ISSN: 2583- 2247, Vol. 06, No. (1-2) 2025, Pg. 08-13

ENVIRO Dental Journal

Enviro Dental Journal

dentaljournal.org

Special Care Dentistry and Oral Medicine- A Review

LAKSHMINRUSIMHAN, CHANDRAKALA, SOWBARANICA SIVAKUMAR* and SREEJA NAIR

Department of Oral Medicine and Radiology, RVS Dental College and Hospital, Coimbatore, Tamil Nadu, India.

Abstract

Oral medicine is the field of dentistry that deals with oral and maxillofacial diseases and the medical conditions that affect the oral and maxillofacial areas. Oral medicine specialists are well versed in the medical conditions affecting the oral and maxillofacial areas and their management, thereby being considered one of the best to treat patients with special care needs. For patients with special care needs, oral hygiene is often affected directly and indirectly as these patients are associated with medical conditions. Although there are numerous advances in dentistry, the oral hygiene of patients with special care needs is still compromised. This article briefly explains the role of dental practitioners in the oral care of patients with special care needs and in improving the oral health of special health care patients.

Article History
Received: 19 November 2024
Accepted: 30 December 2024

Keywords
Dental Practitioners;
Oral Medicine;
Special Care Dentistry.

Introduction

Special care dentistry is the branch of dentistry that aims to improve the oral health of patients with physical, intellectual, medical, emotional, mental, sensory, or social impairment or a combination of any of these involving professional challenges and providing them oral care services.[1] Dental practitioners can take care of the dental needs that are required by patients with special care needs. Occasionally they may require specialists for more specialized management as a referral.[2] Dental practitioners are trained and educated in treating patients as Special care dentistry is a part of the BDS curriculum, where they likely do not consider treating them as an obstacle.

Areas Covered

This review article discusses the role of oral medicine practiced by dental practitioners in treating patients with special care needs. It also discusses the significance of dental education for dental practitioners in treating special care children and the importance of oral health in disabled patients. It covers the design of dental offices for patients with special care needs and managing these patients at the dental office.

CONTACT Sowbaranica Sivakumar drsowsivakumar@gmail.com Department of Oral Medicine and Radiology, RVS Dental College and Hospital, Coimbatore, Tamil Nadu, India.

Doi: http://dx.doi.org/10.12944/EDJ.06.0102.03

Discussion

Patients with Special Care Needs and Dental Team

The dental team includes a Dentist, dental hygienist, dental assistant, and dental laboratory technician. The dentist offers guidelines to the supportive staff to initiate preventive measures to maintain oral hygiene for patients with special care needs.

According to Disability Act, disabilities include blindness, low vision, leprosy, hearing impairment, locomotor disability, dwarfism, intellectual disability, mental illness, autism spectrum disorder, cerebral palsy, muscular dystrophy, chronic neurological conditions, specific learning disabilities, multiple sclerosis, speech and language disability, thalassemia, hemophilia, sickle cell anemia, Parkinson's diseases, victims of acid attack, other disabilities including deaf and blindness. Patients with any of these conditions or combinations are considered patients with special care needs.[3]

It is the responsibility of the dental practitioner to decide whether the patients with special care needs can understand, reason, recall, and apply information regarding dental care & treatment. The dental team plays an important role in providing methods to improve oral hygiene to the caretakers of the patients with special care needs. These caretakers are involved in the day-to-day living of the special needs when their parents are no longer involved.[4] Researchers report that some dental practitioners face difficulty and stress in delivering oral care to patients with special care needs. So, dental professionals require specialized knowledge related to preventive measures and treatment of oral diseases through additional training. Oral health is more important for patients with special care needs as they are more prone to oral disease than patients without special care needs. Patients with special care needs can access dental services through either General Dental Service (GDS), National Health Service (NHS), or private dental practitioners.[5]

Education to Dental Students on Special Needs Patients

It has been evaluated that the dental curriculum on educating dental students about treating patients with special care needs has decreased eventually. The exposure to care oral health of patients with special needs is less during undergraduate and postgraduate dental education.[6] Experiencing clinical situations related to oral diseases of patients with special needs and handling them requires adequate knowledge and skills. The knowledge and skills taught during the dental curriculum are beneficial during undergraduate and postgraduate dental education and dental practice. The more experience the students have with such patients, the more will the capabilities, positive attitude & confidence in treating them. Undergraduate and postgraduate dental education provides less exposure to the management and care of oral health of patients with special care needs.[7]

Minimal education on dental health professionals towards treating patients with special care needs, lack of dental health professional care for these patients, and inadequate social contact are reasons for the lack of dental services not received by these patients. A positive clinical approach toward the elderly and disabled patients will overcome anxiety and develop better management skills for dental health professionals.[8] Emergencies may predispose patients with special care needs like epilepsy, allergies, etc. to the dental chair which requires the dental health professionals to be well known to manage any of these lifesaving conditions.

