

## СОВЕРШЕНСТВОВАНИЕ ПРОФИЛАКТИКИ И ЛЕЧЕНИЯ КАРИЕСА ЗУБОВ У ДЕТЕЙ

Иноятлов А.Ш., Камолова Ф.Р., Рахматова Д.С., Афакова М.Ш.

Бухарский государственный медицинский институт.

### ✓ Резюме,

На основе аналитического подхода авторов констатируется в настоящее время большое количество питательных веществ, наличие жевательного состава органических веществ, химический состав бытовых веществ оказывают серьезное влияние на микробиологию полости рта, что приводит к увеличению количества кариеса зубов. В настоящее время его профилактика является более важным, чем лечение кариеса зубов. Причина в том, что ткань зуба считается одним из необратимых органов и средства, потраченные на ее восстановление, в 15 раз превышают средства, затраченные на ее профилактику. Наличие у детей кариеса зубов больше, чем у взрослых, а также высокая склонность к зубному заболеванию требует создания среди них стабильной профилактической программы.

По мнению авторов основной процесс, в основе профилактики должно быть - это создание устойчивой профилактической программы кариеса, которая встречается у детей и, скорее всего, будет иметь высокую вероятность, что она решит актуальную проблему.

В отличие от взрослых людей, у которых полость рта у детей отличается от взрослых, изменение нейтральной среды в полости рта происходит быстро и нестабильно. Кроме того, то, что стадии гниения остаточных продуктов в полости рта продолжают в полости рта, влияет на полость эмали зубов. В связи с этим авторы разработали капсулу для мытья зубов Aerodent с целью восстановления биомассы полости рта. Некоторые структуры капсулы для мытья зубов могут покрывать все зубы, а пурпурный, расположенный в капле, полностью компенсирует вышеупомянутый недостаток. "Aerodent" является важным компонентом оборудования для профилактики кариеса.

Ключевые слова: кариес зубов, профилактика, Аэродент, экстракт алоэ, микробиология полости рта, эмалевый пол.

## BOLALARDA TISHLARNING KARIESINI OLDINI OLISH VA DAVOLASHNI TAKOMILLASHTIRISH

Inoyatov A.Sh., Kamolova F.R., Rakhmatova D.S., Afakova M.Sh.

Abu Ali Ibn Sino nomidagi Buxoro davlat tibbiyot instituti.

### ✓ Rezume,

Hozirgi davrda oziqa moddalarining soning ko'p bo'lish, organik moddalarning murakab tarkibga ega bo'lib borishi, maishiy vositalarning kimyoviy tarkibi og'iz bo'shlig'ining mikrobiologiyasida jiddiy ta'sir qilib borishi tish karieslarining ko'payishiga sababchi bo'lmoqda. Hozirda tish kariesini davolashdan ko'ra uning oldini olish juda muhim hisoblanadi. Sababi tish to'qimalari qayta tiklanmas a'zolaridan biri hisoblanib uni qayta tiklash uchun sarflangan mablag'lar uning profilaktikasi uchun sarflangan mablag'lardan 15 marotaba ko'p bo'ladi. Bolalarda tish karieslarining kattalarga nisbatan ko'p bo'lishi tishlar kasallanishining moilligi ham yuqori bo'lishi ular orasida barqaror profilaktik dasturni tuzishni talab qilmoqda. Dunyoda yuzlab karies kasalligining profilaktik dasturlari tuzilgan bo'lib ular haligacha o'zini oqlamadi. Biz o'rganishimiz kerak bo'lgan asosiy jarayon bu bolalarda uchraydigan va uchrash ehtimoli yuqori bo'lgan karies kasalligining barqaror profilaktik dasturini yaratish bo'lib, bu dastur orqali yuqorida o'z yechimini kutayotgan dolzarb muammoni hal etadi. Bolalarning og'iz bo'shlig'i katta yoshli insonlardan farq qilib og'iz bo'shlig'idagi neytral muhit o'zgarishi tez va beqaror bo'ladi. Bundan tashqari og'iz bo'shlig'idagi qoldiq maxsulotlarning cherish bosqichlari og'iz bo'shlig'ida davom etishi tishlarning emal qavatiga ta'sir qiladi. Shu munosabat bilan biz og'iz bo'shlig'i biomuhitini tiklash maqsadida "Aerodent" tish yuvish kapsulasini ishlab chiqdik. Tish yuvish kapsulasining ayrisimon tuzilishi barcha tishlarni qoplab olishi va kapada joylashgan purkovchi bir nechta kanalchalarning joylashganligi yuqorida aytilgan kamchilikni to'la qoplaydi. "Aerodent" karies kasalligi profilaktikasi uchun muhim qurulma apparat hisoblanadi.

