H36 Cervical Vertebrae Entrapment in the Noose as Evidence of Cause of Death by Hanging in Skeletal Cases: Three Remarkable Finds

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After attending this presentation, attendees will be shown examples of cervical vertebra entrapment in ligatures as evidence of cause of death by hanging.

This presentation will impact the forensic community by stressing the importance of thorough recoveries at skeletal crime scenes, especially in areas where bone and culturally pertinent associations are scattered among extraneous debris.

Cause of death by hanging may be difficult to determine from decomposed or skeletal remains alone, and may have to be inferred from evidence at the scene. The purpose of this paper is to present three remarkable skeletal cases, each exhibiting a cervical vertebra entrapped in a noose as unambiguous evidence of cause of death by hanging.

The first case involved human skeletal remains found in a wooded residential area in Middle Tennessee. Dr. Hugh Berryman, two members of the Forensic Anthropology Search and Recovery Team and a death investigator from the State Medical Examiner's Office processed the scene. The remains were clothed and largely held in articulation by dried soft tissue. No ropes or other indicators usually associated with hanging were found upon initial examination. Remnants of a dark colored woven belt tied to a wide strip of white cloth were found among other unassociated debris on the ground near the remains. When collected, it was discovered that the D-shaped metal buckle facilitated a loop that enclosed a skeletonized 5th cervical vertebra and hair. The metal buckle was positioned on the posterior side of the neck and the size of the loop was exceedingly small, indicating that it became reduced in size as the body decomposed.

A second case was discovered in eastern Louisiana in April 2006 and was presented at the 2008 annual meeting of the American Academy of Forensic Sciences by Dr. John Verano. The remains were recovered from a wooded area and were largely skeletonized, with some dried soft tissue, and clothed. The majority of the remains were found hanging in a partially fallen tree with the skull and other bones scattered in the area. In this case, a nylon rope with a simple slipknot was found to encircle the skeletonized 3rd cervical vertebrae and hair. The position of the knot is posterior and to the right of the spinous process, but due to decomposition, the knot may have slipped from its original position.

The third case from Pinellas, Florida dates to October 1990 and was examined by Drs. Douglas Owsley and Robert Mann. At the scene, police found human skeletal remains and what appeared to be men's clothing lying on the ground at the base of a tree from which a rope and noose still hung. A 4th cervical vertebra with a crushed right vertebral foramen was found encircled by the noose. Since this foramen was crushed, the position of the noose at the time of death could be determined and is said to indicate homicide as the manner of death.

In anthropological cases involving hanging where the bones and associated cultural items have been scattered, cause of death may be difficult to determine. This study presents three cases where the presence of a cervical vertebra entrapped in a noose provides clear evidence of hanging as the cause of death. Such findings argue for the thorough processing of skeletal crime scenes, especially in areas where bone and pertinent cultural associations are scattered among extraneous debris.

Hanging, Cause of Death, Crime Scene Recovery

 ** Presenting Author*