



F38 Aesthetic Ranking of Denture Identification Methods

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After attending this presentation, attendees will be familiar with:

a) a selection of the various methods that have been used over the years to mark dentures; b) the results of a patient survey designed to determine the most suitable method of denture marking in terms of the patient's perception of aesthetics.

This presentation will impact the forensic community and/or humanity by demonstrating how it is essential that the dental community consider introducing mandatory denture marking. The role of forensic dentists in bringing about this change through advocacy and education is highlighted within this presentation.

Introduction: Following major disasters such as earthquakes, fires, or floods, a definitive and early identification of the dead and injured becomes of the utmost importance. Often this identification must be accomplished via the use of odontological methods. Determination of the various individual physical and genetic characteristics of the human dentition has proved to be very efficient in aiding the task of identification. Edentulous subjects, on the other hand, have lost all or most of the key features that have proven valuable in such cases. Hence, the process of identification is made much more difficult unless the victims wear identification (ID) marked dentures.

Study: A survey of 100 Manchester Dental Hospital denture patients receiving complete and/or partial dentures was undertaken in order to determine both their attitudes toward denture marking, and also their preference for the type of marking in terms of aesthetic value. Patients were shown ten, 12 x 4 inch color photographs labelled (a) to (j) comprising each of the following denture ID marks:

Label (a). showing a technique in which the patient's name was typed on a piece of 'onion skin' paper and incorporated within the fitting surface of the denture during the packing procedure.

Label (b). showing a method involving the use of a typed, commercially produced metal strip (trade name: ID-Band) embedded into the polished surface of the denture.

Label (c). showing a RFID system consisting of a data carrier, generally known as a tag or transponder. The tag consists of a torpedo shaped microchip with a coiled antenna measuring 8.5mm x 2.2mm. The transponder was embedded into the fitting surface of the already fabricated denture.

Label (d). showing an example in which a fine fiber-tipped pen was used to mark a label made from a partially polymerized strip of PMMA before including in the fitting surface of the denture base during the trial packing procedure.

Label (e). shows an example of an ID label that had been produced in a 'P - touch' electronic lettering system (P - touch, Brother Co, Canada). The label used consisted of a 103µ thick, white or clear laminated strip onto which 2mm characters are typed, after which it is incorporated into the denture subsequent to its fabrication.

Label (f). utilizing a standard soft metal band that is either typed or engraved with the patient's details before being rolled up and inserted into

a predrilled cavity approximately 2-3mm wide. A small wax plug is then placed over the metal band prior to filling the remainder of the cavity with self-cure resin.

Label (g). is made from a label printed on 35mm photographic slides via the use of a computer graphics package.

Label (h). utilizing piece of 0.125mm thick stainless steel tape onto which the patient's details are engraved. The tape is then incorporated into the fitting surface of the denture during the trial packing stage.

Label (i). showing an example that involves cutting a groove of approximately 0.5 to 1mm deep into the buccal flange of the denture; the length of which would correspond to the length of the patient's name. An ordinary ballpoint pen or felt-tip pen is then used to print the patient's name in the recess before being sealed with fissure sealant

Label (j). showing an example that allows the dentist to write on the surface of the denture using a spirit based pen or pencil prior to covering the ID mark with a clear denture base polymer dissolved in chloroform.

Ethical approval for the study was obtained and each patient signed an informed consent form. Data were entered into SPSS and the mean aesthetic rank for each denture identification method was produced.

Results & Conclusion: Denture mark labeled 'C' (incorporating the transponder) was a clear favorite, preferred in 49 of the one hundred patients. The second favorite was denture 'A', (incorporating the onion skin paper within its fitting surface). However, this was only ranked 1 by 13 people. Denture 'I'



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was the most disliked ID mark; only two patients ranking it in first place. When asked whether they would prefer some form of ID mark incorporated into their denture in the future, all but one patient gave a positive response. With the prevalence of mass disasters and the increasing threat of global terrorism, it appears self-evident that the incorporation of some form of ID marking of dental prostheses should be made mandatory.

Identification, Denture, Survey