

# A Simple Immediate Surgical Obturator for Maxillary Resection

Ling BC. A Simple Immediate Surgical Obturator for Maxillary Resection. *Annals Dent. Univ. Malaya* 1995;2:21-23.

## INTRODUCTION

Temporary obturator is necessary for maxillectomy procedures to minimise functional disabilities of speech and the swallowing of food and fluid following surgery.<sup>1,2</sup> It also provides a base to hold surgical packing and/or tissue conditioners in place. This packing helps to restore function and counter act contraction during healing of the tissues at the operated site. Dental clinicians are often faced with the problem of surgical staffs requesting an obturator for their patients at short notice. This article describes a fast technique of constructing an immediate surgical obturator.

**Key Words:** maxillofacial prosthesis, immediate temporary obturator.

## TECHNIQUE

An impression of the maxillary and mandibular arches of the patient was taken and models casted (Fig. 1).

2. The area to be surgically removed is outlined on the model. This area is then trimmed on the model (Fig. 2). Retention and rest wires are bent and placed in position. Two or four holes are drilled on the model in the area where hemi-maxillectomy is to be performed, using first round 8 bur, followed by an acrylic cutting bur (Fig. 3, 4).
3. The model is notched at three areas at the edge of the model. It is then waxed-up after blocking out any unnecessary undercuts (Fig. 5). A layer of boxing wax is wrapped a round the model. Alternatively, a sheet of manila paper can be wrapped a round the model and held in position using stapler or paper clip (Fig. 6). A mix of stone is then poured onto the top of the wax-up (Fig. 7).
4. The two halves of the model is opened. The wax boiled out from the model (Fig. 8). Separating medium is then applied onto the model and acrylic resin packed into the area left by the wax. Rubber bands are used to tie the two halves of the moulds together (Fig. 9). The acrylic resin dough in the mould is then cured by slow boiling for one hour.

## REFERENCES

1. Zarb GA: The maxillary resection and its prosthetic replacement. *J Prosthet Dent* 1967; 18:268-281.
2. Laney WR: Restoration of acquired oral and paraoral defects, in Laney WR, Cibilisco JA (ed): *Diagnosis and Treatment in Prosthodontics*. Philadelphia, Lea & Febiger, 1983; 377-446.

Booi C. Ling, BDS, MSc, FRACDS  
Department of Prosthetic Dentistry,  
Faculty of Dentistry,  
University of Malaya,  
59100 Kuala Lumpur,  
Malaysia.  
Tel: (103)-7567 311  
Fax: (03) - 756 1607

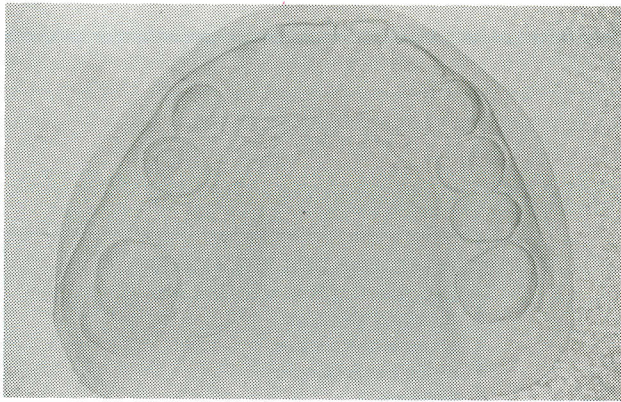
5. The obturator is removed from the model, trimmed and polished (Fig.10). On the fitting surface of the obturator a hole is drilled on each of the projections with a round 8 bur, to hold fluid self-cured acrylic resin mix (Fig. 11).
6. Galvanised wires are bent and retentive grooves are made at the ends of the wires. The wires are bent to sit on the holes in the projections (Fig. 12). Self-cured acrylic resin is poured into the reservoir in the acrylic projections. The temporary immediate obturator is then polished and ready for use (Fig. 13).

