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ANALYSIS OF THE ETIOLOGICAL STRUCTURE OF THE CAUSES OF DENTAL DISEASES IN CHILDREN

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Summary : Social survey the level of knowledge of oral care from the children's parents indicated that the overwhelming majority of parents have significant gaps in necessary health knowledge. The results of the conducted sociological research among adolescents outlined the basic concepts regarding dental health, and to implementation of dental preventive measures. Clinical studies revealed peculiarities of carious lesions of teeth in children of different ages.

Key ords : children, adolescents, prevention, social-hygienic function, dental status.

The publication is a part of the scientific theme of the Department of pediatric dentistry of the dental faculty of "Improvement of dental care to children living in conditions of biogeochemical deficiency fluoride and iodine", state registration number 0114U004123

Ukraine is a unique region on the prevalence of dental caries, the disease rapidly spread throughout the countries of the former Soviet camp, with the exception of the Baltic States. High prevalence of dental caries in countries with the so-called "transition" economies, the third world countries and countries that recently have undergone drastic social upheaval. A high level of dental caries is characteristic of the Balkan countries, Central Asia and the Middle East (with the exception of the OPEC countries and Israel), is a fairly high prevalence of caries in South-East Asia (except Japan, Brunei, Singapore and South Korea) [10]. The experience of European countries, in particular, bordering with Ukraine, points to the feasibility of increasing the volume of preventive work in dentistry and in the direction of preventive measures and support systems the level of dental health [1,2, 5, 8, 9,].

Russian scientists (V. Wagner, W. Distel, N. Smolar, L. Khomenko) justify the need to improve medical services to the population taking into account the international experience and domestic conditions of life. According to researchers (A. Denga, K. Kosenko, N. Savychuk) the most common dental disease of childhood caries remains because of insufficient or missing clinical examination of the child population. Important to consider the prevention of caries in children residing in the biogeochemical conditions of the deficit of fluoride and iodine (A. Klotzsche, I. Koren, Y. Mukhin, A. potapchuk, A. Vaska).

In foreign publications (C. M. Figueiredo et al., 2008; G. D. Slade et al.) preventive measures should start early in childhood.

A review of recent research shows that the problem of maintaining the dental health of children is complex and its solution is possible provided the improvement of medical and organizational forms of

prevention. This determines the relevance and purpose of our publication.

The purpose of the study. To establish the linkages between the socio-hygienic operation and dental status of students of educational institutions of Uzhhorod.

Object of study: dental health and condition of hard tissue of teeth in children in educational groups in Uzhgorod.

Research methods: analytical, clinical, epidemiological, statistical, comparative and structural methods of analysis.

Materials and methods.

1. The study was conducted on the basis of the educational complexes and schools Uzhgorod. To the total study group was recruited 230 parents of children who have been with the consent offered to answer questions specifically developed questionnaire. From this questionnaire it was possible to establish information about gender, age of Respondent, age and sex of the child.

   Parents were asked to answer the following questions:

   1. When in Your opinion there is a bookmark a child's teeth?
   2. Specify what are the main minerals needed for strength of the teeth?
   3. Up to what age continuing the formation of the tissues of the tooth?
   4. How often should I visit the dentist in children in the absence of dental problems?
   5. Do You know what teeth most often affected by caries?
   6. What foods are good for teeth strength?
   7. Spread the usefulness of a food in descending order (1 – "cheese", 2 – "Apple", 3 – "salt", 4 – "brownies", 5 — "candy").
   8. Specify the causes of tooth decay in children?
   9. Specify how often Your child brushes his teeth.
   10. A choice of brushes for cleaning Your child's teeth affects...?
   11. Can I chew gum?
   12. What will you offer to take the child to strengthen teeth?
   13. From whom You expect help in maintaining the dental health of your child in the first place (put a rating on a scale from 1 to 8, where 1 is the most awaiting assistance, 8 – least expect aid) Options:

   A) employees of the kindergarten;
   B) pediatricians;
   C) their parents;
   G) an educational institution;
   D) dentist;
   E) the public;
   F) familiar;
   G) Internet resources.

