Case Report

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ROLE OF PEDIATRIC DENTISTS IN EARLY MANAGEMENT OF CLEFT LIP AND PALATE IN CHILDREN: A CASE REPORT

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Abstract

Cleft lip and palate is one of the commonest congenital deformities seen at child birth. The case reports presented here is of a 4 day old infant with left unilateral complete cleft lip and palate involving uvula and soft palate with Intra Uterine Growth Retardation(IUGR), Atrial Septal Defect(ASD) and Patent Ductus Arteriosis(PDA) who was referred to the dental department for fabrication of feeding plate as otherwise the child was being fed with feeding tube. The feeding plate was delivered to the child who was thus put off the feeding tube and discharged from the hospital.

Key words: Cleft Lip And Palate; Feeding Plate; Multiple Congenital Anomaly

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INTRODUCTION

Cleft lip and palate is one amongst the commonest congenital deformities seen at birth of a child. It has been seen that majority of Cleft lip and palate cases are non syndromic, approximately 25 percent have associated birth defects or some genetic syndromes.[1-2] Inadequate nourishment due to difficulty in feeding affects the childrens' health and acts as a stumbling block in the normal developmental milestones. The feeding appliance effectively separating the oral cavity from the nasal cavity is a great aid in feeding. In this case report, we are presenting a case in which infant with cleft lip and palate was given feeding plates.[3]

CASE REPORT

A 4 day old child with left unilateral complete cleft lip and palate involving uvula and soft palate, with IUGR, ASD and PDA was referred to the department of Pedodontics and Preventive Dentistry for fabrication of feeding plate as he was presently unable to take breast feed or bottle feed and was thus being fed through feeding tube. The child had no possible etiological factor associated with cleft i.e. no increased maternal age, parents had no consanguious marriage and no related family history of CLCP. The child couldn't take breast feed nor bottle feed due to the large defect. To avoid nasal regurgitation and repeated chest and ear infections, feeding plate was advised for the patient. The PDA was 3mm while ASD was 5mm and due to the age and the weight, surgery was not advisable.Impression was made using medium body and light body putty material. A cast was poured of dental stone type 2. Cast was inspected and the undercuts were blocked. Then,

the feeding plate was fabricated using heat cure acrylic. Most retention was assumed to be provided from palatal shelves of maxilla and nose chamber. Pronounced extension into the soft palate was avoided to prevent gagging. Two rubber bands were placed on the sides for additional retention, to prevent swallowing and for easy retrieval of appliance.Initially, the child was being fed with a normal nipple. The feeding with this nipple was very slow. Later long teat nipple was advised. Also the mother was counselled on the various modified feeding techniques with which the child could be fed i.e. she was taught the modified football hold (child in usually held at an angle of 45°), which minimizes nasal regurgitation.[1] Mother was instructed how to use and clean the device and were advised to place the prosthesis to the infant all day long except for cleaning. This led the child to take feed easily and he was thus put off the feeding tube and discharged from the hospital.

