

Periodontics

Perspectives of Current Ideas, Techniques and Clinical Concept in Periodontics and Restorative Dentistry

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Periodontal Disease in Children and Adolescents

Periodontal disease in adults is common and is regularly treated by general dentists and periodontists. There is a wide range of clinical problems associated with adult periodontal disease whereas in children and adolescents a more narrow range of problems occur. The nature of periodontal disease of children and adolescents is generally the same as those in adults, however the severity and progression can often be more rapid.

Juvenile Periodontitis

This manifestation of periodontal disease is characterized by rapid loss of connective tissue attachment and bone at more than one tooth in the permanent dentition. The disease often occurs in children between the ages of 11-13 years, is more common in females and has a familial tendency. The overall occurrence epidemiologically is between 1-3.4%. Two basic forms of the disease may exist. There is a more localized form, where only the incisors and first molars are involved and the second form is generalized and most teeth are affected. A significant characteristic of the disease is the microbiota where gram negative organisms dominate and *A. actinomycetem-comitans* is the most prominent organism.

Treatment should begin quickly due to the rapid progression of the disease. Administration of antibiotics (tetracyclines, metronidazole, augmentin have been used effectively)

accompanied by flap curettage and frequent maintenance are the usual regimen. Bone grafting is sometimes necessary.

An interesting phenomenon that occurs in juvenile periodontitis is that the disease progression seems to slow down or stop after the early twenties.

Gingival Hyperplasia

As in adults, gingival hyperplasia can be induced by medication (diltiazem, calcium channel blockers). As in adults, either changing medications or reduction of the dose is necessary in order to resolve the problem. Another causative agent in children can be orthodontics. In most cases poor plaque control seems to be the exacerbating factor leading to hyperplasia. If the condition is slight then completion of orthodontics and removal of brackets and bands resolves the problem. When the extent of the hyperplasia interferes with completion of orthodontics or is unaesthetic then gingivectomy/gingivoplasty is necessary. Once the excess tissue is removed then scrupulous plaque control is necessary to prevent recurrence. Regular and frequent maintenance and medicated rinses (chlorhexine) help reduce plaque and recurrence of hyperplasia.

Mucogingival Problems

Mucogingival problems occur in both adults and children. Differences between adults and children can lead to different recommendations for similar problems. For instance, the presence of an aberrant frenum in a child undergoing orthodontic treatment is universally regarded as something that requires treatment. In an adult patient, without the signs or symptoms of disease surgical removal of the frenum attachment may not be necessary. This concept also applies to situations where there is minimal or lack of attached gingiva. In an adult there is a wide range of possibilities regarding the management of these problems. The decision to surgically intervene is based on many factors that cannot be listed here. For the child, the issue of growth and development and the presence or absence of orthodontics are the main considerations. What appears to be a mucogingival deficiency in a child is often merely an issue of maturation. For instance, when the mandibular incisors have erupted there are often discrepancies in levels of the marginal gingiva. There often is an illusion of gingival recession around one tooth relative to the others. Many times this is merely the failure of the gingiva on the adjacent incisors to adequately retract (passive eruption), but eventually time and development will rectify the situation.

When there is a legitimate area of concern over lack of attached gingiva and gingival recession decisions have to be made whether

surgical treatment will be necessary. If orthodontic treatment is being considered then the predicted direction of tooth movement has to be taken into consideration. With facial recession there is often an associated facial version of the tooth. If orthodontic treatment is anticipated then the lingual movement of the tooth can improve or resolve the problem without surgical intervention. Conversely, if no movement or facial movement is anticipated then grafting is appropriate.

Systemic Factors

A wide variety of systemic diseases may result in severe, rapid periodontal attachment loss that can lead to premature exfoliation of teeth. Several diseases have been associated with periodontitis before puberty that include Papillon-Lefevre syndrome, hypophosphatasia, neutropenias, leukocyte adhesion deficiency, Down's syndrome, leukemia, early onset Type 1 diabetes and others. Some of the early manifestations of these diseases occurs orally so that children who present with abnormal periodontal findings should be carefully screened and sent for medical consultation. Treatment is frequently difficult with eventual unsuccessful outcomes, however combinations of mechanical periodontal treatment, antimicrobial agents and systemic drugs to modulate the host response has led to improved prognosis.

Next Topic: The Role of Oral Inflammation and Systemic Health

Do You Have suggestions for future topics? Call my office or e-mail your ideas.

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