

Clinical and Morphological Features the Occurrence of Tooth Decay

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Abstract: The decay of human teeth is not just a local problem, but a real signal that serious pathological changes are taking place in the body. The oral cavity, being a mirror of health, reflects the general condition of internal organs and systems. When the destruction of dental tissues begins, it often indicates the development of hidden diseases or a weakening of the immune system.

This article outlines the generally accepted and modern views on the causes of caries and the solution to these problems in young children.

Keywords: chemical resistant chloride compounds, minerals, antibiotic.

From the moment an organism is born until its death, various chemical reactions take place in its stomach, the end products of which are chemical mineral chloride salts. This reaction occurs when two components are combined: hydrochloric acid and a mineral substance. With the blood flow, chemical resistant chloride compounds quickly spread to all areas of the living body. Accordingly, the less the body consumes minerals, the less often a chemical reaction occurs and a small amount of mineral chloride enters the bloodstream. Since any living organism is surrounded by an incalculable number of putrefactive microbes, and the intake of chloride minerals into organs and tissues is rapidly decreasing for one reason or another, there is a detrimental effect of putrefactive microflora on the living departments of an earthly being.

Water is an important chemical element for the full existence of a living organism. The loss of 10% of water by the body leads to various disorders and disorders, and the loss of more than 20-25% ends in death for a living being. Water makes up 65% of the body weight of an adult organism. With the direct participation of water, important metabolic processes take place in the body. Therefore, it is understandable why a living being needs to consume such a large amount of water [1].

Currently, artificial addition of fluoride-containing compounds to tap water is used to prevent the formation of dental caries in people. But, except for humans, this water is consumed, especially in winter, by all farm animals (large and small cattle, horses, pigs, birds). Fluoride is added to drinking water, mainly in places with a low percentage of fluoride. At the same time, significant visible changes in tooth enamel are observed, namely, with an increased content of fluoride components in drinking water. The normal fluoride content in drinking water should range from 1 mg/liter. In numerous works and scientific studies of many domestic and foreign scientists, we find that, with an excessive content of fluoride in tap water, there is spotting of tooth enamel and damage to the bone system. Such characteristic changes in dental and bone tissues are registered in many countries of the world. The presence of fluoride in a living organism is found not only in teeth, but also in muscles, skin, hair, nails. The increased content of fluoride in the body depends primarily on the nature of the body's nutrition, its age and the excess content of fluoride in the area.

Fluorine (lat. Fluorum, chemical sign – F) is a chemical element of group VII of the Periodic Table of D.I. Mendeleev. It is an unpleasant and irritating gas to the mucous membranes. Fluorine is found everywhere in nature and is localized in soil, fresh and seawater. Seas contain ten times more fluoride than fresh waters. A very active chemical element. It reacts chemically with all minerals except chlorine, oxygen, nitrogen and some so-called "noble" gases.

As a therapeutic anti-cariogenic agent for the hard tissues of the teeth of the mouth of people, the domestic scientist I.G. Lukomsky proposed 75% fluoride paste. In his opinion, and thanks to the experiments conducted on small laboratory animals (white rats and mice, guinea pigs) at that time, it was proved that when cleaning the tooth enamel of animals with toothpaste containing fluoride, the carious process was suspended and even its harmful development stopped. In addition to the external organs, a high content of fluoride is also noted in other internal parts of a living organism (erythrocytes, sperm, blood plasma). As already noted above, when the fluoride element is insufficiently consumed with food, endemic caries occurs.

Thus, the chemical element fluorine, according to the majority of both medical and veterinary doctors, has a preventive effect to prevent the appearance of a carious cavity in the dental tissue. But is this really the case?

Materials and methods of research.

It was noted that the upper and lower jaws of various wild, zoo and domestic farm animals were often used for the manufacture of medicinal products. In addition to them, the museums had animal skeletons, which could be used as an example to examine their dental components.

The teeth of animals perform a chewing function and when they are lost, significant changes occur in the further development of the body. The number and distinctive features of teeth in animals and humans have their own properties characteristic of each individual. A mammalian tooth consists of a crown, neck and root.

1. The crown is completely covered with enamel and protrudes above the surface of the gum.
2. The neck is the gap between the crown and the root.
3. The root of the tooth is located in the alveolar fossa of the gum and is covered with cement.

The development of teeth occurs at an early intrauterine stage of fetal development. As the body grows, teeth change several times in its life: baby teeth fall out, and permanent ones grow in their place. Teeth also perform power functions, participating in the rupture of raw food, with the help of canines. To attack and deter prey (predators), the jaws of the mouth are naturally equipped with numerous rows of sharp teeth. In domestic animals, for example, in ruminants, the upper row of teeth is missing and this is due to the constant chewing of coarse food. In snakes, the teeth are designed to attack the victim and serve to inflict wound holes where venom is injected from the venom glands.

