



Pathology Biology Section - 2012

G12 Homicide During Police Procedures: From Crime Scene Investigation to Reconstruction — The Long Way to the Truth

Francesco Vinci, MD, Maricla Marrone, MD, and Sabrina Leonardi, MD, Section of Legal Medicina - University of Bari, Piazza Giulio Cesare n. 11, Bari, 70124, ITALY*

After attending this presentation, attendees will understand that ballistics investigation is the prerogative of several professionals. Among them, forensic pathologists are essential to ensure a correct reconstruction of the dynamics of events in cases of murder or injury. In fact, a multidisciplinary approach combining the specific skills of different professionals will guarantee the best results.

This presentation will impact the forensic science community by showing how pathologists are irreplaceable in forensic ballistics. Their knowledge, enabling an objective assessment, can integrate and complete the conclusions of other ballistics experts, and assess the compatibility of the bodily injuries and the reconstructed dynamics.

A case is presented of a 47-year-old man who died of a gunshot wound during capture by the police. The victim was driving down a city street in the wrong direction when he was spotted by policemen. A chase by two police cars began and three policemen fired several shots at the victim's car, one of which killed the victim. During the crime scene investigation, a different military force found nine cartridge cases on the tarmac, several bullet fragments in the car (back and front right), and two bullets (a deformed bullet on the floor of the left front seat and an intact bullet on the right front seat). Fragments of glass were found on the tarmac at a distance of two to three meters from the car and the right front window was broken.

The agents reported the following dynamics: the man entered a dead-end street, so he tried to re-enter the main road probably intending to run over the three policemen. Two gunshots were fired against the back wheels and several shots toward the front right of the car. The victim's car started to move again and a policeman broke the front window with a gun. The car stopped immediately and when the policeman opened the front door where he found the victim slumped lifeless in his seat.

A team of forensic pathologists performed autopsy, genetic, and toxicological examinations as well as a ballistic investigation. Autopsy findings showed a single through wound with entry in the victim's left shoulder and exit on the right chest, then striking the arm. The gunshot course was from left to right and back to front at a downward angle of 18°. The bullet struck the left lung and the heart, causing massive hemothorax and slight hemopericardium. The victim also showed a bruise on the left cheek, consistent with a blow from the firearm magazine.

Examination of gunshot residues on the jersey sleeve revealed a shooting distance of 40-60cm. Ballistic examinations were made of the bullets, bullet fragments, cartridge cases, three guns, and on the victim's car: the findings were compared with the evidence markers at the crime scene. The two bullets in the car were 9mm caliber gun. Genetic investigations revealed the victim's DNA on the intact bullet. Firing tests identified the weapon which fired the fatal bullet and studied the decrease of V_0 and gunshot residue after firing against the window of a similar car. The victim's car had been hit by at least seven bullets: five shots against the front left (one of which ended on the floor of the left front seat) and two shots against the back wheels.

The following event dynamics were reconstructed: during the capture, the policemen shot at the back wheels and front left of the victim's car. Then a policeman broke the car window with the gun muzzle; meanwhile, a bullet was fired from the same gun and hit the victim's shoulder. It is not known whether the shot was intentional. The car traveled on a few meters while the man died. The blunt injuries to the head probably occurred when the victim was forcibly removed from the vehicle.

In conclusion, serious discrepancies were highlighted between the crime scene reconstruction by the pathologists and what had been reported by the policemen: the man's death was not due to an accidental gunshot fired at the car wheels, but to a gunshot fired directly at the victim, probably accidentally. Finally, ballistic investigations identified the weapon and the policeman responsible for the death.

Ballistic Findings, Forensic Pathology, Shooting Reconstruction