

## E8 Funny Games: Homicide Among Neighbors

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**Learning Overview:** The goal of this presentation is to show how a multidisciplinary approach to the crime scene is instrumental in the study of complicated inspections to detect all traces of the crimes and to direct investigations in the correct manner.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by demonstrating how a complete forensic team could provide important support to investigative activities by providing benefits to law enforcement regarding the performance of forensic K-9 units and their optimized combination with forensic operators, revealing their capability in detection, identification, and location of biological traces.

This case dealt with a 55-year-old man who was killed in front of a building near his unauthorized cottage. The forensic pathologist team was alerted by the local prosecutor to a case of gun homicide. At the crime scene, the man was found lying on the sidewalk, supine, with his thorax in a large pool of blood. In front of the entrance door to the building were two steps. Near these steps, at a distance approximately 370cm from the corpse, and on the sidewalk, was a cartridge case. On the other side of the steps, at a distance of approximately 390cm from the corpse, another casing was found. The access door of the house appeared open, with a broken lower panel. Along the wall of this door was a window that had one of the two glass panes broken.

The external examination revealed, in correspondence with the fourth left intercostal space, the presence of a linear wound with finely jagged margins and extroflexes (exit hole). At the left upper abdominal quadrant, immediately below the costal arch, was a round-shaped wound with jagged and introflected margins (entrance hole). The left forearm presented with two wounds: one in correspondence to the upper third of the dorsal face, which was round shaped with jagged and introflected margins (entrance hole); the other in correspondence to the upper third of the fly face that was oval shaped with jagged and extroflexed margins (exit hole). In the right dorsal region was a roundish wound, with jagged and introflected margins (entrance hole); the other in correspondence to the upper third of the fly face that was oval shaped with jagged and extroflexed margins (exit hole). In the right dorsal region was a roundish wound, with jagged and introflected margins (entrance hole). At the autopsy, an ogive was found in correspondence with the adipose tissue of the right gluteal region. The death was attributed to a cardiac and vascular lesion with cardiac tamponade. Such a wound is produced by a single-munition gun. The autopsy also identified other internal injuries produced by a gun.

During the interrogation, the suspect declared he was attacked first by the victim, who had used a golf club to break the windows of the house and the car before striking the suspect. The golf club was not found near the houses of the suspect and victim, so the prosecutor asked for a new inspection of the surrounding land because witnesses saw the victim's family hide the body. This inspection was effectuated with the help of the Forensic K-9 Unit and dogs trained to detect and locate any biological trace, such as blood.

The golf club was found buried in a field in front of the victim's house and was compared to the suspect's lesions, which were compatible with the aforesaid blunt body. Comparative genetic tests were conducted, comparing the blood DNA profile found on the club with the suspect profile obtained by buccal swabs. After genetic analysis, the profile matched, confirming the history told to the judge. In light of these findings, the judge decided to close the case as a legitimate (self) defense.

At the end of the police investigation, the suspect was declared innocent and returned to his home, near the house of the victim. After a few days, his house was set on fire. The police arson investigation is in progress.

## Forensic K-9 Units, Crime Scene Investigation, Genetics Analysis

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