

Identification of Human Remains Based on Dental Implant Presence

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INTRODUCTION

The objectives of the investigation: The most common role of the forensic dentistry is the identification of deceased individuals. The dental identification of humans occurs for a number of different reasons, mainly in those cases when the body is fragmented or disfigured and visual recognition cannot be done. Dental identification always plays a key role in natural and manmade disaster situations and particular in the mass casualties associated with aviation disasters. The identification is essential from both of the humanitarian and the religious points of view as well as for judicial reasons. **Experimental method used:** The procedure of the identification based on **IMPLANT PRESENCE** is evaluated in case report with a new possibility of electronic imaging called Dental Cross in comparison with classical dental documentation, which is officially used for identification of the missing persons by Interpol (Fig.1).

CASE REPORT

The victim of Tsunami (2004) is described. A man (*1963) was assessed in the place of the disaster by experts, who recorded his findings into the yellow Victim Identification Form concerning the dental aspect of the examination. (Fig. 3). Schematic marks and various colours were used to register the stage of their teeth and to distinguish materials such as noble or base metal and composite or amalgam fillings. The extracted teeth were marked with a cross over the tooth in the yellow form. Only the coronal part of the tooth and the extracted tooth were represented in this graphical list. The more detailed information were worked out in a part called "specific data" in a form of a free text, where the presence of a potential implant or a bridge was described. The root canal treatment or posts were not mentioned at all.

The stages of the victims' teeth were transferred into the interactive Dental Cross with the advantage of changing the free text describing materials and prosthodontics to schemes, which were distinguished in colours. When comparing the postmortem dental findings of the male victim (Fig. 3) with the orthopantomogram, we could say that most of the findings corresponded with each other a number of posts was marked in the Dental Cross with no sign in the yellow form. The presence of the implant in the region 25 was in the free text with „specific data“. The man had orthopantomogram from the year 2000. During three to four years treatments were made but the findings were not in contradiction with the identification. The identification was positive.

CONCLUSION

Implant insertion in year 2000 was diagnostic tool for Tsunami victim in year 2004. Orthopantomogram and the interactive dental cross confirmed positive identification of the man.

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The electronic DentCross shows a virtual graphic combination of a dental examination and images including an X-ray and also photo documentation (i.e. root canal or implant picture) (Fig. 2).

POSTMORTEM x ANTEMORTEM IDENTIFICATION.

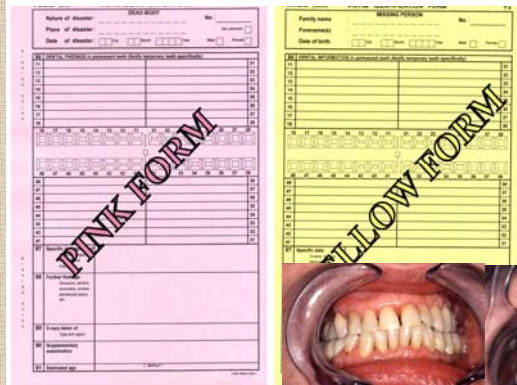


Fig. 1: Ante and postmortem identification.

Fig. 2: Graphical image, photo and X-ray documentation, after implant insertion.

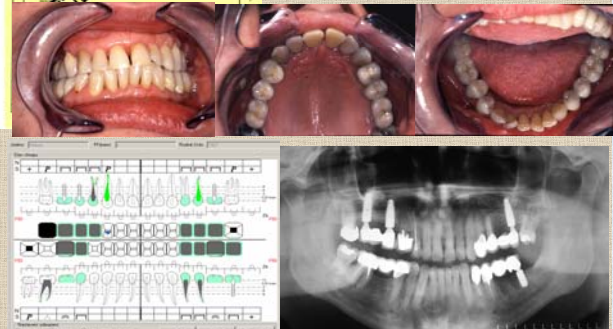


Fig. 3: Identification based on comparison of orthopantomogram (antemortem) and interactive Dental Cross (postmortem).