   Using a quota sampling according to the criteria of gender, age of parents and age of children were interviewed 230 respondents, of which 25% were parents aged 20-29 years, 40% of parents aged 30-39 years, 35% of parents aged 40 years and older. For the article – 45% of parents and 55% of mothers.
2. A sociological study of the level of knowledge of oral hygiene among high school students - 340 (160 boys and 180 girls) with a mean age of 16.4 years, who were asked to voluntarily answer the questions of a specially developed questionnaire.

The studies were carried out on the basis of the observation of a dentist's office, the outpatient Department of the Uzhgorod city children's hospital. The study group was formed during the execution of preventive examinations of adolescents who studied in educational establishments of Uzhhorod. There have been voluntary survey 340 people (160 boys and 180 girls) with a mean age of 16.4 years, who were asked to voluntarily answer the questions of a

specially developed questionnaire. The study group was formed at random with temporal randomization.

3. A study of the dental status of adolescents 1776, pupils of graduation classes of school institutions in the city of Uzhgorod (SOSH № 2, 3, 4, 5, 6, 7, 8, 10, 12, 15, 19, school-Lyceum 20 and 22, "Harmony" Uzhgorod gymnasium, a Boarding school with profound studying of separate subjects, Uzhgorod economic Lyceum). The age of the students 16-17 years old. Of them: 1030 - 746 girls and guys. Research period: September 2014 and was completed in April 2015.

The study was conducted on clinical base of the Department of pediatric dentistry of the dental faculty of "Uzhgorod national University"

During routine inspection of a dentist with clinical and physical methods for the study of established dental diagnosis, and then determined the intensity of dental caries (caries-seal-removed – CPV), took into account the condition of the mucous membrane of marginal periodontium, alveolar bone, and malocclusion. For the clinical examination used a standard observation set are composed of dental mirror, probe and tweezers [6].

After the examination results entered in a register of the consultations and examined the patient received the appropriate medical advice, if necessary. Subsequently, journal entries were reviewed, carried out the calculation of the CPV for each clinical case, the results and intermediate calculations were recorded in a specially created worksheet of the Microsoft Excel document was formed the data base. Later, all results were reviewed and were revshawn those that were illogical, incomplete or false. For statistical processing was used the software packages Microsoft Excel 1997-2003 and LibreOffice StatCalc 2.1. In the course of statistical processing was performed simple tests of nonparametric statistics in Microsoft Excel 1997-2003. After allocating the study group to the respective subgroups, depending on the objectives of the study, carried out simple tabular and comparative analysis.

The obtained results were compared among themselves and with the existing publications on the selected problem [6, 7].

Results and their discussion. A sociological study of the level of knowledge of oral hygiene to parents of children of younger school and preschool age indicated that the overwhelming majority of parents have significant gaps in necessary health knowledge, health workers — is not "opinion-leaders" in matters of dental care, knowledge about the physiology of dentition of the person are distorted and incomplete, do not realize the role a balanced diet in the prevention of dental diseases. In contrast, recognized the importance of calcium and fluorine as main elements in the prevention of dental caries, there is a trend towards product selection of healthy eating, conscious of the negative role of "light" carbohydrates.

By results of the conducted sociological research of students of adolescent age were identified their perceptions regarding dental health, and to implementation of dental preventive measures.

In respect of the periods of laying teeth, the vast majority of respondents — 72.5 percent believed that these processes occur immediately after birth, 20% said that "just before birth", and 7.5% of adolescents reported that the teeth are laid in the first 3 months of pregnancy.

