



## Feeding Habits in Cleft Lip and Palate Patients - Advantages and Disadvantages

Deepti K\*, Shilpi K, Prakash Chandra K and Pawan Kumar D

Department of Burns and Plastic Surgery, All India Institute of Medical Sciences, Jodhpur, India

### Short Communication

Nutrition in cleft lip and palate is crucial and challenging to deal with. As these children have to undergo surgery therefore, they must gain weight. Thus, adequate nutrition and weight gain are essential in these kids.

Parents are often anxious about these kids due to the anomaly and the dilemma they face to feed their kids. The sucking is weak and non-rhythmic, with difficulty in maintaining good seal and latch. There is very much risk of gagging, choking, and regurgitation in these patients. Cleft children, especially with the palate, are more prone to ear infections and cold coughs. The struggle during feeding makes these kids tire more easily.

Due to aerophagia, more air swallowing during feed makes their stomach full without getting an adequate diet [1]. Inadequate feeding causes malnutrition, which eventually leads to anemia, hypoproteinemia, and low weight. Thus, supplemental feeding, apart from breastfeeding, is necessary for these kids [2].

In exclusive cleft lip patients, there is no difficulty while feeding, especially in the case of incomplete unilateral patients. The breast tissue fills the defect to create the seal [2].

The palate superiorly, lip anteriorly, tongue inferiorly, cheeks bilaterally, and posterior pharyngeal posteriorly -all these structures help in creating negative pressure by forming a closed chamber. Palate helps create a barrier between the nasal and oral cavities, thus helping in preventing regurgitation. However, in cleft palate patients, if the defect is anteriorly and smaller, the tongue helps close the defect while feeding.

Good sucking helps in the development of tongue and oral muscles, which directly affects chewing and speech development.

The feeding frequency should be adjusted according to the age of the newborn. On day 1 of life, stomach capacity is 5 ml to 10 ml; thus, he can be fed 8 to 12 times/day, with each feeding consisting of 2 ml to 10 ml of milk. At 3 to 6 months, it increases to 120 to 150 ml/feed around 6 to 8 times/day. As the child ages, 150 to 180 ml/feed can be given six times/day [1].

While feeding, one must remember that foremilk is rich in lactose, while hindmilk has a higher fat content. There should be exclusive breastfeeding for six months [3]. It has anti-infective properties. It is less irritant even if a child regurgitates. There is a good amount of iron, zinc, Vit A, C, and D compared to Cow's milk, which has high calcium, phosphorus, potassium, sodium, and magnesium. The saturated fat and high casein content in Cow's milk make it difficult for newborns to digest [1]. In a study by Gopinath [2] on nutrient intake between 2 to 6 years with and without cleft lip and palate, he observed that except for fat and potassium intake, there was a significant difference in nutrient intake in both groups.

While feeding, hold your baby upright around a 60 to 80-degree angle with the chin tilted up (Figure 1). In unilateral cleft, keep the nipple away from the cleft, while in bilateral cleft, hold the infant with a modified football hold. The weak latch can be improved with the dancer's hand position, in which the infant's chin rests on the web between the thumb and index finger, stabilizing the jaw (Figure 2). Feeding should not last for more than 30 min. One should be burping frequently, every 5 min to 7 min [1].

One should be very vigilant in understanding the cues of the child. If hungry, he will open his mouth, turn his head too much, and even start crying if not fed in time. If properly fed, he will smile, play, and lie calmly. If he sleeps too much, that is also a sign of concern, which may be due to poor

### OPEN ACCESS

#### \*Correspondence:

Deepti Katrolia, Department of Burns and Plastic Surgery, All India Institute of Medical Sciences, Room no: 403, OPD Building, AIIMS, Basni Industrial Area Phase II, Jodhpur, India, Tel: 8587997469

Received Date: 20 Dec 2023

Accepted Date: 04 Jan 2024

Published Date: 09 Jan 2024

#### Citation:

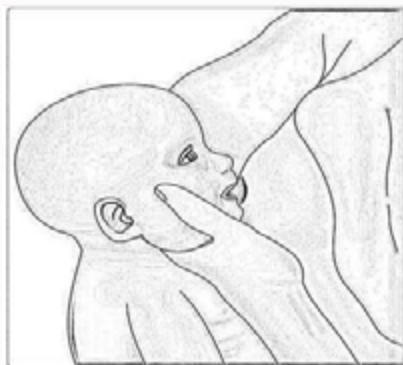
Deepti K, Shilpi K, Prakash Chandra K, Pawan Kumar D. Feeding Habits in Cleft Lip and Palate Patients - Advantages and Disadvantages. *Ann Clin Case Rep.* 2024; 9: 2557.

