

Gingivitis

Gingivitis is a disease of the gingiva.

Manifestations

- Redness, swelling, bleeding after sulcus probing, exudation (= increased flow of sulcal fluid), ulceration.
- Increase in probing depth without loss of attachment = fake pocket.

Inflammation

The initial manifestation of gingivitis is **inflammation**. The gums are red and edematous. Inflammation leads to a gradual increase in the volume of the gingiva, which is first manifested by enlargement and rounding of the interdental papillae. Gradually, the *stippling* disappears and the gingiva becomes smoother. The **fake periodontal pockets** are formed.

Bleeding

Another symptom that is typical of inflammation is **stimulated hemorrhage**. The gingiva bleeds, for example, when cleaning teeth, eating, etc. The degree of inflammation can be inferred from the intensity of bleeding (PBI - papilla bleeding index).

Formation of ulcers

In some cases, **ulcers** may form on top of the interdental papillae, leading to tissue disintegration and, in extreme cases, complete disappearance of the papilla (**ANUG - acute necrotizing ulcerative gingivitis**). An *inverted papilla* may form, which is sunken in the opposite direction. Ulcerative changes in the gingiva may indicate some serious diseases such as leukemia or AIDS.



ANUG

Gingival Hyperplasia

In some cases, connective tissue accumulates in the gingiva, leading to an even greater increase in gingival volume and thus accentuation of periodontal pockets.

Classification by etiology

- Plaque-induced gingivitis only;
- Plaque-induced modified by general factors:
 - *Endocrine factors:*
 - Gingivitis at puberty (e.g., juvenile hyperplastic gingivitis);
 - Pregnancy gingivitis;
 - Gingivitis in diabetes mellitus,
 - *General disease:*
 - e.g., Gingivitis in leukemia
 - *Drug-modulated gingivitis:*
 - Gingivitis with hormonal contraceptives
 - Gingival hyperplasia (Cyclosporine A, hydantoins, Ca^{2+} channel blockers) with following inflammation.^[1]



Gingivitis (teeth before and after scaling)

Classification by progress

Acute gingivitis

- Acute inflammation of the gingiva with redness, swelling and exudation.
- Causes: mechanical and thermal influences (persistent bacterial plaque).

Chronic gingivitis

- Long-term clinical course;
- Manifestations: limited to the gingiva (bleeding, hyperplastic swelling...)
 - There is no loss of attachment, bone is not lost, sulcus may be deepened into a parodontal pocket;
 - Inflammatory hyperplasia leads to the formation of pseudopockets.
- Cause: microorganisms dental plaque = "dirty" gingivitis;
 - Microbiology - G+ rods and cocci predominate over G- bacteria - facultatively anaerobic predominate over purely anaerobic.

Plaque-induced gingivitis

- Inflammation induced by dental plaque bacteria;
- Localized × Generalized form;
- May affect the entire gingiva or only the interdental papillae
- Typical chronic course;

Histologically

round cell infiltrate. No disruption of alveolar bone, compacts.

Prognosis

untreated may progress to parodontitis (transfer of inflammation to alveolar bone). Treated fully reversible.

Therapy

- Chronic form: hygiene! Removal of retention sites for plaque (tartar, overhanging fillings, inadequate prosthetic work...)
- Acute form: gentle rinses with hydrogen peroxide, after calming down as in the chronic form.

Gingivitis gravidarum (pregnancy gingivitis)

- In the sulcular fluid - increased amounts of estrogen and progesterone + increased reactivity of gingival tissue, bacterial invasion;
- Increased vascular permeability, edema, synthesis of prostaglandins and other mediators of inflammation;
- Spontaneous gingival bleeding (mainly from the 2nd trimester onwards), gingival hyperplasia (epulis gravidarum);
- The amount of plaque is not increased, its composition changes.

Therapy

as same as for plaque-induced gingivitis.

Pubertal gingivitis

- Hormonal imbalance, often associated with poor hygiene and excessive mouth breathing;
- Peak prevalence around age 15. More significant changes in girls.^[2]
- Clinical manifestations as in pregnancy gingivitis.

Therapy

as same as for plaque-induced gingivitis.

Gingivitis intermenstrualis, menstrualis and climacterica

- Consequence of a change (decrease) in estrogen levels - decreased keratinization of cells;
- Loss of the natural covering of keratinized cells.

Therapy

as same as for plaque-induced gingivitis.

Contraceptive-induced gingivitis (pill)

- as pregnancy gingivitis, when taking high progesterone preparations.

Therapy

as same as for plaque-induced gingivitis.

Sources

Related articles

- Gingiva
- Periodontium
- Parodontology

External sources

- Klasifikace onemocnění gingivy (<https://www.fnplzen.cz/kliniky/stom/klasifikace.htm>)

References

1. POLENÍK, Pavel. *Onemocnění gingivy* [online]. Česká parodontologická společnost (FN Plzeň), ©1999. [cit. 2011-09-12]. <<https://www.fnplzen.cz/kliniky/stom/klasifikace.htm>>.
2. MAZÁNEK, Jiří – URBAN, František. *Stomatologické repetitorium*. 1. edition. Grada Publishing a.s, 2003. pp. 456. ISBN 80-7169-824-5.

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