Kalit so'zlar: tish kariesi, profilaktika, Aerodent, Aloe ekstrakti, og'iz bo'shlig'i mikrobiologiyasi, emal qavati.

## IMPROVING THE PREVENTION AND TREATMENT OF DENTAL CARIES IN CHILDRENINOYATOV

Inoyatov A.Sh., Kamolova F.R., Rakhmatova D.S., Afakova M.Sh.

Bukhara State Medical institute named after Abu Ali Ibn Sina.

### ✓ Resume,

At present, the increase in the number of nutrients, the increase in the content of organic substances with a murakab, the chemical composition of household appliances have a serious impact on the microbiology of the oral cavity, which causes an increase in dental caries. At present, its prevention is much more important than the treatment of dental caries. [12,17] The reason is that the funds spent on restoration of the tooth tissue by being considered one of the members of the restoration will be more than 15 marotaba from the funds spent on its profilactics. [18] The fact that dental caries in children is higher than in adults and the predisposition to tooth decay is also high requires the establishment of a stable profilactic program between them. In the world, profilactic programs of hundreds of caries diseases have been compiled, which have not yet justified themselves. The main process that we need to learn is the creation of a stable profilactic program of caries disease, which children have a high probability of experiencing and

*experiencing, through this program solve the actual problem that awaits their solution above. Children's oral cavity is different from adult people, so the change in the neural environment in the oral cavity becomes rapid and unstable. In addition, the continuation of the cherish phase of the residual products in the oral cavity in the oral cavity affects the enamel layer of the teeth. In this regard, we have developed an Aerodent dental wash capsule for the purpose of restoring the oral cavity bioengineering. At present, the means of tooth washing are irrigators from this(<https://www.irrigator.ru>) and toothpastes have in common with the capsule for tooth washing, but tooth washes clean the front and rear layers of the teeth, so that the surfaces of the teeth facing each other remain without cleaning. The distinguishing structure of the tooth-washing capsule is that it covers all the teeth, and the fact that the sprayer located on the cap is located several canals completely covers the above-mentioned drawback. "Aerodent" is an important structural apparatus for profiling caries disease.*

**Keywords:** Dental caries, Profilactics, Aerodent, Aloe extract, oral cavity microbiology, enamel floor.

**D**ental caries is a nodal problem of dentistry, very interesting in theoretical and extremely important in practical terms. Prevalence of caries among children's population remains an urgent issue in our time. Caries incidence, especially in children early age, remains high. According to WHO, already in the- those one year in some children in 15% of cases detected caries-affected teeth, by the age of three the prevalence of caries in children reaches 46%, by six years - 96%. Due to this, improving the system of dental care assistance to the children's population of the country and its maintenance in modern- at the national level, the critical challenge facing organizers of practical health care [1]. Enamel time-current teeth is characterized by low thickness and a low degree mineralization, which leads to extremely rapid progress- prevention of carious process. Within 2-3 years after the eruption- tooth decay under the influence of oral fluid constantly occur demineralization and demineralization processes. The least caries- the cervical region of the teeth is resistant because its mineralization occurs after eruption. During this period the hard tissues of the tooth are already exposed to caries- genetic factors in the oral cavity [2]. Dental caries is a polyetiologic disease, arising from bacteriological and chemical processes leading to decalcification and decay of solid tooth tissue. First reports of a possible link between fluoride ions and their influence on caries fall at the end of 19th centuries. Sir James Crichton-Braun addressed this message General meeting of The Eastern Branch, British Dental Association [3].

The use of fluoride for the prevention of caries, and in the treatment and treatment of early forms of dental caries, received scientific justification and numerous confirmations, as in labo-both in laboratory studies and in clinical trials [4]. Fluoride drugs are the main means of prevention dental caries, most often they are used in the form of salts. According to modern data, the caries-static effect of fluoride- it is based due to its accumulation in tissues and liquids by- oral cavity in the form of calcium fluoride. With regular administration of PTO- reed replenishes such stocks in the form of globules microcrystals of calcium fluoride, which are formed on the- the surface of the tooth. After the formation of microcrystals calcium fluoride, proteins and phosphates settle on their surface, contained in saliva. At the same time, phosphate ions are adsorbed on the active centers of calcium fluoride crystals, resulting in a surface layer of fluoride hydro is formed- hydroxyapatite. Research suggests that fluoride, included in the crystal lattice, is a potential factor of protection against caries [5, 16].

**Purpose.** Now in the world use a Water flosser (WP-660E2-instruction-manual.pdf) and DENTAL SPA water floss irrigator they are not used for the treatment of diseases of the oral cavity and teeth, but only for their prevention. Model "Aerodent" is different from them.

