



ISSN: 0976-3031

Available Online at <http://www.recentscientific.com>

International Journal of Recent Scientific Research
Vol. 8, Issue, 1, pp. 15178-15180, January, 2017

**International Journal of
Recent Scientific
Research**

Research Article

FEEDING PROSTHESIS FOR NEWBORN PATIENT WITH CLEFT PALATE

Randhir Singh*, SandeepKaur and Zaffar Iqbal

Department of Prosthodontics, Government Dental College, Srinagar

ARTICLE INFO

Article History:

Received 17th October, 2016
Received in revised form 21st
November, 2016
Accepted 05th December, 2016
Published online 28th January, 2017

Key Words:

Cleft palate, obturator, feeding appliance,
impression

ABSTRACT

Prosthodontics is a versatile branch which entails procedures from prevention to treatment. Feeding appliance is one of the treatment modality provided to facilitate easy nutrition to a patient with cleft palate. Cleft lip and palate is a congenital anomaly occurring at birth. The main objective of this treatment is that this procedure is to facilitate feeding but it can also be used for naso-alveolar molding. This article describes about the construction of feeding plate in a 2 month old patient.

Copyright © Randhir Singh et al., 2017, this is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Clefts of the lip, alveolus and palate are the most common congenital malformations seen in the head and neck region (Ellis, 2003). Children with CLAP face a vast variety of problems, like feeding difficulties, hearing loss (ear infections), missing or malformed teeth and speech defects, subsequently leading to failure to thrive (Goldberg et al, 1988). The oronasal communication diminishes the ability to create negative pressure, which is necessary for suckling (Osuji 1995, Samant, 1989). The feeding process is also complicated by nasal regurgitation of food, excessive air intake that requires frequent burping, (Saunders et al, 1989) and choking (Samant, 1989). Feeding time is significantly longer and fatigues both baby and parent (Saunders et al, 1989). There are different approaches to address the problems associated with feeding cleft palate babies. These included feeding equipment (bottles, teats, cups, and spoons), feeding techniques (e.g., Richard's Enlargement, Stimulate, Swallow, Rest [ESSR] method), breast-feeding, prostheses, and nutrition/lactation advice (Reid 2004). Feeding obturators are passive devices designed to provide a normal contour to the cleft alveolus and hard palate. They separate the oral and nasal cavities and in doing so provide a surface to appose the nipple during suckling (Glass and Wolf 1999).

This clinical report describes the technique of fabrication of feeding prosthesis of a 2 month old baby boy, who was born by a full term normal delivery (Fig.1). The baby was referred to

the department of prosthodontics because of poor swallowing ability.



Figures 1

Technique

1. Primary impression was made using disposable plastic spoon as a tray and impression compound as impression material (Fig.2)
2. Impression was poured in Type IV dental stone (kalstone, kalabhai) and a custom impression tray was fabricated from autopolymerizing acrylic resin.

*Corresponding author: **Randhir Singh**

Department of Prosthodontics, Government Dental college, Srinagar



Figure 2 Primary impression made with impression compound.

3. After evaluating the impression tray intraorally, vinylpolysiloxane adhesive was painted over the intaglio surface, and loaded with viscous vinyl polysiloxane impression material (aquasil, Putty; dentsply). Insert the loaded impression tray into the mouth. Care is to be exercised at this point of time to ensure that the baby is breathing.



Figure 3 Final prosthesis with labial button



Figure 4 Feeding appliance in place

4. Definitive cast was poured and undercuts were blocked, acrylic resin prosthesis was fabricated after application of separating medium.
5. Prosthesis was retrieved and evaluated for smoothness and uniform thickness. After finishing and polishing, a small hole was made using a round bur at the labial flange. A bead of resin was added to make labial button to which a ligature was tied which was secured on both cheeks with tape (Fig. 3 and Fig. 4)
6. Instructions were given to parents on how to insert, remove, and clean the prosthesis.

DISCUSSION

The feeding prosthesis obturates the defect, thus making a matrix against which nipple can be pressed to extract the milk. (Kogo *et al* 1997) (thus facilitating the feeding obturating the defect not only improves feeding but also reduces nasal regurgitation, (Oliver 1969) choking, and shortens the length of time required for feeding. (Turner *et al* 2001) the obturaorseperates the palatal shelves and tongue, thus there is no interference to horizontal growth of palatal shelves and tongue assumes its correct functional position, thus contributing to the growth and speech development. Before making impressions suction apparatus should kept ready (endotracheal tube) to avoid any untoward contingency. The child should be fully awake not sleepy as it is important while making impression to avoid aspiration Child should be crying while making impression Otherwise we will know that airway is blocked. A variety of techniques have been advocated in the literature for the purpose of obtaining impression, including alginate (Oliver 1969) beeswax (Samant, 1989), periphery wax finger, physiological wax, polysulfide impression material (Saunders *et al* 1989), and very-high-consistency vinyl polysiloxane (Taylor, 2000). Its important to choose an impression material, which does not tear easily, have sufficient body to support itself, and give satisfactory detail. The putty type vinyl polysiloxane is the material of choice because its high viscosity reduces the danger of aspiration or swallowing, and its relatively satisfactory detail duplication is for the purpose of fabricating a palatal prosthesis.

Summary

The feeding prosthesis is a simple device that not only improves the feeding of patient but also alleviates the concerns and anxiety of parents. But care is to be exercised to supplement it with lactation advice and modified bottle feeding methods.

References

1. Ellis E, (2003). Management of patients with orofacial clefts. 4thEdn. Mosby Inc.; 2003. *Contemporary Oral and Maxillofacial Surgery*, 4: 623–645.
2. GoldbergWB, Ferguson FS, Miles RJ, (1996). Successful use of a feeding obturator for an infant with a cleft palate. *Spec Care Dentist*, 8:86-9.
3. Glass RP, Wolf LS (1999) Feeding management of infants with cleft lip and palate and micrognathia. *Infants Young Child*, 12:70–81.
4. Kogo M, Okada G, Ishii S, Shikata M, Iida S, Matsuya T, (1997). Breast feeding for cleft lip and

- palate patients, using the Hotz-type plate. *Cleft Palate Craniofac J*, 34:351-3533.
5. Osuji OO, (1995). Preparation of feeding obturators for infants with cleft lip and palate. *J ClinPediatr Dent*, 19:211-214.
 6. Oliver HT, (1969). Construction of orthodontic appliances for the treatment of newborn infants with clefts of the lip and palate. *Am J Orthod*, 56:468-73.
 7. Reid J, (2004) A Review of Feeding Interventions for Infants With Cleft Palate. *Cleft Palate–Craniofacial Journal*, May, 41:268-278.
 8. Samant A, (1989). A one-visit obturator technique for infants with cleft palate. *J Oral MaxillofacSurg*, 47:539-540.
 9. Saunders ID, Geary L, Fleming P, Gregg TA, (1989). A simplified feeding appliance for the infant with cleft lip and palate. *Quintessence Int*, 20: 907-910.
 10. Turner L, Jacobsen C, Humenczuk M, Singhal VK, Moore D, Bell H, (2001). The effects of lactation education and a prosthetic obturator appliance on feeding efficiency in infants with cleft lip and palate. *Cleft Palate Craniofac*, 38:519-24
 11. Taylor TD. Clinical maxillofacial prosthetics. Chicago: *Quintessence*: 65-66, (2004)

How to cite this article:

Randhir Singh., SandeepKaur and Zaffar Iqbal.2017, Feeding Prosthesis for Newborn Patient with Cleft Palate. *Int J Recent Sci Res*. 8(1), pp. 15178-15180.