

# Psychological Effects Of Speech Disorders In An Adult Patient With Untreated Cleft Palate

Akinbami B. O. B.D.S. FWACS

Department of Oral and Maxillofacial surgery, University of Port Harcourt Teaching Hospital, Port-Harcourt

### Abstract

**Background:** Cleft palate of the primary or secondary type, is accompanied with various devastating physical and psychological effects. The purpose of this case study was to highlight the psychosocial problems the patients with these defects encounter both at the initial and later stages of their lives.

**Method:** The case study focused on the history and clinical examination of a 25-year-old, single, female patient who presented with hypernasality and misarticulation of speech secondary to an incomplete cleft of the secondary palate which was not treated.

**Results:** The patient was found to break down with tears in the process of discussion about her social life; she disclosed having problems with interacting with the society and especially with her male friends. Examination revealed a 5 centimeter (cm) long and 2cm wide central defect involving the soft palate/uvula and causing a communication between the oral cavity/oropharynx and nasal cavity/nasopharynx. The patient was counseled and asked to come for surgery. However she has not come back since the day she came to our clinic.

**Conclusion:** Speech defects in longstanding untreated clefts are not easily correctable and these have associated life-long impact on the quality of life of the patients, therefore, because some parents are afraid of surgical operations and may not want to subject the children to this treatment, this study will enlighten the clinicians to inform and emphasize to the parents/relations about these speech defects and psychological implications that will result if the children are not treated and even at the appropriate time.

**Keywords:** Speech disorders, untreated cleft palate, psychological problems.

Paper accepted for publication 5<sup>th</sup> September 2007

### INTRODUCTION

Cleft palate either of the primary or secondary type, is accompanied with various devastating physical and psychological effects.<sup>1</sup> The disease is a congenital manifestation of an interplay of many environmental

factors and genetic alterations which result in inadequate production, development, migration and union of orofacial tissues of the developing fetus within the gestational period of 7weeks-12weeks.<sup>2</sup> Some physical features of these diseases manifest in the children immediately following birth and these include problems of feeding and aesthetics, other problems which occur later during development of the child are failure of teeth to erupt and altered morphology/arrangement of teeth, inadequate resonance and misarticulation of speech, hearing difficulties as well as ear, nasal, and chest infections.<sup>3</sup>

However, these physical features causes more serious and disturbing psychological and social effects not only for the growing child, but also for the parents especially the mothers who at times may want to hide the babies and deny well-wishers and relations access to them.<sup>3,4</sup> Some parents even have superstitious ideas or are made to believe that such children are from mysterious sources and that evil inclinations are ascribed to them if allowed to live. In addition, some of the parents who bring the babies to the hospital are afraid of losing the children when informed that the defects will be corrected surgically. This has made it impossible to treat some of the cases at the appropriate time and when the defect is left untreated, the dimensions increase with age and the physical features manifest and worsen with time.<sup>5</sup> This ultimately causes the child a lot of psychological trauma as he/she grows up and interacts with the society.<sup>6</sup> This report highlights the psychological burden of a 25-year-old female patient who presented in our clinic with severe hypernasality of speech due to untreated incomplete cleft of the secondary palate.

### CASE REPORT

A 25-year-old female patient with a higher diploma and a contract staff of one of the multinational oil companies came to the Oral and Maxillofacial surgery department of the hospital in October 2006 with a history of opening in the roof of her mouth since birth. The patient had

insufficient resonance and was reluctant to communicate because of this deficit. She also had occasional aspiration of food and liquids into her nose but could not remember any previous episodes of symptoms suggesting infections, predisposing factors to cleft palate could not be ascertained. She however disclosed that her parents had taken her to the hospital some days after birth but they were afraid to subject her to surgical operation. The patient was not married and not engaged at the time of presentation and she desired such.

Further assessment revealed a cleft defect (5cm long by 2cm wide) in the soft palate and uvula dividing these structures into two equal halves. There was communication between the posterior portion of the oral cavity and nasopharynx. The hard palate, premaxilla, tongue, cheeks, upper and lower lips and the external nose were intact and well formed. The tonsils, peritonsillar structures and pillars of the fauces were well formed. All the teeth were present and well aligned in relation to the adjacent and opposing teeth. There was no ear discharge or deformity of the ears, eyes and eyelids. The jaws were also normal in proportion.

On further interaction with the patient, the patient broke down with tears in the process of discussion about her social life; she disclosed having problems interacting her male friends because of her altered speech. A diagnosis of incomplete bilateral cleft of the secondary palate involving the soft palate and uvula was made.



**Figure shows the diagram of the patient with incomplete cleft of the secondary palate in the soft palate and uvula.**

The patient was informed that the operation can still be done, but the outcome of the speech defect is unpredictable; she was encouraged to come for the surgery. Despite her willingness to get the defect corrected surgically, she still opted to inform and obtain her parents' consent but the patient has not turned up for surgery for over a year.

