



G39 The Need for a Complete Dental Autopsy of Unidentified Edentulous Human Remains

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Learning Overview: After attending this presentation, attendees will understand the need for the application of best practices when conducting the identification of missing and unidentified human remains. The scientific literature in the field of human identification highlights the importance of a multidisciplinary approach when conducting a human identification process, including a dental autopsy.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing the results of an identification casework in which the dental autopsy and dental radiology were beneficial in the postmortem data collection, even in an edentulous individual, for the purpose of narrowing the search of reported missing persons in that geographical area and to establish identity.

In Abruzzo, one of the 20 regions of Italy with a total of more than 1.3 million inhabitants, there are, to date, 505 reported missing persons and 6 unidentified human remains as highlighted by the June 2018 official report of the Italian Ministry of the Interior.

In December 2017, a decomposed unidentified body was found near the river Tronto of Teramo, Italy. The corpse was found with no identifying document or specific personal belongings, except for a pack of cigarettes. The medical examiner diagnosed a gastric perforation as the cause of death, due to the intake of hydrochloric acid. The jar of muriatic acid found near the body led to a verdict of a suicide. After the autopsy, the Penal Court in Teramo appointed two forensic odontologists to complete the postmortem assessment and collect dental data for the purpose of identification. The cadaver was found wearing a complete set of upper and lower dentures. The dental autopsy and 43 periapical X-ray images determined the cadaver as a male between the ages of 55 and 65 years old, totally edentulous with upper and lower dentures, and an osteosynthesis with two plates and screws in the left corner of the mandible. The generic profile was circulated by the Carabinieri Police Agency and was also sent to Penelope Abruzzo, the regional association of missing persons, and to the editorial team of a national television program on missing persons, *Chi l'ha Visto?* (*Have You Seen This Person?*).

In March 2018, the sister of the missing person finally reported the disappearance of her brother, and a presumptive identification was performed through a visual recognition of the decomposed cadaver. The sister confirmed the presence of two dentures and revealed the name of the dentist and the place of the maxillofacial surgery for the treatment of the fractured mandible. The two forensic odontologists were able to establish the identification of the cadaver by comparing the dental and radiological data received from the dentist and the hospital. No DNA comparison was then required.

This case report confirms the need for always performing a complete dental autopsy, including of X-ray imaging, in all unidentified human remains cases, even in edentulous individuals in whom no teeth are clinically visible.

Identification, Edentulous, Dental Autopsy