## DISCUSSION

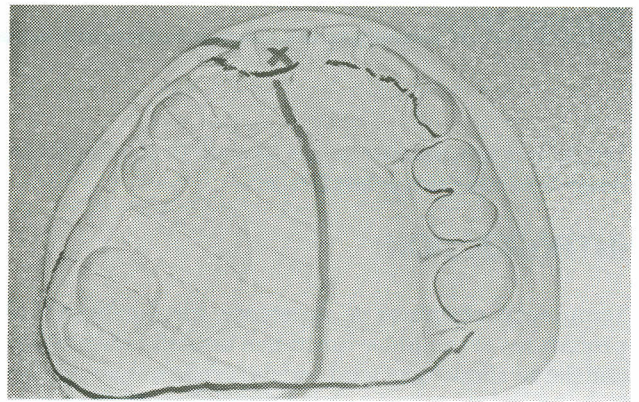
The technique is quick and easy to perform and can be carried out by a technician or clinician within half a day. The acrylic projections on the fitting surface of the temporary obturator allow a reservoir to be made which will in term make cold curing of the galvanised wire loop onto the obturator easier and quicker. The wire loops allow the retention of gauze pack or other materials.

## CONCLUSION

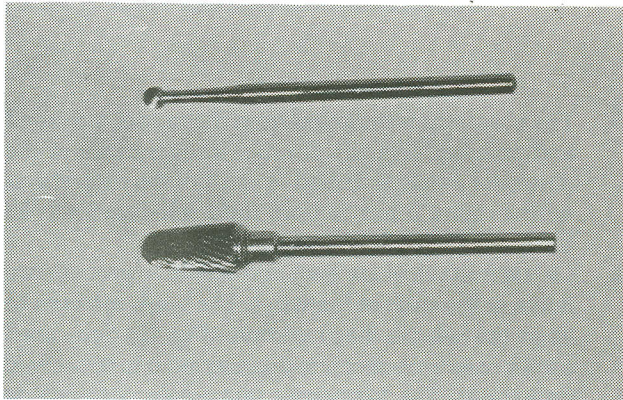
A quick self-cured acrylic resin temporary immediate obturator technique is described. It is cheap, quick and simple to perform and can be carried out in any dental surgery, clinic or laboratory.



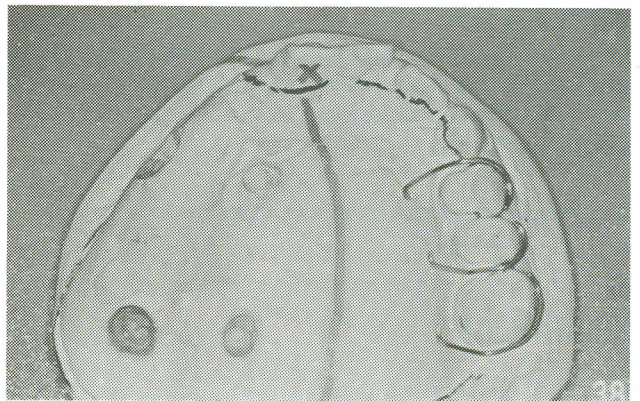
**Figure 1.** *Picture of the model showing tumour on the right side of the maxilla.*



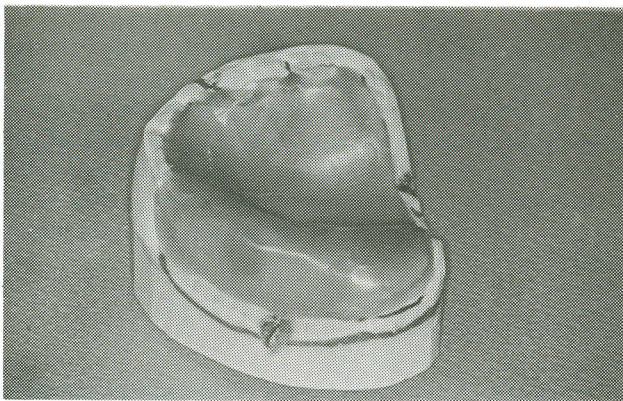
**Figure 2.** *The area to be resected was marked and shaded on the model.*



