

A Unique Case of Attempted Two Gun Suicide with One Firearm Discharge and Two Muzzle Imprints

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ABSTRACT: Two gun suicides are rare and many authors regard them a special form of “planned complex suicide.” As with all multi-gunshot suicides, two gun suicides may initially lead to an increased suspicion of a homicide. In this article, the authors describe the case of an attempted two gun suicide where a 38-year-old male used two .45 caliber weapons to shoot himself, but only one discharged. Both firearms left muzzle imprints, despite only one having been fired. This case not only represents a rare form of suicide, but the muzzle imprint from the non-fired weapon provides an illustration of the mechanism of muzzle imprint formation.

KEYWORDS: Forensic pathology, Two gun suicide, Muzzle Imprint, Contact Wound

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INTRODUCTION

Multiple gunshot suicides are rare (1-3) and multiple gunshot suicides involving two firearms are considered, by some authors to represent a special subset of these suicides that have been termed either “combined suicide” or “planned complex suicide” (1, 2). Not only are these types of suicides unusual, but the presence of more than one gunshot wound may lead to increased suspicion of homicide (2, 4). In this case report, a unique case of an attempted two gun suicide where only one firearm was discharged is described.

CASE REPORT

The decedent was a 38-year-old male with no known significant medical or psychiatric history. On the evening of his death, two female friends noted that he was intoxicated at a restaurant and drove the decedent to his home. During the ride home, the women reported that the decedent seemed upset and made statements that he “would not be long for this world.” After arriving at the decedent’s home, the two women temporarily attended to other activities and believed that the decedent was going to sleep. The women and a neighbor heard a bang and, within seconds, arrived to find the decedent lying on his lawn, unresponsive, with blood in his mouth. Emergency services and police were summoned and the decedent was found to have two .45 caliber firearms near his body and a gunshot wound

of the head. A single fired cartridge case and an unfired cartridge were recovered from the scene. No other individuals were noticed to be near the decedent at the time of the incident and the decedent was known to own both firearms.

At autopsy, the decedent was found to have a perforating contact gunshot wound on the head. The entrance defect was on the left side of the chin and was remarkable for soot deposition within the wound and a muzzle imprint (**Image 1**) that closely resembled the muzzle of the Smith and Wesson firearm that was found near the decedent’s body. Specifically, the muzzle imprint showed the markings consistent with the edges of an accessory rail, which the other firearm found on the scene did not possess. This Smith & Wesson firearm was also remarkable for back spatter of blood on the firearm and within its barrel (**Image 2**). A second muzzle imprint was noted on the right side of the chin (**Image 3**), but was not associated with a separate gunshot wound. This imprint more closely resembled the muzzle of the second firearm (**Image 4**). Additionally, the second firearm had no macroscopic evidence of back spatter. These findings are most consistent with the decedent holding the muzzles of both firearms to his body and only discharging one firearm. The unfired firearm was determined to be functional, so the exact reason why it was not discharged is unknown. The release of gasses into the soft tissues of the face from the gunshot would have caused the tissue to expand against

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Image 1: A photograph of the gunshot wound, illustrating the muzzle imprint with abrasions representing the tips of the end of the firearm's accessory rail.

Image 2: A photograph of the muzzle of the firearm that fired the suicidal gunshot wound, with the accessory rail and backspatter of blood.

the muzzle of the second firearm, producing the second imprint. On the basis of investigation and autopsy information, the cause of death was determined to be "gunshot wound of the head" and the manner of death was determined to be suicide.

DISCUSSION

This case represents an attempted case of a very rare phenomenon. For example, in Hudson's analysis of 3,522 firearm suicides, only 58 cases involved multiple gunshots and none of these cases involved the use of two or more firearms, illustrating that it is more likely for individuals to repeatedly shoot themselves than to use two or more firearms (4). Despite the relative rarity





Image 3: A photograph of the muzzle imprint left by the unfired weapon.

of these cases, Perdekamp and colleagues' case report and review of the available literature (2) documents that this is not a new phenomenon and describes multiple cases of two gun suicides dating back to a citation of an article by Klein from 1819 in the German language literature (5). Still, because of the rarity of these cases, they may give suspicion of homicide (2, 4) and require cooperation between law enforcement, pathologists, and crime lab personnel to correctly recognize and categorize the manner of death (2).

Some authors consider two gun suicides to represent a special category of suicide that is termed either "combined suicide" or "planned complex suicide" (1, 2). Though the exact reason why individuals choose to commit suicide with more than one firearm is not known, some authors have hypothesized that individuals committing suicide in such a manner may wish to avoid pain and have also cited Rommeney's (6) hypotheses (from German language literature) that it may represent a form of "double-checking" habit seen



Image 4: A photograph of the muzzle of the second weapon, without an accessory rail.

in some individuals (1). Parroni and colleague's review did not describe any cases linked to diagnosed schizophrenia or other severe psychotic illness (1).

Despite having unique features, two gun and multiple gunshot suicides do share similarities to more ordinary single gunshot suicides. First, authors indicate that the location of entrance wounds (more frequently in the head and chest) is similar in single and multiple gunshot wound suicides, including two gun suicides (1, 4). Also, Parroni and colleagues note that, similar to single gunshot wound suicides, there is a similar male predominance of victims and similar occurrence of depressive disorders (1).

Besides representing an attempt at an unusual form of suicide, this case also represents an interesting illustration of the mechanism of formation of muzzle imprints in contact range gunshot wounds. The presence of a muzzle imprint from the non-fired weapon reinforces the well-known principle of how expansion of tissues by gases from the discharged firearm expands the skin forcefully against surrounding structures and leaves an imprint, as described by Di Maio (7). The formation of the muzzle imprint of the unfired weapon in this case is similar to cases in which the unfired barrel of a double barrel

weapon left a muzzle imprint due to the expansion of skin against it due to the gasses from the fired barrel as in cases described by Di Maio and Spitz (7, 8). Similarly, Perdekamp has described the formation of imprints of other firearm parts (a folded shoulder stock) from expansion of the skin during a contact range gunshot wound (9).

CONCLUSION

In conclusion, this case represents an attempt of a two gun suicide. This is a rare form of suicide of which investigators must be aware, so they can avoid incorrectly categorizing the manner of death. Additionally, the presence of a second muzzle imprint from the unfired weapon provides an interesting demonstration of the mechanism of muzzle imprint formation.

DISCLOSURES

The authors, reviewers, editors, and publication staff do not report any relevant conflicts of interest.

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