

## EVALUATION OF THE EFFECTIVENESS OF THE "AERODENT" DEVICE IN DIFFERENT AGE GROUPS OF CHILDREN

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**Annotation:** For the purpose of prevention and treatment of these diseases, it is possible to apply a new capsule of "Aerodent" tooth washing. Pros of the capsule: instead of water in the tooth-washing capsule, the therapeutic extract is used, the capsule consists of a multi-chamber ie 30 channels, which washes the four surfaces of each tooth, covering each tooth gap. it is easy to use dental floss and this is a one-time process, it can be used by young children, it can be used as a dental floss, from which it is possible to neutralize the nutrient acids that store the biomuhite of the oral cavity in the stomach[1.3.5].

**Purpose of the work:** The main purpose of using dental floss: It consists in neutralizing the nutrient acids that remain in the oral cavity after eating and cleaning the tooth surface, normalizing the oral cavity ph environment, restoring the oral cavity eobiosis and reducing the number of microorganisms that have a patogen effect, maintaining the organotrophic of the tooth and shaft surfaces in the Meyer.

**Material and research methods:** Composition and selection of the composition of the extract of the tooth washing capsule: depends on the type of disease, the stage, patient condition, age, purpose of use. The composition of the liquid in the ampoule can be adjusted in the following order, depending on the types of diseases and their condition: in the treatment of stomatitis, a separate extract composition is formed. In the treatment of dental diseases, a separate extract composition is formed[2.4.6]. A separate extract composition is formed for rinsing the oral cavity and profilactics of oral diseases. Dental capsules can be used from the age of 7 years. The procedure for use is always carried out after a meal, by inserting the PA portion of the capsule into the oral cavity and pressing the button on the ampoule once. Bunda from the cap in the form of an aerosol spreads to the entire oral cavity, starting with the excruciating tooth pits[7].

**Results of the study:** A total of 134 patients used this capsule, 34 of whom were patients with frequent stomatitis, while the remaining 100 were those who used dental caries prevention to keep the oral cavity biomuhit in a normal state. Patients with frequent stomatitis were not vomiting for the last 3 months after using the equipment. In a permanent procedure for the profilactics of dental and oral diseases, users preferred "Aerodent", saying that they did not observe any unusual problems with the equipment.

Tincture extract from licorice and flour has a healing and astringent property. One of the main solutions of the above-mentioned scientific problem is to take the medicinal liquid substance that has preserved its properties in the first place and distribute it to patients by inserting it into the ampoule part of the Aerodent dental washing equipment, taking the drug into the world market[8.10].

Composition and selection of the composition of the extract of the tooth washing equipment: depends on the type of disease, stage, patient condition, age, purpose of use. The composition of liquids in the ampoule can be compiled in the following order, depending on the types of diseases and their condition: in the treatment

of stomatitis, a separate extract composition is formed. In the treatment of dental diseases, a separate extract composition is formed. A separate extract composition is formed for rinsing the oral cavity and profilactics of oral diseases. The use of dental equipment can be used from the age of 5-6 years. The mode of use is always after a meal, the teeth are washed with a single press of the button on the ampoule by inserting the cap part of the equipment into the oral cavity. Bunda in the form of an aerosol from Kappa, the extract spreads throughout the oral cavity, starting with the dental cavities[9.11].

The goal we aim to achieve through Aerodent dental flossing equipment is to reduce the period in which children with this disease are now prone to tooth caries by transferring them to a faster level of treatment and thereby reducing their recovery period. The development of the most difficult model of the profile of caries in the world will be the main goal. In addition, the production of the medical device, which is the most high-quality and affordable in Uzbekistan, is an indicator of saving patients from excessive consumption of drugs and additional means, preventing complications, entering the world market and occupying it[11].

Currently the most widely used Water flosser (WP-660E2-instruction-manual.pdf) and DENTAL SPA water floss irrigator (<http://skidki-market.ru/magazin/product/irrigator-polosti-rta>) larvae are used not only for diseases of the teeth and oral cavity, but also for the purpose of profiling these diseases, for the purpose of eliminating soft caries of the teeth. And the useful model "Aerodent", which we have created, is quite different from this.

The advantages of dental equipment "Aerodent" are as follows:

1. In dental equipment, instead of water, a therapeutic extract is used.
2. Our useful model consists of a multi-chamber, that is, 30 channels, which cover each tooth cavity and wash four surfaces of each tooth.
3. The main task of our useful model is to treat purulent inflammation of the oral cavity, quickly and qualitatively carry out treatment.
4. Tooth washing equipment is easy to use, that is, it is a one-time process, from which young children can comfortably use it.
5. It can be used as a toothbrush and paste for a wash teeth.
6. Through dental floss, the biomuhite of the oral cavity is stored in the enamel and it is possible to neutralize the nutrient acids.
7. After eating, neutralize the remaining nutrient acids in the oral cavity and clean the surface of the teeth.
8. Normalization of the oral cavity pH environment
9. Restore oral eobiosis and reduce the number of microorganisms that have a pathway.
10. Maintain organotrophic of the tooth and shaft surface in the dental laboratory.
11. It forms a protective film on the tooth enamel layer, increases its immunity, protects it from external influences.
12. It performs such functions as maintaining oral hygiene clean by providing stagnant air in the oral cavity.

