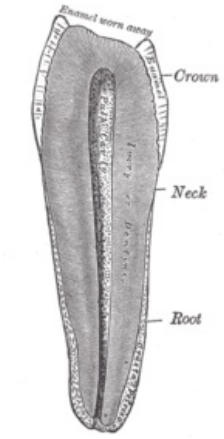
Erosion (Dentistry)

Erosion is the loss of hard dental tissues caused by chemical influences of non-bacterial origin. Acids in the environment of the oral cavity lower the pH, which leads to enamel demineralization. Saliva counteracts this effect with its buffering capacity. Acids of endogenous and exogenous origin cause erosion.

- Endogenous acids - their source is gastric juices in case of vomiting, bulimia, gastroesophageal reflux or alcohol. In case of vomiting, damage to the palatal surface of the frontal teeth is most common.
- Exogenous acids - their source is food or the work environment. In the working environment, for example, acid vapors during the production of accumulators. In the case of food, especially carbonated soft drinks, candies, citrus fruits, vinegar.

Saliva restores the pH to physiological values thanks to its buffering capacity. In a healthy individual, this process takes about 10 minutes. We encounter a reduced buffering capacity of saliva in individuals suffering from xerostomia



Erosion

Division

The basic division divides erosion according to *Eccles*:

- Surface lesions - erosion affects only the enamel
- Localized lesions - erosion affects the dentin. Exposed dentin represents less than 1/3 of the lesion.
- Generalized lesions - erosion affects the dentin. Exposed dentin represents more than 1/3 of the lesion.

The erosive process has an early and a late phase. A superficial lesion appears during the early phase and is a reversible process. Localized and generalized lesions appear at a late stage and are an irreversible process. According to the degree of progression, we divide into active and latent erosion.

- Active (progressing) lesion - The erosion surface is rough. The edges of the erosion are uneven and the protrusions from the edge of the lesion point towards the center of the lesion.
- Intact (latent) lesion - The erosion surface is smooth. The edges of the erosion are rounded and smooth.

BEWE index

BEWE(basic erosion wear examination)

Score	Criterion assessment
0	No erosion
1	Initial loss of surface structures (gloss, perikymata)
2	Clinically manifest defects with damage to less than 50% of the tooth surface
3	Clinically manifest defects with damage to less than 50% of the tooth surface

Differential diagnosis

Erosion can easily be confused with abrasion or attrition. Unlike these defects, erosive defects have a smooth and shiny surface. In the case of atrice and abrasion sharp edges appear.

Mechanical and erosive defects are often combined, because erosive defects have lower mechanical resistance, therefore it is not always possible to completely separate these processes from each other. For these reasons, it is also not recommended to brush your teeth immediately after eating, when the pH in the mouth is reduced.

Links

Related articles

- Abrasion (Dentistry)
- Atrice
- Tooth resorption

Used literature

- MINČÍK, Jozef, et al. *Kariologie.* 1. edition. Praha : Stomateam s.r.o, 2014. 255 pp. ISBN 978-80-904377-2-2.