

G31 The Mystery of the Unidentified Human Remains Found Wrapped in Dental Packing Tape and Its Dental Biography

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Learning Overview: After attending this presentation, attendees will be able to evaluate the application of best practice when performing the identification of unidentified human remains. In the field of missing and unidentified cadavers, it is essential to reach a preliminary generic profile of the unidentified body. This can be obtained only through a multidisciplinary postmortem assessment.

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 postmortem collection involved a forensic pathologist, a forensic odontologist, and a forensic biologist, who were able to define the profile of the unidentified person.

In Apulia, one of the 20 regions of Italy with a total of more than four million inhabitants, there are to date 3,548 reported missing persons and 59 unidentified human remains, as highlighted by the Missing Person Association “Penelope Puglia.” In May 2017, an unidentified skeletonized body was found wrapped in dental packaging tape in an abandoned factory in Bari, the capital of the region. The medical examiner appointed by the court was authorized to involve a biologist and a forensic odontologist for a complete postmortem assessment. The anthropological evaluation and the dental autopsy allowed the definition of the generic profile with a specific dental biography, including a dental age estimation using periapical X-ray of the upper and inferior canines. The dental biography was that of a female, aged 55 (± 5 years) years old, partially edentulous with only front teeth and one inferior molar, orally neglected, wearing two mobile partial prosthetics, with a high horizontal alveolar bone reabsorption, which resulted in the appearance of long “jagged teeth.”^{1,2} The radiological analysis of the jaws revealed infrabony pockets with plausible teeth mobility. The observation of the two partial prosthetics led to the conclusion that they were manufactured seven to eight years previously. Furthermore, the only amalgam restoration was assessed clinically as having been performed approximately five to seven years prior. Dental findings were also recorded in the International Criminal Police Organization (INTERPOL) Unidentified Missing Person form, as the initial nationality of the deceased was not known. A biological DNA sample was collected from the inferior second molar. The condition of the cadaver did not allow for the collection of fingerprints.

Histological findings and a skull Computed Tomography (CT) scan allowed the medical examiner to determine the cause of death as a hemorrhagic stroke, due to several beatings and physical abuse. The forensic dental examination enabled the narrowing of the search to four reported female missing persons, on which the police held some antemortem data. One had been examined for sexual abuse in 2009 and had received a vaginal swab. DNA analysis was performed on this specimen revealing two profiles, one of the victim’s and one of a male abuser. The comparison with the postmortem DNA profile matched with the missing person and all other data was compatible.

This case report confirms the need for always performing a complete dental autopsy in all unidentified human remains cases to reach a speedy identification by narrowing the search of the compatible reported missing persons.

Reference(s):

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2. Cameriere R., Cunha E., Sassaroli E., Nuzzolese E., Ferrante L. Age Estimation by Pulp/Tooth Area Ratio in Canines: A Study of a Portuguese Sample to Test Cameriere’s Method. *Forensic Sci Int*, 2009, 193(1-3).

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