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Editorial

Role of oral physician in providing care to Special patients

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"People with special health care needs are like butterflies with a broken wing. They are just as beautiful as all others but they need help guidance & encouragement to spread their wings." - Ralph Waldo Emerson

1. Introduction

The dental profession has an obligation to guarantee equitable and high-quality oral health care services for members of all societal groups. What is meant by "short term stabilizing and safe care in a secured therapeutic environment" is special care. Special care dentistry (SCD) is concerned with improving the health of oral tissues for individuals and groups in society who have a sensory, physical, intellectual, medical, mental, emotional, or social impairment or disability, or, more frequently, a combination of several of these factors. This is according to the Joint Advisory Committee for Special Care Dentistry in the UK.[1]

According to the census of 2021,[2] 29.7 million Indians are classified as special care population, making up 3.9% of the world's dependent population. The majority of these individuals—77%—reside in the nation's rural areas. These patients' oral health issues are still not being managed by a professional organization. In this regard, the non-governmental and governmental sectors should implement the initiatives that the WHO, AIIMS, New Delhi, and their combined efforts have suggested.

The specialty of "special needs dentistry," also known as "special care dentistry," was first recognized by the General Dental Council of the United Kingdom in 2008.[3] It offers preventive and therapeutic dental care services to individuals who are unable to accept routine dental care due to a range of medical conditions or limitations that necessitate more than routine dental care. It also includes those receiving critical care, long-term hospital stays, difficult medical problems, and residential care residents. Other forerunner nations that made SCD a specialty include Australia and New Zealand.

2. Role as Oral Physician in Special Care Dentistry

Patients who have special requirements are more likely to develop oral illnesses (Table 1). Additionally, it has been noted that obtaining dental care is a significant obstacle that is frequently disregarded when it comes to SCD treatment. However, depending on the kind of disability (mild, moderate, or severe), different access requirements may apply. Some patients need more involved and sophisticated dental care; sadly, these people also have to deal with severe mouth infections, which can aggravate or cause conditions that need more expensive medical care.

The specialty of oral medicine and radiology (OMR) focuses on treating medical and dental conditions pertaining to the orofacial area, including managing patients with

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Table 1: Patients requiring special care in dentistry

Categories of patients for special needs	Examples
Geriatric patients	Dementia, Coronary artery Disease, Arthritis Stroke
Physical (Mobility & Sensory)	Cerebral Palsy, paralysis due to stroke, acquired brain injury & Spinal cord injuries, Visual or hearing impairment.
Behavioral Problems	Attention deficit hyperactive disorder, Autism spectrum disorder (ASD).
Complex Medical Problems	Immuno-compromised patients, geriatric with complex medical problems, haemophilia, cancer, renal disease, seizures disorders, cardiovascular disease, multiple allergy, leukemia, HIV/AIDS,
Psychiatric & Psychological Problems	Severe depression, Schizophrenia, Bipolar disorder, Psychosis, Post-traumatic disorder, Obsessive compulsive disorder
Intellectual Disability	ASD, Down Syndrome, Developmental delay.

compromised health and oral symptoms of systemic diseases. The capacity to handle individuals with specific needs and medically complex situations is one of an OMR specialist's competencies. Because they are knowledgeable with medical conditions and how they can affect oral health, OMR professionals might be the greatest option for the SCD field. Furthermore, oral medicine is described by the American Academy of Oral Medicine as "the discipline of dental sciences concerned with the diagnosis and non-surgical management of medically related disorders and conditions affecting the maxillofacial area, as well as the oral health care of medically compromised patients."

