



Prosthodontic Rehabilitation of Intraoral Maxillofacial Defect with an Interim Obturator - A Case Report

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Abstract

Patients with cleft palate undergo various problems such defects occur as a consequence of congenital malformations, trauma or surgical resection of tumors. Communication between nasal and oral cavity causes difficulty in swallowing, speech and gives unaesthetic appearance.

Prosthodontics rehabilitation with obturator prosthesis restores the missing structures and act as a barrier to cover the defect. This helps in improvement of vital functions. Rehabilitation with prosthetic treatment help patient psychologically to increase their self esteem, and work to lead a normal life. This case report describes prosthodontics management of a cleft palate patient with obturator prosthesis.

Keywords: maxillofacial prosthesis, obturator, palatal defects, interim maxillary obturator.

Introduction

Maxillofacial prosthesis is the art and science of anatomic, functional or cosmetic reconstruction by means of nonliving substitutes in the region of maxilla, mandible and face that are missing or defective because of surgical intervention, trauma, pathology or congenital malformations.

The cleft lip and palate is a congenital defect with the presence of an oro-nasal communication, malformation or agenesis of the teeth close to the cleft and deficient sagittal and transverse growth of the maxilla.

The rehabilitation of congenital cleft lip and palate starts soon after the child is born. It is so challenging that it involves a team of dedicated

specialists and the timing a team of dedicated specialists and the timing of treatment is of paramount importance. This in turn has lead to development of different treatment philosophies.

Cleft of hard and soft palates are treated with various surgeries. Initially cheiloplasty was performed in the first month and in later years of life palatoplasty is carried out. Associated with these surgical advantages there has also been a need for cleft palatal prosthesis since rehabilitation is not limited to anatomical repair of cleft. Depending on the type and extent of cleft. Several functional and morphological aspects such as speech, hearing, developing of occlusion and craniofacial growth may be damaged and required

intervention by multidisciplinary team at appropriate time for achievement of integral rehabilitation.

Maxillofacial rehabilitation with the help of prosthesis is an important contribution by the prosthodontists in the field of dentistry to humanity.

Prosthetic treatment allows patients to feel more normal, increases their self esteem and offers them greater opportunities for employment and for fulfilling their social potential.

An obturator (latin : obturare – to stop up) is a prosthesis used to close a congenital or acquired tissue opening, primarily of hard palate and/ or contiguous alveolar soft tissue structures(GPT-9). Ambrose Pare, a french surgeon treated palatal perforations using an obturator. He was the first person to fabricate an obturator.

Principal function of an oral obturator is closure of palatal defects for establishment of oro nasal integrity. Fabrication of obturator requires biologically inert, technically simple and desirable materials.

Many newer materials like silicone obturators and implant supported prosthesis can be utilized for prosthetic rehabilitation of intraoral defects but heat cured acrylic obturators are still treatment of choice because of several advantages.

This case report is about the laboratory and clinical management of cleft palate patient with interim maxillary obturator made with heat cured acrylic.

Case Report

A 24 years old male patient came to the department of prosthodontics and crown & bridge, BIDS, Patna, with a chief complain of difficulty in speech and swallowing due to a hole in the palate.

On intraoral examination deviated nasal septum and loss of fullness of upper lip was found. Patient had difficulty in speech and pronunciation of certain words.

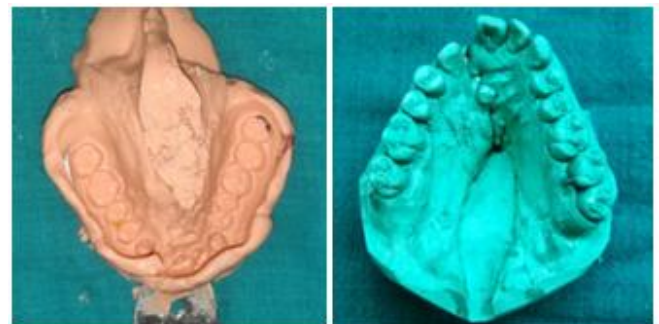


Clinical Procedures

Block out of defect was done using gauze pieces and then impression was made with alginate.



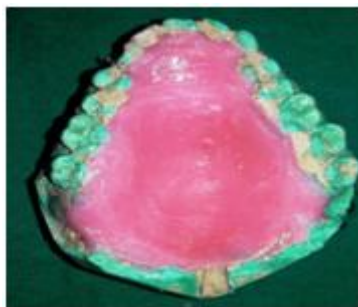
Impression was poured with type II dental plaster and casts were obtained.



Modeling wax was adapted over the defect and the adjoining palatal area.

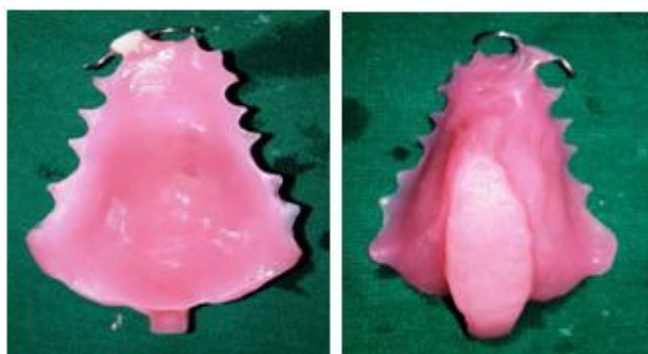


Flasking and dewaxing was done followed by packing with heat cure acrylic resin which was then polymerized.



Conventional compression molding technique was used for fabrication of obturator.

The obturator portion of the prosthesis was smoothed to reduce the possibility of trauma to the mucosa & thus improve tolerance of the prosthesis. After finishing and polishing insertion was done.



Post insertion oral hygiene maintenance instructions were given as well as patient was instructed how to clean the obturator.



After insertion routine follow up was done time to time.

Discussion

The present case report describes a method of rehabilitation of a maxillary defect with an interim

heat cured acrylic obturator which provides an option of restoring esthetics and function by a non invasive method.

Other than acrylic, silicone is the material of choice for the fabrication of obturator. Silicone elastomers can be mainly of – Room temperature vulcanizing (RTV), or High temperature vulcanizing (HTV).

Silicone elastomers are resilient but it has several disadvantages like they are costly, need special technical manpower and not easily available.

Room temperature vulcanizing silicone readily picks up odour. But they are not universally accepted as they have lifeless appearance and poor tear strength. Hence heat cured acrylic resins are routinely used for construction of obturator.

Acrylic resin is available easily, easy to colour and stain, has good strength to be fabricated with feather margin and has shelf life of about 2 years. This process is simple, non invasive, cost effective and allow for periodic examination & cleaning.

Conclusion

Patients with such a defect suffer from a lot of psychologically trauma due to impaired functions and aesthetics. Hence we as prosthodontists should try to restore the lost form and functions of the oral and peri- oral structures that will help the patient to live a normal life.

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