MODIFIED METHOD OF PREVENTION FOR WEDGE-SHAPED DEFECTS OF TEETH

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Abstract: Local (exogenous) and general (endogenous) factors affect the occurrence of wedge-shaped teeth defects. Ingestion of acidic foods and medicines, the use of abrasive toothpastes and hard toothbrushes or their inappropriate use are local factors. Common factors include somatic pathologies, mainly endocrine diseases. For the most part, the mineral part of the hard tissues of the teeth of humans and animals consists of apatites, and the similarity of the recently used hydroxypatite with the hard tissues of the teeth is undeniable. On this basis, the use of hydroxyapatite-containing preparations for the prevention of wedge-shaped teeth defects can be considered theoretically justified.

Key words: Prevention, treatment, calcium hydroxyapatite, teeth, degree of damage, fluoride.

According to chemical theory, the occurrence of a wedge-shaped defect in teeth is explained by the demineralizing effect of acids that are formed during the fermentation of food residues in the cervical region of the teeth [2,4,7,9,12,14,18,25]. According to D.A. Entina (1938) “hereditary or acquired (alimentary) and neurodystrophic disorders cause moments of discalcination of the hard tissues of the tooth, which change their physical structure so much that even slight friction caused by a food lump, movement of the lips, cheeks and tongue may turn out to be sufficient for the formation of tissue defects ". The author attributes the wedge-shaped defect of the teeth to lesions of the hard tissues of the teeth of endo and exogenous origin. In the emergence of a wedge-shaped defect of teeth, an important role is played by the violation of trophism of the tissues of the tooth as a result of degenerative processes in the periodontium when the necks of the teeth are exposed during periodontal disease [1,3,5,8,10,13,15,19,23]. The development of a wedge-shaped defect of teeth, combined in 92% of cases with periodontal diseases, is accompanied by increased release of crevicular fluid from the gingival groove, which is defined as a link in the pathogenetic mechanism in the origin of wedge-shaped teeth defect [6,8, 9,11,14,15,20,22,25,27].

Purpose of the study. The effectiveness of a modified method for the prevention of wedge-shaped teeth defects by using toothpastes containing calcium hydroxyapatite and fluoride preparations.

Methods. Dental examination of patients was carried out using a standard set of dental instruments under natural light.

Examining the oral cavity, attention was paid to the hygienic state of the oral cavity, the type of occlusion, the condition of the hard tissues of the teeth, diseases of the paradont and the mucous membrane of the oral cavity. Particular attention was paid to wedge-shaped defects of hard tissues of teeth, their localization, shape, depth of damage and intensity of hyperesthesia.

96 (40 men and 56 women) students aged 18-28 years old, studying in the second and third courses of the dental faculty of the Bukhara State Medical Institute during 2020-2021, were examined, and 30 patients aged 30-50 years old were treated with wedge-shaped teeth defects.

To determine the effectiveness of the use of various toothpastes for the prevention of wedge-shaped teeth defect, we have identified the first group, including students without manifestations of wedge-shaped teeth defect, divided into three subgroups. The students of the first subgroup used Colgate total toothpaste containing calcium glycerophosphate, the students of the second subgroup used the Splat with fluoride paste with sodium fluoride, and the students of the third subgroup brushed their teeth with the Parodontol paste with hydroxyapatite. All students of the first group were recommended to use soft-bristled toothbrushes, as well as to carry out applications with these toothpastes for 15 minutes.

Control examinations of the students of the first group were carried out six months later, one and a half years in order to identify a wedge-shaped defect in the teeth. The effectiveness of the use of toothpastes was assessed by indicators of the index assessment of the state of the hard tissues of the teeth, the hygienic state of the oral cavity and electrodontometry. Analysis of the results of the dental examination, carried out six months later in patients of the first subgroup who used Colgate total toothpaste, did not reveal any manifestations of wedge-shaped teeth defects in any of the examined patients.

After one year, the analysis of the survey results made it possible to establish the following. The manifestation of wedge-shaped teeth defects with concomitant hyperesthesia was diagnosed in 3 (12%) patients. The level of remineralization of hard tissues was 2.00 + 0.05 points. The data of the enamel resistance test (ERT) in patients of the first subgroup increased relative to the initial data by 12.25% (32.04 + 1.25), which indicated a decrease in the enamel resistance to acids.

In the students of the second subgroup, who used the Splat with fluoride toothpaste, the examination, carried out after six months, a year and a year and a half, did not reveal the initial manifestations of wedge-shaped teeth defects. Within a year and a half, the condition of the hard tissues of the teeth has improved, indicators.

Discussion. Analyzing the results obtained, we can conclude: the manifestations of a wedge-shaped defect of teeth were detected in students of the first subgroup a year after the start of using toothpaste for oral hygiene. Colgate total. Wedge-shaped defects in them were diagnosed within the enamel and were accompanied by hyperesthesia of the first degree.

Considering the data obtained, it can be considered reasonable to recommend to patients fluoride toothpastes as a reliable means of preventing wedge-shaped teeth defect.

Conclusions

1. Measures for the prevention and treatment of wedge-shaped defects of the teeth should include general and local remineralizing therapy using deep fluoridation of enamel and dentin-sealing liquids, medical pads with hydroxyapatite in combination with the appointment of drugs containing microelements and vitamins.
2. On the basis of the state of enamel and dentin before and after the application of various therapeutic measures to increase the effectiveness of the treatment of wedge-shaped teeth

defects, it was found that the highest results were observed with the combined, sequential use of fluorine- and hydroxyapatite-containing preparations.

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