When analyzing the hygienic state of the oral cavity after 6 months of use of the "Aerodent" device in children (see Table 17), the Fedorov-Volodkina index in children showed a good indicator with  $1,03 \pm 0,02$  points among children 6 years (temporary teeth), while among children 6-9 years showed  $1,39 \pm 0,23$  points and a satisfactory indicator. The lowest indicator of oral hygiene was observed in the 10-12 age group of children, with an average of  $1,76 \pm 0,45$  points, which showed a satisfactory indicator. We connect this with

the exchange period tooth extraction. In the 13-15 age group of children, this figure was found to be equal to  $1,56 \pm 0,38$ . The improvement of oral hygiene to such a satisfactory side indicates the presence of a positive effect of the "Aerodent" device, which is used regardless of the beginning of the exchange period in different age groups, the corresponding sequential arrival of the phases of intensive exchange and the formation of a permanent tooth[12.13.14.15].

When analyzing the acid resistance (sweat test) of tooth enamel after 6 months of use of the "Aerodent" device in children, a significantly lower indicator of sweat test was noted in the group of children aged 6-9 years (permanent teeth) and 10-12 years (respectively  $59,7 \pm 3,9\%$  and  $55,3 \pm 3,1\%$ ). In the group of children 6 years of age (temporary teeth), this figure was  $44,2 \pm 1,1\%$ . The best indicator of the resistance of tooth enamel to acid was observed among children 13-15 years of age and was  $35,6 \pm 2,4\%$ . Also in the age groups, a KOSRE test reflecting the recovery (remineralization) time of enamel in children was studied. The results of the KOSRE test showed that the tooth enamel has a direct affinity to the indicators of acid resistance. Through this, the validity of the results of the sweat test is based. The lowest indicators of the duration of remineralization of Bunda were noted in the group of children 6-9 years (permanent teeth) and 10-12 years, respectively, with  $4,5 \pm 0,2$  days and  $3,8 \pm 0,1$  days. In general, these data indicate that in the groups studied in patients, the level of mineralization of tooth solid tissues varies significantly depending on age[16.17.18.19]. The improvement of the level of remineralization of the outer layer of enamel is determined by the period after the teeth come out. That is, the longer the weight is performed, the better the degree of mineralization. In addition, we can see the same situation in children when the enamel is subjected to the action of acid[20.21.22.23.24].

At the cutting edge of the checked cut teeth, the electrometric indicators were  $1,50 \pm 0,21$  mKA in children 6 years (temporary teeth), and  $5,71 \pm 0,11$  mKA in the neck area ( $r < 0,05$ ). The highest index was observed in children aged 6-9 years (permanent teeth), with a cutting edge of the incisors teeth, as well as in the neck area, respectively,  $2,1 \pm 0,12$  MCA and  $6,22 \pm 0,32$  MCA. Among children 10-12 years of age, these indicators were  $1,72 \pm 0,19$  mKA at the cutting edge and  $4,98 \pm 0,27$  mKA at the neck area. Among the children involved in the study, the lowest among the electrometric indicators of the incisors teeth was recorded in the 13-15 age group of children. In this age group, the electric parameters at the cutting edge of the incisors teeth were on average  $1,11 \pm 0,08$  mKA, and in the neck area  $3,06 \pm 0,21$  mKA.

Children 6 years of age (temporary teeth) electric indicators on the oral surface of the pile teeth amounted to  $1,67 \pm 0,29$  MCA and  $5,48 \pm 0,37$  MCA ( $r < 0,05$ ) in the neck area. These indicators showed a tendency to decrease in electrical conductivity among children 6-9 years of age (permanent teeth), indicating  $2,21 \pm 0,23$  mKA and  $5,61 \pm 0,43$  mKA, respectively, among children 10-12 years of age. Pile teeth in 10-12 years of age showed an average of  $1,78 \pm 0,18$  mKA on the oral surface, pile teeth showed  $4,82 \pm 0,29$  mKA on the neck area. If the pile teeth in 13-15 young children showed an average of  $1,18 \pm 0,12$  mKA on the oral surface, this indicator was  $2,83 \pm 0,24$  mKA on the neck area of these teeth ( $r < 0,05$ ).

It should be noted that in the molars, too, there was a colony of such changes. Children 6 years of age (temporary teeth) in the molar tooth drum showed  $1,37 \pm 0,14$  MCA, in the fissure  $2,2 \pm 0,09$  MCA, and in the neck area  $4,2 \pm 0,27$  MCA ( $r < 0,05$ ). These indicators showed  $2,4 \pm 0,09$  MCA,  $4,11 \pm 0,13$  MCA ( $r < 0,05$ ) and  $8,2 \pm 0,38$  MCA, respectively in the molar tooth drum, fissure and neck area among children aged 6-9 years (permanent teeth), electrical conductivity on account of the increase in the mineralization of dental hard tissue among children aged 10-12 years in the showed MKA ( $R < 0,05$ ). While 13-15 young children showed an average of  $1,1 \pm 0,19$  mKA in the molar tooth drum, this indicator was  $2,2 \pm 0,09$  mKA in the fissure of these teeth, as well as  $3,66 \pm 0,21$  mKA in the neck area of these teeth ( $r < 0,05$ ). Statistically significant results were not obtained when this indicator was studied in fissure[23.24].

Thus, studies conducted in children participating in the study revealed qualitative changes in the solid structures of the tooth, which were expressed by a change in the degree of their electrical conduction. When

the level of mineralization of tooth hard tissue is studied in children who have been examined, enamel demineralization has been identified in various dental periods, and due to this, there is a risk of primary injury requiring treatment and prophylactic measures aimed at remineralization of tooth hard tissues. This was especially evident in the 6-9 and 10-12 age groups.

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