CARIES RESISTANCE AND CARIES SENSITIVITY

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Abstract: The maturation of enamel in dental fissures depends on its washing with saliva and the degree of covering with caries. Densification of enamel is a change in the chemical structure of enamel under the influence of macro and microelements.

Key words: with the presence of a pellicle, with optimal chemical composition of saliva and mineralization activity, with a sufficient amount of oral fluid, with low permeability of tooth enamel;

Caries occurs faster in teeth with a high tendency to caries. It depends on the general state of the organism. Common diseases associated with caries, at the same time, do not affect the structure and composition of mature teeth, but functional changes in organs and systems affect the course of the carious process, the composition and amount of oral cavity fluid. Caries resistance or caries resistance of your teeth is provided by:

- ♦ with the chemical composition and structure of tooth enamel and other hard tissues;
 - ♦ with the presence of a pellicle;
 - ♦ with optimal chemical composition of saliva and mineralization activity;
 - ♦ with a sufficient amount of oral fluid;
 - with low permeability of tooth enamel;
 - ♦ with sufficient chewing pressure and self-cleaning of the tooth surface;
 - ♦ with the content of dental care;
 - with oral hygiene;
 - with the benefits of diet;
 - with timely and complete maturation of enamel after tooth eruption.
 It is important in the development of tooth caries susceptibility:
 - ♦ improper maturation of enamel;
- ♦ diet insufficient in protein, macro and microelements, excess amount of carbohydrates;

- ♦ lack of ftom in drinking water;
- ♦ lack of pellicle;
- ♦ composition, concentration, viscosity, amount, flow rate of oral fluid:
- biochemical composition of hard tissue of teeth;
- condition of blood vessels and nervous system;
- ◆ improper development of teeth as a result of general somatic diseases;
- ♦ functional states of organs and systems of the body during the maturation and formation of hard tissues of the tooth.

If the secretion of saliva or its quantity (viscosity) decreases, the caries process becomes active. A high concentration of macro and micronutrients stops the caries process. The presence of thick and smooth enamel, its dense structure, minimal gaps in the crystalline lattice slow down the caries process. The presence of pits, ridges, folds, ditches, thin enamel and delicate structure activates the pathological process. Most often, dental caries develops in fissures of insufficient enamel. This process is also active in the neck area. V.K. Leontev (1984, 1989) proved by electrometry that the maturation of enamel is a dynamic process, which depends on the group of the tooth, the topography of the tooth and other factors. Rapid maturation of tooth enamel develops 4-6 months after the eruption of 78 teeth in the area of the incisal edge and cusps. The enamel of the cutting edge of the spade and pin teeth matures 2 times faster than the pre-neck enamel area. The maturation of enamel in dental fissures depends on its washing with saliva and the degree of covering with caries. Densification of enamel is a change in the chemical structure of enamel under the influence of macro and microelements. From all these factors, it is known that the caries process is faster and more active in young people than in the elderly. V.V. Nedoseko (1987) divided the bite into 4 groups according to caries resistance as a result of clinical and laboratory tests:

- 1. High resistance group. People with carious teeth and healthy periodontium are included. Saliva secretion in such people is 2 times higher than in people prone to caries. The amount of ionized calcium in saliva is high, the pH is shifted towards the alkaline side, and the amount of organic phosphate is low.
- 2. Group of medium resistance to caries. Foci of demineralization are located in molar, premolar, sometimes molar teeth. Caries intensity (KPO) is 9.09±0.80. Salivary secretion is 2 times lower compared to caries-resistant patients, the pH of saliva has shifted to the alkaline side, it is more saturated with 16.4% hydroxyapatite. Oral fluid is rich in inorganic phosphorus. Saliva has demineralizing activity. In this group, tooth enamel has a high level of remineralizing activity.

3. Group of low resistance to caries. It occurs in people with KPO = 17.65±1.27. All teeth except the lower shovel teeth are affected by caries. Saliva has a neutral pH, is highly saturated with calcium and phosphates, and has a high concentration of Na and K. Dental care has a high tendency to caries, the hygiene index is low. Enamel remineralization is high. 4. A group of very low resistance to caries. It occurs in people with a high hygienic index and very low saliva secretion. Saliva is not saturated with hydroxyapatite by 10.3%. The intensity of caries is equal to KPO = 29.9±4.89. Remineralization of enamel is greatly reduced. The carieso79 gene of dental caries is higher than other groups. The amount of total and ionized calcium and phosphate in oral fluid is low compared to other groups.

The demineralizing activity of saliva is high. Elimination of caries is related to the remission of general somatic diseases, intake of sufficient amounts of calcium, phosphorus, and iron during pregnancy and breastfeeding.

Frequent and large amount of carbohydrate consumption, poor oral hygiene causes cariogenic micro-organisms to attach tightly to the dental pellicle and cause tooth decay. When eating sticky substances, they accumulate in the retention points of the teeth (fissures, pits, contact surfaces, filling and prosthetic surfaces), as a result, the process of decay and decay begins. The formation of dental caries is affected by:

- ◆ anatomical structure of the tooth and its interaction with surrounding tissues;
- ♦ food ration and chewing intensity;
- ♦ saliva and gum fluid;
- oral hygiene;
- ♦ the amount of fillings and prostheses in the oral cavity;
- ♦ dental and jaw anomalies.

. This formed substance is called dental plaque. It can only be removed by force. Accumulation of organic acidification - milk, pyruvate, ant, propion, oil and other acidification occurs under dental plaque. These products are the products of sugar digestion during the life of most bacteria. Caries microorganisms are fixed in tooth hard tissues, metal, plastic and produce various carbohydrate preservatives: glycan, levan, dextran, heteropolysaccharide.

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