

One Stage Repair of Binderoid Complete Cleft Lip /Palate Including Primary Aveolar Bone Grafting Followed by Secondary Nasal Repair Using Costal Cartilage and Reverse Fork Flap

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Abstract

Background: Binderoid cleft lip/palate(CLP) was first described by Mulliken in 2003 and is characterized by nasolabiomaxillary hypoplasia and orbital hypotelorism . (1) We have been performing one stage repair of cleft lip/palate not only to unilateral but bilateral CLP (BCLP).

Methods: The following is a brief description of one stage repair for BCLP. 1. At lip repair, white lip is designed linearly. 2. Philtrumplasty is performed .3. External nose repair is done by suspending alar cartilage. 4. Periosteoplasty of piriform aperture rim is performed. 5. Primary alveolar bone grafting (PABG) from hard palate and/or inferior nasal concha is performed with gingivoperiosteoplasty (GPP) or gingivomucoperiosteal flap (GMPF). 6. Hard palate can be closed directly when cleft width of posterior margin is under 8 mm and when it is over 9 mm, submucoperiosteal relaxing incision is added. 7. Soft palate is closed by modified Furlow method.

Case:

A female baby was referred to our hospital for the treatment of BCLP. She had marked nasolabiomaxillary hypoplasia and orbital hypotelorism (Figure 1.).Holoprosencephaly had already been ruled out before the referral and she was diagnosed as Binderoid complete CLP. After presurgical orthopedics, she underwent one stage repair of cleft lip and palate at 6 months old. At the age of 5, we performed external nose repair using costal cartilage and reverse fork flap.

Results: Her nasolabiomaxillary hypoplasia has been improved (Figure 2).At alveolar cleft, some amount of bone formation is observed. There have been no major complications such as marked maxillary growth impairment, necrosis of premaxilla, oronasal fistula, or velopharyngeal incompetence.



(Figure 1)



(Figure 2)

Conclusions: Our one stage repair can be applied with benefit and safety to Binderoid complete BCLP children, who are among the most difficult types of CLP to treat.

Reference

1. Mulliken, J. B., Burvin, R. , Padwa,. Binderoid Complete Cleft Lip/Palate.Plast Reconstr Surg 111(3):1000-1010,2003.