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Periodontal disease in special needs patients: A review

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Abstract

Individuals with intellectual and developmental disabilities (I/DD) are at risk for oral illness and have a difficult time getting routine and preventive dental care. It comes third in terms of unmet requirements, after residential services and career options for this group of people. Oral health has a detrimental impact on one's general health and quality of life. Significantly higher incidence of dental caries, periodontal disease, poor oral hygiene, low expectations, fear of treatment, and lack of information among persons and caregivers are all factors contributing to this condition. Other concerns include difficulty getting dental treatment or rejection of services due to a lack of education and clinical expertise, inappropriate bias, or inadequate provider compensation. Individualized and coordinated care services, as well as education of persons, carers, and providers, including both classroom and clinical experiences with special needs patients in dental programmes, are all strategies to improve service delivery.

Keywords: dentistry, periodontal disease, special needs patients

Introduction

Dental care for those with special needs is complicated by a physical, mental, or social handicap. They have a history of receiving less or inferior oral health care than the general population, despite the fact that they may have dental disorders that impair systemic health [1]. They have dental cavities, poor oral hygiene, periodontal disease, and malocclusion, all of which are common in normal youngsters [2, 3].

Special needs patients are more susceptible to developing oral disorders, to a lesser or greater extent, according to the nature of their handicapping condition. Dental pain and tooth loss caused by caries and periodontal disease can have a significant impact on one's overall quality of life. Special needs patients are disabled patients who, for an extended length of time, have been prevented from fully participating in normal activities of their age group, such as social, recreational, educational, and vocational activities [4].

Most youngsters under the age of seven require daily oral hygiene assistance from their caretakers. Due to their mental and physical obstacles, patients with special needs require additional care even when they are older than seven years old. Some special needs patients learn slowly and have a hard time understanding others' and their own actions, such as brushing their teeth (mental challenges). Scoliosis, unsteady stride, and increased limb tone affect some of them (physical challenges).

People with an impairment or disability who require "special needs dentistry" or "special care dentistry" are described in a variety of ways. In agreement with The Joint Advisory Committee for Special Care Dentistry [5], this report defines impairment and disability broadly and includes social factors. Special care dentistry is defined as 'the improvement of oral health in individuals and groups in society who have a physical, sensory, intellectual, mental, medical, emotional, or social impairment or disability, or more often a comb'.

Evidence that periodontal disease is worse in individuals or groups with special needs

Special health-care patients, according to a research issued by the US Surgeon General in 2000, have a greater risk of periodontal disease than the general population [6]. Dementia [7], depression [8], PTSD [9], psychological issues [10], reduced mobility [11], and learning difficulties

have all been linked to an increase in periodontal disease ^[12]. Hereditary or medical conditions, as well as the use of prescription medications or recreational drugs, can all raise the risk of periodontal disease.

Learning disabilities were associated with a greater number of untreated carious lesions, poor oral hygiene, and a higher prevalence and severity of periodontal disease.

Is periodontal disease more prevalent in particular individuals/ groups?

Down syndrome patients have been shown to have an increased risk of getting periodontal disease ^[13]. People with Down syndrome have widespread gingivitis as adults and may develop generalised and rapidly progressing periodontitis, resulting in severe tooth mobility and tooth loss by the end of the fourth decade ^[14]. Down syndrome patients have been shown to have significantly more missing teeth, more bleeding on probing, and higher gingival and plaque indices than those with mental disability, indicating a higher risk of periodontal disease ^[15].

How does periodontal disease impact quality of life?

The state of one's teeth has an impact on one's quality of life ^[16]. A disabled person's dental health may isolate them, preventing their integration and acceptability into society. While mastication and speaking are crucial functions of the oral cavity, the aesthetics of the oral structures and the ability to express emotion improve quality of life.

Nonsurgical periodontal therapy can usually ameliorate the physical and psychological effects of periodontal disease on oral health-related quality of life ^[17]. When tooth mobility, dental sensitivity following recession, periodontal infections, an unesthetic smile, oral malodor, and impaired masticatory function are described, periodontal disease can cause physical and psychological distress, lowering one's quality of life ^[18]. In some circumstances, dentures and implants to replace lost teeth can help with nutritional intake, dietary enjoyment, self-esteem, social engagement, and social acceptability ^[19].

Evidence to indicate that periodontal disease is managed differently in individuals with special needs

The use of oral health services by people with disabilities is notoriously underreported. Over the course of a seven-year investigation examining oral health-care utilization by adults and children with disabilities in Belgium, researchers discovered that people with disabilities see the dentist just as frequently as people without disabilities. However, an examination of the oral health care offered suggests that people with disabilities may have unmet dental-care needs. Those with disabilities were more likely to seek emergency dental care in both age categories, and fewer radiographs and restorations were documented. Children with impairments were less likely to obtain orthodontic treatment, while adults with disabilities were less likely to receive endodontic therapy ^[20].

Outcome of periodontal care different for special needs patients

There are few studies that show how comprehensive dental care affects measurable oral health outcomes in those with special needs. A new retrospective study looked at how oral health outcomes for persons with cognitive and developmental disabilities changed over time. Individuals received regular comprehensive dental care over a period of 12 years. While the prevalence of caries has reduced over

time, periodontitis has increased ^[21].