It can be widely used in the treatment of various diseases of the oral cavity, as well as in their prophylaxis through a dental capsule, that is, it can be applied to oral stomatitis, trophic ulcers, injuries of the mucous membranes, caries of the teeth, as well as organic changes in the hard tissue of the tooth, its diseases.

At present, the means of tooth washing are irrigators from this(<https://www.irrigator.ru>) and toothpastes have in common with the capsule for tooth washing, but tooth washes clean the front and rear layers of the teeth, so that the surfaces of the teeth facing each other remain without cleaning. The distinguishing structure of the tooth-washing capsule is that it covers all the teeth, and the fact that the sprayer located on the cap is located several canals completely covers the above-mentioned drawback

The main purpose of using dental floss:

- Neutralize the nutrient acids that remain in the oral cavity after eating and clean the surface of the teeth.
- Normalization of the oral cavity pH environment
- Restore oral ecobiosis and reduce the number of microorganisms that have a pathogen effect
- Maintain dental and shaft surface organotrophics in the dental laboratory.
- Dental caries and oral cavity stomatitis fast, quality, affordable method of treatment and proper organization of its profilactics.

**Structure of the tooth washing capsule.** The dental capsule consists of 2 parts namely "capsule Pae corresponding to the tooth's shape" and "extract-preserving ampoule". The ampoule and Paa parts of the tooth-washing capsule are connected together they work together and are used to wash the oral cavity and tooth spaces (faces contactus), [3,9,19] store the pH of the internal environment in the stomach, normalize the oral ecobiosis.

The capsule Pae part is a part of the cap designed to enter the oral cavity, in which a special semicircular is made for the symmetrical location of the teeth, corresponding to the level of the dental caries, covering all the teeth, consisting of a system of canals corresponding to each tooth spacing, the system of its canals is placed in a special cap PA is a hard coating in which the anterior 15a and posterior 15a tubules have a system of tubules located in a total of 30 caps from which the extracellular fluid at a large pressure coming out of the ampoule comes out and flushes the spacing of the teeth as well as the oral cavity. This extract mixes with mucus and saliva on the mucous membranes, each substance in the extract is effective for the treatment of diseases of the teeth and oral cavity, or for the prophylaxis of these diseases. The size of the cap will be individual for each age category.

The ampoule with which the extract is stored is a part - this is a special container, which, in the hermetic state, is placed into it a spray flute through this flute, extrak from the ampoule turns out at a greater pressure and into the channels of the kappa. The ampoule can contain nickel

or Silicon. The volume of the container of an extract ampoule contains 800 cm<sup>3</sup> 800ml of liquid. When used once, 10 ml of liquid is lost, which means that the capsule can be used approximately 80 times. The liquid that comes out of it is in the form of an aerosol. The composition of

the extract can be liquid suspension, nastoyka, and clear liquid, depending on the type of liquid, as well as the purpose of use: the compilation and selection of its composition, the type of disease, the stage, the patient's condition, age.

#### A separate extract for the treatment of dental lesions. (ml)

isotonic solution	700	sodium Bicarbonate 0.4%	30
Aloe extract	60	Menthol	2
monofosfat sodium	10	<i>Hedysarum coronarium</i> L. — Копеечник	50

#### Material and methods

The composition of the extract is a liquid suspension, tincture, and transparent liquid; to determine the type and composition of the extract, the type of disease, stage, patient's condition, age and purpose of application are taken into account.

Depending on the type and condition of the disease is determined by the composition of aidosti ampoules:

1. Separate extract for the treatment of stomatitis.
2. A separate extract for the treatment of dental lesions.
3. Separate extract for washing and prevention of diseases of the oral cavity.

The dental capsule can be used by children from 4 years old. Use after eating, putting on a mouthpiece press the aerosol button.(11) In this case, the released aerosol spreads from the dental cavities throughout the oral cavity.

Indications for use of dental capsules: for the prevention before and after dental lesions and diseases of the oral cavity, stomatitis, gingivitis, periodontitis, inflammation of the oral mucosa, caries, cleaning and prevention of the formation of yellow plaques in the crown of the tooth, to protect the oral cavity from pathogens.

Contraindications to the use of dental capsules: mainly in surgical operations performed in the oral cavity, acute focal and disseminated purulent inflammation, acid and thermal burns of the oral cavity and in children with not erupted teeth.