Regarding the integration of OMR specialists with SCD, there was a considerable variation in the responses; dental surgeons from Canada, India, Spain, Israel, Italy, Brazil, the United States, the United Kingdom, and Thailand agreed the most.[4] An OMR specialist's responsibilities in SCD included:

2.1. Comprehensive case history

The most important prerequisite for a proper diagnosis, efficient treatment planning, and lowering the chance of exacerbating a medical condition is a thorough, accurate, and current medical history. To help forecast collaboration, the patient's development, education, and cognitive abilities should be discussed during the interview. Many patients in need of special care have sensory issues or communication difficulties that make visiting the dentist difficult. An OMR specialist should take these into account when taking the patient's medical history and be ready to alter standard oral care procedures to meet the patient's specific requirements. Improving care delivery will require an understanding of the patient's cognitive state, sensitivity to triggers, oral aversion, and negative behavior triggers.

Oral physician should communicate patients with special health care needs (SHCN) at a level appropriate for their cognitive development. If the patient/parent is unable to provide accurate information, consultation with caregiver or with the patient's physician may be required. Reasonable adjustments in the SCD clinics should be made as per Equality Act 2010:

1. Ground floor clinics
2. Provision for longer appointments or flexibility with cancellations,
3. Disabled parking
4. Disabled toilets

2.2. Thorough clinical examination

It is necessary to perform a thorough general physical and clinical examination (relevant to the medical problem), which includes assessing the head, neck, and oral tissues. Every available supplementary diagnostic tool, including pictures, blood tests, and radiographs, should be examined by the oral doctor. The patient's other healthcare professionals should be consulted in order to coordinate care by the oral doctor. When necessary, a medical doctor should be consulted regarding prescription drugs, general anesthesia, sedation, and any other precautions or limits that could be needed to guarantee the safe administration of dental care. It could be essential to use a multidisciplinary strategy when managing complex cases.

2.3. Behaviour management

Patient behavior guidance for SHCN patients can be difficult. Anxiety, intellectual incapacity, poor hearing, or vision can all hinder communication. Patients with SHCN may show resistive behaviors due to dental anxiety, a lack of knowledge about dental care, oral aversion, or exhaustion from several medical visits and treatments. These actions may make it more difficult to administer dental care safely. For the safe administration of care and with consent, protective stabilization may be beneficial for certain patients (such as those with aggressive, uncontrollable, or impulsive behaviors; when typical behavior guidance strategies are insufficient). An oral physician may use general anesthesia or sedation when non-pharmacologic behavior guidance measures are unsatisfactory. This will enable the safe and quick completion of full therapy.

2.4. Management of SCHN patients with developmental or acquired orofacial pathologies or syndromes

Oral aversion in special patients with acquired orofacial disorders can exacerbate anxiety and reduce cooperation in the dental environment. Devastating effects and lifetime issues can result from developmental abnormalities that appear. Every attempt should be made to help the patient and/or family adjust and comprehend the intricacy of the anomaly and any associated oral needs from the moment of initial contact. The psychosocial well-being of the patient and the impact of the condition on look, function, and growth are all important considerations for the oral physician. Long-term therapy interventions that are timed to align with developmental milestones may be necessary for congenital oral disorders. Patients with disorders such oral cancer, cleft lip/palate, ectodermal dysplasia, and epidermolysis bullosa may need care from a multidisciplinary team. Coordinating delivery of services by the various health care providers can be crucial to successful treatment outcomes.

A. Non-surgical management of orofacial pain cum orofacial neurosensory disorders, temporomandibular joint disorders, oral mucosal lesions, salivary gland disorders etc.

OMR specialist sometime be the first person to diagnosis underlying systemic disease(s) in these patients by noting the oral manifestation(s) of underlying systemic or metabolic disorders. Also oral physician being the right specialist for managing different orofacial pains, salivary gland disorders or TMDs which are common findings in these patients.

2.5. Discussing oral preventive strategies

An oral surgeon should create a customized oral hygiene regimen that takes into account each patient's particular impairment. Using fluoride dentifrice twice a day can help avoid gingivitis and tooth cavities. Dentifrice without sodium laurel sulfate (SLS) to eliminate foaming nature, a fluoridated mouth rinse, or an alternative (e.g., casein phosphopeptide-amorphous calcium phosphate [CPP-ACP]) may be recommended for toothbrushing if the patient's sensory issues make the taste or texture of fluoridated toothpaste intolerable. Patients with physical limitations may benefit from improved patient compliance with the use of electric toothbrushes and floss holders.

