



F40 Non-Radiographic Dental Identification: Great, Good, and Not So Good

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The goals of this presentation are to review principles of dental identification, illustrate how to support a non-radiographic ID, discuss how a false positive can be avoided, and provide examples of interdisciplinary cooperation.

This presentation will impact the forensic science community by reminding participants of the principles for a record based dental identification and pitfalls that may arise from false assumptions and incomplete records.

Three cases will be presented where no radiographs were available for comparison.

Case 1: Human remains were recovered from an isolated burial site in Guadalcanal. An Identification Tag was present with the remains that corresponded to the name of a soldier missing in action. The records of all individuals known to be missing from that area were examined. Only one record documented the missing teeth noted in the remains. Consultation with the anthropologist revealed no skeletal inconsistencies. A positive identification recommendation was forwarded.

Case 2: Human remains were returned to the U.S. by Cambodian authorities. The remains were associated to the Mayaguez Incident. Dental remains consisted of a mandible. The dental information was compared to the dental records available for those lost in the incident. Two records were unavailable. Concordance to one record was noted and the dental identification was proposed. Several years later, a U.S. recovery mission was allowed to recover remains from the incident. Upon DNA analysis, the previous identification proposal was proved false. Assumptions about the source of the remains and lack of coordination with the anthropologist were factors in the false positive.

Case 3: Human remains were recovered in rural Oregon. After several leads were excluded dentally, an additional possible identification was proposed. The antemortem dental record showed no inconsistencies. The skull photograph was compared to the antemortem photograph and the superimposition showed good concordance. Further analysis by the anthropologist showed no inconsistencies also. The medical examiner used information from the dentist, anthropologist, scene, and incident history as a basis for a positive identification.

Dental Identification, Photo Superimposition, Dental Records