Results: 24 patients used this capsule, 14 patients often had stomatitis and were used for the treatment of stomatitis, and the remaining 10 were used for the prevention and maintenance of a normal oral environment. Patients who often had stomatitis, after using the capsules, the disease was not observed for the last three months. Users for the prevention and maintenance of a normal oral environment by supporting the "Aerodent" said that they sleep having problems with the capsule.

Conclusion: currently, for fast, effective, harmless and cheap treatment and prophylaxis of dental caries and stomatitis in children and adults, you can use a cleaning tooth capsule. Dental capsule "Aerodent" provides a clean environment in the oral cavity, the normal condition of the teeth and oral mucosa. Patients breathe freely, and feel clean cold air. Antibacterial substances kill pathogens. Scientific patented No. FAP - 20190031

#### LITERATURE:

1. Petersen P. E. The World Oral Health Report 2003: continuous improvement of oral health in the 21st century // Community Dentistry and oral epidemiology. - 2003; 30 (Suppl. 1): 3-24.
2. The international growth of toothpaste sales 2000-2006 yrs // Euromonitor Intl., 2006.

3. Кузьмина Э. М. Стоматологическая заболеваемость населения России. - М.: МГМСУ, 2009; 225.
4. Schiffner U., Bahr M. Outcome of improved mechanical or chemical plaque control in elderly persons // Caries Res. - 2003; 37: 267-318.
5. Федоров Ю. А. Гигиена полости рта. - СПб.: ПолиМедиаПресс; 2003; 112.
6. Petzold M. The influence of different fluoride compounds and CaF<sub>2</sub> precipitation and microstructure // Caries Research. - 2001; 35: 45-51.
7. Матело С. К., Купец Т. В., Жардецкий А. И. и соавт. Медикаментозная эффективность детских кальций-фосфатсодержащих зубных паст и зубных паст с низкой концентрацией фтора: результаты двухлетней программы контролируемой чистки зубов // Вопросы современной педиатрии. - 2011; 10 (2): 86-90.
8. Луцкая, И.К. Одонтметр Применение наногидроксиапатита в профилактике кариеса эмали Соловьёва Ж.В. Научный альманах. 2018; 3-2 (41): 165-167.
9. Четчка С.Г. и др. Применение препарата глуторед в профилактике фиссурного кариеса /Четчка С.Г., Кузнецова Е.В., Тармаева С.В. В книге: актуальные проблемы стоматологии детского возраста сборник научных статей VI региональной научно-практической конференции с международным участием по детской стоматологии. 2016; 180-182.
10. Горбунова И.Л. и др. Роль тканевой резистентности зубной эмали в профилактике кариеса / Горбунова И.Л., Вишнякова В.В. В сборнике: Материалы XXIV Международного юбилейного симпозиума "Инновационные технологии в стоматологии", посвященного 60-летию стоматологического факультета Омского государственного медицинского университета Сборник статей. отв. ред. Г. И. Скрипкина. 2017; 120-124.
11. Фарниева О. А., Аликова З. Р. Распространенность и интенсивность кариеса в различных экологических зонах РСО - Алания // Владикавказский медико-биологический вестник. 2010; 11(18): 119-126.
12. Харьковская М. Д. Эффективность кариес профилактики в условиях воздействия неблагоприятных факторов внешней среды : автореф. дис. ... канд. мед наук. Минск, 1998. 15 с.
13. Николаева М.О. и др. Микробиологическая оценка эффективности средств индивидуальной гигиены полости рта в профилактике кариеса Николаева М.О., Соколова И.С. В сборнике: неделя науки - 2018 материалы Международного молодежного форума, посвященного 80-летию юбилею Ставропольского государственного медицинского университета. 2018; 333-334.
14. Braga M. M., Oliveira L. B., Bonini G. A., B?necker M., Mendes F. M. Feasibility of the International caries Detection and Assessment System (ICDAS-II) in epidemiological surveys and comparability with standard World Health Organization criteria // Caries Research. 2009; 43: 245-249.
15. Bratthall D. Introducing the Significant Caries Index together with a proposal for a new oral health goal for 12-year-olds // International Dental Journal. 2000; 50: 378-384.
16. Broadbent J. M., Thomson W. M. For debate: problems with the DMF index pertinent to dental caries data analysis // Community Dental Oral Epidemiology. 2005; 33: 400-409.
17. Луцкая, И.К., Новак Н.В. Значение этапа планирования в эстетическом реставрировании зубов / И.К. Луцкая, Н.В. Новак // Современная стоматология. 2015; 1: 65-68.
18. Куцевляк В.Ф. и др. Оптическая проницаемость твердых тканей зуба для света фотополимеризатора в эксперименте / В.Ф. Куцевляк[и др.] // Современная стоматология. - 2006; 2: 30-33.

