



### E6 A Young Mummy

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**Learning Overview:** After attending this presentation, attendees will be informed regarding a rare case of mummification that occurred in an unusual time interval.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by demonstrating that exceptions may exist in determining time since death in a complete mummified body.

A body in advanced stage decomposition is a challenge for forensic pathologists. Personal identification, as well as manner and time since death, require a specific skill, but sometimes they are not enough to explain all of the cadaveric phenomena.

It is known that mummification occurs in response to dryness of the environment, good ventilation, and high temperature. Due to the evaporation of water in the remains, the body becomes dehydrated or desiccated and shrivels. The natural appearances and features of the body are preserved indefinitely. Mummification is usually described after several weeks, and it is normally completed, on average, in a year.

In this case, a body in an advanced state of mummification was found during the summer season in an abandoned ground in southern Italy. The cranium was almost completely skeletonized, and the remaining part of the body was predominantly mummified. No signs of postmortem animal activity were found. No elements that allowed identification were found. The autopsy and the Computed Tomography (CT) scan excluded traumatic lesions, but the preservation of the organs' tissues, due to mummification, allowed histopathological analysis that concluded for a natural cause of death.

Police investigation revealed that 17 days before the discovery of the corpse, a missing Senegalese male was admitted to the emergency room after an accidental fall. During the admission, a CT scan was performed, but the subject left the hospital before completing all analysis, then he disappeared.

Odontological comparison was made between antemortem X-rays in the emergency room and skull X-rays performed at the Institute of Legal Medicine to compare the frontal sinus and odontological data. This provided a positive match between the mummified body and the missing Senegalese male.

Personal identification of the mummified body allowed the precise definition of the postmortem interval. The victim was in the emergency room 17 days before the discovery of the body, so one can conclude that the time of death was no longer than 17 days before the first inspection.

This case is interesting because of the atypical precocious mummification that occurred in a very short period of time (just two weeks) and for the procedure described by this study to obtain identification.

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#### **Mummification, Time Since Death, Personal Identification**