Oral Manifestations of Down Syndrome

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A congenital disorder arising from a chromosome defect, causing intellectual impairment and physical abnormalities including short stature and a broad facial profile. It arises from a defect involving chromosome 21, usually an extra copy (trisomy-21). Down syndrome is a lifelong condition. But with care and support, children who have Down syndrome can grow up to have healthy, happy, productive lives. Down syndrome is caused by a problem with a baby's chromosomes. Normally, a person has 46 chromosomes. But most people with Down syndrome have 47 chromosomes. In rare cases, other chromosome problems cause Down syndrome. Having extra or abnormal chromosomes changes the way the brain and body develop. Dental Manifestations, Oral and Dental Considerations, Management: delayed eruption of both primary and permanent dentitions, 35-55% of microdontia, clinical crowns are short, conical, small, roots complete. Enamel hypocalcificiation and hypoplasia are common DS patients 50% more likely to have congenitally missing teeth, taurodonts are frequent finding. 1/3 more caries resistant than their non-DS siblings. Gingivitis develops earlier and more rapidly and extensively in persons with DS, perhaps because of an abnormality in host defenses. Patients with DS have altered microbiological composition of subgingival plaque, including increased Antinomies and Hemophilic strains. There are observed V-shaped palate, incomplete development of the midface complex, soft palate insufficiency. Hypotonic O. Ores, Masseter, Zygomatic, Temporalis Muscles. Absent incisors make articulation difficult. High incidence of laryngeal -tracheal stenosis, also upper airway obstruction and sleep apnea are common. Scalloped, fissured tongue with bifid uvula, cleft lip/palate, enlarged tonsils/adenoids. Oral and Dental Considerations in Down syndrome. Higher incidence of congenitally missing primary and permanent teeth in as many as 50% of patients. Reduced salivary flow. Tongue enlargement is relative (as a result of underdeveloped maxilla, tongue appears to be enlarged). Crowding is frequent, especially in maxilla, due to underdevelopment. Higher incidence of bruxism, particularly in ages 0-6 years. Bruxism tends to decrease after age six. Higher incidence (96%) of periodontal disease (misaligned teeth contribute to this secondarily). Current research suggest that reduced neutrophil and monocyte chemotaxis, reduced phagocytosis, and a defect in T-cell proliferation and maturity may be reasons for the increase in periodontal disease seen in these patients. An important note about pre-medication: patients with Down syndrome are more likely to require SBE prophylaxis prior to dental procedures because of their increased incidence of congenital heart defects. Consultation with the patient's physician may be necessary. Dental Management: an aggressive preventive dental program is recommended for patients with Down syndrome. The program should include: three to four month recalls: Consistent preventive care can help reduce periodontal disease, dietary counseling and encouragement of good oral hygiene: Practical advice to minimize consumption of cariogenic foods and the effects of such foods on tooth structure. Topical fluoride application: For caries prevention and/or reduction of dentinal.

Key Words*: DS, Dental Manifestations of down syndrome patients, Oral and dental Considerations of down syndrome patients, Management of dental care of down syndrome patients*