F21 The Use of Photographs in Dental Comparisons for the Identification of Human Remains

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This presentation will demonstrate the development of initial statistics and therefore, preliminary scientific basis for the identification of human remains through direct visual comparison of photographs exhibiting some anterior dentition to the dentition present on found human remains.

A lack of dental information reported in missing person files, the prolonged efforts of identification staff to obtain antemortem comparison materials and the absence or inaccuracy of antemortem dental records reported in a large number of identification cases make the need for alternate dental comparison techniques clear. The comparison of photographic media is widely accepted and integral to the field of forensic odontology. Yet one of the simplest and most accessible of images, a smiling snapshot, receives little attention in the research forum.

The technique of direct visual comparison is explored for its ability to narrow a pool of potential candidates for identification. Additionally, video superimposition of photographs is employed to further evaluate the accuracy of the direct visualization technique and to reduce the number of false inclusions and indeterminations. Initial figures show that potential matches can be reduced by 80 percent when the direct visual comparison technique is used. Application of video superimposition to the same photographs further reduces the potential match rate by 98 percent.

It is envisioned that confirmation of the technique by further research and its subsequent application to human identifications, both singular and en mass, can free up staff hours and finances dedicated to the preliminary stages of investigation and result in increased numbers of confirmed identifications.

Human Identification, Forensic Odontology, Direct Visual Comparison

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