

FREQUENCY AND STRUCTURE OF THE BASIC STOMATOLOGIC DISEASES AT THE CHILDREN'S POPULATION OF YAKUTSK CITY

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The resume

Prevalence and intensity of dental caries, paradontitis at children of preschool and school age, and also teenagers of Yakutsk educational institutions have been studied. The indicators of necessity and the dental care rendering level are defined on the basis of received data. Ways of the specialized help optimization and the increase of hygiene level at children and the teenagers' living under the conditions of the North large units are proved.

Keywords: dental caries, gingivitis, paradontitis, index of hygiene, level and necessity of dental care, children and teenagers hygiene

Introduction

Actual problems of dentistry and medicine are dental caries and pathological processes of tissues paradontitis of inflammatory-destructive and exchange-dystrophic types. [Ivanov V. S, 1998; Bezrukov A.N., 1999; Petzold M., 2001]. It is connected with their prevalence among the population and peculiarities of clinical course leading to a functional defect of dentoalveolar system, and also to the pathologies of GI tract etc. [Devjatкова M. A, 2005; Kutusheva D.R., 2010]. Somatic diseases promote the change of structure and characteristics of mixed saliva where preconditions for structure's weakening and teeth's composition, developments of paradontitis illnesses, pathologies of a temporomandibular joint are formed. [Maksimovsky J., 2006]. Besides, dental diseases in an oral cavity form the chronic centre of an infection and can promote the development of the focal-caused diseases (rheumatism, rheumatic endocarditis etc.). [Bolatova L.H., 2010].

Nowadays there is some data about hygiene's low level and the population's knowledge about individual hygiene of an oral cavity and also preventive measures of dental diseases. [Ovodova G. F, 2009; Alekseeva N.A., 2010]. In this connection, it is necessary to consider the given aspects during researches and rendering a prophylactic help and no doubt it will have a positive effect on preservation and strengthening the population's health.

Optimization of rendering a dental help is based on the knowledge of disease's level and the features of its clinical course. The reasons of pathological processes' development in an oral cavity are both local and general factors. Besides, it is proved that geographical, ecological, social and economic factors have an influence on disease level. [Zenovsky V.P., 1991; Ivanova E.N., 1997; Belousov A.V., 2001; Kuzmina E.M., 2001; Ushnitskij I.D., 2008; Janushevich O. O, 2009]. It is necessary to stress that such researches in the Republic Sakha (Yakutia) were conducted in the end of 20th century and in the beginning a new millennium. It shows the necessity of complex researches among preschool and school age children to improve the system of rendering a specialized dental care.

Research objective: To reveal prevalence, intensity of the basic dental diseases on the basis of complex research and to define the level of rendering and the requirement of preschool, school age children of Yakutsk city in a dental service.

Materials and methods: For achievement of the given object and the decision of tasks a complex dental investigation of 151 preschool and school age children from 6 till 15 years old constantly living in Yakutsk has been done. A cohort of children was formed by casual sample's methods. A special card for an estimation of dental status, recommended by WHO (1995) has been used for inspection. Examined children have been subdivided into following key age groups: 6 years (a condition of the first second teeth); 12 years (a condition of second teeth); 15 years (a clinical condition of tissues paradontitis).

Affection of teeth's firm tissues by caries was graded by prevalence and intensity indicators. The intensity was determined by the indexes of cs, CSE+cf, in CSE (caries-stopped-extracted) all stopped, extracted and affected with caries teeth were considered. Also the definition of a cavity hygienic condition was held with the application of hygiene's indexes by Fedorova-Volodkina (1971) and J.C. Greene, J.R. Vermillion (1964). The intensity of inflammatory process of tissues paradontitis was determined with the help of index PMA on C.Parma's method. (1960).

A special questionnaires worked out by a nursery therapeutic dentistry of «Moscow state medical dental university» (2009) have been used for the definition of hygiene's level of junior, secondary and higher secondary school age children.

Statistical polishing of a clinical material was done by the standard methods of variation statistics.

Results of research. The analysis of the received results of clinical-epidemiological research of children testifies the presence of some features. So, the prevalence of time teeth's caries during the replaceable bite among 6-9 years old children is 93,02±0,24 %. In the structure

of forming components of cs index the indicator of time teeth's caries which was at level of $76,96 \pm 0,27$ % considerably prevails. The component «s» - the stopped teeth was only $18,19 \pm 0,13$ %. It is necessary to underline that early removal of time teeth before their physiological change have been revealed during research and their indicator was at the level of $4,85 \pm 0,10$ %. It is the initiating moment promoting the development of dentoalveolar anomalies during the formation of children's constant bite.

