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WHAT IS THE DIFFERENCE BETWEEN NON-CARIOUS LESIONS OF THE HARD TISSUES OF THE TEETH

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ABSTRACT

Non-carious dental lesions are a frequent occurrence in dental practice. This concept includes a wide range of diseases with different etiologies and clinical manifestations. Non-carious dental lesions are an extensive group of diseases and pathologies. These include all damage to enamel, dental tissue, diseases of a non-bacterial nature.

KEYWORDS

Pathology, teething, non-carious, diagnose, hyperplasia, fluorosis. hereditary pathologies, tooth injury, pigmentation.

INTRODUCTION

In terms of prevalence, they occupy the second place after caries. Such lesions can have a variety of symptoms and clinical picture, and they have different causes of occurrence. But they are all congenital or acquired. They can have different distribution – they affect one or all teeth in a row, separate areas in a

certain order. Many of these diseases are difficult to diagnose, since the signs of different pathologies are similar and difficult to distinguish from each other. This may also be due to insufficient knowledge of the disease, which complicates its detection and increases the risk of complications.

Classification of non-carious lesions

Due to the variety of diseases that belong to the concept of "non-carious lesions of the teeth", their classification does not have one generally accepted standard. If you summarize all the data, you can get a generalized list of types of lesions.

1. Pathology of development during teething: Anomaly of shape, size. Fluorosis (speckled teeth). Enamel hypoplasia (developmental disorder). Pathology of the structure of teeth of a hereditary nature (odontogenesis, amelodentinogenesis). Syphilis (congenital). Other developmental pathologies associated with external factors (taking antibiotics, rhesus conflict).
2. Pathological changes in the hard tissues of the tooth: Complete loss of the tooth. Erosion. Color change after eruption. Hypersensitivity of tissues.
3. Changes in the internal structure of the tooth: Root fracture. Dislocation of the root. Fracture of the tooth crown. Opening of the pulp. In our country, another classification is more often used, proposed in 1968 by V. K. Patrikeev. According to it, non-carious lesions of the teeth are divided into two groups.
4. Lesions that occur before eruption: An anomaly of eruption and development. Hypoplasia of teeth. Hyperplasia. Fluorosis. Hereditary pathologies.
5. Lesions that occur after eruption: Erosion. Wedge-shaped defect. Necrosis of hard tissues. Hyperesthesia of teeth. Erasure. Tooth injury. Pigmentation. Hypoplasia.

This is the name of the pathology of the development of dental tissue during its formation, that is, in children before teething. Such a violation is caused by insufficient mineralization of tissues. The main sign is the complete absence of an organ or its abnormally small development. Hypoplasia of teeth can be both congenital and develop after the birth of a child. There are several reasons for this: the conflict of Rh factors of mother and child, an infectious disease suffered by the mother during pregnancy, infections in the child after birth, severe toxicosis accompanying pregnancy, premature birth, trauma during childbirth, pathology of the child's development after birth, dystrophy, diseases of the gastrointestinal tract, metabolic disorders, developmental disorders brain activity, mechanical damage to the jaw bone. There are two types of hypoplasia – systemic and local. The first is characterized by the defeat of all teeth, low enamel thickness or its absence. Yellow spots appear. Local is characterized by the defeat of one or two organs. There is a lack of enamel (partial or complete), structural defects of teeth – they can be deformed. Such violations cause pain. Severe hypoplasia causes increased tooth abrasion, tissue destruction or complete organ loss, and the development of malocclusion. Treatment of hypoplasia includes teeth whitening (at an early stage) or filling and prosthetics (with severe disease). At the same time, the enamel is remineralized with medical preparations (for example, calcium gluconate solution). In order to prevent the

occurrence of hypoplasia in children, pregnant women are recommended a balanced diet containing vitamins for teeth (D, C, A, B), calcium and fluoride, as well as strict observance of oral hygiene.

