G27 Marking Dental Prostheses

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After attending this presentation, attendees will understand the importance of marking dental prostheses as an aid to help identify the victims of accidents or disasters, people with Alzheimer's disease, the senile, the elderly, and people who are undocumented or lost. Alternatively, marking helps provide recognition of a lost prosthesis in nursing homes. Attendees will also understand how to recognize such a marking.

This presentation will impact the forensic science community by illustrating that the marking of a prosthesis is reliable and reasonably priced. This study completes the research undertaken in the identification of victims at the Forensic Odontology Department of the Institute of Criminal Research of the French Gendamerie (IRCGN).

The marking of dental prosthesis has two major benefits: (1) to help locate or identify an accident or disaster victim; and, (2) to help prevent loss, disappearance, or exchange of dentures among nursing home residents. Requirements for applying markings to dental prostheses is dependent on the country. In the United States, 22 states require dental surgeons to mark the dentures. In Sweden, 35% to 50% of the dentures are marked. In France, a survey by the National College Council of the Dental Surgeons reported that, in retirement homes, only 7% of dentures are marked.

To be accessible to all patients, the marking must be easily applied, should not affect the strength of the denture, and have a reasonable cost. The marking should not be uncomfortable for the patient. Moreover, the marking must withstand saliva, fire, and stand the test of time. In forensic odontology, the marking must allow for the recognition of crowns, bridges, and partial or full dentures. Finally, marking must be precise to eliminate confusion.

The catalog of different marking techniques used for dentures will be presented with the methods divided into two groups: engraving or inclusion. References will be provided to inform attendees as to which techniques may be available for creating such marks.

Currently, miniaturized technologies should be considered as the most interesting. An embedded microchip can contain very important information and enables the rapid identification of the wearer of the denture. The transponder that supports such data in microchipped full and partial dentures has a very low space requirement. Research has been undertaken in the Forensic Odontology Department of the IRCGN to apply this marking technique in fixed dental prosthesis, to some extent. Such a possibility should encourage dental surgeons to chip dentures of personnel at risk (e.g., firemen, flight crews, soldiers, policemen, and hospital staffs), after obtaining their permission.

Marking, Dental Prosthesis, Identification