

Periodontology

Gingival Diseases in Childhood

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The effects of periodontal disease observed in adults have their inception earlier in life. Gingival disease in the child may progress to jeopardize the periodontium of the adult. The developing dentition and certain systemic metabolic patterns are peculiar to childhood.

There are also gingival and periodontal disturbances that occur more often in childhood and are therefore identified with this period.

THE PERIODONTIUM OF THE DECIDUOUS DENTITION

1-The gingiva of the deciduous dentition is pale pink but not as pale as of the adult attached gingiva because of thinness of the keratinized layer causes the underlying vessels to be more visible.

2-may be either smooth or stippled (stippling is found in 35% of children between ages 5 and 13 years) .

3-The interdental gingiva is broad faciolingually and tends to be relatively narrow mesiodistally, in conformity with the contour of the a proximal tooth surfaces of the deciduous teeth .

4-The gingival sulcular depth is shallower in the deciduous dentition than in the permanent dentition. The mean gingival sulcus depth for the primary dentition is $2.1 \text{ mm} \pm 0.2 \text{ mm}$.

5- The width of the attached gingiva is greater in the incisor area, decreases over the cuspids, and increases again over premolars (primary molars) and permanent molars . The attached gingiva increases in width with age.

Radiographically

the alveolar bone in relation to the deciduous dentition shows a prominent lamina dura, both in the crypt stage and during eruption. The trabeculae of the alveolar bone are fewer but thicker than in the adult, and the marrow spaces tend to be larger. The crests of the interdental septa are flat.

TYPES OF GINGIVAL DISEASE

Chronic Marginal Gingivitis

Chronic marginal gingivitis is the most prevalent type of gingival change in childhood.

The gingiva exhibits all the changes in color, size, consistency, and surface texture characteristic of chronic inflammation.

A fiery red surface discoloration is often superimposed on underlying chronic changes.

Gingival color change and swelling appear to be more common expressions of gingivitis in children than are bleeding and increased pocket depths.

Etiology:

The cause of marginal gingivitis in children as in adults is plaque, local conditions as materia alba and poor oral hygiene favor its accumulation.

Dental plaque appears to form more rapidly in children age 8 - 12 than in adults.

Calculus is uncommon in infants; it occurs in approximately 9% of children ages 4 - 6, in 18% of age 7 - 9, and in 33% to 34% of those ages 10 - 15.

puberty gingivitis: gingivitis and gingival enlargement is found in the circumpubertal period. It occurs in males and females and resolves partially after puberty. This inflammatory lesion may include a gingival enlargement as a result of hormonal changes that magnify the tissue response to dental plaque.

The most frequent manifestation is a significant increase in bleeding interdental sites and inflammatory gingival enlargement.

eruption gingivitis: Gingivitis associated with tooth eruption, tooth eruption itself does not cause gingivitis, inflammation results from plaque accumulation around the erupting teeth.

the gingiva around erupting teeth may appear reddened because the gingival margins have not fully keratinized and the sulcus has not developed.

Gingivitis occurs more often and with greater severity around malposed teeth because of their increased tendency to accumulate plaque and *materia alba*.

- Gingivitis is increased in children with *excessive overbite* and *overjet*, *nasal obstruction*, and *mouth-breathing habit*.

Exfoliating and severely carious deciduous teeth often will cause gingivitis due to:

a- plaque accumulation from pain during brushing or food impaction in areas of tooth breakdown .

b-the discomfort of chewing on severely infected teeth forces unilateral chewing and increased food and plaque accumulation on the affected site.

Dental crowding in mixed dentition often lead to increase incidence of gingivitis because of difficulty of adequately cleansing the area of plaque and food debris.

Localized Gingival Recession

Gingival recession around individual teeth or groups of teeth is a common source of concern. The gingiva may be inflamed or free of disease, depending on the presence or absence of local irritants.

There are many causes of gingival recession but in children the position of the tooth in the arch is the most important.

Gingival recession occurs on teeth in labial version and on those that are tilted or rotated so that the roots project labially.

Anterior open bite increases the prevalence of gingival recession. The recession may be a transitional phase in tooth eruption and may correct itself when the teeth attain proper alignment, or it may be necessary to realign the teeth orthodontically, mostly seen in lower incisors and upper cuspid regions.

Acute Gingival Infections

a-Primary Herpetic Gingivostomatitis.

This the most common type of acute gingival infection childhood and often occurs as a sequela of upper respiratory tract infection.

b-Candidiasis.

This is a mycotic infection of the oral cavity caused by the fungus *Candida albicans*.

c- Necrotizing Ulcerative Gingivitis.

The incidence of necrotizing ulcerative gingivitis (NUG) in childhood is low .

In children living in areas where chronic malnutrition is common and in children with Down syndrome and those with severe illness, the incidence and severity of NUG are increased.

Primary herpetic gingivostomatitis, which is more common in childhood, is occasionally erroneously diagnosed as NUG.

TRAUMATIC CHANGES IN THE PERIODONTIUM

a-Traumatic changes may occur in the periodontal tissues of deciduous teeth under several conditions.

In the process of shedding deciduous teeth, resorption of teeth and bone weakens the periodontal support so that the existing functional forces are injurious to the remaining supporting tissues.

Excessive occlusal forces may be produced by malalignment, mutilation, loss or extraction of teeth, or dental restorations.

b-In the mixed dentition stage, the periodontium of the permanent teeth may be traumatized, because the permanent teeth bear an increased occlusal load when the adjacent deciduous teeth are shed.

The periodontal ligament of an erupting permanent tooth may be injured by occlusal forces transmitted through the deciduous tooth it is replacing.

External trauma as well as trauma from occlusion may result in ankylosis of deciduous teeth and occasionally of permanent teeth. these teeth appear to be intruded or sunken. ankylosed deciduous teeth may interfere with alveolar bone growth around erupting permanent teeth and

may prevent their timely emergence into the oral cavity. most frequently seen in the deciduous second molar that prevent the eruption of permanent bicuspid.

