

Feeding Management in Infants with Craniofacial Anomalies



Jill M. Merrow, MA, CCC-SLP

KEYWORDS

- Cleft • Craniofacial • Feeding management • Dysphagia • Breastfeeding
- Fiberoptic endoscopic evaluation of swallowing • Modified barium swallow study
- Video swallow study

KEY POINTS

- Feeding and swallowing abilities in infants born with craniofacial anomalies show great variability.
- Difficulties with feeding mechanics in infants with cleft lip and/or palate include limited labial seal and stability of the nipple within the oral cavity, suboptimal intraoral pressure, suction, and milk transfer.
- Feeding difficulties with cleft lip and/or palate can be more complicated in the presence of an associated syndrome or sequence.
- Common feeding goals for infants with craniofacial anomalies include improvement of milk flow to meet caloric intake requirements, prevention of excessive air intake, minimalization of nasal regurgitation, and attainment of physiologic stability accomplished through various management strategies.
- Instrumental assessment via fiberoptic endoscopic evaluation of swallowing and/or modified barium swallow study can be used when appropriate to gain further objective data regarding swallow function and to devise strategies to promote safe feeding and swallowing.



Video content accompanies this article at <http://www.facialplastic.theclinics.com>.

INTRODUCTION

Feeding abilities in all children gain prompt attention and demand vigilance from parents immediately after birth. Whether receiving a prenatal diagnosis of a craniofacial anomaly by fetal ultrasound or receiving the diagnosis at birth, the anxiety and worry can be overwhelming. The sooner that caregivers are educated regarding feeding management, the sooner they feel empowered to adequately feed their infant. Referrals to cleft and craniofacial teams for prenatal consultations after identification of a cleft on

fetal ultrasound have been found to be both informative and anxiety-reducing to the parents.^{1,2} Specifically, Davalbharka and Hall³ (2000), reported that antenatal counseling prepared parents for the birth of an infant with a cleft in 85% of respondents; 89% of parents felt they benefitted from knowing the diagnosis ahead of time. Although feeding and swallowing issues persist beyond infancy, this section focuses on typical development of infant feeding and swallowing skills, feeding difficulties and their causes, evaluation, and management.

Disclosure: The author has nothing to disclose.

State University of New York (SUNY) Upstate Medical Center, 750 East Adams Street, Syracuse, NY 13210, USA

E-mail address: merrowj@upstate.edu

Facial Plast Surg Clin N Am 24 (2016) 437–444

<http://dx.doi.org/10.1016/j.fsc.2016.06.004>

1064-7406/16/© 2016 Elsevier Inc. All rights reserved.

Typical Feeding and Swallowing Development

In a healthy, typically developing newborn, feeding is reflexive. The rooting reflex encourages the newborn to find the nipple and the suck reflex to pull milk from the nipple. Milk is extracted from the nipple by both positive and negative pressure, otherwise known as compression and suction. Milk extraction results from the coordinated movements of the following oral structures.

Jaw

The supportive structure of the jaw moves in a vertical dimension. Its inferior movement assists with creating suction.

Lips

The lips assist with the anterior seal around the nipple and support stabilization of the nipple within the oral cavity.

Tongue

The tongue tip compresses the nipple. The posterior aspect of the tongue seals the oral cavity against the soft palate. When the tongue drops, it enlarges the oral cavity creating suction. The tongue also forms a midline groove for the transfer of the liquid bolus from the mouth to the oropharynx.

Cheeks

The cheeks provide stability. The greater the fat pads, the greater the stability.

Hard palate

The hard palate assists the tongue with nipple compression and stability.

Soft palate

The soft palate assists the tongue in closing off the oral cavity posteriorly. During the swallow, it rises to seal off the nasal cavity, prevent nasal regurgitation and create suction.

Sucking These oral movements coordinate with respiration and swallowing to produce a suck-swallow-breathe sequence ideally in a 1:1 suck-swallow ratio. Suckling is the first phase of the suck to emerge. The tongue moves in an anterior-to-posterior dimension and, according to Arvedson and Brodsky⁴ (2002), “liquid is drawn into the mouth through a rhythmic licking action of the tongue, combined with pronounced opening and closing of the jaw. Lips are loosely approximated.” This pattern changes by the sixth month of life with onset of differentiation between the jaw, tongue, and lips, including increased lip closure and more vertical excursion of the tongue.

Swallowing Swallowing, or deglutition, is not a synonymous term to pair with feeding. Swallowing is a complex process of both volitional and reflexive behaviors involving the action of coordinated, sequential motor movements from the mouth to the esophagus. Hence, there are 4 stages to swallowing that are generally accepted: the oral preparatory phase, the oral phase, the pharyngeal phase, and the esophageal phase. The oral preparatory phase involves the suckling or sucking, biting, and chewing actions that bring the food into the mouth and form the bolus. The oral phase consists of bolus transit to the oropharynx by the tongue. The pharyngeal phase involves the closure of the nasopharyngeal port, anterior and vertical excursion of the larynx, inverse movement of the epiglottis, vocal fold closure at midline and relaxation of the upper esophageal sphincter (UES), and inverse movement of the epiglottis with coverage of but not a tight seal for the laryngeal vestibule. The pharyngeal muscle constriction triggers pharyngeal peristalsis. As the bolus moves from the hypopharynx through the open UES, the esophageal phase begins. The involuntary peristaltic action of the esophagus propels the bolus through the relaxed lower esophageal sphincter to allow the bolus to enter the stomach.

Progression Reaching oral sensorimotor milestones allows the typically developing infant to progress to solid foods. According to Arvedson and Brodsky⁴ (2002), spoon-feeding skills emerge between 4 to 6 months of age. At about 6 months, munching with vertical jaw movements emerges. Infants become ready for thicker textures. Rotary jaw action begins at about 7 months and is refined by 12 months of age. New textures should be gradually introduced in order for the child to gain competence in chewing ability and to prevent choking.

Feeding Difficulties: the Mechanics

Parents of infants with clefts often make the following observations regarding limited feeding ability: “My baby isn’t sucking well. My baby doesn’t want to feed. He pushes the nipple out of his mouth. My baby is lazy. My baby isn’t swallowing correctly. It comes out of his nose. My baby is always hungry. My baby acts hungry but then falls asleep as soon as he starts feeding.” These symptoms are often influenced by the mechanical issues that emerge due to the cleft lip and/or palate. In simple terms, the lip latches to the nipple and the palate maintains the latch. Given lip and palatal deficiencies, the latch and its maintenance are adversely affected. The type and severity of the cleft directly influence the intensity

Download English Version:

<https://daneshyari.com/en/article/5714454>

Download Persian Version:

<https://daneshyari.com/article/5714454>

[Daneshyari.com](https://daneshyari.com)