

**FEATURES OF TREATMENT OF DENTAL CARIES IN CHILDREN USING
MEDICINE AERODENT**

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ABSTRACT

Dental caries in children is a more serious public health problem due to the high prevalence of the disease and the low effectiveness of treatment and preventive measures. At the same time, the trends in the formation and development of dental morbidity in the child population under the conditions of increased anthropotechnogenic load in the urban environment, as well as the planning and implementation of comprehensive programs for the prevention of dental diseases that are adequate to the degree of stress on the sanitary-hygienic situation and environmental problems require further clarification. Improving preventive, diagnostic and therapeutic measures based on the study of monitoring of dental morbidity, aimed at reducing the prevalence and intensity of caries in children, determines the relevance of the problem chosen for research, the solution of which is of extremely important scientific and practical importance.

Key words : *apexogenesis, pulps, orthodontic appliances, Aerodent.*

Treatment of injuries of the dentoalveolar region in children often causes difficulties for the dentist, worries the child and parents. Traumatic tooth injuries are more common as an independent type of trauma in children. A tooth injury is understood as a violation of the anatomical integrity of the tooth, its surrounding tissues or changes in the position of the tooth in the dentition [1,2,10]. According to both domestic and foreign authors [2], every 3-4 children are subject to acute tooth trauma to one degree or another. Most cases are caused by falls or accidents during games or playing sports. More often, lesions occur in boys. A predisposing factor is deep incisal overlap. An incisal overlap of 3-6 mm doubles the incidence rate of injuries of the incisors compared to 0-3 mm. Cutting over 6 mm increases the risk by 3 times.

Currently, children from 1 to 5 years of age have widespread diseases of the oral mucosa of stomatitis and dental caries. To prevent and treat these diseases, you can use the "Aerodent" dental cleaning capsule. Currently, varieties of dental cleaners for children are increasing, but their ineffectiveness and difficulty in using result in an increase in infectious diseases of the oral cavity, stomatitis and dental caries.

According to A.Cameron, R. Widmer, 2003, the incidence rate of 22% of children is injured in permanent teeth up to 14 years. The ratio of boys and girls is 2: 1. The greatest number of cases is observed at the age of 8-10 years. The upper front teeth are mostly damaged. More often one tooth is damaged. Diagnosing the extent of tooth damage after an impact is difficult.

The treatment of injuries accompanied by damage to the pulp or tooth dislocation is always associated with risk, since its consequences are unpredictable. The choice of treatment tactics will depend on the nature of the damage, opening the pulp chamber, preserving the viability of the pulp and growth area, stage of root formation, timing of treatment at the clinic after injury. In addition, damage to the apical vessels can cause death of periodontal tissues and disrupt the growth and formation of the tooth root. The greatest number of errors is associated with the treatment of teeth with unformed roots. The principles of treating dental injuries in adults are not always justified for children. This requires a differentiated approach to dental treatment, depending on the degree of root formation in length.

The benefits of "Aerodent" are as follows:

- In a capsule, a healing extract is used instead of water.
- Our utility model is multi-chamber, that is, it has 30 tubes that facilitate tooth brushing from all surfaces of the tooth and tooth gaps.
- The main function of our model is the quick and high-quality treatment of purulent inflammation of the oral cavity.
- Using a cleaning capsule is a very simple and instantaneous process; children can use it.
- It can be used as a toothbrush to neutralize acids and maintain a normal oral bio-environment.

This utility model can be used in dentistry and otolaryngology for flushing teeth and the oral cavity. The cleaning capsule can be used to treat and prevent oral stomatitis, trophic wounds, damage to the mucous membrane, dental caries and organic changes in the hard tissues of the teeth.

The main purpose of using cleaning capsules:

- Cleaning and neutralizing acids from tooth surfaces after eating.
- Normalization of the ph environment of the oral cavity.
- Restoration of eobiosis of the oral cavity and reduction of pathogenic microorganisms.
- Preservation of organotrophy of teeth and gums.

The correct formulation of fast, cheap, effective treatment and prevention of dental caries and stomatitis. The "Aerodent" dental capsule consists of 2 parts "a mouthguard corresponding to the shape of the tooth groove" and an "ampoule for extract". These parts of the cleaning capsule are interconnected and are used to clean the contact surfaces of the teeth (facies contact), preservation of the internal ph environment, and normalization of eobiosis of the oral cavity.

An ampoule for an extract is a special hermetic vessel, has a tube through which the extract passes under high pressure into the vessels of the mouthpiece. The ampoule can be made of nickel or silicone. The volume of the ampoule is 800 cm³ and contains 800 ml of liquid. With a single use, 10 ml of liquid is consumed, which means that you can use it about 80 times. The liquid exits the ampoule in the form of an aerosol. It is used by children after eating to preserve the consistency of the dentition, and to reduce food residues and pathogens in the oral cavity. The child using "Aerodent" puts on a mouth guard and presses the aerosol button, with the extract released under high pressure, cleans the teeth of the upper jaw from top to bottom and the lower jaw from bottom to top.

Objective: Now in the world they use Water flosser (WP-660E2-instruction-manual.pdf) and DENTAL SPA water floss irrigator they are not used to treat diseases of the oral cavity and teeth, but only for their prevention. The Aerodent model is different from them.

MATERIAL AND METHODS

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

Depending on the type and condition of the disease, the composition of the ampoule's fluid is determined:

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

Children from 4 years old can use the capsule. Use after eating, putting on a mouth guard press the button of an aerosol. In this case, the released aerosol spreads from the dental cavities throughout the oral cavity.

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

Contraindications to the use of dental capsules: mainly with surgical operations performed in the oral cavity, acute focal and spread purulent inflammation, with acid and thermal burns of the oral cavity and in children with teething.

RESEARCH RESULTS

30 patients used this capsule, 20 patients often suffered from stomatitis and used to treat stomatitis, and the remaining 10 were used to prevent and maintain a normal oral biological environment. Patients who often had stomatitis after using the capsules did not experience the disease for the last three months. Users for the prevention and maintenance of a normal oral biological environment, supporting "Aerodent" said that they had problems with the capsule in their sleep.

CONCLUSION

Currently, for cleaning children's and adults's teeth for quick and effective, harmless and cheap treatment and prevention of dental caries and stomatitis, a cleaning capsule can be used. Aerodent dental capsule provides a clean environment in the oral cavity, normal condition of the teeth and oral mucosa. Patients breathe freely and feel clean cold air. Antibacterial agents kill pathogens. Scientific work patented No. FAP - 20190031

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