

Volchenko N., Sokolova I., Nazaryan R.

PERIODONTAL TISSUE CONDITION (PMA), ORAL HYGIENE (OHI-S) AND QUESTIONNAIRE SURVEY IN 9-11-YEAR OLD SCHOOLCHILDREN WITH DIFFERENT EDUCATION LOAD

Kharkiv National Medical University, Ukraine

Abstract. *The study of education load impact, created by different education systems shows that the increase in intellectual activity volume has an influence on schoolchildren. The influence of increased load is often adverse. The aim of our research was to investigate oral hygiene state and periodontal tissue condition and questionnaire in schoolchildren 9-11 year old, who are enrolled in different education programs (children enrolled in general education program and schoolchildren enrolled in advanced study of foreign languages).*

Key words: *periodontal tissue, children, gingivitis, hygiene of oral cavity, indexes of hygiene of oral cavity, schoolchildren, education load.*

Introduction. Children's health condition is the condition of health of the nation. In view of the above the doctors have been working hard to determine the factors which have an adverse impact on children's health. It has been of particular importance to detect such factors which have an impact on schoolchildren [1, 2, 3, 4, 10].

Over the last years the number of specialized schools, lyceums, classes with enhanced studying of different subjects is evidently increasing in our country. An apparent dependence of the degree and character of impairment of schoolchildren's health and the amount and intensity of academic load has been revealed [1,2].

New programs are different from the typical ones by the increased intensity of education load and require from schoolchildren significant psychoemotional efforts. Great energy demands are related to the strain of functional systems, which in its turn can have an impact on somatic health of the child [3, 10].

Due to insufficient exploration degree of new methods of study and their impact on schoolchildren, it is necessary to investigate health condition of children in new learning environment. Comprehensive integrated study and hygienic reasoning

of new education systems are required to eliminate their negative impact on child's body [1, 3].

The study of education load impact, created by different education systems shows that the increase in intellectual activity volume has an influence on schoolchildren. The influence of increased load is often adverse [1, 2, 4].

However, according to the data, provided by the current literature, there is no evidence confirming the impact of different educational load on the oral health of schoolchildren [5, 6, 7, 8, 9].

The aim of our research was to investigate oral hygiene state and periodontal tissue condition in schoolchildren 9-11 year old, who are enrolled in different education programs (children enrolled in general education program and schoolchildren enrolled in advanced study of foreign languages).

Materials and methods: this research involved 75 children at the age of 9 – 11 years. This group included 45 schoolchildren who were enrolled in collegium program with enhanced study of foreign languages (first group, the main one) and 30 schoolchildren enrolled in traditional secondary education program (second group, the control one). The children were examined by standard procedure (WHO). The authors employed index assessment of periodontal tissue condition by PMA. Index assessment for oral hygiene determination was carried out by simplified oral hygiene index (OHI-S) J.C. Green, J.R. Vermillion.

The purpose of the survey children were given a questionnaire in which they had to answer at home with parents. The questions also concerned the oral hygiene daily brushing, the rigidity of the brush and the frequency shifts, the use of chewing gum and the multiplicity of visiting the dentist.

Results and their discussion. Index determination according to PMA shows that schoolchildren have different periodontal tissue condition. After staining the gums in the area of the teeth following results were obtained: not revealed the presence inflammation 69.5% children enrolled in board education program in 87.5% in the general education. At the same time, the inflammation of the gingiva mild

detected in 30.5% of the first group of child, and 12.5% to the second group of children.

Simplified oral hygiene index data (OHI S) J. C. Green, J. R. Vermillion (Oral Hygiene Indices Simplified) - the majority of children, 82,2% children of the first group and 91,5% children of the second group have low score, which confirmed good oral hygiene. Middle level, i.e., satisfactory oral hygiene, was observed in 11,8% board education program schoolchildren and 8,5% general education program schoolchildren. Unsatisfactory oral hygiene index was observed in 4,0% board education program schoolchildren. Extremely poor oral hygiene was found in 2,0% schoolchild of the same group. As for general education program schoolchildren, they did not show neither unsatisfactory nor poor oral hygiene.

