

NON-CARIOUS DISEASE OF DENTAL HARD TISSUES - ENAMEL EROSION.

Asia International University
Kurbanova Nodira Vohidovna

Abstract: Enamel erosion, that is, the gradual loss of some part of the enamel and dentin, causes erosion on the teeth. The exact cause is unknown. There are assumptions that it may be caused by the action of a toothbrush and toothpaste, or by the effect of wet fruit juice.

Keywords: enamel, dentin, plate-shaped defect, Nasmite membrane, demineralization, erosion.

Introduction: Dental erosion has been observed in nervous, mental disorders, gout, endocrine diseases, especially thyrotoxicosis. Dental erosion in middle-aged and elderly people (40-80 years old) most often occurs in the upper molars, and can also occur in premolars. A round or saucer-shaped defect - a pit - is formed mainly on the vestibular surface of the teeth. First, the enamel is damaged, then the dentin. The bottom and the periphery of the erosion are hard and smooth. In the initial stage of erosion, when the enamel is advanced, the enamel and dentin are damaged. Maksimovsky Yu.M. (1981) divided dental erosion into 3 stages:

- The enamel surface.
- All of the enamel.
- Both enamel and dentin are affected.

Dental erosion can be active acute and stabilized chronic and can pass into each other. This is observed in the recurrence of thyrotoxicosis. The hardness of the enamel decreases. On average, it is 295 kg mm², normally 395 kg mm². The hardness of the dentin increases slightly, it is -70 kg mm², normally 359 kg mm². In the area of erosion on the tooth, the nasmite layer thins, changes occur in the prisms - demineralization. In the enamel, such trace elements as copper, zinc, iron, cobalt decrease. The interprism space expands. Shiny, replacement dentin is formed in the dentin, the dentin tubules narrow and obliterate. Leus P.I., Galchenko V.M. (1983) considered tooth erosion to be a disease similar to caries.

Treatment depends on the form in which erosion begins. First of all, it is necessary to prevent factors that cause erosion. Therefore, it is recommended to exclude, eliminate or rinse the mouth after consuming juices and fruits, not to use hard brushes or toothpastes when cleaning teeth, but to use soft toothbrushes for these purposes, such as remineralizing toothpastes containing fluoride - "Pepsodent", "Jemchug", "Ftoradent", "Blend-a-med", "Colgate". For local treatment, sodium gluconate solution, 3% pepsodent solution, 2% sodium fluoride solutions are applied to the erosion surfaces of hard dental tissues (application). They perform a remineralizing function and stabilize erosion. In addition, these drugs reduce tooth sensitivity (hyperesthesia). At the same time, patients are recommended to take multivitamins. From time to time, teeth are treated with a 75% fluoride paste. This reduces dental hyperesthesia, strengthens dental tissues, and forms fluoride apatite. Also, instead of soaking, 1-2% calcium gluconate liquid can be applied to the teeth by electrophoresis and then soaked with 4% sodium fluoride. Each treatment course consists of 15-20 procedures. If the erosion is deep, it is closed with a filling. Composite materials (photopolymers) are used for filling. If a significant part of the dentin has been lost due to erosion, a base must be placed before the filling. If there are softened tissues, they should be removed and replaced with a filling. In order to reduce or eliminate the causes of caries, it is necessary to prohibit the use of carbonated drinks, ensure regular and proper dental cleaning.

Patients should be taken to a dispensary and periodically treated with remineralizing fluoride preparations. If patients have disorders of the functions of the endocrine glands, treatment should be carried out in conjunction with an endocrinologist. Vitamins, microelements, calcium salts are recommended.

Conclusion: enamel erosion is a disease that develops after tooth eruption, the causes of which have not yet been fully studied. Plate-shaped lesions are observed on the enamel and dentin. Sensitivity increases in the teeth. Treatment is mainly remineralizing measures.

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