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Dental Treatment of Cleft Lip and Cleft Palate: Alginate Molding for Newborns and Breastfeeding Support.

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ABSTRACT:
Cleft lip and cleft palate (CLP) are among the most common congenital craniofacial anomalies, requiring early intervention for optimal functional and aesthetic outcomes. This article discusses the role of dentistry in managing CLP, emphasizing the importance of taking an alginate mold of the newborn's oral structures. Additionally, it explores how early intervention aids in proper feeding, particularly breastfeeding, which is essential for the infant's nutrition and development.

I. INTRODUCTION:

Cleft lip and cleft palate result from incomplete fusion of the maxillary and palatine structures during embryonic development. These anomalies affect speech, feeding, and facial aesthetics, necessitating multidisciplinary care, including dental, surgical, and orthodontic interventions. A crucial aspect of early dental management is obtaining an accurate impression of the newborn's oral cavity to facilitate treatment planning and feeding support.

Alginate Mold Taking in Newborns:

Dental impressions are essential for fabricating feeding plates and guiding future corrective surgeries. Alginate, a hydrophilic irreversible hydrocolloid, is the preferred material due to its ease of use, accuracy, and safety in newborns. The procedure involves:

Preparing the Newborn: Ensuring a secure yet comfortable position to minimize distress and maximize procedural success.
Selecting the Tray: Choosing an appropriately sized or custom tray suited to the infant's oral cavity.
Mixing and Loading Alginate: Ensuring a smooth consistency to achieve an accurate impression.
Inserting the Tray: Carefully positioning the tray inside the newborn's mouth while maintaining a secure hold to capture the morphology of the cleft region without distortion.

Removing and Inspecting the Impression: Once the alginate has set, removing the impression carefully and inspecting it for accuracy and completeness before proceeding.
Model Casting: Pouring dental stone or high-quality plaster into the impression to create a precise working model of the cleft anatomy, which serves as the foundation for the fabrication process.
Acrylic Device Fabrication: Using the model to design and fabricate a functional acrylic appliance tailored to the patient's specific cleft condition. This device assists the baby in positioning the mother's nipple properly, prevents milk regurgitation into the nasal cavity, and enhances feeding efficiency, ensuring proper nutrition.

II. CONCLUSION:

Early dental intervention plays a critical role in managing CLP. Taking an alginate mold soon after birth aids in the fabrication of feeding plates, which support breastfeeding and promote healthy development. Multidisciplinary collaboration among dentists, surgeons, and lactation consultants is essential to optimize treatment outcomes for affected infants. Future research should focus on improving impression materials and techniques to enhance newborn comfort and procedural efficiency.

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