes meet twice more, than in a Bukhara. We recommend treatment-and-prophylatic action to begin as soon as possible, i.e. to begin with embryo the period of development of the child.*

Keywords: *anomaly, deformation, diastema, periodontal diseases.*

ЧАСТОТА ЗУБОЧЕЛЮСТНЫХ АНОМАЛИЙ У ДЕТЕЙ, ПРОЖИВАЮЩИХ В РАЗЛИЧНЫХ ЭКОЛОГИЧЕСКИХ УСЛОВИЯХ

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Аннотация: *на сегодняшний день накоплен большой опыт лечения и профилактики стоматологических заболеваний. Доказано, что эмбриональная профилактика зубочелюстных аномалий возможна при комплексных мероприятиях, направленных на предупреждение и устранение этиологических и патологических факторов. В этом случае наиболее сложным является адекватное воздействие на общее состояние детей, устранение факторов, негативно влияющих на плод и его зубной ряд в антенатальном периоде. Обследованы 2248 детей г. Бухары и г. Зарафшана Бухарской области. Результаты исследования выявили, что в г. Зарафшане аномалии верхней челюсти и болезни пародонта встречаются вдвое больше, чем в г. Бухаре. Мы рекомендуем начать лечебно-профилактические мероприятия как можно раньше, то есть начинать с эмбрионального периода развития ребенка.*

Ключевые слова: *зубочелюстные аномалии, экологически неблагополучные условия, заболевания пародонта, дети.*

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Relevance. To date, extensive experience in the treatment and prevention of dental diseases. It is proved that embryonic prophylaxis of dentoalveolar anomalies is possible during complex measures aimed at preventing and eliminating etiological and pathological factors [3, 7, 11, 14].

In this case, the most difficult is the adequate impact on the general condition of children, the elimination of factors negatively affecting the fetus and its dentition in the antenatal period [1, 5, 9, 12].

In recent years, studies have been conducted to study the prevalence of dental caries, periodontal disease, and dentofacial anomalies among children and adults [4, 8, 13]. However, some key points of this problem, such as the relationship between the level of pollution of others in different territories, differing in the degree of pollution of environmental objects, have not yet been clarified [2, 6, 10].

The purpose of this study was to study the condition of teeth, periodontal disease and the frequency of dentoalveolar anomalies in children living in ecologically polluted areas, and to develop therapeutic and preventive measures.

Material and research methods. 2248 children aged 6 to 14 years and older, students of schools No. 7, 16 of Bukhara and No. 1, 3 of Zarafshan, as well as 86 pregnant women from these cities were examined. When examining the children, the shape of their faces in the face and the profile of the closed teeth were studied and when the dentition was closed in central occlusion. When examining the oral cavity, attention was paid to the condition of the frenum of the lip and tongue. We found out the timing and causes of tooth extraction, the anomaly in the position of individual teeth, dentitions and bite according to the classification of Kalvelis. The

state of hard tissues of teeth was also studied considering changes in the surface of tooth enamel in the form of spots, hypoplasia, fluorosis and spalls. Depending on the number of decayed, missing and filled teeth, 5 degrees of caries were determined: very low (0.0-0.1), low (1.2-2.6), moderate (2.7-4.4), high (4.6-6.5), very high (4.5-6.5), very high (6.6 or more). According to the degree of disease activity, compensated, subcompensated and decompensated forms of the carious process were distinguished (Vinogradova T.F. 1972). When classifying carious lesions of tooth tissues. The hygienic condition of the oral cavity of children was assessed by the Fedorov-Volodkina Hygiene Index (1971), Green-Vermillion.

Statistical processing of the material was carried out by traditional methods of variation statistics. When organizing and conducting, the principles of evidence-based medicine were observed.

Research results and their discussion. A hygienic assessment of the degree of air pollution in the cities of Bukhara and Zarafshan was carried out together with the city centers of the State Epidemiological Supervision. The results showed that the main sources of harmful emissions in Zarafshan are the quarry of the mining and smelting complex "Muruntau", enterprises for the production of nonwoven materials, building materials, a city printing house, and in Bukhara, a graphite-gypsum plant, industrial heating network, a plant for reinforced concrete products, a textile mill , silk factory, furniture factory.

The level of actual air pollution in these two cities was estimated by the most common harmful substances: sulfur dioxide, nitrogen dioxide, carbon monoxide, ammonia, phenol, hydrogen fluoride, formaldehyde, carbon disulfide, hydrogen sulfide, suspended solids, lead. The results obtained indicate that the highest levels of contamination with the studied harmful substances in the atmosphere of Zarafshan in 2013-2017. ranged from 0.3 to 19.6 mg / m, which exceeded the MPC by 10.6–13.5 times, and were assessed as "causing concern" and "dangerous". In Bukhara, pollution was less pronounced and was assessed as "permissible" and "causing concern".