Treatment plans for people with SHCN should include traumatic dental injuries in their preventive measures. This includes providing proactive advice regarding the likelihood of trauma (such as motor skills/coordination deficiencies, seizure disorders), making mouth guards, and knowing what to do in the event that dento-alveolar trauma happens. Children with SHCN also have a higher likelihood of experiencing physical, sexual, and neglect abuse. More than half of child abuse cases involve injuries to the cranium, face, head, and neck. The mandatory reporting processes and indicators of misuse should be known to oral physicians.

3. Radiographic Considerations in Dental Office for Special Patients

Based upon the characteristics described in literature, special patients reporting in the dental office are classified as:

Table 2:

Special Patient Characteristic(s)	Description as per past literature
Handicapped patients	Physically handicapped Mentally challenged Bedridden Homebound, asylum seekers Unable to keep mouth open Unable to close mouth to hold the dental X-ray film in place
Young patients	Birth to 03 years or 03-05 years
Patients reporting with behaviour problem(s)	Gagging Sedation Anxiety Management problem
Patients with oral and or physical developmental problems	Small mouth Crowded dentition High arched palate or cleft palate Traumatic injury

So based upon above mentioned classification, following alternatives to intraoral dental radiography could be made for special patients:

1. Modifications of the intraoral technique
2. Adjuncts in the form of devices, personnel, or induced changes in the patient,
3. Alternatives to intraoral filming which include the extra-oral film techniques,
4. Miscellaneous approaches.

4. Modifications of the Intraoral X-Ray Technique

1. Intraoral X-ray film holders modifications
2. Modifications of Intraoral X-ray film packets
3. Supporting devices for patient's jaw stabilization and film holders
4. Modification of Film holders or films

Intraoral X-ray film holder modifications: includes using Rinn Snap-A-Ray intraoral x-ray film holder, or making an x-ray film holder using tape and tongue depressors. Use of these modifications appears to ease with which handicapped or young special patient can hold the x-ray film. Starkey et al[5] reported a bitewing x-ray technique using a rubber band to be used for special patients.

Modifications of Intraoral X-ray film packets: include utilizing the smallest x-ray film that can be found, bending

an occlusal film to be used in the anterior or posterior jaw region, or bending the corners. For individuals that require the least amount of discomfort due to their size, fear, or both, all of these procedures are advised. Another adjustment suggested by Lewis et al.[6] involves taping cotton rolls to the film packet to keep the film comfortable and in its original plane.

Supporting devices for patient's jaw stabilization and film holders: comprises Velcro-stripped straps, mouth props, and helmets with chin straps. It seems that the deciding factor when selecting any of these methods is jaw control. These methods would benefit patients with disabilities who have trouble opening or shutting their jaws. After inserting the film or film holder, the jaw is kept locked with a velcro strap and a helmet chin strap. Patients who are unconscious and receiving general anesthesia are treated using a similar method. Film holders are held against the teeth using mouth props.

Modification of Film holders or films: have been supported for patients who are young or resistant, those who gag, and those with disabilities. A method known as "reverse" bitewing entails inserting a film into the buccal vestibule and aiming the central beam through the patient's jaws from the other side of their head. Buccal implantation reduces choking while producing a radiograph that, aside from the intervening structures superimposed, resembles a typical periapical or bitewing radiograph.

It is common practice to recommend occlusal film to early special needs children in place of periapical images. An additional "special" patient is one who may have had catastrophic injury to their jaws or teeth, in which case an emergency survey should be performed using the occlusal film. Modification of film position is described by Beaver et al[7] in which a pedodontic x-ray film is inserted lengthwise in Rinn Snap-A-ray holder to provide smallest mesial-distal length possible while still permitting representation of contacting tooth surfaces.

