Alarm Signals to Postpone Feeding Plate Fabrication and Nasoalveolar Molding

Sir,

Cleft lip and palate are common congenital anomalies with a global prevalence of 0.3 and 0.33 per 1,000 live births, respectively.[1] The oral cleft condition, which is associated with multiple aetiological factors, can present as a syndrome or a single entity.[2,3] The dentist in coordination with the paediatrician, plays an important role in managing these disorders from the first few weeks of life, by feeding plate fabrication and/or nasoalveolar molding, improving dietary intake, and surgical outcomes.

It is advocated that nasoalveolar molding should start as early as possible for better cleft approximation, because of the higher amount of hyaluronic acid present in tissues at this time, making them more moldable. Therefore, the attentive and trained clinician desires to proceed with feeding plate and/or nasoalveolar molding at the earliest.

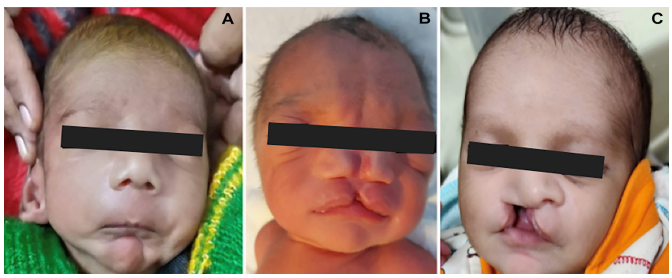

Figure 1: (A) Clinical presentation of isolated palatal cleft; (B) Clinical presentation of mid facial cleft; (C) Clinical presentation of unilateral complete unilateral cleft.

However, seemingly innocuous submucosal and isolated clefts may be associated with respiratory difficulty, pulmonary infections, congenital heart disease, micrognathia, glossoptosis, and anomalies of the extremities.[4] Physical examination of mid-palate clefts should rule out extension of meninges into the defect. Premature cleft palate babies with failure to thrive may be syndromic with respiratory and systemic involvement. Laboured breathing and periods of apnea must be watched out for symptoms (Figure 1). The Pierre Robin sequence is an example where the first step is to ensure that the patient breathes appropriately.

Recording an impression of the palate or giving an appliance in the absence of planning can have disastrous consequences. The clinical experience of this team advises proceeding with caution. A major risk associated with the feeding plate and/or nasoalveolar molding procedure is impression-making, where anoxia/ hypoxia may result. Also, a slightly posteriorly, over-extended feeding plate occluding the airway, can become life-threatening. Debilitated infants can have weak reflexes leading to aspiration and respiratory complications while feeding with a plate *in-situ*, especially if the plate is poorly adapted, which might also contribute to mucosal laceration. Facial taping done for feeding plate retention may lead to mucosal or dermal reactions in the systemically compromised babies.

Complications are more likely in busy/government hospital setups, where comprehensive examination and investigation may be sacrificed or overlooked. The treating dentist, therefore, needs to be on lookout for warning signals, and even defer the procedure till expert opinion is accessed. Early detection, preferably at the time of birth, and referral to tertiary care centres cannot be overemphasised. The decision regarding the best time to begin nasoalveolar molding/ feeding plate treatment must be made with the help of an interdisciplinary team comprising of concerned experts, and the procedure may be postponed until the infant is considered fit.

COMPETING INTEREST:
The authors declared no competing interest.

AUTHORS' CONTRIBUTION:
AV: Conceptualisation and writing.
SVS: Conceptualisation and data collection.
DA: Data collection.
All authors approved the final version of the manuscript to be published.

REFERENCES

1. Salari N, Darvishi N, Heydari M, Bokaee S, Darvishi F, Mohammadi M. Global prevalence of cleft palate, cleft lip and cleft palate and lip: A comprehensive systematic review and meta-analysis. *J Stomatol Oral Maxillofac Surg* 2022; **123(2)**: 110-20. doi: 10.1016/j.jormas.2021.05.008.
2. Kasatwar A, Borle R, Bhola N, Rajanikanth K, Prasad GSV, Jadhav A. Prevalence of congenital cardiac anomalies in patients with cleft lip and palate - Its implications in surgical management. *J Oral Biol Craniofac Res* 2018; **8(3)**:241-4. doi: 10.1016/j.jobcr. 2017.09.009.
3. Hadadi AI, Al Wohaibi D, Almtrok N, Aljahdali N, AlMeshal O, Badri M. Congenital anomalies associated with syndromic and non-syndromic cleft lip and palate. *JPRAS Open* 2017; **14**:5-15. doi: 10.1016/j.jpra.2017.06.001.
4. Alois CI, Ruotolo RA. An overview of cleft lip and palate. *JAAPA* 2020; **33(12)**:17-20. doi: 10.1097/01.JAA.0000721644.06681.06.

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Received: February 07, 2023; Revised: March 20, 2023; Accepted: March 21, 2023
DOI: https://doi.org/10.29271/jcpsp.2023.10.1211