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# PREVENTION PROGRAM DENTAL DISEASES IN SCHOOL-AGE CHILDREN

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**Abstract:**
This paper describes the experience and results of an educational program on oral health care in Uzbekistan.

**Keywords:** prevention, oral hygiene, hygiene education

**Introduction**:
The global program to prevent the increase in dental morbidity is based on the principles declared by WHO and FDI, the main stages of which are public health education in the field of dentistry, expansion of preventive dental services, and motivation of the population to maintain oral health [1; 2; 3; 4]. The increasing dental morbidity in Uzbekistan is a real threat to the health of the population, mainly the younger generation [5; 6]. (SHEP) [7; 8]. Objective of the study To investigate the effectiveness of the school education program on oral health care of children in Uzbekistan using fluoride-containing dentifrice.

**Materials and research methods**:
To determine the level of knowledge of oral hygiene, a questionnaire survey was administered to children before, 1.5 years after, and 3 years after the start of the program (510 children in total). Hygiene culture regarding the prevention of oral diseases was studied among 55 parents and 75 teachers of elementary school children in Section 1. Clinical Medicine 14 elementary school classes To determine the preventive and clinical efficacy of the action of fluoride-containing dentifrice on the condition of children's teeth and oral tissues, early grades (7 to 10 years old ) school children, the task was to investigate the initial

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data on the dental status of 909 schoolchildren (7-10 years old). The children who participated in the clinical trial on the prophylactic effect of fluoride-containing dentifrice (909 children in total) were divided into groups in the following order: parents trained at home (supervised hygiene group CG). The second group of elementary school children also brushed their teeth twice a day with fluoride-containing toothpaste but without supervision (unsupervised oral hygiene group GCG). A third group of 120 elementary school children (comparison group GS) received oral hygiene training once, but their subsequent hygiene and the toothpaste they used were voluntary and unmanaged. Children who participated in the clinical trial completed a card recommended by the WHO (Geneva, 1997), which included a thorough examination of their oral condition. Dental condition was investigated by measuring the prevalence and intensity of dental caries (KPU, KPU+kp index and its components), GreenVermillion Hygiene Index (OHI-S), CPI index and its components. The same children were examined by a dentist every 6 months. Diagnosis of dental caries, periodontal disease, and measurement of clinical indices were performed by methods generally accepted in clinical laboratories. The fluoride content in the drinking water of Baku in all three groups was almost the same, ranging from 0.3-0.5 mg/l. The digital data obtained were statistically processed using medical statistics methods. A parametric Student's t-test was used to quantify differences between the variation series, and Pearson's agreement test-$\chi 2$ was used for frequency analysis. Calculations were performed on a computer using an EXCEL spreadsheet. The comprehensive program we proposed consisted of two areas: pedagogy and medicine. The task of the pedagogical phase of the program was to provide elementary school students with an understanding of oral anatomy and physiology, the major dental diseases, how to detect such diseases, and how to prevent them. The main focus of the instruction was on the need for regular oral hygiene, correct tooth brushing, methods of prevention of oral diseases, and rational nutritional intake. To implement the educational phase of the comprehensive program for the prevention of dental diseases, teaching materials approved by the Ministry of Education of the Republic of Uzbekistan were proposed.The initial level of knowledge about oral hygiene among children aged 7-8 years was low. At the same time, 30% of boys and 50% of girls believed that teeth should be brushed only once a day. Fifty percent of boys and 40% of

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girls did not know which toothpaste to choose or what kind of toothbrush to use; the initial level of knowledge about oral hygiene among children aged 8-9 and 9-10 was also found to be low. The educational phase of the comprehensive prevention program had a positive impact on the level of oral hygiene knowledge: after 3 years, the level of hygiene knowledge among boys increased to 12.5 points and among girls to 11.5 points; among children aged 8-9 years, knowledge was rated equally by both sexes at 12 points each; a similar trend was observed among children aged 9-10 years The prevalence of major dental diseases was high among 302 first-graders aged 7-9 years, when their early dental status was examined. The prevalence of dental caries was 91.64 ± 0.83% and the caries intensity was 5.83 ± 0.31. Inflammatory disease of periodontal tissue was detected in 55.45 ± 1.50 school children. The majority of children (73.18±1.33%, according to OHI-S) had poor oral hygiene. The positive effect of the educational program was obtained in relation to a 19.95% reduction in the prevalence of caries in permanent teeth in children of the first group (studied according to the educational program) compared to those of the second group (not educated) (49.60 ± 1.83% and 69.55 ± 2.43%, $p < 0.001$). The intensity of caries in permanent teeth was also reduced by 1.8 times in the children of the first group compared to those of the second group (0.79 ± 0.11 and 1.42 ± 0.21, according to KPU, $p < 0.001$). The number of children with inflammatory periodontal disease was also 1.7 times lower in the first group than in the second group. Thus, the introduction of a program conducted by dentists and teachers with young children was highly effective in improving hygienic and sanitary knowledge and reducing dental morbidity among school children.