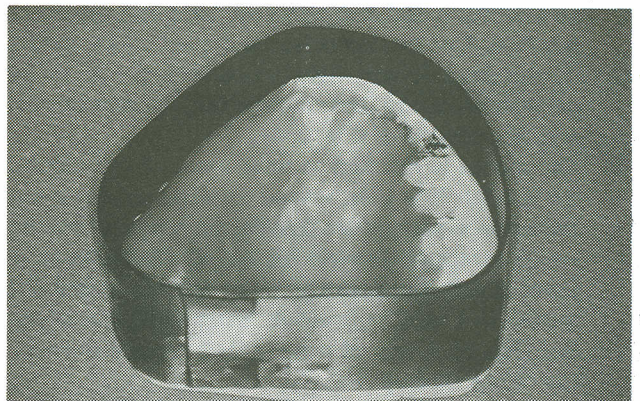
**Figure 3.** *The round 8 bur and acrylic cutting bur used.*



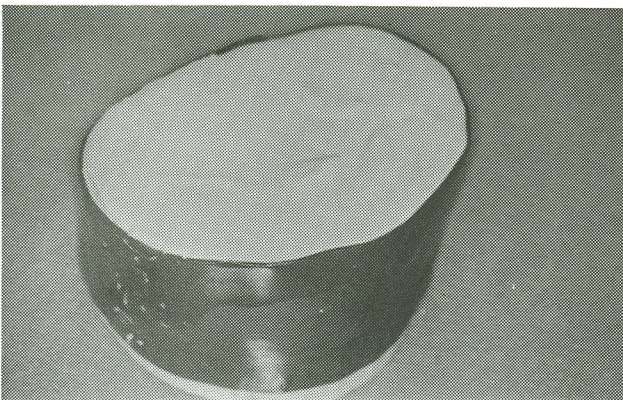
**Figure 4.** *The model which has been prepared. The teeth and the tumour, area were trimmed away. Four cavities were prepared on the side to be resected. Clasp wires were bent and placed in position.*



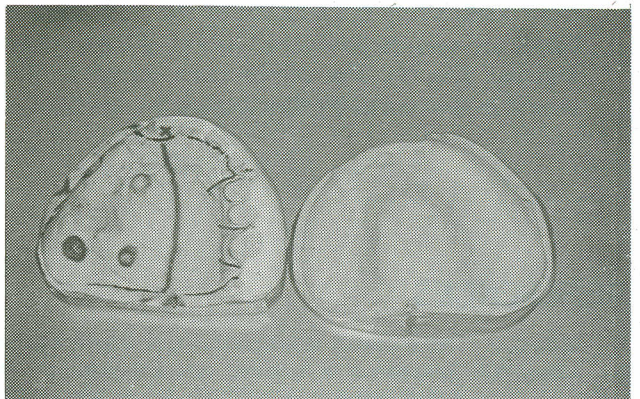
**Figure 5.** *The model was waxed up.*



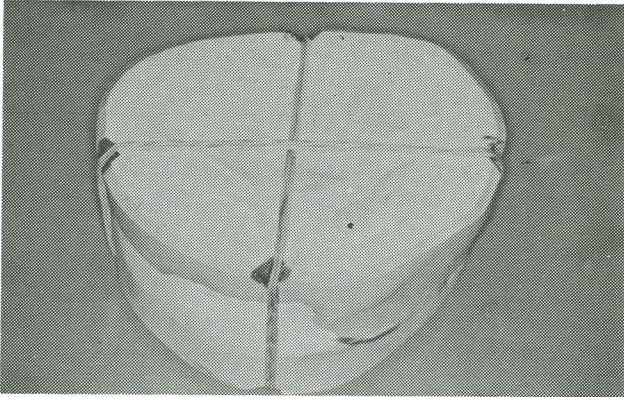
**Figure 6.** *The model was surrounded by boxing wax to receive plaster to form the mould.*