In the questionnaire schoolchildren revealed that the majority of them brush their teeth twice a day, 50.0% schoolchildren enrolled in advanced study of foreign languages and 53.7% children enrolled in general education program. 44.6% of the children of the first group and 43.9% second - spend brushing their teeth in the morning, and 5.4% and 2.4%, respectively, perform this hygienic procedure only in the evening, i.e., once a day.

Most children in both groups use toothbrushes average rigidity of 60.8% of students in the main group and 61,0% of the comparison group. Soft brush prefer 35.1% and 34.1% of the children. On the "super-soft brush," replied 2.7% of students in collegiate programs and 4.9% - general. And only 1.4% of the surveyed children of the first group said that they do not know what is on the stiffness of the brushes used.

The main part of schoolchildren enrolled in advanced study of foreign languages (52,7%) and children enrolled in general education program (52,7%) produce change toothbrush every three months. Every 6 months change brush 25.7% of children of the first group and 29.3% of the second. Monthly change occurs in 18.9% of pupils main and 22.0% of the comparison group. Also found that 2.7% of pupils collegiate programs do not change toothbrushes in general. 41.9% of children of the first group and 39.0% - second, do not use chewing gum at all or can use them very rarely, and the rest of the children in both groups generally

prefer them to chew after eating (to 2.7% and 2.4%) or in the presence of unpleasant mouth odor (23.0% 26.8%), or independently of food intake (32.4 % and 31.7 %).

On the question about the frequency of their visits to the dentist, 43.2% of children of main and 36.6% of the comparison group, said that the visit of the doctor when something starts to bother. Preventive checkups to the dentist once in three months to go to 9.5% of students first and 14.6% of children in the second group. Every 6 months visit dentist 24.3% of schoolchildren enrolled in advanced study of foreign languages and 22.0% - children enrolled in general education program. And, just at 14.9% and 26.8%, respectively, arrange visits to the dentist once a year. Also, during the survey, we found that 6.8% of school children of the main group do not go for checkups and treatment to the dentist.

Conclusion: 1. A result the authors obtained data suggesting that the majority of schoolchildren, enrolled in board education program were found to have more signs of periodontal tissue inflammation in comparison to the children enrolled in general education program.

2. The obtained results give a possibility to draw a conclusion that board education program schoolchildren are prone to a higher risk of oral diseases development, first of all such as gingivitis and caries.

Reference.

1. Kildiyarova R.R. Foundations for Children's Health / R.R. Kildiyarova , V.I. Makarova, Y.F. Lobanov / / tutorial . - GEOTAR Media . - 2013. - P. 328. [Кильдиярова Р.Р. Основы формирования здоровья детей / Р.Р. Кильдиярова, В.И. Макарова, Ю.Ф. Лобанов // Учебник. - ГЭОТАР-Медиа. – 2013г. – с. 328.]
2. Baranov A.A. Basic laws morphofunctional development of children and adolescents in modern conditions [Text]: scientific publication / A.A. Baranov [etc.] / / Proceedings of the Russian Academy of Medical Sciences . - 2012 . - № 12. - P. 35-40 . [Баранов А. А. Основные закономерности морфофункционального развития детей и подростков в современных условиях [Текст]: научное издание / А. А. Баранов [и др.] // Вестник Российской академии медицинских наук. - 2012. - № 12. - С. 35-40.]