On the role of macro - and micronutrients in the development of the teeth, 100% of

respondents indicated calcium and 40.9 per cent also cited phosphorus, 25% of respondents had some information about the role of fluoride. Other chemical elements of the Teens remembered

To the question "Until what age the formation of tooth tissue?", answers of teenagers were distributed as follows: 30% believe that the formation continues up to 18 years, 30 per cent for option "a lifetime", the rest of respondents are unable to answer.

On the question of the regularity of visiting a dentist even if there are no problems with teeth almost 100% of respondents answered twice a year visits to the doctor. The lesions of individual teeth carious process, about 30.5% believed that most often affects the upper front teeth, 32.5 per cent of all teeth, 37,0% - reported predominant lesion posterior teeth.

Regarding the use of teeth and other organs of the mouth, almost 100% of teenagers thought that the most useful are dairy products, 45,5% - vitamin complexes, 35.0% of the fish products.

The responses of adolescents, as in the previous study, resulted in a rating of the "usefulness" of the chosen list of foods that is shown in Fig. 3.3. Respondents also made up a rating of the usefulness of such products as apples, cheese, salt, cakes and candy.

Regarding the reasons for the development of caries among adolescents is almost 85.5% of the reported negative role of bacteria living in the mouth. 54.5% of respondents in this subgroup reported the etiological role of lung carbohydrates (cakes, candy, jelly), 40,5% - unpeeled teeth, 11.5% in other undefined reasons. Among teenage respondents 85 % reported brushing their teeth every day, 60% reported that brushing your teeth twice a day — morning and evening.

On choosing a toothbrush, 85% of respondents reported that the choice of brush for them dependent on parents (parents who buy the brushes and decide when to be replaced). 15% of adolescents highlighted the role of advertising in choosing a toothbrush.

To the provocative question, "can I chew gum?" almost 100% of respondents answered that it can be done after eating, but could not decide for how long and with what frequency during the day.

To the question what products it is advisable to use for strengthening teeth, the overwhelming number of adolescents (75.2 per cent) said that it is necessary to consume dairy products, about 42.5 %, reported the possibility of using fluorinated toothpastes, 36,5 % - reported the need of the use of vitamin complexes.

The results of the reconsideration of the initial review of documentation checkups for high school students of Uzhgorod, in the study group were included the results of the inspection 1776. After a thorough viewing and "culling" inaccurate and incomplete results are as follows: the average level of intensity of dental caries (CPV) amounted to 5,11 ± 2,33; among 1776 people stomatologicaly healthy was only 130 people, which was 7.3% of the total number examined; 408 people have been removed permanent teeth – and, accordingly, included defects of the dentition and were in need of orthopedic dental treatment to prevent the development of secondary dento-alveolar deformations, which amounted to 23 %. 231 a person had untreated periodontitis teeth – and, respectively, require endodontic therapeutic dental treatment, which amounted to about 13%.

In the future, the study group was divided into smaller subgroups, each of which

undertook the calculations of the CPV and the statistical data processing.

The obtained results point to the uneven incidence of dental caries in adolescents in different schools — from 4,06 ± 1,69 at a median of M = 4 secondary school № 3 to 7.69 ± 3,12 with median M = 7,5, which was observed in "Harmony". Overall, there was a trend to increase the level of intensity of dental caries in girls was discovered in a girls school № 2, 3, 4, 6, 12, 15, 19, 20, "Harmony" gymnasium of Uzhgorod and Uzhgorod economic Lyceum. At the same time, the structure of the CPV metric to the schools and the sex was even more heterogeneous.

So, a kind of "leader" in the number of affected untreated dental caries were the students of secondary school № 7 of the city of Uzhgorod, where the level of PFF was 6.31 ± 2.96 points to 6.79± 2,90; a fairly high rate "To" appeared in students "Harmony" - 3,78± of 2.03 to 4.57 ±2,65, and the figure for young men was formed so high, because of the existing excesses in the data; the least affected by untreated caries was the students of school № 3 - from 0.77± 0,86 to 0.67± 0,87. If we consider the overall trend according to the level of untreated caries in the structure of intensity of caries according to gender, we found that youths from SOSH № 2, 5, 7, 15, "Harmony" POP and Uzhgorod economic Lyceum, the level of untreated caries was higher than in girls. While in school № 4, 6, 8, 10, 12, 20 Uzhhorod gymnasium and the number of affected untreated dental caries was higher in girls. In school № 3 and 19 in this indicator among students of different gender no significant difference was identified.

