Oral health status

Although the overall oral health of the general population is improving, disparities still exist in oral health needs among certain special needs groups. Individuals with mental retardation (MR), for example, have worse oral health and oral hygiene compared with the general population. Dental problems are among the top 10 limiting secondary conditions among people with MR. Traci et al. found the estimated prevalence rate of oral hygiene problems was 451 per 1,000 individuals with Down syndrome and an average DMFT score of 6.44 was found among individuals with Down syndrome and an average DMFT score of 6.73 among individuals with other aetiologies of MR. Sturmey and Hinds found 33 percent of individuals with MR compared with an average DMFT score of 6.44 was found among individuals with Down syndrome and an average DMFT score of 6.68 among individuals in the general population. They found, however, that the proportion of missing teeth to filled teeth was much higher among individuals with MR compared with the general population, suggesting extraction, rather than full restoration, is the primary treatment of dental problems among those with MR. Dental caries, or tooth decay, may be linked to frequent vomiting or gastro-oesophageal reflux, decreased saliva production, medications containing sugar or special diets that require prolonged bottle feeding or snacking.

Periodontal health

Similar findings also have been reported with respect to gingivitis, periodontal disease, bruxism and lack of masticatory ability. Periodontal disease can occur in children with impaired immune systems or connective tissue disorders and inadequate oral hygiene. The prevalence of gingivitis is estimated to be 1.2 to 1.9 times that of the general population. Dental disease also has been shown to be more prevalent among individuals with MR compared with the general population. Sturmey and Hicks found 33 percent of those examined with MR had gingivitis and 20 percent had lacked mastication abilities. In addition, Oilo et al. examined the wear of teeth among individuals with MR and found 5.3 percent of men and 2.8 percent of women had unacceptable tooth wear that required treatment compared with 1.2 percent in the general population.

Oral development

Tooth eruption may be delayed, accelerated or inconsistent in children with growth disturbances. The gingivae may appear red or bluish-purple before erupting teeth break through into the mouth. Eruption depends on genetics, growth of the jaw, muscular action and other factors. Children with Down syndrome may show delays of up to two years. Malocclusion and crowding of the teeth occur frequently in children with atypical development. More than 80 craniofacial syndromes have been reported that can affect oral development with 25 percent associated with mental impairment. Muscle dysfunction contributes to malocclusion, particularly in people with Down syndrome. Teeth that are crowded or out of alignment are more difficult to keep clean, contributing to periodontal disease and dental caries.

Tooth anomalies are variations in the number, size and shape of teeth. Morphological patterns in SHCN children also can be disturbed. For example, children receiving chemotherapy for childhood cancer can result in a higher prevalence of various malformations in teeth. Children treated in the early years of their lives displayed the most severe dental defects, suggesting that immature teeth are at a greater risk of developmental disturbances than fully developed teeth. People with Down syndrome, oral clefts, ectodermal dysplasia or other conditions may experience congenitally missing, extra or malformed teeth.

Risk factors

Oral hygiene A number of factors may predispose an individual with SHCN to oral pathologies. The oral hygiene among individuals with MR has been shown to be consistently poor compared with individuals in the general population. Those with MR often have impaired physical coordination and cognitive sequences, relying on skills that limit independence in task completion. Medication Other factors include a lack of saliva as a side effect to multiple medication use or the high sugar content of some medicines. Systemic factors The very nature of the child’s disability may also predispose to oral health problems, such as individuals with Down syndrome who may be more susceptible to gingivitis and other periodontal diseases because they are thought to have underlying abnormal immuno-logic responses.

Strategies for oral health care

A number of strategies that can be employed by the general dentist and his/her team have been recently suggested by the National Maternal and Child Oral Health Resource Centre. These include:

- Work with parents and care givers to promote self care, healthy diet and access to regular dental care.
- Educate the whole dental team in assessment, prevention and early intervention methods such as oral hygiene advice, dietary advice, regular screenings and topical application of fluoride varnish or calcium enriched gel where needed.
- Be willing to coordinate care with specialists or other health care professionals.
- Give practical help and recommendations to aid in oral hygiene maintenance such as the use of power toothbrushes and other appropriate oral hygiene aids, mouthwashes and toothpastes.

Providing oral care to patients with developmental disabilities, however, may simply require adaptation of the skills we use every day. In fact, most people with mild or moderate developmental disabilities can be treated successfully in the general practice setting. Keeping our knowledge base up to date will enable us to provide appropriate care for the special health care needs child.

A complete list of references is available from the publisher.

About the author

Juliette Reeves is an experienced dental hygienist and qualified nutritionist. She regularly writes for Smile-on.com, and has a regular column in Dentistry magazine. Reeves also has written a number of post-graduate training modules in nutrition and oral health for the dental profession. She divides her time between a busy family practice in Wimbledon (London) and writing, researching and lecturing in nutrition and oral health. Visit her Web site at www.perio-nutrition.com.