



E105 Homicide by Unspecified Means: The Importance of a Forensic Pathologist and Anthropologist Teamwork Approach in Death Scene Investigation and Postmortem Analysis

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Learning Overview: After attending this presentation, attendees will recognize deaths that meet the diagnostic criteria of homicide by unspecified means and will highlight the importance of the forensic pathologist and anthropologist leading the death scene investigation and postmortem analysis.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by highlighting the importance of a teamwork approach between the forensic pathologist and anthropologist in the medicolegal death investigation and postmortem analysis in suspected homicide by unspecified means-related deaths.

A complete medicolegal death investigation includes a death scene investigation, postmortem examination, and ancillary studies. A death that occurs under objectively suspicious circumstances, when there is no anatomic cause of death, no toxicology cause of death, no environmental, circumstantial, or historical cause of death, or when a more specific cause of death cannot be suggested, the terms “homicide by unspecified means,” “homicidal violence,” and “homicidal means” are suggested as an appropriate cause of death.¹ Commonly, deaths that fulfill this diagnostic criterion involve decomposed and skeletonized decedents that require additional forensic investigation and analysis. Reported here are two cases of skeletonized females that were found buried in wooded areas after their husbands killed them.

A 44-year-old female was missing for approximately five months when her husband was found dead in his residence. He hanged himself and left a confession note and map that detailed he choked the decedent to death and buried her body the next day. Based on the map, the female was found in a shallow grave in a densely wooded area. A team from the medical examiner’s office that included the forensic pathologist, two forensic anthropologists, and a medical examiner investigator led the death scene investigation of the female, which revealed predominantly skeletal remains. At the morgue, the forensic anthropologists performed a skeletal analysis, which revealed a peri-mortem defect of the right side of the skull; remote, healing, or healed fracture of the maxilla and right palate; and no fractures of the unfused hyoid bone. While the examination of the body did not demonstrate a specific cause of death, given the circumstances, the decedent’s cause of death was homicidal means, probably of asphyxia due to strangulation, and the manner of death was homicide.

A 32-year-old female was last known alive in 2010. In 2018, the decedent’s husband led law enforcement to a wooded area where he buried the decedent after killing her. He confessed he stabbed the decedent in her neck. A team from the medical examiner’s office that included the forensic pathologist, two forensic anthropologists, a forensic anthropology coordinator, and a medical examiner investigator led the death scene investigation of the female’s skeletal remains. At the morgue, the forensic anthropologists performed a skeletal analysis, which was most significant for sharp force trauma to the right sides of cervical vertebra 7 and thoracic vertebra 1, representing a minimum number of one impact, consistent with a knife cut injury of the lower aspect of the right side of the neck. Given the circumstances, the cause of death was homicidal means, including sharp force injury of the neck, and the manner of death was homicide.

When the diagnostic criteria for homicide by unspecified means under objectively suspicious circumstances of death are met, which includes a body deliberately hidden from view, attempt to conceal evidence, and scene findings suggestive of antemortem injury not verifiable by autopsy, it is recommended that the forensic pathologist and anthropologist be present and lead the death scene investigation and that a full autopsy with skeletal analysis is completed.¹ The presence of both the forensic pathologist and anthropologist at the death scene may serve to locate the decedent with minimal disruption if buried, preserve potential evidence, determine human remains versus non-human remains and objects, appreciate possible postmortem animal activity, and identify possible peri-mortem trauma. A full autopsy with a skeletal analysis is recommended because, as highlighted in the second case reported here, the forensic anthropologist documented sharp force trauma of the vertebrae that was consistent with the confession given, and can provide specific, scientific cause of death information in an otherwise homicide by unspecified means-related death.

Reference(s):

¹ Matshes E.W., Lew E.O. Homicide by unspecified means. *Am J Forensic Med Path.* 2010 Jun;31(2):174-7.

Homicidal Means, Investigation, Analysis