## F48 X-Rays, Angles, and an ID: A Case Presentation

*Denise C. Murmann, DDS*, 7365 West North Avenue, River Forest, IL 60305*

After attending this presentation, attendees will gain another technique to aid in obtaining postmortem radiographs for a dental identification.

This presentation will impact the forensic science community by demonstrating how a specific difficulty with antemortem radiographs can be addressed.

Radiographs are one of the best tools that forensic odontologists use to assist in the identification of deceased individuals. Obtaining quality antemortem records, especially radiographs, is crucial for identification. However, in this case, the antemortem radiographs were not ideal, therefore, the postmortem radiographs needed to be similar to allow for an accurate comparison.

In this situation, the suspect poured gasoline on Victim A while the victim was sleeping in the lower level of a house, and then set him on fire. The flames soon spread to the rest of the home and consumed it. Two other family members were able to escape from the upper level, but Victim B did not get out of the building. As sad as any homicide is, this was made more poignant by the fact that the suspect, Victim A, and Victim B were all related. The suspect was the cousin of Victim A and the brother of Victim B.

The identification of Victim A was straight forward. His antemortem radiographs were obtained and compared to the postmortem radiographs taken in the Coroner's office. He had several posterior amalgams that were consistent and it was determined to be a positive identification.

The identification of Victim B was more difficult. There was a current set of full mouth radiographs that were provided by the decedent's general dentist. These antemortem radiographs were compared with the full mouth set of postmortem radiographs taken by a forensic dentist at the corner's office. When compared, the posterior radiographs showed much consistency, but the anterior teeth did not. The antemortem radiographs were very foreshortened. The case was made even more arduous in that the victim had all thirty-two adult teeth, but no restorations.

Test radiographs were made on a human skull that had been dissected for medical study. Different film placements and angulations of the X-ray unit were attempted to reproduce the foreshortening seen in the antemortem radiographs; but to no avail. Finally, the dental office of Victim B was contacted and it was requested that they demonstrate their radiographic technique. The dental office agreed and the dental assistant that took the antemortem radiographs of Victim B showed exactly how she placed the radiographic film, and at what angulations she took the radiographs. To document this technique, the assistant was asked to photograph a sample of her method, so that it could be replicated at the coroner's office. The postmortem radiographs were then taken again on the descendent, using the new film placement and angulations.

Comparison of the antemortem radiographs of Victim B and the new postmortem radiographs revealed that they were consistent. Therefore the conclusion was a positive identification.

**Forensic Odontology, Indentification, Dental Radiographs**

 ** Presenting Author*