



# JOURNAL of FORENSIC ODONTO-STOMATOLOGY

VOLUME 31 Supplement 1 October 2013  
Abstract book IOFOS Conference 2013 Firenze

## ATYPICAL POSTMORTEM DENTAL IDENTIFICATION

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*The author declares to have no conflict of interest.*

*Reasons that a forensic dental comparison is an ideal instrument in death investigation include the longevity and durability of the oral/dental anatomy, even in scenarios of extreme heat, trauma, decomposition or a combination of all of these factors. Identification by dental record comparison is universally recognized and consistently accurate. There are scenarios however, despite thorough investigation, antemortem dental records are not available. We will detail the alternative investigative methods we employed that resulted in positive identification, without antemortem dental records. In each case discussed, identity was confirmed utilizing an alliance of forensic dental autopsy, antemortem medical records or differential non-radiographic oral anatomy. With each case example, a greater knowledge of the scope and advantage of contemporary forensic odontology as an augment to identity investigation will be gained.*

*Our first case involved a male that autopsy confirmed the cause of death as inhalation of products of combustion and manner of death as suicide. Antemortem dental records were not recovered, however medical radiographs of the head and neck were available. A forensic odontologist was summoned and antemortem digital radiographs, a frontal and lateral skull series highlighting a medical implant on the cervical vertebra, were offered for analysis. The dentition was visible on both radiographs and postmortem dental radiographs were created. A positive identification was rendered based on the comparison of dental restorations.*

*Our second case involved a male that autopsy determined the cause of death as coronary artery disease with contributing factors of drowning and chronic alcohol abuse, the manner of death was accidental. A forensic odontologist was requested to complete a dental identification, but only recent frontal and lateral CT scans were available. Postmortem dental radiographs were taken and a positive identification was rendered after, precise antemortem image improvement to allow for a strict comparison of the decedent's restored teeth.*

*Our third case involved a vehicle collision yielding two fatalities, a male youth, and an elderly female. The bodies of both were charred and identification by dental record comparison was ordered. Antemortem dental records for the female victim were obtained and her identification was made without difficulty. Only study models of the youth's teeth, prior to orthodontic appliances were available. Dental impressions were collected on the decedent and models created for comparison.*

*The distinctive pattern of the palatal rugae antemortem and postmortem had numerous consistencies*



*and no unexplainable inconsistencies upon direct comparison. A positive identification was rendered based upon this comparison.*

**KEYWORDS:** Forensic Odontology, Identification, Atypical.

JFOS. October 2013, Vol.31, Sup.No.1 Pag 38-39

ISSN :2219-6749