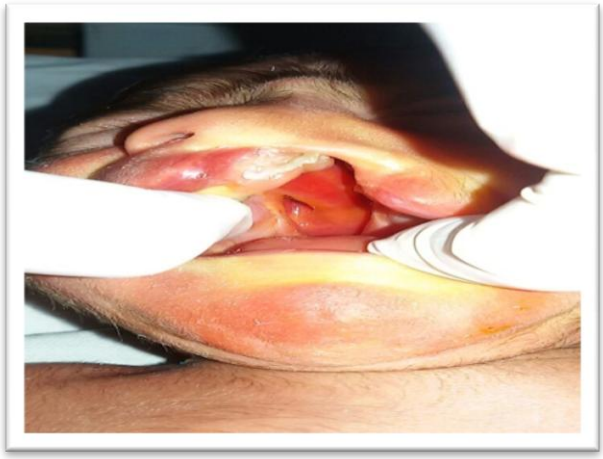

Figure 1: Pre-operrative

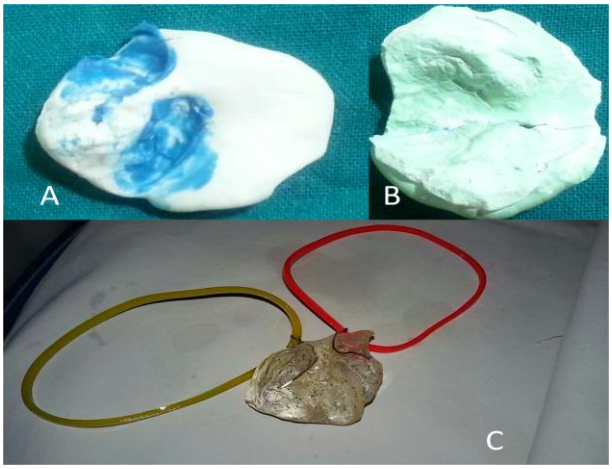

Figure 2: (A) Rubber Base (B) Cast Poured (C) Feeding Appliance

Figure 3: Post-Operative

DISCUSSION

Oral facial cleft is amongst the commonest facial abnormalities, and treatment of such a child continues till late adolescence and puts enormous stress on the entire family.[2] Feeding difficulties associated with cleft palate have been documented. In patients with no syndrome, the underlying problem is generally failure to generate negative intraoral pressure(suction)during feeding. This affects attachment to the breast or artificial nipple and extraction of milk, bolus organization, retention of the bolus in the mouth before swallow initiation, and in swallow initiation. Sequelae to this include excessive air intake, nasal regurgitation, fatigue, coughing, choking and gagging on fluids, prolonged feeds, and discomfort. Parents may also fear the task of feeding their infant.[3] There is no generalised consensus about the most efficacious interventions for infants with feeding problems. These may include modified nipples or bottles, modified feeding techniques, feeding plates, and parental counselling on nutrition and lactation.[4] It has been reported that the non-random occurrence of several morphologic defects not identified as a syndrome or a sequence is called an *association*. Oral clefts are frequently associated with congenital heart defects. The cause of these associations is unknown. This category is also called “multiple congenital anomaly”.[4] Our case report too comes under this category. In an individual study conducted at Sri Ramachandra Dental College showed that associated anomalies were more

frequent in patients with cleft lip and palate than in patients with cleft lip alone and patients with cleft palate alone. The study reported that organs most commonly involved with associated anomalies in the order of decreasing incidence are eye, ear, heart, upper limb, lower limb, genitals, mandible, mental retardation, craniofacial clefts, skull, tongue, growth retardation, skin and hair.[5] While in another study conducted in India in 2011, facial anomalies (21%) were most frequently detected, followed by ocular (17%), central nervous system (15%), lower and upper extremities (15%), and cardiovascular (10%).[4] The most common disadvantage of using feeding tube early in life includes soft tissue perforation. The feeding tubes are known to be responsible for most of the recorded perforations as the tissues are soft at first and they become hard and stiff after several hours of use. The feeding tube is also reported to produce rare complications such as bladder perforation, pericardial sac perforation, and colonization with Enterobacteriaceae.[6] Considering the complications that can be encountered, it is always better to give a feeding plate to the child instead of being put on feeding tube.

CONCLUSION

A deep knowledge and proper diagnosis of the **o**rofacial cleft and the associated syndromes is essential for management of child with CLCP. Secondly, for such patients, a multidisciplinary approach is required. Lastly, before any treatment, parental counselling is a must as it is very difficult for parents to accept the condition of the child and they undergo a lot of psychological stress. Once these hurdles are overcome, we receive better response and acceptance with the feeding pattern of the child. Recognition of the associated anomalies and syndromes with the oral cleft is essential for assessment of problems and risks faced by the child. Thorough knowledge of anomalies associated with Orofacial clefts will help to provide necessary treatment and improve survival of these children.

REFERENCES

1. Abhay Agarwal, Vivek Rana, Shabina Shafi . A feeding appliance for a newborn baby with cleft lip and palate.Natl J Maxillofac Surg. Jan-Jun 2010; 1(1):91-93.
2. Chapados C. When a child is born with a cleft lip and palate. Can Nurse 1997;93:31-36.
3. Julie Reid . A Review of Feeding Interventions for Infants With Cleft Palate. Cleft Palate–Craniofacial Journal May 2004; 4(3)
4. P.S. Sekhon, M. Ethunandan, A.F. Markus, Gopal Krishnan, C. Bhasker Rao, Cleft Palate–Craniofacial Journal, July 2011; 48(4).
5. Cohen MM., Jr . Cleft lip and palate: From origin to treatment. New York: Oxford University Press; 2002. Syndromes with orofacial clefting; pp. 53–65.
6. Rangeeth, et al. Role of the pediatric dentist and prosthodontist in early cleft management. SRM Journal of Research in Dental Sciences October-December 2013; 4(4).

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