

Case 2: *Nancy*

A Toddler with Cleft Lip and Palate: Early Therapy

Cynthia Jacobsen

Introduction

This case presents an infant born with a bilateral cleft lip and palate. It focuses on the progression of speech, language and hearing evaluations, and speech treatment (both pre- and post-surgical) over the first two years of life.

Learning Objectives

The learning objectives for the reader are to:

Basic:

- describe the effects of a bilateral cleft lip and palate on resonance and speech development in a young child,
- explain the purpose of Nasendoscopy (FFVN), and
- describe goals of speech therapy and parent education in the toddler years.

Advanced:

- describe the differences between compensatory speech errors and speech errors due to disordered phonology,
- summarize how speech evaluations led to the child's treatment plan, and
- contrast clinical information available at the 18 month and 2 year team visits and how the data affected treatment planning.

Suggested Activities

- Identify one compensatory error seen in a child with cleft palate. Suggest therapy activities to move sounds from the nose or pharynx into the mouth. Suggest activities appropriate for a child 18-30 months of age.
- Compensatory errors are errors in the place of articulation. The child uses dysfunctional placement in an attempt to close the velopharyngeal valve. Once the error is learned, the child often continues to use incorrect placement following surgery. One error is the glottal stop. The glottal stop is a voiced stop consonant with a glottal place of production. Glottal stops are often substituted for stop consonants such as /b/ and /d/. A glottal stop can completely replace a stop consonant or occur as a co-production with oral placement for stops and affricates. Therapy activity: Hold the clinician's nasal airway closed and make bilabial consonants (/m/, /b/, and /p/). Subsequently, teach the child to hold her own nose or use a nasal clip and then practice saying sounds with and without the nose closed. Contrast pairs of syllables such as "me" and "be." Once "me" and "be" are learned, contrast "me" and "dee." Show that "me" is a nose word and that "bee" and "dee" are mouth words. Use actions and pictures to demonstrate.
- Identify teaching opportunities for parents to elicit practice of targeted sounds. Describe how parents can provide 100 daily practice opportunities with incidental and direct teaching:
 - Set aside 5 to 10 minutes, 2 to 3 times a day for creative practice of key words.

- Parents make a picture book to read with the child. The book contains words with target sounds such as /p/, /b/ and /w/.
- Parents identify key objects and phrases that can be brought into incidental activities such as eating, bathing, and riding in the car. Parents model words such as “up” and “hop” and use these key words with activities that occur throughout the day
- Parents set up a special place with a mirror, to introduce objects followed by practice of target sounds. Parents may have key word cards or toy animals to elicit syllables such as moo moo (cow), bah bah (sheep), wuh wuh, (dog), neigh neigh, (horse) to make practice varied and fun. Having a set of materials in varied locations lends itself to short periods of quality practice.
- Determine the goals for speech therapy. The goals for speech therapy are correct placement for sounds without compensatory errors in the throat or nose. The child imitates speech sounds including stop consonants and learns to direct airflow out of the mouth. Early words contain a variety of consonant-vowel combinations and syllable shapes. Consonants usually heard include: /m, n, h, w, b, d and g/. The child also learns the parts of the face and tongue such as “lips, teeth, tongue, mouth and nose.”

Case Analysis Questions

1. **What do you know about the client’s medical concerns?** Nancy had a bilateral cleft lip and palate. She also had an early history of otitis media which resolved following bilateral myringotomy and tubes.
2. **What do you know about the client’s articulation disorder?** Nancy’s two conditions contributed to her severe articulation disorder. As a result of velopharyngeal insufficiency, Nancy was not able to obtain intraoral air pressure for sounds such as /b/, /g/, /f/; thus Nancy’s speech was hypernasal and there was nasal air emission on consonants. Nancy also had a phonological disorder, affecting consonant usage across syllable positions.
3. **What do you know about the client’s velopharyngeal insufficiency?** Nancy had moderate hypernasality and nasal air emission. She could not say high pressure consonant sounds.
4. **What more do you need to know about the client?** Knowing the child’s level of cooperation or frustration due to the severity of the speech problem is helpful in designing therapy activities. The student clinician needs to know how to educate parents with everyday language (plainlanguage.gov).
 - **What information was available in cleft team reports?** Reports by the cleft team included team member findings as well as a team treatment plan.
 - **What information was available in speech evaluation reports?** Speech evaluations provided information on articulation, resonance and nasal air emission, language development, and behavior.
 - **What information do you want to obtain from reading materials and research?** Students may want information about parent counseling, as well as diagrams and charts for parent education. The student clinician may want to obtain additional information about therapy. Students need to understand the vocabulary used in the study by physicians, dentist, nurses and allied health professionals.

5. **Should any other course of intervention have been considered?** No other course of intervention was considered.
6. **What are the challenges that might arise from each new treatment option?** Once velopharyngeal insufficiency was resolved, the SLP needed to implement a therapy program to address the phonological speech disorder.
7. **Describe the family's account of the case.** The family was extremely satisfied. Family questions were answered, requests were respected and the child's speech problem was resolved.
8. **Describe the clinician's account of the case.** The clinician described a structured speech therapy program and a strong parent home program coordinated with the team's overall treatment plan. The SLP supported the parents when they requested nasendoscopy at age two.
9. **Was there consensus between the family's and clinician's account of the case?** Yes.

Additional Suggested Readings

- Kummer, A.W. (2007). *Cleft palate and craniofacial anomalies. Effects on resonance*. (2nd ed.). Boston: Cengage.
- MedlinePlusHealth Topic: Cleft lip and palate. <http://www.nlm.nih.gov/medlineplus/cleftlipandpalate.html>
- Managing speech problems: Physical treatment of velopharyngeal dysfunction. Chapel Hill: Cleft Palate Foundation.
- Plainlanguage.gov A website with helpful methods for making communication understandable. <http://www.plainlanguage.gov/>
- The SmileTrain Cleft Information Public Library <http://medpro.smiletrain.org/library/PublicLibrary.html>
- Wide Smiles: Cleft Lip and Palate Resource (parent networking and support). <http://www.widesmiles.org/index.html>