



Case Report

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Rehabilitation of Maxillary Defect with an Interim Obturator: A Case Report

Dr. Chitra Goyal¹, Dr. Rahi Goyal²

1. Senior Lecturer, Department of Prosthodontics, Jaipur Dental College, Jaipur, Rajasthan, India
2. Consultant at global Heart and General hospital

Abstract

An interim obturator acts as a bridge between surgical and definitive phases of treatment of a maxillectomy patient. Apart from restoring the functions of speech and deglutition, it has a great psychological benefit to the patient in regaining social acceptance. [1] For the success of a obturator it should cover maximum supporting area, utilizing all the favourable undercuts and utilizing the remaining teeth and reduction of the weight of the obturator is important. [2] This case report describes a modified technique for fabricating an overdenture with closed hollow bulb obturator.

Keywords: Interim Obturator, Subtotal maxillectomy, C clasps

INTRODUCTION

An obturator is a prosthesis used to close congenital or acquired palatal defects. Large defects which cannot be closed surgically are best treated with prosthetic obturators. Traditionally there are three distinct phases of rehabilitation of maxillectomy patients. These are surgical, interim and definitive phases. Obturators may be used on an immediate or transitional basis. [1] An interim obturator is normally placed 7-10 days after surgery. [1, 3] During the time the interim prosthesis is in place, the surgical site heals and becomes dimensionally stable. [1] Artificial replacement of the teeth and palate aids in speech, mastication, esthetics and morale. However, the prosthodontist should not rush to provide artificial for the interim obturator prosthesis. [3]

The friability of tissue after radiation therapy, if it has been used, usually allows use of only the simplest type of prosthesis. [3] Also posterior teeth should not be added to interim obturator prosthesis since they may impose excessive stress on the wound and delay the healing process. [3] This article describes an easy method to make interim obturator prosthesis more comfortable during the time required for postsurgical healing.

CASE REPORT

A 50 years female patient came to the prosthodontics Department of Jaipur Dental college and hospital, Jaipur 10 days after surgery with the chief complaint of missing teeth, difficulty in eating & drinking water, foul smell from mouth, speech difficulty. Patient was an operated case of left subtotal maxillectomy for Squamous cell carcinoma. The site of surgery was the part of left maxillary hard and soft palate.

Extension of defect- Anteroposteriorly - first molar tooth region to a part of soft palate. Mediolaterally - mid alveolar ridge beyond 2nd premolar tooth till midline of hard palate.

A few teeth were also extracted on that side. The missing teeth were 26 and 27. Intraoral examination revealed raw wound at the operated site.

Patient was planned for prosthetic rehabilitation with Interim Obturator with minimum extension into defect area until surgical closure was performed.

PROCEDURE

1. Preliminary Impressions : Preliminary impressions of upper and lower arch were recorded with irrevers

***Corresponding author:**

Dr. Chitra Goyal

Senior Lecturer, Department of Prosthodontics, Jaipur Dental College, Jaipur, Rajasthan, India

Email:
drchitragoyal@gmail.com

hydrocolloid impression material (Imprint, DPI, Mumbai) with metal stock perforated trays.^[4] (Fig.1)



Fig.1 Alginate impressions of upper arch

Impressions were poured with type-III dental stone and casts were obtained.^[4]

2. Block Out of Defect: Block out of the defect was done with modelling wax.

3. Fabrication of Base Plate: Approximately 5-7cm of area was left from top of the palatal defect to prevent seepage of oral fluid and better adaptation of the final prosthesis.^[4] After this separating medium was used and denture base with extension in the defect was made with self cured acrylic resin (DPI, RR, Mumbai, India) with dough method. Then 19 gauge hard round stainless steel orthodontic wire was manipulated (3M Unitek, Monrovia, Calif) to fabricate 'C clasps' that engage the labial infrabulge retentive areas of the remaining healthy teeth on the nonresected and resected side. Defect area was filled with table salt and a cap of pen was trimmed on one side and adapted over resected ridge to fabricate a false ridge and to prevent the tongue to move in defect area. (Fig.2) Then self cure acrylic resin was used to fabricate the plate. (Fig.3)



Fig.2 Blocked out cast with multiple c clasps, trimmed Cap of pen, salt in defect area



Fig.3 Interim obturator

On completion two small hole were made on the base of hollow bulb obturator. One opening was to pass the water to dissolve the salt and second opening was to remove dissolved salt completely. These small hole were sealed with the self cure acrylic resin. The obturator was finished, polished and relined with soft liner and inserted in the patient mouth. (Fig.4) Post insertion instructions were given and patient was called for regular recall checkups which showed an improvement in speech, mastication, swallowing and facial esthetics.



Fig.4 Relined interim obturator with soft liner

DISCUSSION

The aim of interim obturator is to improve speech, deglutition and to maintain the oral hygiene to aid in tissue healing of the patient until a definitive prosthesis is constructed.^[5] Posterior teeth was not added to interim obturator prosthesis because they may impose excessive stress on the wound and delay the healing process. An obturator can be made hollow or solid. An interim hollow bulb obturator has advantage of being less weight to provide better retention and comfort to the patient.^[5] The interim obturator allows the patient to slowly adapt to the new prosthesis. There is remodeling of the soft tissues adjacent to the defect and scar band reorganization.^[1] Due to this remodeling the interim obturator may require frequent readjustments. When the soft tissues around the defect have stabilized, a definitive obturator can be fabricated.^[1]

CONCLUSION

Patients with such a defect suffer from a lot of psychological trauma due to impaired functions and aesthetics. Prosthetic rehabilitation will improve patient's social life and restores aesthetics, functions & also boosts patients morale.

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