Table 3: Adjuncts in the form of devices, personnel, or induced changes in the patient

Technique	Description	Category of special patients
Parental help	Ask the parent to wear gloves & apron, stand behind child or cradles the child and stabilizes child's body with one hand while stabilizes the chin or film holder with other hand.	Young, anxious or handicapped children
Behaviour modification technique	Tell show do, hypnosis, distraction or postponement.	Special patients with gagging, anxious or young child
Pharmacological agents	For Gagging: • 12.5 mg Phenergan + 9mg Nisentil to be given intramuscular • 50 mg Cyclizine suppository • N_2O/O_2 inhalation • 2% Xylocaine or Dyclone rinse • 02 tsp Donnage elixir PO	Special patients with gagging or having uncontrolled body movements.

5. Alternatives to Intraoral Dental X-Ray Films - Extra-Oral Film Techniques

Extraoral radiographs could be the sole option if intraoral radiography is not feasible due to the patient's age, disability, or uncontrollable movements. The best options are lateral oblique, panoramic films, using a Status-X system, or real-time imaging.

A unilateral view of the jaws and posterior dentition is possible with the lateral jaw exposure. An occlusal film or lateral film cassette is used in this approach, and it is put on the side that will be radiographed. The X-ray head is positioned on the other side, and the beam is directed towards the cassette through the face. The video can be taped to the patient's or parent's face, or held in their hands. A patient who is disabled or a kid may be videotaped while lying on their side with the film between their face and the dental chair.

Another extraoral radiography technique that is easily employed on some patients is panoramic film. A general survey including a significant area of the face is produced by the procedure. Less medication is used than in a full mouth survey. Additionally, the method enables the disabled patient to be filmed without a transfer. From the perspective of reduced radiation exposure, Valachovic and Lurie[8] believe that the indications for panoramic radiography are restricted because, frequently, extra intraoral images are taken when pathosis is detected.

Siemens Status-X offers still an additional choice.[9] It has been suggested for bedridden patients and unusual children with crowded teeth or a high palate. The intraoral X-ray source and extraoral film placement provide lower patient dose and, in many projections, an adequately detailed film. The rapid exposure makes the technique good for the handicapped and young children who have problems with movement.

6. Miscellaneous Approaches

Use of portable X-ray machines or doing radiography in reclined position for bedridden or handicapped patient should be done if required. Even real time digital imaging (both intraoral and extraoral) is another good option for

radiography in special patients.

7. Conclusion

OMR experts plays a major role in SCD team as they have handsome knowledge on medical diseases and their effect on oral health and vice versa. Also, OMR is a unified speciality that could be a referral point to the medical fraternity for the better management outcome in these patients.

8. Source of Funding

None.

9. Conflict of Interest

None.

References

1. Joint Advisory Committee for Special Care Dentistry. A case of need: proposal for a speciality in Special Care Dentistry. London: JACSCD; 2003.
2. Census of India, History, Census of India 2011 & 2021. Available from: https://www.studyiq.com/articles/census-of-india/.
3. Anonymous. Special care dentistry recognised by GDC. *Br Dent J*. 2008;p. 205–300.
4. Spielman A. The future of oral medicine. *Oral Dis*. 2018;24(1-2):285–8.
5. Starkey P. Bitewing radiographic technique for the young child. *Dent Dig*. 1967;73(11):488–91.
6. Lewis TM, Tidswell BA, Mcquillan. Pedodontic roentgenology – a practical technique. *Aust Dent J*. 1963;8:97–100.
7. Beaver HA. Radiographic technics for the young child in your practice. *J Mich State Dent Assoc*. 1972;54:282–7.
8. Valachovic RW, Lurie AG. Risk-benefit considerations in pedodontic radiology. *Pediatr Dent*. 1980;2:128–48.
9. Casamassimo PS. Radiographic considerations for special patients – modifications, adjuncts, and alternatives. *Pediatr Dent*. 1982;3(2):448–54.

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