



A11 Blood and Tissue Spatter Associated With Chainsaw Dismemberment

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After attending this presentation, attendees will recognize and understand blood and tissue spatter patterns characteristic of postmortem dismemberment of a human body with a small powered electric chainsaw.

This presentation will impact the forensic community by serving as an evidentiary resource for investigating the potential dismemberment by chainsaw of a human body, when not immediately evident from scene investigation.

In February of 2005, a 43-year-old, 108 kg, woman was reported missing. The ensuing police investigation and evidence found at the suspected scene suggested that the missing woman had been killed and subsequently dismembered in the basement of the residence. A part of the incriminating evidence was the recovery of a receipt for an electric chainsaw, which was never recovered. The location of the suspected dismemberment was in the basement of the home in a small confined space once used as a coal room (approximately 2 x 3 x 3 meters) with a concrete floor.

Several weeks into the investigation, the entirety of the victim's remains had been located, to include two lower legs amputated below the knees, an intact pelvic region amputated below the navel, and an intact torso. The pelvis and legs recovered from a local landfill, while the torso was found in a neighboring state. Those investigating the crime; however, were uncertain that an electric chainsaw could have been used to dismember a large human body in such a small, enclosed, space with such little evidence of blood or tissue spatter. There also was skepticism that the small electric chainsaw apparently purchased by the assailant could be powerful enough to dismember a large body without becoming fouled in soft tissue and bone.

To address the above questions two experimental reenactments of the dismemberment were conducted. The same make and model of electric chainsaw, as noted on the recovered receipt at the scene, was used in the experiments. White cotton sheeting was used to recreate the dimensions of the small basement coal room. Two humanely euthanized female pigs were used as the test carcasses. The experiments showed that an electric chainsaw easily cut through the pig carcasses with little resistance beyond some mild to moderate pressure needed for the initial skin penetration. In the first experiment, with the saw held largely parallel to the floor, there was a trail of tissue deposited largely directly beneath the chainsaw bar and a somewhat larger puddle of tissue on the floor directly under the discharge chute of the chainsaw. Very little spatter, consisting only of small, fine, high velocity droplets, was found on the sheet walls of the test chamber after the first cutting. In the second experiment, using a freshly killed pig, the pattern of spatter was similar; however, an increased volume of bloodier spatter was seen on the lateral walls. Both the victim and the two experimental carcasses showed characteristic striations across bony surfaces consistent with those seen on hard objects cut with a chainsaw. In all instances of dismemberment, some of the skin surfaces adjacent to the dismemberment sites were relatively smooth while other areas showed somewhat regular skin tags. The plywood sheeting that supported the pig in the first dismemberment showed superficial divots similar to those seen at the scene.

Detailed results will be presented of the experimental reenactments of the postmortem dismemberment. The characteristic patterns associated with blood and tissue spatter, as well as, tool mark impressions on bones and floor will provide insight into potential cases in which a successful dismemberment has occurred.

Chainsaw Dismemberment, Tissue Spatter, Tool Marks