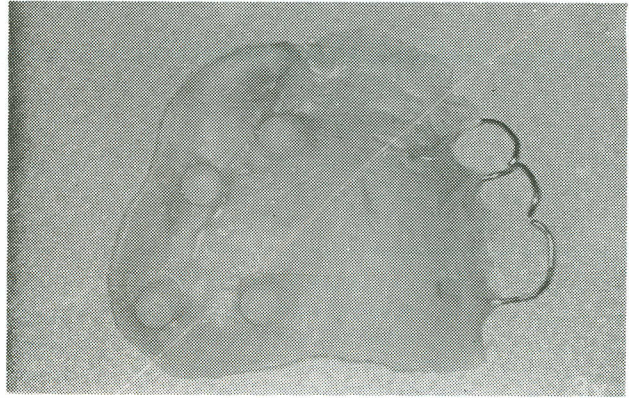
**Figure 7.** *Plaster was poured to form the mould.*



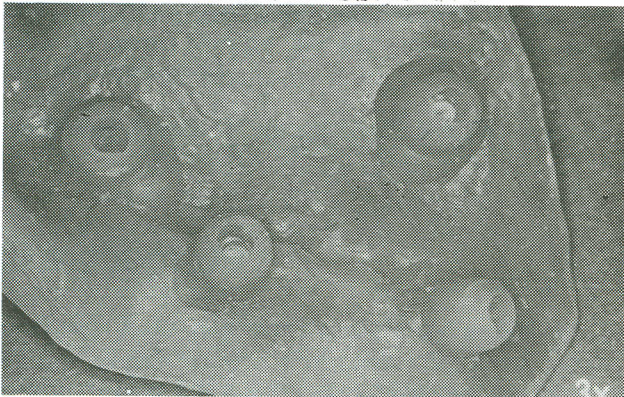
**Figure 8.** *The two halves of the mould was opened and the wax boiled out.*



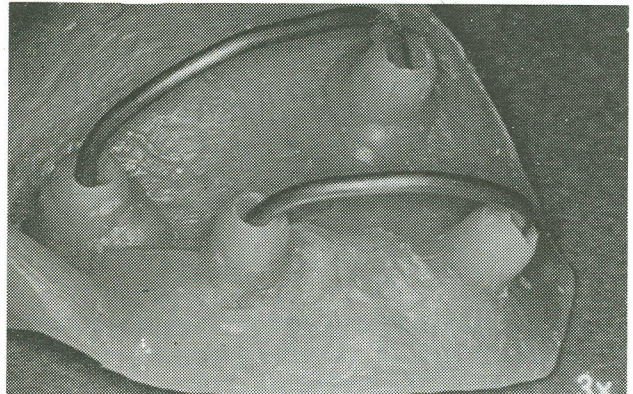
**Figure 9.** Acrylic resin was packed and the mould held together by means of rubber bands. The resin dough was then cured by slow boiling for one hour.



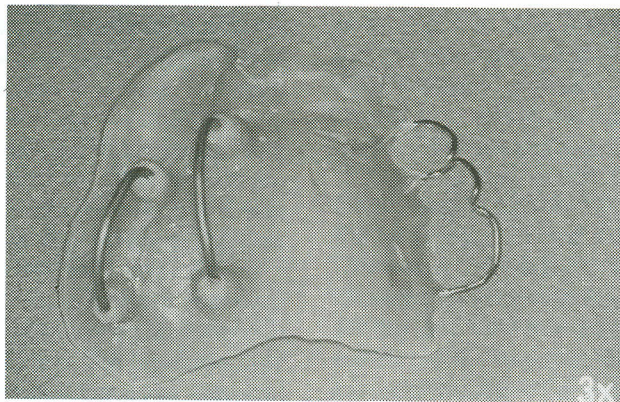
**Figure 10.** Picture showing the cured unfinished obturator - fitting side.



**Figure 11.** Holes were prepared on the acrylic projections with a round 8 bur.



**Figure 12.** Galvanised wire (or round 1 mm diameter stainless steel wire), bent to sit in the 8 mm bur hole.



**Figure 13.** The finished immediate temporary obturator showing the fitting surface.