



THE IMPORTANCE OF PROPHYLAXIS PASTE IN PREVENTING DENTAL CARIES

Maxsetbayev Aqilbek Kuanishbaevich
Ubaydullaeva N

Scientific Supervisor : I assistant, PhD Tashkent Dental State Institute

Annotation: *In experimental and clinical conditions the influence of medioprophyllactic toothpastes with different fluoride compounds on enamel structural and functional characteristic of permanent teeth on the stage of secondary mineralization was studied. In the experimental part qualitative and quantitative chemical test of the superficial enamel layer in 80 samples was made. Using secondary ion massspectrometry method the quality of fluoride and calcium ions enamel penetration was tested. Using radiophotoelectronic spectroscopy the number of fluoride, calcium and phosphorus ions was evaluated.*

Key words: *fluoride, toothpastes, aninofluoride, sodium fluoride*

Prevention of permanent caries teeth in children is one of the urgent problems pediatric dentistry, due to the high the level of prevalence and intensity of this diseases [1-4]. The lowest level of caries resistance of permanent teeth is observed in the first year after their eruption. Raise level of prevention during this period, in particular for through the use of the most effective means personal hygiene, will help to reduce decrease in the level of morbidity. One of the main properties of fluorine is ability to catalyze mineralization processes enamel.

In the experimental part of the work 80 samples of permanent enamel were studied teeth. Enamel samples were obtained from permanent teeth. That were removed for orthodontic reasons indications (premolars and canines of children aged 12-13 age not later than 1 month after eruption). Immediately after extraction, the permanent teeth were placed into the "artificial saliva" solution, which was prepared according to the method of T. Fusayama (1975). All enamel samples were divided into 3 main and 1 control groups. They were housed in four separate hermetic boxes (20 samples per box), which which were filled with artificial saliva. In the the following enamel samples of each main group treated twice a day with an interval of 12 hours.

Dental caries, commonly known as tooth decay, is a prevalent oral health issue that affects millions of people worldwide. It is caused by the accumulation of bacteria on the teeth, which produce acids that erode the enamel and dentin layers of the teeth. If left untreated, dental caries can lead to pain, infection, and even tooth loss. However, with proper dental care and hygiene practices, it is possible to prevent dental caries from developing in the first place. One such preventive measure is the use of prophylactic pastes.

Prophylactic pastes are dental products that contain fluoride, a mineral that helps to strengthen the enamel and prevent tooth decay. They are applied topically to the teeth during routine dental cleanings or as part of a daily oral hygiene routine. Prophylactic pastes work by remineralizing the enamel and dentin layers of the teeth, which helps to make them more resistant to acid erosion.



The importance of prophylactic pastes in preventing dental caries cannot be overstated. Research has shown that regular use of fluoride-containing products can reduce the incidence of dental caries by up to 50%. This is because fluoride helps to inhibit the growth of bacteria on the teeth, which reduces the amount of acid they produce. Additionally, fluoride can reverse early stages of tooth decay by promoting remineralization of weakened areas of the enamel.

Prophylactic pastes are especially important for individuals who are at high risk for developing dental caries. This includes children, older adults, and individuals with certain medical conditions that affect their oral health. For children, prophylactic pastes can help to protect their developing teeth from decay, which can have long-term implications for their oral health. For older adults, prophylactic pastes can help to prevent root decay, which is a common issue as the gums recede with age. And for individuals with medical conditions such as diabetes or dry mouth, prophylactic pastes can help to prevent dental caries from developing due to the increased risk of bacterial growth in the mouth.

In conclusion, prophylactic pastes are an essential component of a comprehensive oral hygiene routine. They are an effective and easy-to-use preventive measure that can help to reduce the risk of dental caries and promote overall oral health. If you are concerned about your risk for dental caries, talk to your dentist about incorporating prophylactic pastes into your oral hygiene routine. With proper care and preventive measures, you can maintain a healthy, beautiful smile for years to come.

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