**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 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 mm ± 0.2 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 in Childhood**

**Plaque-Induced 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.

**puberty** **gingivitis**

 gingivitis and gingival enlargement is found in the circumpubertal period; this form of gingivitis has been termed puberty gingivitis. 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. In children, as in adults, the cause of

gingivitis is plaque; local conditions such as *materia alba* and poor oral hygiene favor its accumulation. In preschool children, however, the gingival response to bacterial plaque has been found to be markedly less than that in adults.

**Eruption** **Gingivitis:**

Gingivitis associated with tooth eruption is so common that the term eruption gingivitis has come into frequent use. Inflammation associated with plaque accumulation around erupting teeth, perhaps due to discomfort caused by brushing these friable areas. The gingiva around erupting teeth can appear reddened because gingival margins have not yet keratinized fully and sulcus development is incomplete.

Exfoliating and severely carious primary teeth often contribute to gingivitis caused by plaque accumulation as a result of pain during brushing or food impaction in areas of cavitation. As a normal part of exfoliation, the junctional epithelium migrates under the resorbing tooth, thereby increasing pocket depth and potentially creating a niche for pathogenic bacteria.

**Drug-Induced Gingival Enlargement**

Gingival enlargement can result from the use of certain drugs. Cyclosporine, phenytoin, and calcium channel blockers, which are used to treat conditions that are encountered during childhood (e.g., organ transplantation, epilepsy, cardiac anomalies), increase the prevalence of gingival enlargement.

**Gingival Changes Related to Orthodontic Appliances**

Gingival enlargement can be related to the presence of fixed orthodontic appliances, which complicate plaque removal. Gingival changes can occur within 1 to 2 months of appliance placement. They usually are transient, and they only rarely produce long-term damage to periodontal tissues.

**Mouth Breathing**

Mouth breathing and lip incompetence, which are together referred to as an open mouth posture, are often associated with increased plaque and gingival inflammation. The area of inflammation is often limited to the gingiva of the maxillary incisors. There is usually a clear line of demarcation where the gingiva is uncovered by the lip.

 **Non–Plaque-Induced Gingival Lesions**

**Primary Herpetic Gingivostomatitis**

Primary herpetic gingivostomatitis is an acute-onset viral infection that occurs early during childhood, with a heightened incidence.

between the ages of 1 and 3 years. Among children with primary herpetic infections, 99% are symptom free or have symptoms that are attributed to teething. The remaining 1% can develop significant gingival inflammation and ulceration of the attached gingiva, tongue, palate, and lips.

The most important therapeutic measure is to control the child’s hydration with bland, nonacetic fluids. Hospitalization may be necessary in some severe cases.

**Periodontal Diseases of Childhood**

**Aggressive Periodontitis**

The currently accepted designation of aggressive periodontitis broken down into two forms: localized and generalized. Localized aggressive periodontitis has been defined as “interproximal attachment loss on at least two permanent first molars and incisors, with attachment loss on no more than two teeth other than first

molars and incisors. The generalized form of aggressive periodontitis, which is defined as a generalized interproximal attachment loss, including at least three teeth that are not first molars and incisors. In young individuals, localized aggressive periodontitis is more common than the generalized form.

Several studies have suggested the involvement of A. actinomycetemcomitans and P. gingivalis in the pathogenesis of aggressive periodontitis.

**Chronic Periodontitis**

Chronic periodontitis, which was formerly known as adult periodontitis or chronic adult periodontitis, is one of the most prevalent forms of periodontitis. It is characterized by a “slow to moderate rate of progression that may include periods of rapid destruction. "Although the disease can appear in children and adolescents as a result of retained plaque and calculus, it is far less prevalent in this population than it is in adults.

Chronic periodontitis can occur in children in the localized form, in which less than 30% of the dentition is affected, and in the generalized form, in which more than 30% of the dentition is affected. Strains such as T. forsythia, Prevotella intermedia, Fusobacterium nucleatum, P. gingivalis and Prevotella nigrescens are found more often in the children.

**“It is better to be hated for what you are than to be loved for what you are not.”**

**― Andre Gide**