



Pathology/Biology Section - 2014

G98 Multiple (Eight) Self-Inflicted Gunshot Wounds to the Head

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After attending this presentation, attendees will understand that autopsies involving multiple gunshot wounds to the head, even though routinely approached as a homicide based on the circumstances, scene investigation, autopsy, and crime lab testing, could be self-inflicted.

This presentation will impact the forensic science community by generating awareness toward working up a case of multiple gunshot wounds based on the circumstances, history, and scene investigation.

Cases of multiple (considered to be more than two) self-inflicted gunshot wounds are rare and require careful examination of the scene of occurrence, thorough consideration of the decedent's psychiatric, medical, and social histories, and accurate postmortem documentation of the gunshot wounds and their trajectories through the body.

Lethal self-inflicted gunshot wounds are most commonly sustained to the head (81%), often in the right and/or left temple, followed by the mouth and submental region of the neck, the chest (17%), particularly the precordial region, and the abdomen (2%).^{1,2}

In this case, the decedent had a history of depression, without evidence of prior suicidal ideation. At the scene, a six-shot .22 caliber ROHM® RG7 handgun was recovered under the decedent's body and the decedent's blood was present on a lock box in the residence that contained firearm ammunition. Postmortem examination of the body revealed eight entrance gunshot wounds on the decedent's head. There was no evidence of close-range firing (i.e., soot deposition or gunpowder stippling) surrounding any of the entrance defects. Two of the gunshots penetrated the skull, causing injury to the brain. The remaining gunshots were associated with fragmented bullets recovered in the scalp adjacent to the skull. Fingerprint analysis, blood stain analysis, and test firing patterns were evaluated on the gun recovered at the scene.

Upon review of the literature pertaining to multiple self-inflicted gunshot wounds to the head, most cases document two gunshot entrance wound defects. In a case reported in 1906, a subject shot himself seven times and survived, later committing suicide by hanging. The current case portrays the greatest number of self-inflicted gunshot wounds to the head (eight) resulting in death, compared to the published literature.

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It is a common misconception that multiple gunshot wounds of the head are invariably homicidal. In some instances, multiple gunshot wounds of the head are not lethal. Karger explains that an individual's capacity to act following one or more gunshot wounds of the head may be due to the preservation of areas in the central nervous system referred to as "targets of immediate incapacitation." Such targets include the upper cervical spinal cord, brainstem, cerebellum, diencephalon and midbrain including the basal ganglia, the motor cortex, and the capsula interna.³ Following multiple gunshots to the head, an individual's faculties may be fully preserved or minimally limited, if the central nervous system is not injured by the gunshot wound, either because the bullet did not penetrate the skull or because the bullet entered the cranial vault without injuring vital targets.⁴⁻⁶ In the case at hand, only two of eight small-caliber projectiles entered the cranial vault. The victim was clearly not incapacitated early in the course of events as he was able to open the lockbox, while bleeding, and reload the weapon.

Autopsies involving multiple gunshot wounds to the head should be approached as homicides until proven otherwise. However, depending on the scene findings, clinical history, and lethality of injuries, suicide should not be excluded out of hand.

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Self-Inflicted, Multiple, Gunshot Wounds