You may also notice a sharp disparity in the number of affected untreated caries in students of school № 12. The girls average number of teeth were made of 2.49 ± 2,21 boys - 0,81 ± 0,91. But the simple tabular analysis revealed only the average level affected untreated dental caries, their median, but does not reflect the fullness of the fluctuation characteristic.

Peculiarities of carious lesions of teeth in children of different ages. Dental caries affects of 92.7% of pupils of the senior group, the CPV is 5,11 ± 2,33; 23% of the surveyed have permanent teeth removed, according to the available dental defect, 13% have untreated chronic periodontitis.

The results show that among students of high schools of the city of Uzhgorod, the level of intensity of dental caries depends on the level of coverage contingent of dental hygiene, different needs in the form of dental care and the risk of development of secondary changes and deformations when leaving the situation in its current state.

Peculiarities of carious lesions of teeth in children of different ages. Dental caries affects of 92.7% of pupils of the senior group, the CPV is 5,11 ± 2,33; 23% of the surveyed have permanent teeth removed, according to the available dental defect, 13% have untreated chronic periodontitis.

Conclusions. The results of the conducted sociological and clinical studies that demonstrate the linkages between the socio-hygienic functioning and clinical condition of children, between the level of awareness of parents of children and all participants in the educational groups of the city. Uzhgorod and the level of dental health. The effect of socio-psychological features of development of children the selection of effective measures of prevention of dental diseases. The most prosperous on the part of the dental health of schoolchildren of the school № 3, 2, and memorial gymnasium, and the least satisfactory are the school №

7, 22, 20, the number of pupils which has a low discipline and low social status.

Prospects for further research we see in the disclosure patterns of medical social conditions and psychological characteristics of children on the selection of effective measures of prevention of dental diseases.

REFERENCES

1. Казакова Р.В. Порівняльний аналіз показників карієсу зубів і захворювань тканин пародонта у підлітків, які проживають в різних екологічних умовах / Р.В. Казакова, Л.В. Білищук, В.С. Мельник // Новини стоматології. – 2013. – №. 1 . – С. 78 – 79.
2. Каськова Л.Ф. Прогнозування поширеності карієсу в історичному аспекті/ Л.Ф. Каськова, А.В. Артем'єв // Світ медицини і біології. – 2012. – № 4. – С. 26-28.
3. Леус П.А. Результаты программы коммунальной профилактики кариеса зубов на основе методов доказательной стоматологии: сб. тр., посвящ. 50-летию стоматологического факультета Бел. гос мед. ун-та [«Образование, организация, профилактика и новые технологии в стоматологии»]. – Минск, 2010. – С.20-22.
4. Поворознюк В.В. Структурно-функціональний стан зубів і пародонта у дітей, що проживають в різних регіонах України / В. В. Поворознюк, І. В. Задорожна, Т. Д. Павлюк // Вісник стоматології. – 2011. – №4. – С. 105-106.
5. Степанова И.А. Планирование региональных коммунальных программ с эндогенным применением фторида для профилактики кариеса зубов : автореф… дисс. канд. мед. наук. / И.А. Степанова. – М., 2010. – 18 с.
6. Стоматологические обследования: основные методы / ВОЗ. – М.: Медицина, 1989. – 61 с.
7. Юнкеров В.И. Математико-статистическая обработка данных медицинских исследований: монография / В.И. Юнкеров, С.Г. Григорьев. – Санкт-Петербург, 2002. – 267 с.