



B89 “A Gun Too Far”—Reconstruction of a Homicide

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Learning Overview: The goal of this presentation is for attendees to become familiar with techniques of shooting incident reconstruction in a homicide.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by demonstrating how evidence evaluation, observational experiments, and graphic exhibits can be utilized in a trial. Attendees attending this presentation will understand the procedures used to investigate a shooting incident, the value of witness statements, and how to make determinations on the dynamics and the limitations of gunshot residue evidence. All of these teaching details are used to integrate discrete evidence elements into a significant shooting reconstruction.

A woman was found fatally shot. It was either a homicide or a suicide: did she shoot herself or was she shot by someone? This issue required experimental testing and modeling. The primary physical evidence at the scene was both the presence and the absence of gunshot residue, a shooting distance determination, and blood spatter. This was a case that required an analytical shooting reconstruction to determine what was and was not possible.

The only witness to the fatal shooting was the boyfriend of the victim. Both the victim and the suspect were in a bedroom when the shot was fired. While there were several other people inside the house (all of whom heard the shot), none of them witnessed the incident. A forensic expert retained by the defense concluded that the incident was a suicide and that the evidence in the form of bloodstains on the victim’s outstretched arm supported his case for suicide.

This case went to trial and the full shooting incident reconstruction was presented to inform the jury about the impossibility of the woman using the particular handgun to shoot herself. Anthropometric data produced by a kinesiologist was used to validate the length of the victim’s arms and the limits of the victim’s reach.

One issue was the early crime scene photos that showed the location and the orientation of the revolver used in the incident. The handling of the firearm by the first arriving police officer was somewhat uncommon, but his actions were very helpful in subsequent analysis of the incident and in the understanding of what could and could not have occurred.

One of the principle evidence items used by both prosecution and defense in the criminal trial was the absence of gunshot residue on the suspect and on the blanket that covered the victim. An identical blanket was obtained and used for gunshot residue testing which, when compared with forensic laboratory testing, provided a valid distance determination. An important part of the reconstruction was to understand and communicate the significance of the gunshot residue evidence to the jury. The limitations of the significance of gunshot residue on a suspect’s hands was researched in the forensic literature and in the guidelines and practices of several forensic and law enforcement agencies. Additional evidence was evaluated by use of a human model to simulate the victim’s ability to hold the firearm.

Shooting Reconstruction, Bloodstain, Gunshot Residue