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Examining The Unseen: Rare Homicide at Unusual Spot with Unusual Injury

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ABSTRACT

Accidental shooting in hospital settings is rare but presents unique challenges for forensic and medical professionals. This paper presents a detailed analysis of the postmortem examination following an accidental shooting in a hospital ward, where an unintended victim was fatally injured, providing an in-depth analysis of the post-mortem findings and implications for forensic medicine and hospital security. A 35-year-old male with an unusual firearm entry wound on the surface of the small intestinal loop, which was surgically exposed (open laparotomy wound), causing extensive internal damage and hemorrhage. The bullet recovered from the subcutaneous plane on the right side of the abdomen. The death was due to hemorrhagic shock caused by a firearm injury to the internal abdominal organs. What sets this case apart in the literature is not just the tragic nature of the event but the context in which it occurred—a hospital, a place inherently associated with safety and healing. In the landscape of forensic and medical literature, this case stands out because of the intersection of violence and healthcare, which challenges the norms of both fields. This incident highlights the critical need for enhanced security measures in hospitals to prevent violence against patients and doctors. This examination not only provides crucial insights into the nature of gunshot wounds and their impact on internal organs but also emphasizes the broader implications for hospital security and patient safety.

Introduction

Homicide, as the gravest violation of social and moral norms, poses a significant challenge to society. According to the National Crime Records Bureau (NCRB), in 2022, there were 28,522 reported Homicide cases, i.e. 2.1 per 100,000 individuals, 78 murders per day, or 3 murders every hour. In Delhi, there were 501 reported Homicide cases in 2022. ⁽¹⁾

In 2019, India was ranked fourth in the world for total gun deaths, with 14,711 casualties. ⁽²⁾ Depending on the direction of the projectile's travel, entry and exit wounds occur. Entry wounds are smaller and more regular, surrounded by an abrasion collar, and may exhibit a grease collar resulting from the lubricant on the projectile along with tattooing, soiling, or flame burns. Exit wounds are generally larger, more irregular, and characterized by outward tissue bevelling. ⁽³⁻⁵⁾

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Homicides can be transported to diverse locations. The most frequent sites were residential areas, highways, parking lots, petrol pumps, bars, hotels, playgrounds, and shopping malls. (6) In the usually serene and controlled environment of a hospital, where the primary goal is to offer care and healing, the emergence of homicides is both shocking and deeply unsettling.

Case Report

A 35-year-old male underwent several surgical procedures, such as exploratory laparotomy with peritoneal lavage with adhesiolysis and open laparostomy (with Bogota Bag in situ) for bursting the abdomen over a period of two months. On the fateful day, the deceased was in the postoperative ward on his bed, and doctors on duty were performing surgical dressing. One of those doctors heard the sound of gunshots, and multiple bullets were fired unfortunately on the victim, who had several surgical alterations with exposed and infected abdomen by an unknown assailant. This has attracted considerable attention. His family claimed that he was killed in a case of mistaken identity and that the intended target was a history sheeter who was admitted to the same ward. (7) Moreover, to date, hospitals and medical facilities have been considered a safer environment, devoid of all violence, even in the ethics of warzones.

External Examination:

Apart from the general condition of the body, as per the disease, the abdomen was open with exposed loops of the intestines. No external firearm entry wounds were observed. The dead body was sent to the radiodiagnosis department, where radiography revealed a radiopaque foreign body shadow present over the right side of the back of the abdominal region.

The firearm Entry wound of size 1.0 cm X 0.8 cm, Oval in shape, present on the surface of the small intestinal loop, which was surgically exposed, Situated on the left side of the peritoneal cavity, 105.0 cm above the left heel as shown in figure 1.

Internal Examination:

The track of the wound was directed upwards, backwards, and medially towards the right side, resulting in piercing and lacerating multiple loops of the intestines, mesentery, and corresponding mesenteric blood vessels and muscles on the right side, as shown in figure 2. The track of the wound ends in the subcutaneous plane, where a copper jacketed, non-deformed metallic bullet, measuring 1.3 cm in length and 0.7 cm in diameter was found to be impacted in the subcutaneous plane. Externally, the skin overlying the bullet was intact, and it showed a reddish-colored bruise 108.0 cm

above the right heel, as shown in Figure 3. Thus, the cause of death was hemorrhagic shock as a result of antemortem injury to the internal abdominal organs (small intestine, mesentery, and their corresponding blood vessels) produced by the Firearm projectiles.

