SPEAKING DENTURES: A TRIBUTE OF PROSTHODONTICS TO FORENSIC DENTISTRY
A CASE SERIES

Abstract
Denture marking or labeling is not a new concept in either prosthetic or forensic dentistry and its routine practice has been urged by forensic odontologists internationally for many years. It has been reported that nursing home staff collect and clean all of the patients’ dentures together, with the wrong dentures being returned to the patients. To avoid this confusion, denture-marking kits are available. Over the years various methods of denture marking have been reported in the literature. They include surface marking and inclusion techniques using metallic or non-metallic materials, microchips and micro labels. This article details the procedures involved in inscribing metallic strip and photograph of the patient in the denture. The resulting denture is cosmetically appealing, cost effective and satisfies all the forensic requirements of denture marking.

Key Words: Denture Identification, metallic foil, forensic dentistry, photographs.

Introduction
In 1835, a gold denture helped identify the burnt body of Countess of Salisbury. After the Second World War, 819 of the 3,000 of the unidentified dead soldiers were denture wearers. Over the years various methods of denture marking have been reported in the literature. Therefore, any procedure that can provide confirmatory information about an individual in his/her denture must be encouraged. From a Prosthodontist's point of view, this can be prevented by using denture marking in order to give this registration a more personnel character. Most studies have shown that very few patients object to having their dentures marked with some identification.

The identification (ID) marks on dental prosthesis serve two main functions:
1. They facilitate the ID of the patient from the denture for example in cases of unconsciousness, loss of memory or for forensic purposes.
2. The ID of the denture of a living patient is not only helpful for the production laboratories, but also for institutions such as hospitals and community homes. Over the years various denture marking systems have been reported in the literature and have been divided broadly into surface marking or engraving methods and inclusion methods.

ENGRAVING METHOD
In the technique, introduced by Heath[1] identification marks are scratched, engraved or written on the surface of the denture by using a spirit based pen or pencil. Another postfabrication technique reported by Young[2] involved cutting a groove of 0.5-1 mm. deep into the palatal surface of the maxillary denture and the buccal flange of the mandibular denture. The name or the record (OPD No., Age etc) of the patient as well as the name of the doctor can be engraved. After engraving the relevant data, apply a thin layer of cold cure acrylic resin on the surface. This method has disadvantages such as poor abrasion resistance, unaesthetic, and there are chances of losing the ID marks if the denture needs relining.

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sandwiched between two layers of resin during the processing of the denture.

MODIFICATION OF REESON'S TECHNIQUE:
The technique for this procedure is modified in order to get a more clearly marked esthetic denture. In this technique packing procedure is performed two times using the pink and the clear acrylic resins.
1. Flask the denture in the normal way to trial closure. Remove the plastic packing sheet, the pink acrylic resin from the palatal aspect of maxillary denture and from the buccal flanges of the mandibular denture is cut with the help of a sharp B.P. Blade No.-24. A layer of coldmold seal is applied on the plaster surface. Now a properly mixed and kneaded layer of the clear heat cure acrylic resin is applied on the palatal surface or the buccal flanges. (fig. 1-4)
2. The metal foil representing the name and the record of the patient and doctor will be embedded in the layer of clear acrylic resin. The laminated photograph or any other message on a metal foil can also be embedded in this layer. Then place a thin layer of clear acrylic resin on the strip or photograph. Replace the packing plastic, and then close and retighten the flask. The hydraulic bench pressing is done again. (fig. 5-7)
3. Reopen the flask, and remove the packing plastic and the location of the photograph, metal strip can be verified. (fig.-8)
4. Reclose the flask without the packing plastic and tighten.
5. Polymerize the denture according to the manufacturer's instructions.
6. Deflask, trim, and polish the denture to complete the procedure. (fig. 9-10)

DISCUSSION
The proposed method of incorporating the country code and the identity card number in a denture is the recommended procedure recognized by international forensic experts. As there is no legislation mandating
denture marking in India so no practitioner labeled dentures routinely. However, it is the professional and ethical duty of the dentist to do so. The reasons for positive identification are sufficient to support the necessity of doing it. Identifying markings can also be incorporated in orthodontic appliances, maxillo-facial reconstructive prostheses, crowns and bridges.

Advantages:
1. The marking will be visible from both the surfaces intaglio as well as Cameo surface.
2. The photograph or the messages like “keep me clean”, “Remove me during night” will be appreciated by the patient.
3. If the relining is required, still the marking will be visible from the Cameo surface.

Disadvantages:
1. Technique sensitive: Since the packing is done two times as well as with two different materials so operator has to be very careful and the whole armamentarium should be ready prior to the packing procedure.
2. The denture may be slightly thick on the palatal or buccal flange area in the marked denture and the method is more time consuming then the conventional one.

Conclusion And Summary:
Looking at the equipments used, which are readily available, and the results obtained, this innovative technique seems to be the most cost effective and easy to follow, to date. Also the ID mark is fire resistant. Therefore, this technique seems to fulfill all the requirements of the ideal technique and does not have disadvantages like the other old techniques of denture marking. Denture marking is one of the methods of not only making the denture A SPEAKING DENTURE but also to provide the IDENTIFICATION TO THE PATIENT.

References
2. Young KL. On site denture identification can be a practice builder. Dent Econ 1987;77:68-70.