As there are lack of dental practitioners dealing with dental issues in Special Health Care Needs (SHCN), this could be the right step to include Special care Dentistry as a part of the BDS curriculum. Dental practitioners should apply the knowledge clinically by taking appropriate measures to solve the dental issues faced by patients with special care needs. Training should be provided to dental practitioners to treat patients with special care needs and the knowledge to treat these patients will open better career opportunities for undergraduate and postgraduate dental students.[6]

Oral Medicine Specialists and their Potential Role in Special Care Dentistry

The American Academy of Oral Medicine has defined Oral medicine as "the discipline of dentistry concerned with the oral health care of medically compromised patients and the diagnosis and non-surgical management of medically related disorders and conditions affecting the maxillofacial region".[9]

The subject of Oral Medicine in the BDS curriculum includes dental and systemic diseases of all humans so they are considered best among all specialties in providing dental care for special care needs. Dental health professionals have a thorough knowledge of the systemic diseases affecting oral health. Oral medicine specialists may be the first to suspect any medical conditions by the patient's oral manifestations.[10] In the majority of countries, Oral Medicine is combined with other specialties such as Oral Pathology, Oral Radiology, and Special care dentistry.[11]

An OMR specialist is considered to be one of the best among all dental health professionals to treat patients with special care needs. The specialization in oral medicine and radiology allows them to understand the dental health issues of patients with special care needs. The associated problems faced by these patients including sensory issues or any communication difficulties are well understood by OMR specialists.[12] They provide an alternative oral procedure to meet these patient's requirements. Multidisciplinary strategies involving dermatologists, general medical practitioners, respiratory doctors, gastroenterologists, etc. are essential in managing complex cases.[13] OMR specialists are good at treating orofacial pain, salivary gland disorder, and temporomandibular disorders seen in these patients.[14] They also analyze the bleeding disorders, allergies, risks of infection, and drug interactions among patients with special care needs and apply the knowledge when required in the modification of the treatment plan.[2]

Significance of Oral Health in Patients with Special Care Needs

Generally, these patients suffer from poor oral hygiene due to many reasons such as lack of muscular movement, lack of concentration, lack of neuromotor skills, compromised immunity, medications taken for cardiac disease, lack of nutritional intake and developmental anomalies.[5] These reasons limit these patients from maintaining oral health and routine activities.[5] Dental pain in patients with special care needs can alter behavioral changes, and food intake and can affect the nutritional supply too. The responsibility of dental practitioners is to educate these patients to maintain oral hygiene and convince them of the treatment of dental pain.

Barriers to Treating Patients with Special Care Needs

There are several barriers to treating these patients with special care needs for maintaining oral health. These barriers should be corrected or decreased for treatment purposes. The scarcity of dental practitioners in providing care to special needs is due to lack of training during their education period.[2]

Barriers concerning patients with special care needs include communication barriers, barriers in perception, dental anxiety, lack of awareness of oral health, past trauma, high cost, and psychological issues.[4]

Barriers concerning dental practitioners include lack of time, lack of experience, lack of training in treating these patients, feeling incompetent to treat, needing specialized instruments and dental clinic set up, difficulty in developing rapport with patients may develop fear in approaching them, economical consideration includes substandard fees.[4]

Barriers concerning the environment faced by patients with special care needs include infrastructure of the building, lack of transportation, documentation of the patient, and lack of facilities like no ramps for wheelchairs, no lifts, inaccessible toilets, and no suitable parking.[4]

Barriers concerning government include lack of resources and lack of insurance for oral health care services due to the high cost of dental care.[15]

These barriers should be corrected and creating a barrier-free environment for these patients will help in maintaining oral health.