## Discussion

Difficulties of speech such as language delay, misarticulations, hypernasality/ hyponasality and nasal airflow disturbances (nasal emissions and turbulence) are part of the long-term problems and adverse effects of untreated clefts of both the primary and secondary palates which can cause psychosocial problems for the patients more especially when they are not managed at the appropriate time.<sup>1-3</sup> It could also be effects of inadequate surgical managements and complications such as velopharyngeal inadequacy (insufficiency and incompetence), previous studies have documented that 20-25% of children still have speech problems after repair.<sup>4-6</sup> This patient presented with hypernasality, some degree of misarticulation and airflow disturbances due to lack of treatment.

Disorders of articulation (substitutions, omissions and distortions) results from both clefts of the primary and secondary palate in which there is lack of sufficient bulk or inadequate movement and contact of orofacial tissues such as the lips, teeth, tongue, hard and soft palate, pharynx and larynx.<sup>7-9</sup> These contact difficulties cause speech problems such as distortions of some phonemes and consequent substitutions and omissions of some alphabets/words as compensatory measures.<sup>10</sup>

Also, resonance/vibration (sound pressure) disorders are oral and supraglottic problems which results from clefts of both the primary and secondary palates. The defects cause an escape of air, with loss of intra-oral pressure which is necessary to enhance the intermittent vibration of the vocal cords and transmission of sounds.<sup>2,3,5,7</sup> This therefore causes hypernasality of speech. It is however important to know that hypernasality can also be a phonation problem as a result of diseases affecting the larynx/ vocal cords.<sup>3</sup> In addition, it can result from excessive widening of the nasopharynx as in the voice disordered patients.<sup>2,3</sup> Some speakers with velopharyngeal inadequacy seem to accept their loss of intra-oral pressure and continue to articulate as accurately as possible.<sup>4</sup>

Delay in the management of these defects will result in widening of the clefts and this further worsen the speech anomalies, this will gradually culminate in devastating psychosocial problems as in the case of our patient.<sup>6</sup> Management of cleft lip and palate must include prevention of the predisposing and etiological factors, thorough investigation which include prenatal ultrasonic imaging, analysis of enzyme markers,

videofluoroscopy, nasal endoscopy, airflow studies, spectrography and Nasal view (an equipment for measuring the relative sound pressure in the nasopharynx with computerized analysis and conversions into percentages.<sup>5,8,10</sup>

Thorough counseling and assurance of the parents on effective and adequate feeding to improve the weight of the child as well as development of orofacial tissues to allow manipulation and good healing of the tissues is required.<sup>10</sup> In addition, appropriate facilities and applicable surgical techniques are necessary to prevent and minimize altered speech and its effects.<sup>3</sup> Although this patient has not turned up for treatment, It must be

emphasized that management of these patients is a multidisciplinary approach which include the expertise of plastic, maxillofacial and E.N.T surgeons as well as orthodontics, prosthodontics, psychologists and speech therapists.<sup>4</sup>

In conclusion, Speech defects in longstanding untreated clefts are difficult to correct and these have associated life-long impact on the quality of life of the patients, therefore counseling of the parents must emphasize on the long-term psychosocial, marital and emotional problems the children may suffer if the defects are not corrected before school age.

### References

1. Paal S, Strabel-Schwarthoff K, Nkenke E, Schuster M. Evaluation of speech disorders in children with cleft lip and palate. *J Orofac Orthop* 2005; 66:270-278.
2. Trixy C.N, Adriana De Oliveira CG, Anapaula F, Katiaflores G. Speech resonance in orthognatic surgery in subjects with CLP. *J Appl oral sci* 2005; 13: 49-52
3. Tindlund RS, Holmerfjord A. Functional results with the team care of cleft lip and palate patients in Bergan, Norway. *Folia Phoniatr Loqop* 1997; 49:168-176.
4. Bressmann T, Sader R, Awan S, Busch R, Zeilhofer HF, Horch HH. Quantitative diagnosis of hypernasality in cleft lip and palate patients by computerized nasal quality assessment. *Mundkiefer Gesichtschir* 1999; 3:154-157.
5. Anette I, Hans F, Anna E, Christina P, Jan L. Speech development in patient with unilateral cleft lip and palate with different delays in closure of the hard palate. A longitudinal perspective. *Scandinavian Journal of Plastic and Reconstructive and Surgery* 2006; 40: 267-274.
6. Bressman T. Phonetic and Psychological aspects of cleft lip and palate patient. Studies concerning nasal resonance, speed of articulation, voice and quality of life, attending the Department of Phonetics, University of Munich. PhD dissertation. University of Munich. January 1998.
7. Camen C, Catalina D, Ana F, Ramon S. Spectrographic measures of the speech of young children with cleft lip and palate. *Folia Phoniatria. International Journal of phoniatics, speech therapy and communication pathology* 2002; 54: 34 - 38.
8. Kuehn DP, Moller KT. Speech and language issues in the cleft palate. *J Craniofac Surg* 2000; 43: 486-500.
9. Kuehn DP, Henne L. Speech evaluation and treatment for patient with cleft palate. *Am. J Speech language Pathology* 2003; 12: 103-109.
10. Schonweiler R, Lisson JA, Schonweiler BA. Retrospective study of hearing, speech and language in children with clefts following palatoplasty and veloplasty at 18-24months of age. *Int J Pead Otol* 1999; 50: 205-217.