3. Kuchma V.R. Hygienic evaluation of the influence of environmental factors on the functional performance of schoolchildren [Text]: scientific publication / V.R. Kuchma, Milushkina O.Y., Bokareva N.A., Detkov V.Y. // Hygiene and sanitation. - 2013 . - № 5 . - P. 91-94. [Кучма В. Р. Гигиеническая оценка влияния средовых факторов на функциональные показатели школьников [Текст] : научное издание / В. Р. Кучма, Милушкина, О.Ю.; Бокарева, Н.А.; Детков, В.Ю.// Гигиена и санитария. - 2013. - № 5. - С. 91-94.]
4. Chermit K.D. University environment and the health of the educational process [Text] / K.D. Chermit // Higher Education in Russia. - 2011 . - N 2 . - P. 60-65. [Чермит, К. Д. Университетская среда и здоровье участников образовательного процесса [Текст] / К. Д. Чермит // Высшее образование в России. - 2011. - N 2. - С. 60-65.]
5. Vinogradova T. F., O. Maksimov P., Melnichenko E. M. periodontal Disease and mucous membranes of the oral cavity in children. - M., 1983. - 280 p. [Виноградова Т. Ф., Максимова О. П., Мельниченко Э. М. Заболевания пародонта и слизистой оболочки полости рта у детей. — М., 1983. — 280 с.]
6. Grudanov, A. I. Etiology and pathogenesis of inflammatory periodontal diseases / A. I. prodanov, E. C. Fomenko. - M : Medical information Agency, 2010. - 96 p. [Грудянов, А.И. Этиология и патогенез воспалительных заболеваний пародонта / А.И. Грудянов, Е.В. Фоменко. - М. : Медицинское информационное агентство, 2010. - 96 с.]
7. Loe H. Microbiological and immunological aspects of oral diseases // J. Dent. Res. - 1984. - Vol. 6. No. 3. - P. 476-477.
8. Ulitovsky S. B. Prevention of periodontal disease. // Periodontics. - 2002. - №1-2(23).- S. 84-88. [Улитовский С.Б. Профилактика заболеваний пародонта. // Пародонтология. - 2002. - №1-2(23).- С.84-88.]
9. Vasina S. A. The role of oral hygiene in the prevention of dental caries and gingivitis in schoolchildren // Organization of dental care and prevention of major dental diseases. - M., 1983. - So 12. - S. 88-89. [Васина С.А. Роль гигиены полости рта в профилактике кариеса зубов и гингивита у младших школьников //

Организация стоматологической помощи и профилактика основных стоматологических заболеваний. — М., 1983. — Т. 12. — С. 88-89.]

10. Kuchma C. R. New standards of school education from the standpoint of hygiene of children and adolescents [Text] / C. R. Kuchma, M. I. Stepanova // Herald of the Russian Academy of medical Sciences. - 2009. No. 5.- S. 27-29. [Кучма В. Р. Новые стандарты школьного образования с позиции гигиены детей и подростков [Текст] / В.Р.Кучма, М.И.Степанова // Вестник Российской академии медицинских наук. - 2009. - № 5.- С.27-29.]

Волченко Н.В., Соколова И.И., Назарян Р.С.

Состояние тканей пародонта (РМА), гигиены полости рта (ОHI-S) и анкетирование 9-11-летних школьников, обучающихся по разным учебным программам

Харьковский национальный медицинский университет, Украина

Резюме. Изучение влияния различных учебных программ, доказывает, что повышение умственной нагрузки оказывает большое влияние на здоровье школьников. По данным многих авторов, влияние углубленных программ часто бывает неблагоприятным для здоровья детей. Целью нашего исследования было изучение состояния гигиены полости рта и тканей пародонта и анкетирование школьников 9-11 лет, обучающихся по разным учебным программам (общеобразовательные программы и с углубленным изучением иностранных языков).

Ключевые слова: ткани пародонта, дети, гингивит, гигиена полости рта, индексы гигиены, школьники, программы обучения.

Волченко Н.В., Соколова И.И., Назарян Р.С.

Стан тканин пародонта (РМА), гігієни порожнини рота (ОHI-S) та анкетування 9-11-літніх школярів, які навчаються за різними навчальними програмами

Харківський національний медичний університет, Україна

Резюме. Вивчення впливу різних навчальних програм підтверджує, що підвищення розумової напруги призводить до суттєвих змін в здоров'ї школярів. За даними деяких авторів, вплив поглиблених програм досить часто є несприятливим для стану здоров'я дітей. Метою нашого дослідження стало вивчення гігієни порожнини рота і тканин пародонта та анкетування школярів 9-11 років, що займаються по різним навчальним програмам (діти, які навчаються за загальноосвітньою програмою і школярі з поглибленим вивченням іноземних мов).

Ключові слова: тканини пародонта, діти, гінгівіт, гігієна порожнини рота, індекси гігієни, школярі, різні програми навчання.

Received: 5.01.2015

Accepted: 4.03.2015