Editorial
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Editorial

Oral Health in Patients with Cleft lip and palate – A Roadmap for General Dentists

Cleft Lip and Palate (CLP) is the most prevalent congenital anomaly affecting the Oro-facial region with approximately 200,000 babies born with this defect every year.[1] The concept of oral health is multifaceted, encompassing functions such as speech, smile, ability to smell, taste, chew, swallow, tactile sensation and expressing a wide array of emotions through facial gestures with confidence without pain, discomfort, or disease affecting craniofacial complex.[2] In this context, orofacial clefts present significant challenges to the health and well-being of individuals, making oral health a necessity within the framework of holistic management of CLP.[3]

Children with CLP have been reported at increased risk for caries, periodontal disease, and other oral health complications.[4,5] A meta-analysis suggests that individuals with CLP demonstrate higher DMFT scores when compared to matched non-CLP controls with a mean difference of 1.38 ($p = 0.003$).[6,7] These children require consistent dental care, adequate monitoring, education, support, and treatment aimed at preventing oral diseases and promoting the optimal quality of life.[3] The presence of a dentist is essential at almost all stages of comprehensive cleft care, right after birth and continuing into adulthood.[8] Furthermore, dental care should be integrated into the holistic comprehensive management plan[9,10] for individuals with clefts, ensuring necessary access to Oral Health Services.

This editorial highlights the General Dentist's responsibility in its entirety, with a particular emphasis on age-specific interventions aimed at enhancing the oral health outcomes for patients with cleft anomalies.

Cleft Oral Health Guidelines for General Dentists by FDI[1,11]

In 2020, the FDI issued comprehensive Guidelines for oral health practitioners titled "Oral Health in Comprehensive Cleft Care". This document seeks to enhance overall oral health alongside traditional treatment protocols.[12] The report recommends the inclusion of general dentists as pivotal professionals responsible for managing the oral health and nutritional needs of individuals affected by cleft from infancy through adulthood. Salient highlights of this report are:

General Oral health points for patients with cleft[13,14]

- It is imperative to explain to patients and their guardians the etiological factors that contribute to dental caries and periodontal disease.
- Instructions pertaining to dietary advice on avoiding night time feedings, baby bottles, fizzy drinks, and cariogenic snacks are essential for a disease-free oral cavity.
- Age-appropriate oral hygiene practices including toothbrushing, mouth cleansing, interdental cleaning, and tongue cleansing should be reinforced at each stage.
- Fluoridated toothpaste or the application of professional fluoride treatments should be advocated, and such interventions may be administered by Dentist at consistent intervals.
- Identification, interception, and monitoring of white/brown spot lesions may help limit surface caries and their progress.
- For maintenance of healthy dentition, Pit and fissure sealants, GIC restorations, Crown and prosthetic rehabilitation may be done as required.
- Age-specific oral appliances/prostheses are prescribed and a timely referral to an Orthodontist is encouraged.[15]
- Age-based referral for speech therapy, ENT consultation for hearing, and surgical intervention can promote an individual's functional ability and performance.
- Education on scar management should be provided to patients and guardians.

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- It is recommended that psychological assistance personalized to the individual be provided to both the patient and the caregiver.

Age-specific Oral Health Care Guidelines[1,16]

Age 0-2 years

- Education to caregivers on the risk factors of dental caries (sugars, night-time bottles, pacifiers) and measures to prevent it is to be provided.
- Training on appropriate oral hygiene techniques is essential which includes mouth cleansing and gum care before the emergence of primary teeth, gentle tooth brushing during the eruption of the primary dentition, and proper maintenance of the obturator or feeding plate.
- Early diagnosis of white/brown spot lesions and use of professional fluorides (Silver diamine fluoride), ART, Pit and fissure sealants promote caries-free mouth and longevity of existing dentition.
- The general dentist may consider referring the child to an orthodontist for providing the Presurgical infant orthopaedics(17) or palatal obturators before surgery.
- 0-3 months: Feeding and nutritional counselling; auditory assessment & ENT services could be provided as necessary.[18]
- After lip and palate repair, scar management should be explained.
- 6-18 months: Early speech & language stimulation.

Age 2-6 years

- Reinforce caries prevention measures for children and educate caregivers to support the child in brushing teeth with fluoridated toothpaste without rinsing or ingesting.
- It is essential to maintain primary dentition, topical fluoride application should be carried out by the dentist every six months. Minimal invasive caries treatment and restoration may be carried out.
- Space maintainers should be provided if primary teeth are lost and interceptive orthodontic treatment may be considered as the permanent dentition erupts.
- Referral to a speech therapist for evaluation and intervention may be required.

Age 6-12 years

- Children should be assisted and supervised in their brushing routine at least till 8 years of age and proper oral hygiene training should be imparted with inter-dental cleaning aids and interspace brush for cleft area should be incorporated. Use of fluoridated toothpaste along with 6 monthly professional fluoride applications is indicated.
- Instructions to avoid fizzy drinks and cariogenic snacks should be given.
- Pit and Fissure sealants should be placed as premolars and molars erupt to prevent any caries development.
- A periodontal evaluation is advised every six months to assess for signs of food lodgement and pocket formation.
- The eruption of the permanent dentition should be monitored through radiographic assessments.
- At this developmental stage, children will exhibit self-awareness and begin school, necessitating the need for partial dentures[19] for missing teeth and their replacement as they grow.
- With the eruption of permanent teeth, interceptive orthodontics in mixed dentition may be carried out and the need for Maxillary orthopaedic protraction may be assessed at this age, making the referral to an orthodontist necessary.[20]
- Patients should be assessed for the need of secondary bone grafting for alveolar clefts, closure of oro-nasal fistulas, along with rhinoplasty at this stage.

Age 12-18 years

- Stringent oral hygiene measures are required for patients undergoing orthodontic treatment to prevent post-orthodontic white spot lesions and demineralisation.
- In addition to the oral care instructions at the previous stage, Information about behaviour modification including habit cessation such as smoking, and alcohol consumption should be provided as needed.
- The importance of using a fitted mouthguard during sports to prevent injury to dentofacial structures should be emphasized especially during braces treatment.
- Together with the approach of minimally invasive dentistry, it is imperative for dental practitioners to also contemplate aesthetic considerations and provide resin-bonded bridges, crowns or veneers.

- Assessment for sleep apnea by questioning the patient about excessive daytime sleepiness or heavy snoring while sleeping. If any concerns are present referral to a sleep specialist is reasonable.

Age 18+

- It is vital to educate the patient about the factors contributing to dental caries and gum disease and reinforce oral hygiene practices at each appointment. Individual-tailored oral hygiene instructions for patients undergoing orthodontic treatment, and possessing dental implants, or dental bridges are advocated.
- In addition to the aforementioned guidelines, Tooth dental whitening procedures may be administered if deemed necessary.
- Speech should be assessed post-operatively (orthognathic surgery) for Velopharyngeal Dysfunction (VPD).[21]

We would conclude by emphasising that the rehabilitation and care of children living with CLP frequently requires a multidisciplinary team approach encompassing nursing, plastic surgery, speech-language pathology, and orthodontics. It is imperative to incorporate dental care into the comprehensive care continuum for individuals with clefts to ensure adequate access to dental services and to integrate oral health throughout the treatment pathway.[3] To facilitate this integration, oral health professionals must obtain high-quality training and education regarding the care of patients with clefts. International organizations such as FDI are collaborating to develop new resources that establish standards for oral health and the integration of dental care for both children and adults with clefts.

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