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Research Article

PROSTHETIC REHABILITATION OF MAXILLOFACIAL DEFECTS WITH AN IMMEDIATE APPROACH: AN IMPACT FACTOR ON PSYCHOLOGICAL DISPOSITION

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ABSTRACT
The patients with maxillofacial deformity experience unique disruption in the normal oral/craniofacial environment and functions, which are the result of congenital, traumatic or surgical insults. This has negative impact on the psychological disposition of patients, especially, if defect also affects esthetic. In this aspect, Maxillofacial Prosthetics aim to attain the optimal evolutionary functions, such as speech and swallowing, and normalcy, most sought after. Modifying routine dental procedures, the dentist can create an interim prosthesis with immediate approach to cover defect created by missing tissue to regain optimal/suboptimal functions. This paper presents the role of interim prosthesis fabrication with an immediate approach as a positive impact factor on psychological disposition of maxillofacial patient.

Keywords: *Acquired Facial Defect, Interim Prosthesis, Maxillofacial Defect, Psychological Disposition*

INTRODUCTION
Successful prosthetic rehabilitation of disrupted oral/craniofacial environment created by congenital, traumatic or surgical abnormalities is considered the primary goal of dentist, but no less important to the patient is attainment of normal esthetic and functions. Maxillofacial Prosthetic rehabilitation is considered as a critical requirement to improve Quality of Life for individual whose rehabilitation will be lifelong proposition. Hence, Maxillofacial Prosthetics is concerned with the restorations and/or replacement of the stomatognathic system and associated facial structure with prosthesis that may or may not be removed on regular or elective basis [Bulbulian 1965]. Acquired defects are one of the most common maxillofacial defects those are usually managed by removable prosthesis. The typical maxillary acquired defect results in oral communication with nose and/or maxillary sinus, though the composition of residual surgical defect may vary widely. This creates physiological and functional deficiencies in mastication, deglutition, and speech. Such defects have negative impact on the psychological disposition of patients, especially, if defect, also affects esthetics.

Psychological Aspect of Maxillofacial Prosthetic Patient
During recording patient's chief complaint, medical and dental history, examinations and adjunctive consultation, mental assessment of patient's demeanor is must. The prognosis for a successful treatment outcome is dependent upon making a correct diagnosis and anticipating issues beyond the realm of dentistry alone. House classification is the most often used to classify mental status of patients, that is, philosophical, exacting, indifferent, and hysterical. However, this approach seemed short when applied to classify the mental status of patient suffered the life threatening illness or recently suffered surgical or traumatic events. Additionally, patients with maxillofacial defects will experience changes in social acceptance that impacts the psyche and sense of well being. As the maxillofacial patient's Quality of Life is altered and social integration becomes difficult, the patient's expectations to return to "normalcy" often collapse. In this situation, it is critical to perform treatment so that demeanor is more conducive to treatment, and/or coordinated with service of rehabilitating team.

As a key factor for patient satisfaction, the potential benefits of precisely evaluating the patient's psychological perspective are manifold. Mental attitude of maxillofacial patients are usually classified by the etiology of their diagnosis, which is usually categorized: Acquired, Congenital, and Developmental [Taylor 2000]. Therefore, an objective evaluation of the patient's psychological requirements may allow

to more precisely defining the type of intervention most successful for the patient, thereby optimizing and individualizing treatment strategies. This could not only enable to avoid costs of inefficient treatment but, in reply, also contribute to a furthered patient–doctor interaction [Beumer *et al.*, 1979].

Impact of Timing of Maxilofacial Prosthetic Care

Timing of maxillofacial prosthetic care best emphasize the initial appointment prosthetic care that patient required, followed later by the more static prosthetic requirement fulfillment, is helpful with regard to coordinate physiologic and psychological care for patients with such defects.

Design of treatment framework based on timing of prosthetic care:

- Interim care
- Immediate approach - single appointment prosthetic rehabilitation.
- Delayed approach – multiple appointment prosthetic rehabilitation.
- Definitive care.

Advantages of Immediate Interim Prosthetic Care over Delayed Interim Prosthetic Care

The objective of interim prosthesis is to separate/cover defects involving the oral and nasal cavities by either obturating the communication or to reconstruct disfigurement caused by maxillofacial defects. Obturating the defect is an artificial mean of blocking the free transfer of speech sounds and food/liquid between the oral and nasal cavities.

The major deficiencies directly addressed by prosthetic care at first appointment with immediate care are deglutition and speech. At initial focus on improvement in swallowing and speech with immediate interim prosthesis can help boost the rehabilitation process significantly. The advantages of having the ability to take nourishment by mouth without nasal reflux, allowing nasogastric tube removal and to communicate with family members are significant component of immediate prosthetic management. Most importantly, a positive impact on the psychological disposition is noted which later seems critical to perform definitive treatment so that response is more conducive to treatment, and/or coordinated with service of rehabilitating team.

