



H103 Tied to His Own Apron Strings: A Case of Accidental Strangulation by Power Tool

Christine James, DO, Allegheny County OME, 1520 Penn Avenue, Pittsburgh, PA 15222; Karl E. Williams, MD, Allegheny County OME, 1520 Penn Avenue, Pittsburgh, PA 15222; and Todd M. Luckasevic, DO, Allegheny County OME, 1520 Penn Avenue, Pittsburgh, PA 15222*

The goal of this presentation is to illustrate a rare case of accidental strangulation by a bib apron while using a power tool.

This presentation will impact the forensic science community and the general population by illustrating the unexpected dangers of using power tools while wearing presumed “protective” clothing/attire.

Introduction: Deaths associated with power tool use are rare. Most involve accidental electrocution or, less commonly, penetrating/cutting injuries. Accidental strangulation due to power tools has not been previously reported in the literature. Aprons are considered a type of protective layer, but as with any loose article of clothing, can prove to be a hazard.

Materials and Methods: This case involves a 73-year-old Caucasian man with an interest in restoring and repairing African fertility statues. He was wearing a protective cloth bib apron while using an electric power grinder with a rotating buffer attachment to polish a piece of art. The apron became entangled around the rotating buffer head. Twisting of the apron was transmitted to the neck strap, which then wound quickly and tightly around the decedent’s neck, leading to strangulation. The decedent fell backward. During the event, the buffer became unplugged. The victim was found by his wife when she returned home later in the day. Emergency personnel responded to the scene; however, death was obvious and no resuscitation efforts were attempted.

Results: External examination revealed a fully dressed Caucasian male wearing shorts, a T-shirt, clear vinyl gloves, and a blue canvas bib apron. The grinder/buffer was found to be on the “max” setting with the bulk of the apron twisted around the buffer head and approximately 15 turns of the neck strap of the apron wound tightly around the neck. The 1.5-inch-wide apron strap was removed to reveal a circumferential parchment-like ligature abrasion above the level of the thyroid cartilage. Dissection of the strap muscles of the neck was unremarkable and the hyoid bone was intact. Flurid petechial hemorrhages were present in the conjunctivae and palpebral fissures. Scleral hemorrhages were also present bilaterally. The upper lip had a midline laceration and contusion.

Conclusion: While personal protective equipment is highly recommended when working with power tools, any loose clothing may prove hazardous. Aprons, neckties, and necklaces may become caught in mechanisms. Power tool users should be especially cautious of tools with rotating heads. Quick disconnects, avoiding distractions, and supervised use are recommended to minimize bodily injury.

Accidental Strangulation, Apron, Power Tools