F1 Italian Forensic Casework: Pitfalls in Dental Identification

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After attending this presentation, attendees will learn importance of personal dental identification by standardized acquisition procedure of dental charts in Europe and in other European countries. This presentation will demonstrate the real problem of incomplete antemortem dental charts in personal identification cases.

The main factors involved in successful dental identification are the collection of antemortem dental records and the accuracy of the collected information.

In Italy, regulations requiring dentists to record and file a patient's dental charts do not exist. The quality of the archived dental records available for comparison with the postmortem remains may be inadequate or even non-existent. Additionally, the large immigrant population in Italy and in Europe increases the difficulty of identification due to the lack of a uniform collection of dental charts in every European Country.

The authors describe eight cases of identification in which many peculiar features in dental charts existed. However, because of the absence or poor quality of dental records, it was impossible to compare the data obtained by the examination of the cadavers with antemortem records.

In three cases (one extensive charred body and two skeletonized) much of the anthropomethric data matched three possible known persons, however the dental evidence was incomplete. Two of the three cases two extracted teeth recorded in dental files were present in the cadavers. In the other case all the dental features were in agreement and the only incongruity was a fixed dental bridge from 44 to 46 on the corpse that was recorded as 45 to 47 in antemortem dental chart.

In another case (skeletonized remains), there was a contradiction between the dentist's undocumented "memories" (an extraction of 36 and a filling of 37) and the dental evidence in the corpse. This permitted probable but not conclusive identification, although every anthropometric date was in agreement with a known person.

In the fifth case (burnt body), the dentist recognized the undocumented dental prosthesis (an upper circular fixed bridge from 16 to 27). Thus, it was not possible to perform a comparison. In this case, a positive identification was possible on anthropometric data and on personal effects.

In three other cases (one severely decomposed corpse and two skeletonized bodies), there were many peculiar dental features but, without antemortem records, it was not possible to utilize this data because of the absence of antemortem records. One corpse with three fixed bridges and many fillings and was ultimately identified by a parametrized technique of skull-photo superimposition. To this day the other two bodies remain unidentified even though one body had an upper circular fixed bridge and a specific "Steffe" titanic vertebral spacer (number of register: Delta L 3/16 S 200 30 L T2492 H) and the other a full maxillary denture and a removable partial denture on the lower arch.

In light of the above reported cases, the authors underline the importance for regulation requiring practicing dentists to maintain detailed dental charts for every patient, and creating standardized methods of collection and registration of this data. Accurate reporting can also be an ethical duty. Not only is maintaining good dental records important to a patient's health, these records could be used to help restore their identify if sadly necessary.

In conclusion, a computer standardized acquisition procedure of dental charts allowing a simple, quick, and sure comparison between ante and postmortem dental findings to make a positive or a negative identification is vital. The standardized process should then be extended to every European, and also extra-European country.

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