



H52 The Alteration of the Appearance of a Gunshot Wound by the Use of a Hemostatic Agent

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Learning Overview: After attending this presentation, attendees will have learned about another artifact that can potentially cause misinterpretation of gunshot wounds

Impact on the Forensic Science Community: This presentation will impact the forensic science community by reinforcing the necessity of receiving pertinent information found or occurring at a death scene for correct interpretation of autopsy findings

A person was found with an apparent self-inflicted gunshot wound of the head. Emergency medical services were called, and law enforcement arrived first on the scene. The victim was transported to a local hospital, but death was pronounced shortly after arrival. Initial investigation found that no medical intervention had occurred, including resuscitative attempts. Additionally, no medical treatment had happened at the scene of the event per the responding law enforcement official. It was reported that a 9mm handgun was used, since this type of gun was found next to the body. When the body was examined in the morgue, the head had been wrapped with gauze, which had been done by law enforcement at the scene. After removing the gauze, a contact gunshot wound with soot, radiating lacerations, and a muzzle imprint on the right temple was noted; however, several small, tan, uniformly round, pellet-like objects were at the edges of the wound, within the muzzle imprint of the wound, and within the wound track. Available scene information provided no answer as to the nature of these pellet-like objects. Concern was raised that ammunition was used, possibly “snake shot,” that was not consistent with use of a 9mm handgun. Postmortem radiologic exams were performed, which increased confusion since the pellet-like objects were not radiodense and, therefore, not metallic. After time-consuming investigation and interviews with the responding law enforcement official, it was discovered that the officer had used an agent called QuikClot® on the wound and had wrapped the head with gauze prior to transport of the body to the hospital.

QuikClot® is a hemostatic agent used by military, law enforcement, and other first responders when encountering wounds that are freely bleeding. According to this product’s website, this agent consists of small pellets “impregnated with kaolin that accelerates the body’s natural clotting ability and produces no exothermic reaction.”¹ Other products that are used to promote hemostasis out in the field include material designed as a folded dressing embedded with expanding sponges, material consisting of high-surface-area flakes, and material made from chitosan that adheres to red blood cells to promote platelet activation. Use of hemostatic agents is well known to trauma surgeons within a hospital or military setting, but its use is not often encountered at death scenes in civilian settings. This presentation will discuss what QuikClot® is, what it looks like within a wound, and how its unexpected presence may cause confusion when evaluating gunshot wounds.

Reference(s):

1. QuikClot®. Power to Stop Bleeding®. <https://quikclot.com/>.

Gunshot Wounds, Hemostatic Agents, Death Investigation