At the same time, in the process of phylogeny, each species has developed the basic properties of teeth necessary for their survival, which support the vital functions of the body as a whole.

Microscopically, the tooth consists of enamel, dentin and cement. Enamel is a living tissue. It is impossible to distinguish enamel from dentin. With the constant intake of an excessive amount of toxic substance into the animal's body, first of all, the enamel signals its negative effects by changing its color. The color of teeth in living organisms has its own characteristics and differences. But it remains a mystery why animals of different species have different tooth colors. For example, horses, donkeys, mules, ponies, have a dark brown plaque on their front teeth. Some researchers associate this pathology with the action of eaten food, in particular, coarse vegetable food (straw) in contact with tooth enamel has its negative effect on them, which eventually leads to the destruction of tooth enamel, with a change in its color. In carnivorous animals, teeth have a white color and in the future, no matter what they eat, the former color of the enamel is still preserved. When consuming large amounts of water and foods containing a large percentage of fluoride, in humans and animals, tooth enamel changes its color from white to brown. Under the enamel is the dentin, which makes up the bulk of the tooth. The dentin protruding above the surface of the gum is covered with enamel, and hidden in the alveolar well is covered with cement. The hard tissues of an animal's tooth consist of a very durable substance. It contains various macronutrients – calcium, magnesium, sodium and trace elements – silver, fluorine, nickel [2]. These minerals are the main link in the regulation of metabolic processes for the normal functioning of the animal's body. The distribution of minerals in the dental tissue of an

animal is not the same and depends primarily on the presence of trace elements in the earth's crust in a given area, the possibility of their high-quality consumption by animals. Therefore, with excessive absorption by a living organism, for example, fluoride, various diseases of the dental and bone tissues manifest themselves.

You should know how minerals interact with each other, and their excess or deficiency affects different functions of the animal's body, which minerals and in what amount should be present primarily in the dental tissue. The main objective of this scientific article is to uncover the causes of dental caries in animals, as well as a correct understanding of its etiology.

Caries (from Latin. *caries* – decay, caries) is a disease of the oral cavity, as a result of which there is a slow but constant destruction of the hard part of the tooth, with the formation of a carious cavity in it and further complete disintegration of the dental tissue. It is unclear why one species of animal, for example, dogs, cats, has white teeth, while another species, for example horses, sheep, have yellow or brown teeth. Many authors associate this with the peculiarities of the structure of teeth. According to recent data, the tooth contains two well-known minerals. One of them, calcium (Ca), is contained in the dentine of the tooth – 24,500 mg%, and in the enamel – 34,500 mg%. Another mineral is magnesium (Mg): in the dentine of the tooth – 800 mg%, and in the enamel – 250 mg%.

We conducted the following experiment. In the magnesium solution made (magnesium sulfate preparation), lower a piece of bone with the presence of: connective, cartilage, muscle tissue and bone marrow on it, then at the expiration of the period necessary for the start of rotting of this drug, the latter does not occur, the fermentation process does not occur, an unpleasant odor is not felt (experiment 6 months). The magnesium preparation prevents the reproduction of coccal forms of bacteria and the course of other inflammatory processes. A 10% aqueous solution of formalin has a similar effect on putrefactive microorganisms. It is used in the preservation of pathoanatomic preparations for a long time. Its disadvantage is an unpleasant, pungent poisonous smell. The magnesium preparation, on the contrary, has no specific odor and side effects, but at the same time, completely prevents the reproduction of pathogenic microflora and protects the pathoanatomic preparation from rotting.

When magnesium sulfate powder is added to an artificially made solution of 0.5–1% hydrochloric acid concentration, a bactericidal liquid is obtained until it is completely dissolved, killing most microorganisms.

These chemical reactions occurring between minerals and hydrochloric acid are very easily obtained in the laboratory. To do this, a solution of a certain concentration of hydrochloric acid is poured into a glass container, where a certain mineral substance (magnesium, calcium, potassium, nickel, etc.) is introduced. A violent chemical reaction occurs, with the formation of a new complex compound. And in this chemical composition, the decomposition process of a piece of fresh meat placed in it does not occur.

Conclusion. As soon as the minerals stop entering the body, almost immediately, the production of chemical resistant chloride compounds decreases in the stomach, a bright red antibiotic ceases to be released into the blood and instantly a huge world of putrefactive microbes from the external environment and, directly from the digestive tract of a living being, begins its destructive, rotting effect on all chlorine-free areas organs and tissues.

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