

REVIEW ARTICLE

A TECHNIQUE FOR DENTURE DUPLICATION

Author:

Sanju John Jolly¹

Seema George¹

Pius AV²

Cinil Mathew³

¹Reader,
Department of Prosthodontics, Indira
Gandhi Institute of Dental Sciences,
Nellikuzhy P. O., Kothamangalam 686 691,
Kerala, India.

²Professor,
Department of Prosthodontics, Indira
Gandhi Institute of Dental Sciences,
Nellikuzhy P. O., Kothamangalam 686 691,
Kerala, India.

³Sr. Lecturer,
Department of Prosthodontics, Indira
Gandhi Institute of Dental Sciences,
Nellikuzhy P. O., Kothamangalam 686 691,
Kerala, India.

Address for correspondence:
Dr. Sanju John Jolly, Manjummekudiyil
house,
House number- 41\209, Chackingal road,
Palarivattom, Kochi 682 025, Kerala State,
India.
Ph: +91484-2348754, +919895580519
E mail: drsanjujj@rediffmail.com.

ABSTRACT

The copy denture technique is one that facilitates the replication of good features of an existing denture. This allows the dentist to offer patients an alternative to being without a denture during a laboratory relin of an existing denture. This article discusses a technique of denture duplication using vinyl polysiloxane impression material.

KEYWORDS: Copy denture, Interim denture, Temporary denture, Duplicate dentures.

J Odontol Res 2013;1(2):55-7

INTRODUCTION

Maintenance of the adaptation of the denture base to the mucosa that covers the residual ridges is a critical part of a complete denture service. Every denture patient should be evaluated on an annual basis to determine the rate of resorption. Such patients needing a laboratory relin of their existing complete dentures are often reluctant to proceed because they are embarrassed to be without them. Duplicate dentures can be fabricated from the patient's existing dentures for use during the laboratory relin. The adaptation of the patient is better as the contour of the duplicate denture does not differ from the existing denture.

Various techniques have been described to make a duplicate denture using impression material,¹⁻³ impression tray,⁴ duplicating flask⁵ and cups.⁶ A technique for fabricating a maxillary duplicate denture from a patient's existing denture is outlined in this report.

Procedure

- 1) Select a dentulous maxillary tray that corresponds to the size of the patient's existing denture.
- 2) Mix polyvinyl siloxane putty material (Speedex Putty, Coltene Whaledent, Ascot Parkway, Ohio, USA), load it into the impression tray, and press against the polished surface of maxillary denture (fig-1, A). Use a BP knife; make a land area of 3mm wide. Place orientation notches on land area, one in the anterior region and two in the posterior region.