Design of Dental Office for Patients with Special Care Needs

The lack of infrastructure in the dental office for patients with special care needs. This worsens delivering dental care to them. Thus, establishing a friendly dental office for patients with special care needs will remove one of the barriers to better oral health. Thus, a friendly dental clinic setup includes –

1. Parking space - must be in proximity to the clinic within 98 feet distance.[3]

2. Walkway - Levelled surface suitable for walking and wheelchair. It must not exceed 60 m in length, there must be tactile pavers for visually impaired patients.[3]
3. Ramps – with vertical glide more than 6 inches along with handrail.[3]
4. Staircase – Treads 12 inches deep, Riser not greater than 6 inches along with grab bars which must be slip-resistant and have round ends.[3]
5. Lifts – Minimal size: 48 inches wide.[3]
6. Door – Sliding or folding doors that must not require too much force to operate. Automatic doors with push buttons are more accessible for them with a minimal opening of 35 inches.[3]
7. Flooring – Avoiding complex patterns and carpets if placed must be securely fixed.[3]
8. Restroom – Unisex accessible toilets which will be convenient for opposite-gender caretakers.[3]
9. Dental Chair – Modifications are not being incorporated in the dental chair for treating the dental diseases of patients. But changes can be achieved by introducing detachable body rest parts for treating patients with special care needs and can be fitted back for treating the dental diseases of patients.[3]

Levels of Care for Patients with Special Care Needs

LEVEL 1

Delivering appropriate dental care without additional support. Patients can be trained to consume medications, get consent, providing clear information regarding the treatment to the patient's decision.[2]

LEVEL 2

Delivering appropriate dental care with additional support. Patients with communication difficulties, inability to cooperate, inability to tolerate procedures, and inappropriate behavior are categorized under level 2. The medical condition of these patients in the intermediate stage is categorized under level 2. Treatment can be performed under conscious sedation.[2]

LEVEL 3

Delivering appropriate dental care with additional support. Patients categorized under level 3 are severely affected and are uncooperative, access to the oral cavity is severely restricted for any dental treatment, high risk of harming themselves, unable to withstand home oral care. The medical condition of these patients in the advanced stage is categorized under level 3. Treatment is performed under GA.[2]

Modified Radiographic Assessment Techniques for Patients with Special Care Needs

Alternatives can be made during intraoral radiography like modification of X-ray film holders [Rinn Snap-A-Ray/tongue depressor], modification of X-ray film packets [small films, bending films], devices for stabilizing the jaw during radiography [chin straps with head attachment, mouth props], modification of X-ray films [reverse bitewing], radiography in a reclined position, usage of portable X-ray machines.[16]

Managing Patients with Special Care Needs at Dental Office

Maintaining good oral hygiene for patients with special care needs will decrease the risk of oral and dental diseases. Preventing oral and dental diseases for patients with special care needs is achieved by establishing early dental care at home, obtaining a thorough medical, dental, and social history, creating an environment that is friendly for receiving dental care, providing oral health education and measures to the caregivers, and providing behavioral guidance for preventive and therapeutic services.

Parental and some dental practitioners lack awareness and knowledge in managing patients with special care needs which hinders these patients from seeking preventive dental care.[17,18] Managing patients with special care needs with primary attention at the dental office will encourage these patients to have decreased oral diseases. It may also reduce the dental pain faced by these patients. Attention to all aspects of dental care includes

- Scheduling appointments
- Patient assessment
- Medical consultations
- Planning dental treatment
- Informed consent
- Behavior guidance
- Preventive strategies
- Barriers

Providing dental education to the caretakers is an essential role in maintaining oral hygiene at home. This is achieved by giving preventive oral health practices and establishing routine dental care like modified toothbrushes and modified toothbrush handles and heads.[19]

Conclusion

This paper has sought to provide timely information on the role of dental practitioners in the oral hygiene maintenance of patients with special care needs and they should have proper knowledge and training to treat these patients. Increasing awareness among dental practitioners will bring huge changes in the dental care delivery system for patients with special care needs. Special care dentistry should be properly read during the BDS curriculum. Dental practitioners should be aware of the necessary modifications to be made during the treatment of dental diseases of these patients. Dental associations and organizations should provide campaigns to educate patients with special care needs for the prevention of oral diseases. Oral medicine specialists are aware of all systemic diseases and should be taken into consideration for the treatment of these patients. Oral medicine is a specialty of dentistry at the crossroads of medicine and dentistry positioned to diagnose and treat oral and systemic conditions in special care dentistry.

