

Dentures in forensic identification: A simple and innovative technique

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Identification is an essential requirement of any medico legal investigation because a wrong identity may pose a problem in delivering justice. The dental profession has long acknowledged the importance of placing identification marks on dentures. If we go through the literature, we would find many methods to label a denture but none till date fulfils all the requirements of American Dental Association (ADA). This article describes a radiographic technique wherein a lead foil with patient details is sandwiched between two layers of resin during the processing of the denture. Moreover the following method has proved to be simple, easy, quick, durable and cosmetically acceptable fulfilling all the requirements of ADA.

Key words: Denture identification, denture labelling system, forensic dentistry, forensic identification

INTRODUCTION

Forensic dentistry is one of the most innovative branches of dentistry which helps identify victims in mass disasters and in many medico legal investigations. Various recommendations have been made concerning the importance of denture identification.^[1,2] Prosthodontists are playing a very important role in forensic dentistry as they are concerned with fabrication of various prostheses, which can serve as an important tool of identification.

Several inclusion and engraving methods have been described till date.^[3-10] The major disadvantages of all denture-identifying systems till date are listed below. Most of the patients do not accept their names to be written on their dentures. All the ADA specifications (operation ident)^[3] are not fulfilled. If the denture labelling systems are placed on the intaglio (impression) surface they become invisible when relining is done.^[4] Denture looks un esthetic with patient's details if visible. Moreover majority of these techniques are not simple and often involve equipment not readily available in dental laboratories. The following method has proved to be simple, easy, quick, durable and cosmetically acceptable.

Procedure

1. After try in, the waxed up dentures are sealed to the master cast using additional wax. Later the pattern is invested in the dental flask and de-

waxed [Figures 1 and 2].

2. Mix small amount of heat cure denture base resin and place it in the postero-lateral region of the palate [Figure 3]. Place damp cellophane sheet and do the trial closure to reopen the flask easily. This prevents the shifting of the lead foil during the final closure.
3. The flask is reopened and the flash is trimmed away with a sharp knife. Before final closure, the cellophane sheet is removed and discarded.
4. Cut a piece of lead foil from a used IOPA radiographic film 2.5 x 0.6 mm. Write patient details (for example, patient's name, out patient - case number, hospital's name and place where it is done) with 0.5 mm ball pointed tip pen [Figure 4]. Insert the lead foil with patient details postero-laterally in the palate of the maxillary denture and in the lingual flange area in the mandibular denture [Figure 5].
5. Measured powder-liquid mixture should be mixed and packed into the flask at the dough consistency [Figure 6]. Reclose the flask without cellophane and tighten it. Remove the flash.
6. Bench cure and polymerize the denture according to the manufacturer's instructions.
7. Deflask, trim and polish the denture to complete the procedure [Figure 7].
8. An intra oral periapical radiograph of the denture is taken. The radiograph reveals the complete details of the patient [Figure 8].



Figure 1: Investing the master cast in the base of the flask



Figure 5: Placement of the lead foil with patient details on the previously adapted heat cure denture base resin



Figure 2: Flask halves separated after dewaxing



Figure 6: Packing of the required amount of heat cured resin for the final closure.



Figure 3: Small amount of heat cure denture base resin placed in area of denture where lead foil will be located

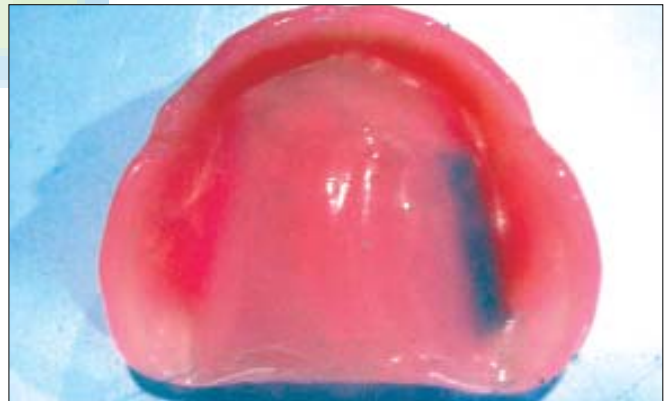


Figure 7: Final denture after trimming and polishing



Figure 4: Inscription of patient's details on a lead foil with a 0.5 mm ball-pointed tip pen



Figure 8: Intra oral periapical radiographic film showing the patient details. (Patient's name, out patient - case number, Hospital's name and place where it is done)

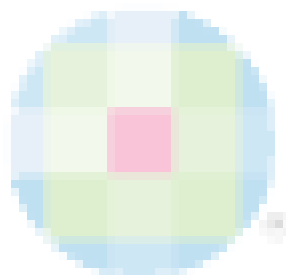
SUMMARY AND CONCLUSION

This technique fulfils all the requirements of ADA. The strength of the denture is not jeopardized; easy and inexpensive to achieve; efficient and durable; can withstand humidity and fire, cosmetically acceptable to the wearer. This technique can be used for both complete and removable partial dentures.

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