



F5 Complete Radiographic History and Dental Artifact Aids in the Identification of an Edentulous Victim

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After attending this presentation, attendees will understand the importance of obtaining a complete radiographic history when attempting to identify an unknown victim.

Learning Objective: to demonstrate the potential importance of a complete radiographic history and the use of a dental artifact in the identification of an edentulous victim.

In general, the most recent dental radiographs provide the most useful and accurate basis for comparison with the postmortem films. Often, unless directed otherwise, dentists provide only the most recent films of the potential victim rather than sending the entire record. However, sometimes valuable dental information can be found in older radiographs. This is a report of such a case.

The presentation will show how a panoramic x-ray taken in 1978 provided the information needed to identify a skeletalized, edentulous victim 22 years later. The victim, found in a ditch alongside a road in rural Nebraska in November, 2000, was identified as an elderly male by anthropologic examination. No other information was available, no other distinguishing features were found at the discovery site and no dentures were found. Given the location of the discovery and the determined age and sex of the victim, local authorities had a missing person that was consistent with this very general description.

Visual examination of the maxilla and mandible showed significant deterioration of the alveolar bone with no distinguishing characteristics evident. The mandible was fractured on the right side in the area of the mental foramen. Radiographic examination of the antemortem films of the missing person began with the most recent film, a single periapical x-ray of tooth #26 taken in 1989. Providing no assistance, the next films reviewed were 2 bitewings taken in 1980. The films showed the crowns of several teeth, but no alveolar bone. Since the victim was edentulous, the films were of no value for identification. The final radiograph was a panoramic x-ray taken in 1978. That film showed several teeth present, but also a small opaque object embedded in the alveolar bone in the area of tooth #19.

It will be shown how the presence of the opaque object was used to identify the victim using comparisons of the location, size, shape and measurements of the object between the antemortem and postmortem films. It will also show dissection and recovery of the object to identify the object itself.

In general, the older the antemortem x-rays the less helpful they are in aiding in the identification of an unknown victim. This is a report of a case where a 22-year-old panoramic film showing a dental artifact was instrumental in the identification of an edentulous victim. It demonstrates the importance of obtaining radiographic histories that are as complete as possible. In this case, without the panoramic film from 1978, the victim likely would not have been identified.

Complete, Artifact, Edentulous