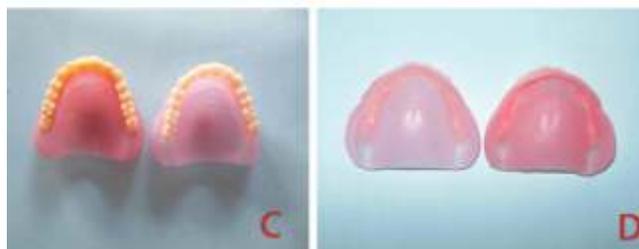
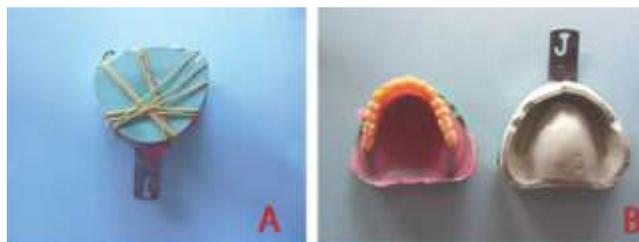
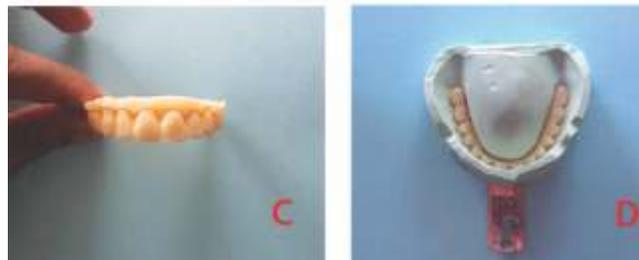
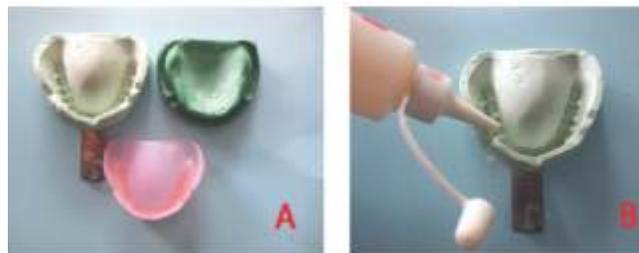
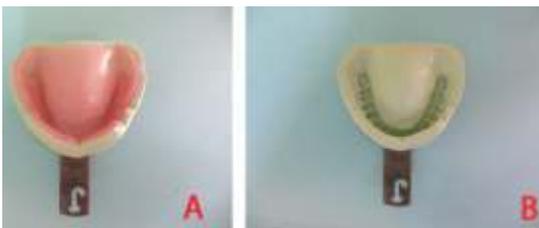
- 3) Remove the denture and inspect for any irregularities (fig-1, B).

- 4) Apply petroleum jelly on the tissue surface of the denture.

- 5) Pour dental stone on tissue surface of the denture (fig-1, C). Ensure that the stone covers the land area formed on the putty and the orientation notch area.

- 6) Separate the cast from the denture. Check the orientation of the cast to the notches on the putty material (fig-2, A).

- 7) Mix tooth coloured resin (SC-10, Wazirpur Ind. Area, Delhi, India) corresponding to the denture teeth and pour into the indentation in the putty material (fig-2, B).



- 8) Remove the resin after it hardens and mark the excess and trim it (fig-2, C).
- 9) Place the resin teeth back into the indentation (fig-2, D).
- 10) Apply two coats of separating media on the cast.
- 11) Wet the acrylic resin teeth with the monomer. Mix auto polymerising resin (DPI-Heat Cure, Dental Product Of India Ltd, Mumbai, India) into the putty and orient the cast with the help of the notches on the putty.
- 12) Secure the cast with the help of a rubber band (fig-3,A,B).
- 13) Once the curing is over, remove the denture from the cast. Trim and finish the denture in the conventional way (fig-3, C, D).
- 14) Evaluate the denture intra-orally. Check the fit of the denture and occlusion. It should be similar to the patients existing denture.

Conclusion

This technique allows the dentist to make an impression of a patient's existing denture and fabricate a duplicate denture. Patients should be informed that the duplicate denture is lower in quality in terms of strength and porosity. The esthetics, fit, and function of the duplicate denture are satisfactory for temporary use, and the minimal cost is an attractive feature to many patients. The duplicate denture should not be considered as a shortcut to new denture construction.

Reference

- 1 Boos RH, Carpenter HO Jr: Technique for duplicating a denture. *J Prosthet Dent* 1974;31:329-34.
- 2 Singer IL. The "zipper" technique for duplicating dentures: Final impressions, replica dentures, and a complete denture splint. *J Prosthet Dent* 1975;33:582-90.
- 3 Nassif J, Jiimbelic R: Duplicating maxillary complete dentures. *J Prosthet Dent* 1984;52:755-59.

- 4 Cherian B, Nair C, Mathew M, George K, Sanjeevan V. Duplicate dentures: Impression tray technique. *KDJ* 2013;36 (1): 29-31.
- 5 Feltmann EF, Morrow RM, Jameson WS. Relining complete dentures with an oral cure silicone elastomer and a duplicate denture. *J Prosthet Dent* 1970;23:387-93.
- 6 Wagner AG. A temporary replacement for an existing complete denture. *J Prosthet Dent* 1987;58:522-25.