Discussion

In forensic casework, documenting and interpreting firearm injuries is a routine task. These are carried out not only for deceased victims during autopsies but also for living victims in clinical medicolegal examinations. In both cases, macromorphological examinations were performed using imaging techniques. This clinical case report of a gunshot wound without an evident entry hole allows for discussion of the diagnostic and therapeutic implications in the management of gunshot wound cases with unusual entry wounds. Initially, the correct diagnosis was elusive because of the absence of a conventional entry wound. The missing entry wound over the skin, along with the lack of an abrasion collar, grease collar, tattooing, or burnt flame, complicates the diagnosis.

Without knowledge of gunshot history, an accurate diagnosis would have been nearly impossible. Routine radiological examination may not have been performed. The bullet was detected only through X-ray imaging. A firearm entry wound was identified in the loops of the intestines without conventional morphological findings. In our country, most autopsies are performed by medical officers working in rural areas. Hence, MBBS students should be sensitized to these findings in undergraduate teaching.

The patient was fatally injured by a gunshot while receiving medical care in a hospital. Despite being one of the most crowded hospitals in Delhi; with 1,700-bed capacity; 6,000 outpatient visits per day, 250 daily admissions, and a 104% bed occupancy rate. Such violent incidents occurred during broad daylight. This highlights serious concerns regarding violence in healthcare settings, which is a growing issue worldwide. It manifests as physical assaults, verbal abuse, and intimidation, causing psychological stress and PTSD among professionals, while also threatening their physical safety. Such violence not only compromises patient safety but also endangers healthcare workers. Furthermore, we delve into protocols designed to ensure safety within hospitals. Strict access control and advanced surveillance systems are essential for preventing unauthorized entry and monitoring potential threats. Additionally, hospitals must invest in training staff for de-escalation and emergency response procedures. Hospitals must establish protocols for rapid coordination with law enforcement to effectively manage and address violent incidents. Hospitals should provide mental health support for staff affected by violence and foster a culture of safety that encourages open communication and adheres

to a zero-tolerance policy toward aggression. In addition, it is important to enforce legal protection for healthcare workers and ensure that hospitals are held accountable for maintaining a safe environment.

Conclusion:

These unusual findings occur in rare cases and may lead to misinterpretation if the autopsy surgeon is unfamiliar with them. Addressing issues of violence with urgency and commitment is crucial as it will enhance safety and foster a more supportive and effective healthcare system. Ensuring that those dedicated to caring for others do so without fear of violence can significantly improve the overall quality of care and professional well-being.

Author contributions:

All authors contributed to the design and conception, manuscript drafting, and final draft approval.

Conflict of interest:

The authors have no conflict of interest to declare.

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Ethical Clearance-

Not applicable

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Figure Legends

Figure 1: Showing entry wound over the exposed loops of the small intestine.

Figure 2: Showing probe along the track of the wound

Figure 3: Showing the bullet impacted in the subcutaneous plane over the back of the right side of the abdomen



Figure 1: Showing entry wound over the exposed loops of the small intestine

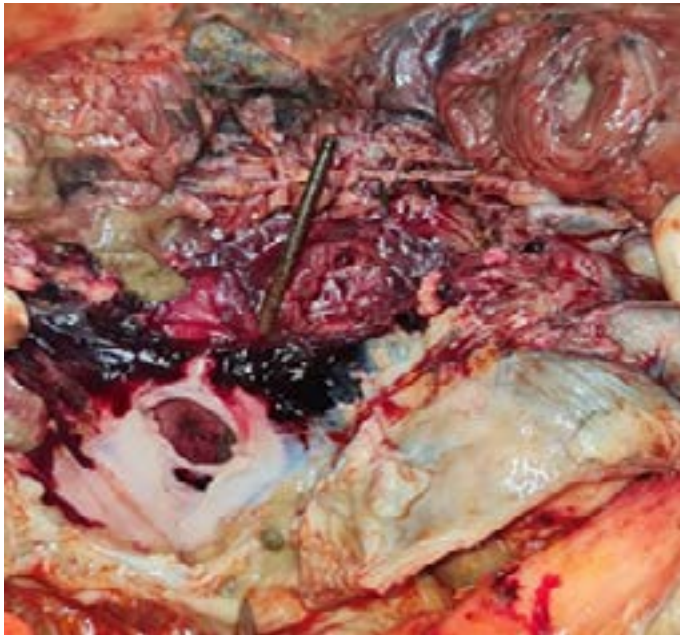


Figure 2: Showing probe along the track of the wound



Figure 3: Showing the bullet impacted in the subcutaneous plane over the back of the right side of the abdomen