



Pathology Biology Section - 2012

G68 Fatal Suicidal Gunshot Wound to the Head With Lack of Immediate Incapacitation

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After attending this presentation, attendees will learn special wound ballistics of the head, and general mechanisms of incapacitation that make sustained capability to act possible in rare cases of gunshot wounds to the head.

This presentation will impact the forensic science community by showing how questions concerning the possibility of physical activity following a given gunshot wound are often raised in court and can be of major importance in reconstruction of a crime and in differentiation between homicide and suicide.

Introduction: A case of physical activity following a suicidal gunshot to the head including perforation of the right frontal lobe from a 9mm is reported. The woman was able to walk a distance of 18m before dying. A review of the literature showed that the potential for physical activity following penetrating gunshot wounds to the head is related to general principles of wound ballistics and mechanisms of incapacitation.

Case report: a 45-year-old woman was found dead in a wooded area. The body was lying on the ground near a car and the face was covered by maggots. A suicide note was found inside the car. The decedent was known to suffer from severe depression and was last seen alive the day before by her estranged husband. The investigators first thought that the victim had died from fatal intoxication, as several empty blisters of alprazolam were found nearby. However, secondarily a 9mm carbine was found 18m distant from the body. At autopsy an entrance wound was located at the right temple. A circular depressed fracture of the right temporal bone was noted. There was an acute subdural hematoma of the right cerebral hemisphere. Several pellets were removed from the surface of the brain. Neuropathology showed traumatic injuries of the right frontal lobe. As the frontal brain does not include areas immediately essential to acting or consciousness, it was concluded that physical activity was possible in this case and that this woman had been able to walk a short distance before dying. Toxicology analysis was not requested by investigators. Death was ruled a suicide.

Discussion: Penetrating gunshots to the head are presumed to cause immediate incapacitation by subsequent disturbance of cerebral functions. In the literature, incapacitation has been defined as “a physiologically based inability to perform complex and longer lasting movements independent of consciousness or intention.” However, not every severe or even fatal gunshot wound causes immediate incapacitation. Physical activity is possible if the trajectory is restricted to the frontal brain or one temporal lobe only and if a projectile of low wounding potential has been used for the gunshot. In our case, neuropathology showed that no central nervous area essential for physical activity was wounded directly, and the woman’s capability to walk following the gunshot wound was of major importance in differentiation between homicide and suicide.

Forensic Pathology, Gunshot Wound, Incapacitation