1. Petersen P. E. The World Oral Health Report 2003: continuous improvement of oral health in the 21st century // *Community Dentistry and oral epidemiology*. - 2003; 30 (Suppl. 1): 3-24.
2. The international growth of toothpaste sales 2000-2006 yrs // *Euromonitor Intl.*, 2006.
3. Kuzmina E. M. Stomatologicheskaya zabolevaemost nasele- niya Rossii. - M.: MGMSU, 2009; 225.
4. Schiffner U., Bahr M. Outcome of improved mechanical or chemical plaque control in elderly persons // *Caries Res.* - 2003; 37: 267-318.
5. Fedorov YU. A. Gигиена полости рта. - SPb.: PoliMediaPress; 2003; 112.
6. Petzold M. The influence of different fluoride compounds and CaF<sub>2</sub> precipitation and microstructure // *Caries Research*. - 2001; 35: 45-51.
7. Matelo S. K., Kupets T. V., Jardetskiy A. I. i soavt. Medi sin- skaya effektivnost detskix kalsiy-fosfatsoderzhashix zubnix past i zubnix past s nizkoy konsentratsiey flora: rezultati dvuxletney programmi kontrolirovemoy chistki zubov // *Voprosi sovremennoy pediatrii*. - 2011; 10 (2): 86-90.
8. Lutsкая, I.K. Odontometr Primenenie nanogidroksiapatita v profilaktike kariesa emali Solovyova J.V. Nauchniy almanax. 2018; 3-2 (41): 165-167.
9. Chechetka S.G. i dr. Primenenie preparata gluftored v profilaktike fissurnogo kariesa /Chechetka S.G., Kuznetsova E.V., Tarmaeva S.V. V knige: aktualnie problemi stomatologii detskogo vozrasta sbornik nauchnix statey VI regionalnoy nauchno-prakticheskoy konferensii s mejdunarodnim uchastiem po detskoy stomatologii. 2016; 180-182.
10. Gorbunova I.L. i dr. Rol tkanevoy rezistentnosti zubnoy emali v profilaktike kariesa / Gorbunova I.L., Vishnyagova V.V. V sbornike: Materiali XXIV Mejdunarodnogo yubileynogo simpoziuma "Innovatsionnie tekhnologii v stomatologii", posvyashennogo 60- letiyu stomatologicheskogo fakulteta Omskogo gosudarstvennogo meditsinskogo universiteta Sbornik statey. otv. red. G. I. Skripkina. 2017; 120-124.
11. Farnieva O. A., Alikova Z. R. Rasprostranennost i intensivnost kariesa v razlichnix ekologicheskix zonax RSO - Alaniya // *Vladikavkazskiy mediko-biologicheskij vestnik*. 2010; 11(18): 119-126.
12. Xarkova M. D. Effektivnost karies profilaktiki v usloviyax vozdeystviya neblagopriyatnix faktorov vneshney sredy : avtoref. dis. ... kand. med. nauk. Minsk, 1998. 15 s.
13. Nikolaeva M.O. i dr. Mikrobiologicheskaya otsenka effektivnosti sredstv individualnoy gigeni polosti рта v profilaktike kariesa Nikolaeva M.O., Sokolova I.S. V sbornike: nedelya nauki - 2018 materiali Mejdunarodnogo molodejnogo foruma, posvyashennogo 80-letnemu yubileyu Stavropolskogo gosudarstvennogo meditsinskogo universiteta. 2018; 333-334.
14. Braga M. M, Oliveira L. B, Bonini G. A., B?necker M., Mendes F. M. Feasibility of the International caries Detection and Assessment System (ICDAS-II) in epidemiological surveys and comparability with standard World Health Organization criteria // *Caries Research*. 2009; 43: 245-249.
15. Bratthall D. Introducing the Significant Caries Index together with a proposal for a new oral health goal for 12-year-olds // *International Dental Journal*. 2000; 50: 378-384.
16. Broadbent J. M, Thomson W. M. For debate: problems with the DMF index pertinent to dental caries data analysis // *Community Dental Oral Epidemiology*. 2005; 33: 400-409.
17. Lutsкая, I.K., Novak N.V. Znachenie etapa planirovaniya v esteticheskom restavrirovanii zubov / I.K. Lutsкая, N.V. Novak // *Sovremennaya stomatologiya*. 2015; 1: 65-68.
18. Kutsevlyak V.F. i dr. Opticheskaya pronitsaemost tverdix tkaney zuba dlya sveta fotopolimerizatora v eksperimente / V.F. Kutsevlyak [I dr.] // *Sovrem. stomatologiya*. - 2006; 2: 30-33.

Поступила 09.06. 2019