There were some distinguishing features in the indicators of constant teeth's caries affection. They characterize the frequency of pathological processes of teeth's firm tissues of demineralizational type (tab. 1). So, the caries prevalence among 10-14 years old children is 83,58 %. 6-year-old children have caries of the first constant tricuspid of the bottom jaw after their teething. The carious teeth prevail in the structure of CSE index and stopped teeth are only 1/10. There were certain features in the structure of CSE components among 12 years old children. They characterize an insufficient level of rendering a dental care (the carious and extracted teeth - $58,17 \pm 0,23$ % , stopped teeth - $41,83 \pm 0,32$ %). But at the same time this data allow to confirm about their necessity in a dental care. The intensity of teeth caries affection among 12 -years- old children is interpreted as a middle level. According to E.M. Kuzmina (2001) the similar indicator at 12-years-old children in Chita region is 1,7 (a low level), Primorsk Territory is 3,5 (a middle level), Khabarovsk territory is 4,6 (a high level). In some way, an insufficient level of rendering and a high level of requirement in a specialized medical help for children are connected with insufficiency of preschool and school dentistry system.

It is known that a dental tartar occupies a basic place in the development of teeth caries. It led us to make an estimation of cavity hygiene by Fedorova-Volodkina. So, the average indicator by hygiene index in the age groups of 7-9 and 10-14 years old children was 2,5 and it is characterized as an unsatisfactory hygiene of an oral cavity.

Table1

Indicators of second teeth caries at the preschool and school age children of Yakutsk

Age	Prevalence (%)	Intensity	C(%)	S (%)	E (%)
6 years old n=26	$11,54 \pm 4,47$	$0,30 \pm 0,05$	$87,52 \pm 0,63$	$12,48 \pm 4,41$	-
12 years old n=30	$76,6 \pm 1,06$	$3,2 \pm 0,41$	$55,10 \pm 2,04$	$41,83 \pm 2,19$	$3,07 \pm 2,36$

According to The World Health Organization teenagers of 15 years are key and informative age during complex clinical -statistical researches of paradontitis illnesses. In this connection, we carried out the analysis of prevalence and intensity of paradontitis illnesses at the given category of schoolchildren (tab. 2). The frequency of revealing pathological processes of tissues paradontitis is interpreted as a high level. Gingivitis is often revealed in the structure of paradontitis illnesses (91,15 %). Basically it is a catarrhal form and in one clinical case a hypertrophic gingivitis has been revealed. A chronic localized paradontitis of a light form was diagnosed in three percent cases. It is necessary to notice that the received data are characterized as a middle level of prevalence by such indicators as “Bleeding” and “Dental tartar”.

Table 2

**Frequency and expressiveness of paradontitis illnesses among 15-years-old teenagers
living in Yakutsk**

CPI (%)				
Prevalence	Healthy	Bleeding	Dental tartar	Intrabory paradontitis pocket
94,11%±0,24	5,89%±3,61	70,57%±0,96	20,58%±2,99	2,96%±2,76
CPI (sextants)				
Healthy	Bleeding	Dental tartar	Intrabory paradontitis pocket	Unconsidered sextants
2,85±0,16	2,44±0,12	0,48±0,08	0,05±0,03	0,18±0,04

The evidence of paradontitis illnesses among teenagers characterizes its some features. It is necessary to notice that the indicators of healthy sextants prevail in the sextants' structure. On the other hand it shows the presence of localized pathological processes of tissues paradontitis of inflammatory character at the surveyed. But at the same time, the indicator of gums bleeding, occupies an important place, and it was at level of 40,67 % in the structure of intensity indicators of inflammatory process. Revealed chronic localized paradontitis of a middle level causes the presence of such components as «Dental tartar » and « Intrabory Paradontitis pocket ». A supragingival dental tartar came out on an oral surface of the bottom incisors, and the depth of paradontitis pocket was 2-3 mm. As the part of examined didn't have teeth (they were removed earlier) the indicator of unconsidered sextants in the structure of forming components was 3 %.

The analysis of the received data of paradontitis illnesses among teenagers allows asserting that they are interpreted as a middle level by the indicators of gums bleeding and dental tartar

and by the intensity as high and low levels. In this connection, we were interested by the question of oral cavity hygienic condition estimation at the given age group because dental plaque in pathogenesis of paradontitis illnesses takes a significant place. So, the data of OHI-S by Green – Vermillion's index (dental plaque and dental tartar) were 3,12. It is defined as a bad level of an oral cavity hygienic condition. Thus the intensity of inflammatory process of gum tissues among 15-year-old teenagers was 27,08 % . It is defined as a light level.

The conclusion

Thus, the carried out clinical-epidemiological analysis of the basic dental diseases at children and teenagers has revealed a high level of teeth caries prevalence and pathological processes of tissues paradontitis. The prevalence of indicators of carious and extracted teeth at examined in the structure of CSE index, and also the frequency of paradontitis illnesses testifies their necessity in a specialized dental care. And an unsatisfactory hygienic condition of children and teenagers' cavity dictates the necessity of measures' activation directed on the increasing the level of their hygiene. The optimization of rendering a dental care to preschool and school age children in some way provides the development of dental offices in the system of educational institutions of Yakutsk city.

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