ISSN: 2474-1655.

Copyright © 2024 Deepti K. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.



**Figure 1:** Recommended position when bottle feeding.



**Figure 2:** Nutrition.



**Figure 3:** Nutrition Haberman.

nourishment [2].

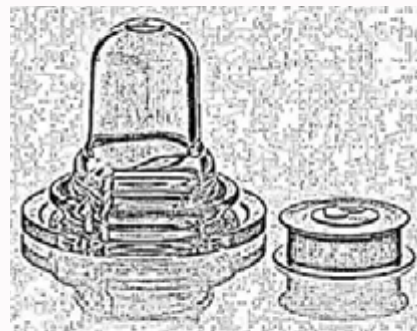
Monitor the child's urine and stool output; normally, frequency of motion and urine is around 4 to 5 times/day [2].

The weight of a child doubles typically every 5 to 6 months. There should be monthly monitoring of weight gain. Apart from this, there should be strict hemoglobin and skeletal growth monitoring. Weight gain is vital in preventing infection, making him more tolerant towards surgery, and healing would be proper.

Bottle feeding should be started in cases where the baby is not catching growth properly. While feeding with a bottle, one should be



**Figure 4:** Mead-Johnson feeder.



**Figure 5:** Pigeon nipple.

understanding the coordination of sucking and swallowing with the breathing pattern of the baby. Thus, gentle squeezing of the bottle in coordination with the pace of sucking and swallowing should be kept in mind [2].

There are various types of nipples and devices available in the market, which include the Haberman feeder (Figure 3), Mead Johnson feeder (Figure 4), Lamb's nipple, Cross-cut nipple, Spoon, or Gravity flow or squeeze bottle - all these help in delivering the fluid over the posterior part of the tongue. A soft nipple allows moderate to fast flow, as slow feed can exhaust the baby. However, the enlarged hole in the nipple also poses the danger of loss of coordination between sucking, swallowing, and breathing which may lead to choke, fatigue, or even aspiration.

The size of the nipple should be appropriately selected according to the baby, as a short nipple cannot contact the hard palate and tongue, while too long can gag the baby.

Mead-Johnson's squeezable bottle directs the milk beyond the cleft but does not have a way valve. Haberman feeder, which is a squeezable nipple with a slit, has straight line markings of different lengths at the base of the nipple, which should be parallel to the baby's nose. It has a valve which prevents excessive air from getting into the nipple. Again, coordination between sucking, swallowing, and breathing is required. Parents must gently squeeze the nipple first, which allows the baby to compress the nipple and control the flow [2]. A pigeon nipple (Figure 5) is a firm bottle with a bulbous nipple with a one-way flow valve. The y-cut nipple is thinner on one side and thicker on the other. Thicker is placed on the baby's upper gum and thinner on the baby's tongue. Duarte et al. [4] did a systemic review of feeding methods of children with cleft lip and palate; and found

that feeding through suction is appropriate before surgical repair. He found that weight gain was seen in children fed with a squeezable bottle filled with breast milk.

Apart from these feeders, an obturator is available to help separate the oral and nasal cavities. Thus, the rigid platform it creates helps in pressing the nipple and extracting the milk. The obturator also has another advantage: It reduces nasal regurgitation, thus reducing choking, and helps in quick feeding [5].

Thus, feeding in cleft lip and palate patients can be managed under proper guidance. Breastfeeding can be adjuvant with another supplemental diet if the baby is not gaining weight.

## References

1. Goswami M, Jangra B, Bhushan U. Management of feeding problem in a patient with cleft lip/palate. *Int J Clin Pediatr Dent.* 2016;9(2):143-5.
2. Gopinath VK. Assessment of nutrient intake in cleft lip and palate children after surgical correction. *Malays J Med Sci.* 2013;20(5):61-6.
3. Gillette Children's Hospital Mailing address: 200 University Avenue East, St. Paul, MN.
4. Duarte GA, Ramos RB, de Almeida Freitas Carosa MC. Feeding methods for children with cleft lip and/or palate: A systemic review. *Braz J Otorhinolaryngol.* 2016;82(5):602-9.
5. Changing the World One Smile at a Time. Smile Train.