

## CASE REPORT

# FABRICATION OF A MAXILLARY IMMEDIATE INTERIM HOLLOW OBTURATOR

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### ABSTRACT:

Oral cancer mostly involves the surgical resection of all or part of the defect, leaving the patient with a deficiency that bargains the health and function of the oral cavity. Surgical treatment creates disastrous effects on appearance, function and psychological aspects of patients. In such cases it is very hard for the patient to execute normal functions. Prosthetic rehabilitation with obturator prosthesis reanimates the missing structures and also acting as a curtain between the various cavities. This article presents a technique for fabrication of immediate interim hollow bulb obturator in a patient who was planned for full mouth extraction prior to radiotherapy.

**Keywords:** Interim obturator, radiation, fabrication procedure.

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## INTRODUCTION

The history of the maxillary obturator prosthesis is well documented. Ambroise Pare (1509-1590) was the first to describe its usefulness. Since the time techniques have changed according to the ability of the clinician and availability of materials.<sup>1</sup>Interim obturator is placed within 1 to 10 days after the surgery.<sup>2</sup>Though the re-epithelialization of defect is less, disrupted sensory innervation reduces the discomfort to the patient. Although reduced salivary flow, mucosal secretions, psychologic effect, and reduced nutrition add to the patient's discomfort and concern.<sup>3</sup>As the healing progresses, an interim obturator is fabricated and protected further into the defect, with consecutive addition of material for improving the border seal and retention.<sup>4</sup>This clinical report documents the fabrication of an immediate interim obturator as the extraction of maxillary teeth were done as an precautionary measure before the radiation therapy began.

## CLINICAL REPORT

A 54-year-old female patient was referred to the OPD of the Department of Prosthodontics Himachal Dental College Shimla from the radio therapy department. Patient had a squamous cell carcinoma of the left side of the hard palate and had under gone surgical resection. Patient had been given a surgical obturator which was sutured after surgery. As the patients treatment plan included radio-therapy but the condition of the remaining

teeth were not as the guidelines so the extraction of remaining teeth were advised (Figure 1).

So, fabrication of immediate interim obturator was planned to facilitate early healing and helping the patient during the speech, swallowing and deglutition etc.

## TECHNIQUE

1. Examination of oral condition was thoroughly done. A maxillary stock tray was selected, which was modified by trimming the right buccal flange and palatal raised portion of tray on right side was flattened for facilitating the impression of the defect.
2. Impression of maxillary arch was made using irreversible hydrocolloid (Figure 2).
3. Impression was poured in Type III gypsum material to obtain a working cast. On the cast double spacer was adapted over the dentulous area and left half of the hard palate. A custom tray was fabricated on it using light cured polymerizing resin. Stoppers were also placed, one on the hard palate and other two on the occlusal surface (Figure 3).
4. Border moulding was done along the borders using a low fusing impression compound and the impression of the defect was made by using admixed technique (Figure 4).
5. After that the spacer was removed and indentations were marked on impression of the defect and holes drilled onto the tray using a metal bur. Tray adhesive was applied on the tissue surface (Figure 5).

- 6. On this tray impression was made using irreversible hydrocolloid (Figure 6).
- 7. A cast poured in in Type III gypsum material to obtain a working cast (Figure 7).
- 8. On this cast the teeth were trimmed and the area was smoothed. After applying separating medium a hollow

- interim obturator was fabricated in which the bulb was hollowed using the pumice(Figure 8).
- 9. Meanwhile the patient underwent the extraction of the teeth (Figure 9).
- 10. Soon after the extraction the obturator was inserted intra orally (Figure 10)



Figure 1: Intra oral view

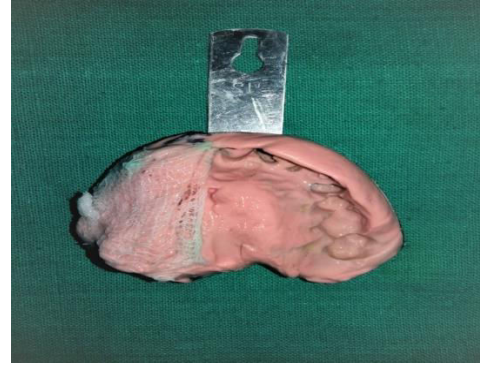


Figure 2: Primary impression



Figure 3: Custom fabricated tray



Figure 4: Impression after border moulding



Figure 5: Impression after perforations



Figure 6: Final impression



Figure 7: Master cast



Figure 8: Interim immediate obturator



Figure 9: Post extraction

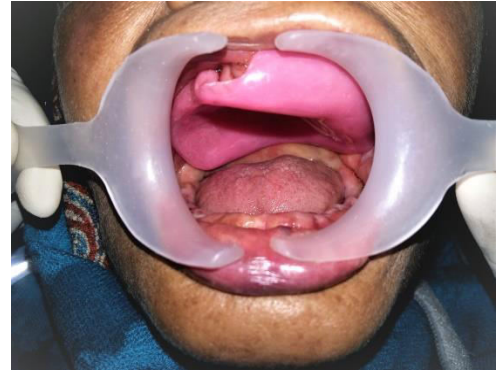


Figure 10: Intra oral view of prostheses

**DISCUSSION**

Prosthetic rehabilitation of a post-surgical defect patient can restore the separation between oral-nasal chambers and in case of soft palatal defects it restores the palatopharyngeal function. This immediate interim obturator prosthesis acts as a matrix for surgical dressing placed in the maxillary defect and also permits the patient to speak and swallow more normally after the anaesthesia wears off.<sup>5</sup> An immediate interim obturator has many beneficial factors such as it acts as a bandage for extraction sockets, controls bleeding, trauma protection, prevents the seepage of food particles, clots protection.<sup>6</sup> This article describes a technique for fabrication of immediate interim obturator using modification of stock tray.<sup>7</sup>

**CONCLUSION**

Different materials like Silicone rubber, visible-light-cured resin<sup>8,9</sup> and heat cure resin have been used to fabricate the obturators but in this technique autopolymerising resin was used, as the prostheses was required within no time so that the healing and preservation of the tissue could be done better. As the patient was scheduled for radiotherapy it was necessary to preserve what so ever is left so that it could be used in future.

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