The study of preventive and clinical The effectiveness of the action of fluoride-containing toothpastes on the condition of the teeth and tissues of the oral cavity in children was studied in 909 junior schoolchildren (7-10 years old). We studied the effect of fluoride-containing toothpaste on the main indicators of caries and periodontal diseases, the state of oral hygiene, as well as on the processes of enamel remineralization. Interesting results were obtained when studying the dynamics of the incidence of dental caries in children in terms of its prevalence, differences between HS and the CG of the oral cavity in terms of the increase in the prevalence of caries was 58%. The most important indicator of the effectiveness of preventive work - the reduction in the increase in the prevalence

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of caries - in relation to the HS was 41.57% at different times, and in relation to the NCG - 3% - 52%. The most important indicator - the reduction in the increase in the intensity of caries - differed most pronouncedly between the control groups (GS, NKG) and controlled oral hygiene. Already after 6 months, the reduction in caries growth was 17%. Subsequently, the figure exceeded 50% and did not go lower. Interesting results of studying the state Oral Hygiene Index, in GS for all time research index of hygiene during the entire period was unsatisfactory (2.13-2.02), which indicates an unsatisfactory state of oral hygiene in schoolchildren. The exact opposite of hygiene oral cavity developed in the group with CG. Already through 6 months after the start of the study, the level of hygiene in the group increased, which resulted in a decrease in the index from 2.20 to 1.29, and after 36 months to 0.44. In connection with the high results obtained by us with controlled oral hygiene mouth, one would also expect a high efficiency of fluoride-containing toothpastes on the condition of the periodontium in schoolchildren. The prevalence of periodontal diseases decreased by 42%, while in the group of uncontrolled oral hygiene it decreased by only 6.0%, and in the comparison group only by 2.5%. Thus, clinical studies conducted over 3 years strongly suggest that the use of fluoride-containing toothpaste in the School Dental Prevention Education Program has a very rapid effect on the growth and development of dental caries and periodontal disease. Uncontrolled oral hygiene proved to be ineffective. Even the emerging positive changes were achieved only after 18 months. Therefore, for the prevention and treatment of diseases periodontal disease in schoolchildren with the help of fluoride-containing toothpastes, only controlled oral hygiene can be recommended.

**Conclusions:**

1. A high prevalence of caries among primary school students in Baku was established - 91.64 ± 0.83%, inflammatory periodontal diseases were detected in 55.45±1.50% of children, and an unsatisfactory level of sanitary culture was revealed in children of primary school age and their parents;
2. As part of a comprehensive program for the prevention of dental diseases, teaching aids for children have been developed, parents and teachers;

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3. School Education Program Prevention of dental diseases is a modern effective method for the prevention of dental caries and periodontal diseases, which makes it possible to reduce the increase in the intensity of caries by 2 times within 2-3 years, and periodontal diseases - by 2-4 times;
4. Controlled oral hygiene with the use of fluoride-containing toothpastes showed pronounced results in the prevention of dental caries: by reducing the growth the prevalence of the incidence of caries up to 57%, by reducing the increase in the intensity of caries 48-57%;
5. The high preventive efficacy of controlled oral hygiene using fluoride-containing toothpaste is expressed in improving the state of oral and periodontal hygiene: for 3 years, the Hygiene Index decreased from 2.2 to 0.44, the number of sextants with bleeding decreased from 5.47±0.49 to 1.85±0.12, and the number of sextants with tartar decreased from 0.16±0.01 to 0, 06±0.01.

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