Hyperplasia

Hyperplasia – non-carious lesions of the teeth associated with excessive formation of tooth tissues. Their appearance is caused by an anomaly in the development of epithelial cells, enamel and dentin. It manifests itself in the form of "drops", which are also called "enamel pearls". They can reach 5 mm in diameter. The main area of localization is the neck of the tooth. Such a drop consists of tooth enamel, inside there may be dentin or soft connective tissue resembling pulp. There are five types of such formations according to their structure: true-enamel – consist only of enamel, enamel-dentine – the enamel shell contains dentin inside, enamel-dentine drops with pulp – connective tissue is inside, Rodriguez-Ponti drops – enamel formations in the periodontium between the root and the alveolus, intra-dentine - located in the thickness of the dentin. Hyperplasia of dental tissues does not manifest itself clinically in any way, it does not cause pain, inflammation or any discomfort. It is only possible to single out an aesthetic factor if the anomaly affects the front teeth. In this case, grinding and leveling of the surface is carried out. In other cases, if nothing bothers the patient, treatment is not carried out. Preventive measures are to protect baby teeth from caries, since their

destruction can cause disturbances in the development of permanent ones.

Fluorosis

Fluorosis occurs during the formation of dental tissue due to increased intake of fluoride into the body. It changes the correct structure of the enamel and causes its external defects – the appearance of spots, stripes, furrows, dark inclusions. In the development of such pathology, not only an overabundance of fluoride plays a role, but also a lack of calcium. In the child's body, fluoride accumulates more and faster than in adults, coming with food and water. There are such forms of fluorosis: dashed – manifested by the appearance of white stripes without a clear contour; spotted – characterized by the presence of yellowish spots with a smooth surface; chalky-speckled – matte or shiny spots having a white, brown or yellow color (can affect all teeth); erosive – multiple erosion of the enamel surface; destructive (a tooth has broken off or completely collapsed) – harmful processes accompanying fluorosis. Methods of treatment of fluorosis vary depending on the form of the disease. So, with a spotty form, bleaching and remineralization is carried out, if necessary, grinding of the top layer of enamel. But the erosive form cannot be cured in such ways, it is necessary to restore teeth with veneers or crowns. General methods of treatment include remineralization, restoration of the shape and color of the organ, local effects on the body, control of fluoride intake.

Erosion

Non-carious lesions of the teeth include such damage to the enamel as erosion. Its formation leads to discoloration, aesthetic damage to the tooth, as well as increased sensitivity. It is detected by visual inspection. Tooth erosion is characterized by progressive destruction of enamel and dentin, the course of the disease is chronic, can take a long time. The cause of the pathology may be mechanical, for example, when using hard brushes or pastes with abrasive particles. Also, erosion can be caused by chemical effects on the enamel when eating foods and beverages with high acidity (pickles, marinades, citrus juices and others). Production workers associated with the constant inhalation of harmful substances most often suffer from such a lesion of the teeth. The use of certain medications can contribute to the onset of the disease (for example, a large amount of ascorbic acid has a detrimental effect on the enamel).

The cause of tooth erosion can also be disorders in the work of the stomach (increased acidity of its environment) or the thyroid gland. It is difficult to identify the disease at an early stage, since it manifests itself only by the loss of shine on a separate small area of the tooth. The further course of the disease leads to a gradual decrease in enamel and dentin. It looks like worn teeth, most often at the base. Treatment is based on stopping the destruction of dental tissues. It includes the use of applications containing fluoride and calcium for about 20 days, then the affected area is

covered with fluorolac. It is possible to use veneers or crowns to restore an aesthetic appearance. The complex therapy includes calcium and phosphorus preparations, as well as vitamins for teeth. If erosion is not treated, it can cause hyperesthesia of the teeth.

Hyperesthesia

Hyperesthesia of teeth is manifested by increased sensitivity of the enamel and in most cases is a concomitant symptom of other non-carious diseases. The prevalence of this pathology is high: about 70% of the population suffer from hyperesthesia, women are more prone to it. The manifestation is a sharp, severe pain that lasts no more than thirty seconds and appears when external factors affect the enamel. Hyperesthesia is divided into types according to several criteria:

1. Distribution: limited form - affects one or more teeth; generalized - characterized by sensitivity of all organs.
2. Origin: a form of hyperesthesia associated with the loss of dental tissues; not associated with loss, due to the general condition of the body.

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