CASE SERIES

Case I

A 20 years old male patient reported to the department with complaint of nasal reflux of fluid, nasal discharge intraorally, and missing teeth leading to poor appearance. History suggested acquired defects as a result of surgical trauma. On intraoral examination, constricted maxillary arch was noticed with persistence of unilateral residual oro-nasal communication on the right side in pre-maxillary region. Maxillary right central incisor and left central incisor, lateral incisor found missing as result of traumatic insult. The main objective of this patient's treatment was to seal the residual oro-nasal communication to improve swallowing, phonetics and maintenance of patency of the nasal cavity. Other objective was to replace the missing central and lateral incisors to improve esthetics and to overcome psychological trauma. (Figure 1)

Figure 1: A- Residual oro-nasal communication, B- Interim prosthesis with missing teeth attached

Case II

A 30 years old male patient reported with chief complaint of difficulty in eating, swallowing, nasal reflux of fluid. History suggested acquired defects as a result of surgical trauma. On intraoral examination, it was noticed that there was persistence of unilateral residual oro-nasal communication on the left side palatal region. The main objective of this patient's treatment was to obturate the residual oro-nasal communication to improve chewing and swallowing capability, phonetics and maintenance of patency of the nasal cavity to overcome psychological trauma. (Figure 2)

Figure 2: A-Unilateral oro-nasal communication, B-Immediate obturator in clear acrylic resin

Case III

A 40 years old male patient reported with chief complaint of nasal regurgitation of fluid, hypernasal speech, and missing teeth leading to poor appearance. History suggested acquired defects as a result of surgical trauma. On intraoral examination, there was persistence of unilateral residual oro-nasal communication in the midline. Maxillary right and left central incisor and right and left lateral incisors were found missing as result of traumatic insult. The main objective of this patient's treatment was to seal the residual oro-nasal communication to improve swallowing, phonetics and maintenance of patency of the nasal cavity to overcome psychological trauma. (Figure 3)

Figure 3: A- Oro-nasal communication in the midline, B-Immediate obturator

DISCUSSION

The functions and esthetic are disrupted because of congenital, traumatic or surgical abnormalities involving the oral cavity and related anatomical structures. The primary goal of maxillofacial prosthetics is to improve the quality of life of individuals with maxillofacial defects [Chang *et al.*, 2005]. Maxillofacial defects due to acquired defects are most common and results after surgery of oral neoplasm or trauma. Sometimes acquired defects exist as a persistent small residual defects or communication after surgical repair of large defects.

This article discusses the management strategy based on 'time factor' and 'effect of time factor on demeanor'. Timing of maxillofacial prosthetic care best described the initial appointment prosthetic care that patient required, followed later by the more static prosthetic requirement fulfillment. In these three cases, an immediate approach interim prosthesis was fabricated which seemed helpful with regard to reestablished swallowing, speech and patency of the nasal cavity at initial appointment. Moreover, there seemed marked effect of time factor on demeanor as at initial appointment prosthetic rehabilitation induces a positive impact on the psychological disposition which later seems critical to performed definitive treatment so that demeanor is more conducive to treatment, and/or coordinated with service of rehabilitating team [Young 1972].

Hence, maxillofacial prosthetic management of patient with acquired defects with immediate approach affects patient acceptance of prosthetic phase because of immediate prosthetic rehabilitation, simple design, easy insertion and removal, easy maintenance, and most importantly, low cost. This overall treatment phase thus provide a more conducive psychological and physiological balance.

Conclusion

The prime objective of an immediate approach interim obturator was to seal the oro-nasal communication to reestablished swallowing, phonetics and patency of the nasal cavity. With such management strategy, the major deficiencies are addressed promptly by maxillofacial prosthetic rehabilitating team at first appointment. Thus, at initial focus only, improvement in swallowing, speech and esthetics with immediate interim prosthesis was achieved and this helped to boost the rehabilitation process significantly and effectively.

REFERENCES

Beumer J, Curtis D and Firtell D (1979). Restoration of Acquired Hard Palate Defects. In: *Maxillofacial Rehabilitation: Prosthodontic and Surgical Considerations* (St. Louis, Mosby).

Bulbulian AH (1965). Maxillofacial Prosthetics: Evolution and Practical Application in Patient Rehabilitation. *Journal of Prosthetic Dentistry* **15** 554-559.

Chang TL, Garrett N, Roumanas E and Beumer J (2005). Treatment Satisfaction with Facial Prostheses. *Journal of Prosthetic Dentistry* **94** 275-280.

Taylor TD (2000). Psychological Management of the Maxillofacial Prosthetic patients. In: *Clinical Maxillofacial Prosthetics* (Quintessence publishing Co Inc).

Young JM (1972). The Prosthodontic's Role in Total Treatment of Patients. *Journal of Prosthetic Dentistry* **27** 399-412.