Acknowledgement

We would like to thank RVS Dental College and Hospital for granting permission to write this article. The Department of Oral Medicine and Radiology, RVS Dental College and Hospital, is highly appreciated for allowing this research work.

Funding Sources

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Confict of Interest

The author(s) declare(s) that there is no conflict of interests regarding the publication of this article.

Data Availability Statement

This statement does not apply to this article.

Ethics Statement

This review did not involve human participants, animal subjects, or any material that requires ethical approval.

Informed Consent Statement

This review article did not involve human participants, and therefore, informed consent was not required.

Clinical Trial Registration

This research does not involve any clinical trials.

Author Contributions

- **Lakshminrusimhan:** Conceptualization, Visualization– Review & Editing.
- **Chandrakala:** Supervision, Project Administration– Original Draft.
- **Sowbaranica Sivakumar:** Data Collection, Methodology, Writing.
- **Sreeja Nair:** Resources, Analysis, Writing.

References

1. Alamri H. Oral care for children with special healthcare needs in dentistry. a literature review. *Journal of Clinical Medicine*. 2022;11(19):5557.
2. NHS ENGLAND, (28 October 2022), Clinical standard: Special care dentistry.
3. Lakshmi K., Kumar P. M., & Das H. Design considerations for a dental health care for patients with special needs. *Journal of accessibility and design for all*: *JACCES*. 2018;8(1):80-101.
4. Vinita mary., Kesavan Ramakrishnan. Barriers in Providing Dental Care to Special Care Populations.2019;(4):580-583.
5. Nunn, J., Gorman, T. Special care dentistry and the dental team. *Vital*. 2010; 7: 22–25.
6. Dao L. P., Zwetchkenbaum S., & Inglehart M. R. General dentists and special needs patients: does dental education matter?. *Journal of dental education.* 2005;69(10):1107-1115.
7. Steinberg B. J.,Issues and challenges in special care dentistry. *Journal of dental education*.2005;69(3):323.
8. SR P.Role of Oral Physicians in Special Care Dentistry. Indian Journal of Public Health Research & Development.2020;11(1).
9. Shetty S. R.,Shaik M. M.,Babu S. G. Oral medicine and radiology-the Indian

scenario. *Journal of Contemporary Medical Education*.2013;1:59-61.

10. Verma P. Role of oral physician in providing care to special patients. *Journal of Oral Medicine, Oral Surgery, Oral Pathology and Oral Radiology.* 2024;10(2):79-83.
11. Rogers H.,Sollecito T. P.,Felix D. H.,Yepes J. F.,Williams M.,D'Ambrosio J. A.,Kerr A. R. An international survey in postgraduate training in Oral Medicine. *Oral Diseases*. 2011; 17:95-98.
12. Manisha Singh. Role of an oral medicine and radiologist in special care dentistry: A short commentary. *International Journal of Oral Health Sciences.* 2024;14(1):38-39.
13. Kapoor Shivam., Chahar Puneet., Mohanty Vikrant., Balappanavar Aswini Y. Special Care Dentistry: Knowledge and Attitudes among Indian Dental Students. Journal of Indian Association of Public Health Dentistry.2019;17(2):108-113.
14. Whitney E. M.,Stoopler E.,Brennan M. T.,DeRossi S. S.,Treister N. S.Competencies for the new postdoctoral Oral Medicine graduate in the United States. *Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology.* 2015;120(3):324-328.
15. Da Fonseca M. A., Hong C. Improving oral health for individuals with special health care needs. *Pediatric dentistry.* 2007; 29(2):98-104.
16. Casamassimo P. S. Radiographic considerations for special patients-modifications, adjuncts, and alternatives. *Ped Dent.* 1981;3(2):448-54.
17. Petrova E. G.,Hyman M.,Estrella M. R. P., Inglehart M. R. Children with special health care needs: exploring the relationships between patients' level of functioning, their oral health, and caregivers' oral health-related responses. *Pediatric dentistry.* 2014;36(3):233-239.
18. Shenkin J. D, Davis M. J, Corbin S.B. The oral health of special needs children: dentistry's challenge to provide care. *Journal of Dentistry for Children.*2001;68(3): 201-205.
19. American Academy of Pediatric Dentistry. The reference manual of pediatric dentistry. 2020;337-44.