



### **G8 Atypical Dental Identifications: What to Do When Antemortem Radiographs Are Missing?**

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After attending this presentation, attendees will have a better understanding of the alternative methods for aiding in dental identifications.

This presentation will impact the forensic science community by presenting cases involving innovative techniques that can be utilized by the forensic odontologist.

When a forensic odontologist is requested to identify a decedent, acceptable antemortem records, especially radiographs, must be available for comparison to the postmortem records. That, of course, is the ideal situation, but quite often circumstances presented to the forensic odontologist require ingenuity to provide the medical examiner's office with help in the identification process. Some interesting examples of cases that required such services are presented in this presentation.

A recent New York City cold case was presented for input in helping with the identification of a military serviceman. The antemortem records, dating back many years, contained only chartings and hand-written treatments; no radiographs were available. OdontoSearch was utilized and provided a statistical likelihood of the records matching, although the software cannot provide a definitive scientific identification; however, the written chart described a unique restorative feature but, unfortunately, it could not be confirmed radiographically. A discussion of why radiographs sometimes failed to image restorative features, as well as the ultimate technique utilized to isolate the hidden features, will be presented.

Following a New York City fire, the forensic odontology team was called in to confirm the identity of several minors. Following standard protocols, the children required postmortem radiographs to verify their identity. Before the process began, the team was informed of religious concerns raised by the community concerning radiographing the decedents. In addition, antemortem radiographs were not immediately accessible, and there was a request by the family for same-day burial. The techniques used to address these concerns, as well as methodology used to confirm the identities, will be discussed.

A fire in New Jersey, the consequence of a homicide/suicide, resulted in the death of a husband, his wife, and their teenage daughter. Reconciliation of the antemortem and postmortem radiographs for the husband and his teenage daughter were straightforward, leading to routine identification for the forensic odontologists. Although the 38-year-old wife had received dental care, no antemortem radiographs existed; however, her dentist could provide high-quality intraoral photographs of the anterior teeth. A technique for modifying the dental autopsy to obtain postmortem photographs of the victim's dentition, the methodology used for the comparison, as well as the pros and cons of the technique, will be discussed.

Forensic odontologists are sometimes asked by the medical examiner offices to confirm an identification despite the fact that antemortem radiographs may not be available to complete the identification process. Routine procedures followed by the forensic odontologist in many instances are not so routine and may require some creativity and innovation, as is described in these cases.

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#### **Antemortem, Postmortem, OdontoSearch**