More dysfunctional is Zarafshan. Common air pollutants - dust, sulfur dioxide, nitrogen dioxide, carbon monoxide, hydrocarbon - in this area are added aggressive substances such as phenol ethyl acetate, formaldehyde. It should be noted that the leading ingredient in the level of air pollution in both Zarafshan and Bukhara was inorganic dust, suspended solids, the presence of which is a consequence of dust storms characteristic of these regions of the republic. All 2248 children examined were divided into three groups (table 1): the first group consisted of children living in Bukhara, the second in Zarafshan, the third group was a control. The hygiene index for children living in Bukhara was 2.35 ± 0.19 (P <0.05), in the city of Zarafshan 7.6 ± 0.85 (P <0.01) (Table 2). A study of the frequency and types of dentoalveolar anomalies and deformities in the examined children shows that 260 children had sagittal anomalies in Zarafshan and 254 children in the vertical direction, which makes 36.4 and 37.6%, respectively. When analyzing the types of dentoalveolar anomalies in the sagittal direction, it was established in the sagittal direction that prognathy is the leading place (73.6%), and with an anomaly in the vertical direction, a deep bite prevails (69.7%).

Table 1. Distribution of examined children by age, gender and bite formation periods

A place residence children	**Early shift**		**Late shift**		**Constant**	
Bukhara city	520		312		291	
Floor	M	W	M	W	M	W
	252 48,5±3.4%	268 51.5±2,7%	130 41.7±5.1%	182 58.3±2.7%	101 34.8±4.9%	190 65,3±1,6%
Zarafshan	530		302		293	
Floor	M	W	M	W	M	W
	263 49.6±2.6%	267 50.3±2.4%	127 42.1±5,4%	175 57.9±2,1%	143 48.8±2.9%	150 51,2±2,7%
Total	1050		614		584	

Table 2. Oral hygiene index in examined children

Groups	**Location**	**Amount of children**	**Before and after hygiene and dental training**			
			Before		**After**	
			Fedorov-Volodkina Index	**Fedorov-Volodkina Index**	**Fedorov-Volodkina Index**	**Fedorov-Volodkina Index**
I	Bukhara city	1076	2,4±0,2	2,7±0,8	1,3±0,9	1,9±1,6
	Zarafshan city	1075	7,6±0,9*	5,6±0,9*	5,2±0,6*	4,3±0,7*
II	Bukhara city	47	1,2±0,3	1,1±0,1	1,1±0,2	1,2±0,1
III	Zarafshan city	50	1,9±0,8*	1,7±0,7	1,8±0,7*	1,6±0,6*

Note: * - a sign of reliability between places of residence.

It should be noted that the analysis of the age structure of children with dentoalveolar anomalies indicates that malocclusion in the sagittal direction both in girls and boys is mainly found at the age of 7-10 and 11-15 years.

The prevalence of anomalies in the position of the anterior teeth is twice as high among children living in the contaminated area - 23.8% and 11.8%, respectively. A similar picture can be seen in the dynamics of the prevalence of diastema, which occurred in 52.9% of children living in ecologically unfavorable territories, and in 23% of residents in the relatively "clean" zone ($P < 0.01$). The following preventive measures were recommended based on the results: Antenatal prophylaxis: reorganization of the oral cavity of a pregnant woman; prevention of mental and physical injuries of pregnant women, especially at the 5-6th week, since at this moment the rudiments of milk and some permanent teeth are laid; timely treatment of toxicosis of 1 and 2 half of pregnancy; the appointment of a balanced diet.

Postnatal prophy laxis: compulsory breastfeeding; prevention of rickets; elimination of bad habits; obligatory check of the frenum of the lip and tongue; during the period of teething and change of milk teeth, eating solid food; timely prosthetics with early tooth loss to prevent deformation of the dentition; balanced nutrition of children in kindergarten, at home and at school (a sufficient amount of fats, proteins, carbohydrates and vitamins).

In the period of milk and early tooth changes, children were prescribed: a set of myogymnastic exercises; polished mounds of unfinished milk fangs; normalization of nasal breathing.

Thus, a comprehensive survey of 2248 children in Bukhara and Zarafshan revealed various levels of prevalence of dentoalveolar anomalies among children, depending on their place of residence, which differ in the degree of air pollution. The highest levels of dentoalveolar anomalies are observed among children living in ecologically unfavorable territories, aged 7-10 and 11-15 years, which dictates the need for therapeutic and preventive measures as early as possible, i.e., starting from the embryonic period of development of the child.

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