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PRESURGICAL NASOALVEOLAR MOLDING THERAPY FOR THE TREATMENT OF BILATERAL CLEFT LIP AND PALATE: A PRELIMINARY STUDY

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Objective: To evaluate the outcome of presurgical nasopalveolar molding therapy in the treatment of patients with bilateral cleft lip and palate.

Setting: The Cleft and Craniofacial Clinic at the University of Texas at Houston Medical School, Houston, Texas.

Patients: Eight patients with bilateral cleft lip and palate, treated between 2002 and 2004.

Interventions: The starting age for presurgical nasopalveolar molding therapy was 34.9 days and the average length of the therapy was 212.5 days.

Main Outcome Measures: Measurements of intraoral and extraoral casts were performed, and statistical analyses were used to compare the differences between measurements before and after therapy.

Results: Intraoral measurements demonstrated that there was a statistically significant reduction of the premaxillary protrusion and deviation. There was also a significant reduction in the width of the larger cleft. Extraoral measurements revealed that there was a significant increase in the bi-alar width and in the columellar length and width. Moreover, there was a significant improvement in columellar deviation. Finally, the nostril heights of both sides were increased.

Conclusion: The authors have quantitatively shown that presurgical nasopalveolar molding therapy has significant advantages in the treatment of bilateral cleft lip and palate patients. It improves the nasal asymmetry and deficient nasal tip projection associated with bilateral cleft lip and palate. It also forces the protruded premaxillary segment into alignment with the dental alveolar segments, improving the shape of the maxillary arch. As a result, the changes associated with presurgical nasopalveolar molding therapy help decrease the complexity of subsequent surgeries.