How does access influence the provision of care?

With the deinstitutionalization of people with disabilities, access to oral health care has become more difficult ^[22]. People who need specific dental care may live in their own homes, in long-term residential care, or on the streets. While the requirement for special care dentistry may be brief in certain cases, the severity of the handicap may develop as people become older or when they have numerous disabilities. Individuals may have poor oral health due to a variety of illnesses that damage oral structures and function, medical management of a disability may impact oral health and function, and the disability itself may result in social isolation, limiting access to dental care ^[23]. Additionally, access to oral care is dependent on the skills and experience of the dental and medical support teams and on the facilities and finances available for care ^[24].

Not every patient with a disability needs to be referred to a special care dentist. However, regular dentists who lack training and expertise in treating patients with disabilities may refer these patients to a specialist in special care dentistry, limiting their access to oral health treatment in the community ^[25]. Patients with complicated medical disorders who require management in a hospital setting using a multidisciplinary team approach ^[26] or who are best treated under a general anaesthesia may have even less access to dental care ^[27]. In addition, an inability to speak and collaborate may make gaining treatment consent more difficult ^[28].

Periodontal management individualized to meet the needs of a special care patient

Issues to consider

- Communication with patient/carer, privacy laws, literacy and consent.
- Pre Consultation written medical history with medications.
- History of pain and discomfort. Oral hygiene habits, with or without assistance
- Examination and diagnosis should be comprehensive.
- Extended appointment time or multiple appointments may be required.
- Access to the dental chair: assistance required; specialized equipment; occupational health and safety.
- Access to the oral cavity: enlarged tongue; gag reflex (absent/ exaggerated). Ingestion/inhalation of debris or objects.
- Positioning for intra-oral radiographs; panoramic radiograph alternative.
- Three-dimensional radiography: shorter-duration exposures may reduce movement artifacts.
- Saliva: quantity and quality.
- Dental and periodontal examination records shared with the patient management team.
- Effect of the underlying medical condition/treatment of periodontal health and management.
- Dental manifestations of syndromes.
- Plaque-retentive elements.
- Presence of parafunctional habits and non-carious tooth structure loss.
- Diagnose and treat infection or pain promptly, without compromising future treatment options.
- Consider systemic antibiotics for immunosuppressed patients.
- Emergency management may require specialist care in a

hospital setting.

- Provide an after-hours contact following emergency care.
- Nonsurgical periodontal care may be carried out in segments to suit the patient's tolerance.
- Select the appointment time to suit the management of the patient with special needs which provides an option to extend the appointment duration and to complete patient records.
- General anesthesia: completion of full-mouth debridement.
- Remove teeth with poor prognosis. Integrate periodontal care with the overall treatment plan.
- Review in 3–6 months.
- Re-examine and chart, review oral hygiene, smoking, medical history, dietary habits.
- Update changes in care arrangements.
- Review periodontal outcome with respect to oral hygiene, medical condition and oral habits.
- Recall visits schedule influenced by ability to control plaque.
- Regularly reviewed by a dentist, and maintenance may be performed by a hygienist.
- Involve and support the patient/carer to maintain oral hygiene.
- Discuss treatment, healing and outcomes with the patient/carer.
- Excellent home care, in the short and long term, is required.
- Removal of gingival overgrowth may enable improved plaque control.
- Extract teeth with a poor prognosis, especially if symptomatic.

How is oral health maintained?

In persons with learning disabilities who are living in society, regular preventative dental care has been found to prevent dental caries and periodontal disease [29]. It has been proposed that frequent dental visits promote patient compliance, allowing conservative treatment rather than extraction, and that the prevalence of oral disorders is lower in people with learning disabilities who receive tailored preventative dental care. Individuals who did not cooperate at all in the dental operation, on the other hand, lost more teeth than those who did. Therefore, cooperation in dental care situations made dental care possible and decreased the incidence of tooth mortality [30].

Periodontal disease typically necessitates a patient's compliance with a home-care programme in order to improve oral health and/or treatment outcomes. The ability to understand the need for and accomplish proper oral hygiene, as well as the physical and medical limits in providing adequate home care, must all be taken into account while developing such a programme [22]. Because patient anxiety during a dental appointment might affect understanding and implementation of verbal instructions, it is recommended that a written preventive programme be provided.

Conclusion

To increase access for patients with mental illnesses, a number of things can be addressed at the dental office level. Empathy and a rudimentary understanding of mental illness and related topics are required to get started. For a variety of reasons [mental illness symptoms (depression, anxiety, paranoia), embarrassment, low self-esteem, life stressors (accommodation, poverty), dental anxiety, fear of the system],

not showing up for a scheduled appointment can be addressed by building trust with the patient and working in collaboration with the person's case manager or other health professionals involved in the case. Appointments should be scheduled so that the patient does not have to wait, as waiting for any amount of time might cause anxiety and lead to walkouts. Other concerns include difficulty getting dental treatment or rejection of services due to a lack of education and clinical expertise, inappropriate bias, or inadequate provider compensation. Individualized and coordinated care services, as well as education of persons, carers, and providers, including both classroom and clinical experiences with special needs patients in dental programmes, are all strategies to improve service delivery.

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