

ATYPICAL FIRE ARM INJURY

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ABSTRACT

There are many case reports of atypical firearm injuries but unexpected direction of the gunfire is found rarely. It is indeed a rare finding that a bullet passes from inguinal area along the length of the thigh without damaging the overlying trouser at the entry. The most important issue in such instance is to decide the manner of death.

A body of a young person was found with bleeding injuries in the abdomen and was confirmed dead on admission to a tertiary hospital. In his right groin, beneath the intact denim trouser, there was a firearm entry wound with burnt margins. The tract was directing downward, inwards and backwards, lacerating the right femoral blood vessels, and exited through a split, at the inner side of right knee with corresponding damage to the trouser. The deceased also had multiple, parallel and superficial scars on the inner aspect of his left hand.

Though he had self-inflicted scars, the site and the direction of the firearm injuries were not elective of suicide.

Attain this direction of fire, without inflicting damage to the overlying garments at the entry is highly unlikely in a homicide.

Carrying the gun under the waist of the trouser is not uncommon and in this case, the gun would have fired accidentally possibly while pulling it out. This conclusion was further confirmed by the absence of damages on the overlying trouser at the entry wound and the unusual longitudinal direction of the tract in the thigh. The most probable manner of death was accidental.

INTRODUCTION

Typical gunshot injury consists of entry, tract and exit wounds. Several authors have reported fatal

cases of rifled firearm injuries showing multiple variations from common findings. Reports of firearm-related deaths with unusual wound sites enrich forensic practice, providing additional data for interpretation of findings¹. The deviation from term 'typical' could be usually due to characters of the gun, bullet or intermediate objects². There are many case reports of atypical firearm injuries, but unexpected direction of the gunfire within the target is found rarely. It is indeed a rare finding that a bullet's trajectory passes from inguinal area along the length of the thigh without damaging the overlying trouser at the entry wound. We present one such case of gunshot injury to the thigh. The most important issue in such instance is to decide the manner of death.

CASE REPORT

A body of a young person was found in front of a boutique with bleeding injuries in the abdomen and was confirmed dead on admission to a tertiary hospital.

Eye witnesses were not available. The police informed that the deceased was a member of an 'underworld gang' and a weapon was not available at the scene.

On examination, beneath the intact denim trouser (upper arrow in figure 01), there was an oval shape, 1.5 x 1cm, perforated laceration at the right groin. The margins were burnt and blackened. When cleaned the wound, a rim of haemorrhage around the margin was evident (figure 02). The tract was 1.5cm in diameter and 34 cm long and it was filled with blood. The tract was directed downwards, slightly inwards and backwards, lacerating the right femoral blood vessels (figure 03), and ended as a split, 1.5 cm x 0.5cm, at the inner side of right knee (figure 04). The margins of the split were free of burning or blackening and

there was corresponding damage to the trouser, 1.5cm x 1.5cm split (at lower arrow in figure 01). Trousers were soaked with blood. The deceased also had multiple, parallel and superficial scars on the inner aspect of his left forearm.

DISCUSSION

Gunshot injuries are on the rise in both developed and developing countries, the reason for this may be increased access to firearms. In Sri Lanka, though the access of the guns to public is very limited, some 'gang' groups have access to weapons and possess weapons by illegal means. The perforated laceration found at the right groin was oval in shape with burnt and blackened margins and was connected to a tract. Therefore, it was identified as a firearm entry wound. The wound found at the distal end of the tract at the right knee was a split, and the margins were free of burning or blackening. Therefore, it was identified as a firearm exit wound. Identification of the entry, tract and exit confirmed that the injury that the deceased sustained was a firearm injury. The small diameter of the entry wound and single narrow trajectory confirmed that the injury was due to a bullet discharged from a rifled firearm. The damage to main femoral arteries is considered as fatal in the ordinary course of nature and the trouser was soaked with blood. The trajectory of the bullet was directed downwards, slightly inwards and backwards, lacerating the right femoral blood vessels of the thigh. Determination of the direction of the bullet's trajectory is important, because it indicates the axis of the weapon barrel in the moment of firing, if there was no external ricochet³.

The most important aspect of gunshot injury is interpretation of injuries to arrive at conclusions on manner of death. It could be homicidal, accidental, suicidal or unascertainable. Interpretation of gunshot injuries is difficult in the absence of eye witnesses and other circumstantial evidence. In this instance too, eye witnesses were

absent possibly due to reluctance to come forward due to subsequent life threats. Therefore, the manner of death had to be ascertained by interpretation of the autopsy findings.

There are elective sites of suicidal firearm injuries such as temple, the neck, the mouth and the chest⁴. Atypical homicidal firearm injuries also can simulate self-inflicted injuries⁵. Though he had self-inflicted scars, the site and the direction of the firearm injuries were not elective of suicide. In homicidal firearm injuries, the preferred sites are the vital parts of the body such as head, neck and chest. Any direction of the tract is possible in homicides. But, killing a person by inserting the barrel of the gun under the waist of the trouser is unlikely. Further, attaining this atypical direction, without inflicting damage to the overlying garments at the entry wound is highly unlikely in a murder.

Though the absence of the gun at the scene is a common feature in homicidal firearm deaths, in this instance, absence of the weapon could have been due to taking it away by another person in the 'gang'.

Carrying the gun under the waist of the trouser is not uncommon and in this case, gun would have fired accidentally possibly while pulling it out. This conclusion was further confirmed by the absence of damages on the overlying trouser at the entry wound and the unusual longitudinal direction of the tract in the thigh.

According to the available evidence and interpretation of injury pattern, the most probable manner was accidental. The cause of death was given as haemorrhagic shock following thigh injuries due to bullet discharged from a rifled firearm.



(Figure 01) blood soaked trouser. No damage to trouser at waist level . There was a split at right knee area (at lower arrow).



(Figure 04) Exit wound was a split at the inner side of right knee. There was a corresponding damage to the trouser (figure 01).



(Figure 02) Firearm entry wound in his right groin, with a rim of haemorrhages.



(Figure 03) Tract was directed downwards, slightly inwards and backwards, lacerating the right femoral blood vessels

REFERENCES

1. Doichinov ID, Timonov PT. Three unusual cases of gunshot wounds. *Folia Med (Plovdiv)*. 2009 Apr-Jun;51(2):53-7.
2. Naik SK, Kumar P, Atal DK, Murari A. Multiple variations of firearm injuries - a case report. *J Forensic Leg Med*. 2011 Oct;18(7):325-8.
3. Slobodan S, Slobodan N, Djordje A. Popliteal artery bullet embolism in a case of homicide: a case report and review of the tangible literature. *Forensic Sci Int*. 2004 Jan 6;139(1):27-33.
4. Knight B, *Forensic Pathology*, 2nd ed, Great Britain, Arnold, 1996, p.235.
5. Fracasso T, Löhrer L, Karger B. Self-inflicted gunshot injury simulating a criminal offence. *Forensic Sci Int*. 2009 Jul 1;188(1-3)