

Optimizing Nostril Symmetry and Nasal Tip Aesthetics With Nostril Retainer and Lip Strapping in Patient With Wide Unilateral Cleft Lip and Palate: A Case Report.

Introduction

Presurgical nasoalveolar molding effectively improves the surgical outcome of primary cheiloplasty and rhinoplasty in patients with complete cleft lip and palate^{1,2}. In institutions where dental or orthodontic treatment are not readily available, alternative presurgical treatment protocols can be improvised to achieve desirable outcome in these cleft patients.

Case Description

A Malay girl was born with a wide unilateral (left) complete cleft lip and palate. Her premaxilla was protuberant and rotated to the right while the left maxilla appeared hypoplastic. The columella was short and rotated to the left. The left alar wing was overstretched and collapsed (**Figure 1 & 2**). Anthropometric measurement at her first visit (2 weeks old) showed that the widest gap in cleft lip was 1.4 cm, dentoalveolar was 1.2 cm and hard palate was 1.1 cm.

Treatment Protocol

Patient commenced the presurgical nose and lip molding with a nostril retainer and elastic band lip strapping during her first visit until primary cheiloplasty. She was regularly followed up at two weekly intervals and the tensile force of the lip strap was increased with time. Primary cheiloplasty with modified Tajima’s open tip rhinoplasty was performed at the age of 5 months. After the surgery, the nostril retainer was used for more than 9 months. The size and shape of the nostril retainer (Silimed®) was regularly checked and changed accordingly, to provide effective support to the left alar and to maintain nostril symmetry. Two flaps palatoplasty was performed at the age of 1 year. After the palatoplasty, she was followed up every 4-6 months until she was 5 years old (**Figure 3-8**).

Analysis

During her follow up, photography and quantitative analysis of the columella height, columella-lip angle, nostril shape and size were recorded.

Conclusion

Preoperative use of nostril retainer and progressive lip strapping in patient with wide unilateral complete cleft lip and palate not only corrected the deformed nasal cartilage but also increased the columella height and columella-lip angle. There was an overall improvement in the nostril symmetry and shape. Regular use of nostril retainer after primary cheiloplasty and rhinoplasty was effective in preventing relapse and collapse of nasal alar³⁻⁴. This method can be considered an alternative to presurgical nasoalveolar molding as it is cost effective, less demanding and more tolerable to the patient.

References

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Figure 1. At 2 weeks old (frontal view)

Figure 2. At 2 weeks old (worm’s eye view)

Figure 3. At 2 years old (frontal view)

Figure 4. At 2 years old (worm's eye view)



Figure 5. At 5 years old (frontal view, repose)

Figure 6. At 5 years old (worm’s eye view, repose)

Figure 7. At 5 years old (frontal view, dynamic)

Figure 8. At 5 years old (worm’s eye view, dynamic)