

# Denture Labelling as an Identification Tool in Forensic Medicine: A Case Report

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## Abstract

Denture labelling is gaining popularity in geriatric patients particularly for those staying alone or in old age home, especially the ones suffering from dementia or physical vulnerability. Various methods of denture labelling have been proposed by prosthodontists over the years. Prosthodontists are playing an important role in forensic odontology nowadays. This article highlights a method of denture identification marking wherein a patient's photograph along with his name and emergency contact number is incorporated within the complete denture.

**Keywords:** Denture Labelling, Denture Marking, Personal Identification

## Introduction

Personal identity is of utmost importance in the society and is also considered a vital part of forensics. Forensic dentistry is the branch of dentistry which deals with collection, examination and evaluation of dental evidence and then presenting the findings in the interest of justice. Denture marking is an accepted method of identifying a person by their dentures especially during times like road accidents, social unrest, natural calamity, war and crimes<sup>1</sup>. It is also advantageous in people with memory disorders. Today Prosthodontists are contributing to forensic dentistry by fabricating prostheses having personal identification markers.

Dr. Robert H. Griffiths emphasized on the concept of denture identification<sup>2</sup>. Since then, various methods of denture labelling/marking have been proposed which can be broadly categorized into surface marking and inclusion method. Methods of surface marking include scribing or engraving letters or numbers, embossing method wherein letters are scratched on cast resulting in embossing on intaglio surface of denture<sup>3,4</sup>. Inclusion methods include incorporating bar codes, lead foil,

electronic microchips, stainless steel metal band, patient's photograph, radiofrequency tags, laser etched disc and paper strips in prosthesis<sup>5-8</sup>. These materials are incorporated in posterolateral part of palate in maxillary denture and distolingual flange in mandibular denture<sup>9</sup>.

## Case Report

A 78-year-old male patient reported to the Department with chief complaint of difficulty in chewing. Oral examination revealed completely edentulous maxillary and mandibular arch. It was planned to fabricate a denture with personal identification features. Technique used was as follows:

- With written consent of patient his stamp sized photograph along with name and an emergency contact number was printed in an easy-to-read font style of 8-point font size. They were laminated using cellophane sheet to protect its ink from monomer.
- Denture was fabricated following the standard protocol and it was finished and polished.

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- On the polished surface of distolingual flange of mandibular denture, 5 mm wide and 1 mm deep slot was made. Laminated emergency contact number was placed in slot prepared and autopolymerising clear acrylic resin was placed in increments. It was then placed in a bowl of warm water and cured for 15 minutes (Figure 1).
- In the similar way, a slot was prepared on polished surface of posterior part of palate and laminated patient's photograph with name was placed. Clear acrylic resin was placed, placed in warm water and allowed to set (Figure 2).
- Denture was again polished and delivered to patient (Figure 3).
- Oral hygiene instructions were given to patient and patient was recalled after one week for follow up.

## Discussion

Denture labelling acts as an important identification tool in forensic odontology. American Dental Association encourages fabrication of dentures with denture labelling. Various methods are available such as scribing or engraving letters or numbers, incorporating bar codes, lead foil, electronic microchips, stainless steel metal band, patient's photograph, radiofrequency tags, laser etched disc and paper strips<sup>3-8</sup>. This denture marking system helps in identifying a geriatric person especially in cases of mass disasters and accidents<sup>10</sup>.

Kruger-Monson stated requirements for denture labelling: Strength of prosthesis must not be compromised, method should be easy and cost effective, system should be efficient, marking should be durable, visible and able



**Figure 1.** Emergency contact number incorporated in denture.



**Figure 2.** Patient's photograph with name incorporated in denture.



**Figure 3.** Postoperative view showing denture marking.

to withstand humidity and fire<sup>11</sup>. Technique used in this article fulfills the above-mentioned requirements.

Barcode system and microchip are widely used as methods but requires a mobile or computer to read the data. In developing countries, a method which is relatively easy, inexpensive and identified by society at large is required. Using patient's photograph and name as denture marker serves this purpose. The identity of a person can be easily perceived by layman without anyone's support<sup>7</sup>. The emergency contact number incorporated in denture is helpful for old patients who cannot reach their home either due to memory issues, health issues or those who have met with an accident. Dentists should encourage patients for denture labelling by telling them about its benefits. Denture labelling should be routinely done for geriatric patients and hospitalized patients.

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