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Pattern of fabricated gunshot wounds- A hospital based cross-sectional study

Kashif Ali[1], **Mohd Kaleem Khan**[1,*]

[1]*Dept. of Forensic Medicine, Jawaharlal Nehru Medical College, AMU, Aligarh, Uttar Pradesh, India*

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ABSTRACT

Introduction: A fabricated firearm injury refers to a self-inflicted superficial injury and if someone has fabricated a gunshot injury, it is important to assess the presentation and the intent behind it.
Material and Methods: This prospective hospital based study was carried out on all patients who presented to Trauma center of Jawaharlal Nehru Medical College and Hospital, Aligarh, Uttar Pradesh with alleged fabricated gunshot injuries over a span of 4 years i.e., from October 2018 to September 2022.
Result: In this study, we found that most of the patients were from age groups 19-30 years (30.2%). Males outnumbered the females. 42 cases (79.2%) were reported from rural background while majority of the cases i.e. 17 cases (32.1%) were unemployed.
Conclusion: The collaborative efforts of all the investigating agencies and medical professionals can help to prevent the fabrication of injuries, which will not only decrease needless court cases but also eliminate unwanted harassment of innocent people.

1. Introduction

A fabricated firearm injury refers to a self-inflicted superficial gunshot wound that has been intentionally created by a person on his own body or occasionally caused by another person acting in agreement with him to give the impression that the person has been shot or injured by a firearm, by some alleged individuals.[1] It is not only dangerous and potentially life-threatening, but it can also be illegal and carry serious legal consequences. If someone has fabricated a gunshot injury, it is important to assess the situation and the reasons behind it. In cases where it is done for malicious or illegal purposes, it may be necessary to involve law enforcement agencies.

A firearm is a thermodynamic machine in which the potential energy of the gunpowder is transformed into the kinetic energy of the projectile.[2] In general, there are two types of firearms i.e. rifled firearms and smooth bore firearms (shotguns).[3] A third category includes locally produced firearms (country made or katta), which are more widespread in developing nations like India.[4] Injury from firearms is a global public health concern. Nowadays, people are buying unlicensed firearms for committing non traceable crime and also to show off for false sense of pride. Another explanation for the rising number of country made firearms is their lower price and easy availability.

68,463 cases were registered under arms act during 2020 as compared to 74,482 cases during 2021 in which 84,623 Arms were seized, comprising of 4,044 arms as licensed/factory made and 80,579 Arms as Unlicensed/ improvised/crude/country made. A total of 86,572 number of ammunitions were also seized during 2021.[5] Counterfeited injuries which are motivated by some form of gain are usually non-fatal. The reasons for fabrication are usually- to provide evidence in support of an untrue accusation made against another individual(s),

* *Corresponding author*.
E-mail address: mkk435@yahoo.co.in (M. K. Khan).

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to accuse an enemy for an assault or attempt of murder or to make simple injury appear serious or grievous. It takes specialized knowledge and expertise to evaluate these fabricated wounds by a forensic specialist. In contrast to delicate areas like the face, neck, genitalia, or nipples, these wounds are frequently seen on accessible body parts.[6,7] The key indicators are the absence of injuries from fighting or self-defense and the difference between the patient's narrative of the incidence and the injury pattern. These fabricated injuries are usually present in adolescent boys, with the upper limbs being the most common body part involved.[8] The present study was done to study the epidemiological profile of fabricated gunshot wound cases evaluated at Jawaharlal Nehru Medical College and Hospital, Aligarh, Uttar Pradesh.

2. Materials and Methods

The present study was conducted in the Department of Forensic Medicine and Toxicology, Jawaharlal Nehru Medical College, AMU, Aligarh for a period of 4 years i.e., from October 2018 to September 2022. This was a prospective hospital based study carried out on all patients who presented to Trauma center with alleged fabricated gunshot injuries. The detailed history was taken with emphasis on age, gender, occupation, anatomical region of the body involved in the injury, management and after that a detailed clinical examination was carried out. to achieve the objective. A documentary data collection form was compiled to capture the relevant information from the patients. The data was entered on the predesigned datasheet and tabulated.

3. Results

Total 53 cases of fabricated gunshot injuries were examined in the Trauma center of Jawaharlal Nehru Medical College over the span of 4 years. In this study, we found that most of the patients were from age groups 19-30 years (30.2%) and 31-40 years (28.3%) as shown in Table 1. The youngest victim was 17 years old while the age of the oldest was 65 years.

Table 1: Distribution of cases according to age

Age group	No. of cases	Percentage
0-18 years	03	5.7
19-30 years	16	30.2
31-40 years	15	28.3
41-50 years	11	20.7
51-60 years	05	9.4
>61 years	03	5.7
Total	53	100

Out of 53 cases, 41 patients (77.4%) were male while 12 (22.6%) were female as shown in Table 2.

Table 2: Distribution of cases according to gender

Gender	No. of cases	Percentage
Male	41	77.4
Female	12	22.6
Total	53	100

42 cases (79.2%) were reported from rural background while 11 (20.8%) were from urban as depicted in Table 3.

Table 3: Distribution of cases according to place of residence

Place of residence	No. of cases	Percentage
Rural	42	79.2
Urban	11	20.8
Total	53	100

According to Table 4, majority of the cases i.e. 17 cases (32.1%) were unemployed. All the 12 females (22.6%) were homemaker followed by 08 cases (15.1%) who were farmers. Out of 53 cases, 7 were carpenter while 5 were laborer.

Table 4: Distribution of cases according to occupation

Occupation	No. of cases	Percentage
Farmer	08	15.1
Laborer	07	13.2
Carpenter	05	9.5
Homemaker	12	22.6
Student	04	7.5
Unemployed	17	32.1
Total	53	100

In most of the cases i.e. 18 cases (34%), the body part involved in the injury was lower limb followed by upper limb (16 cases, 30.2%). In 11 cases (20.7%), the injury was over the back while in 8 cases (15.1%) it was over the abdomen as depicted in Table 5.

Table 5: Distribution of cases according to body parts involved

Body part	No. of cases	Percentage
Head	00	00
Face	00	00
Chest	00	00
Abdomen	08	15.1
Back	11	20.7
Upper Limb	16	30.2
Lower Limb	18	34
Total	53	100

All the cases were admitted and managed conservatively as shown in Table 6. Neither of the cases was operated nor were the injuries fatal.

Table 6: Distribution of cases according to management

Management	No. of cases	Percentage
Admitted & conservatively managed	53	100
Operated	00	00
Fatal	00	00
Total	53	100

4. Discussion

According to section 44 of Indian Penal Code- any harm whatever illegally caused to any person, in body, mind, reputation or property is known as injury.[9] The extent of a gunshot wound depends on the subject's proximity to the weapon and the gun's velocity. On general, damage from high velocity firearms is greater than from low velocity rifles. Also, the damage increases the closer you are to the gun.[10] The literature does not often address the dubious area of counterfeited gunshot wounds. It is crucial for forensic professionals to recognize and record the precise anatomical location of the injury on the body, their sizes, directions, and conduct a thorough examination of the victim's clothing, and take into account their medical and psychiatric histories. In each of the cases we examined, the lack of tattooing and blackening in the presence of burning raised red flags. The other factors which can be used to determine whether the injury is fake or not- variation in history with findings, circumstantial evidence and injury present on easily accessible and non-vital part of body.

It can be challenging to spot fabricated injuries if they are inflicted by a person with medical training, especially if local anaesthetics or surgical equipment were used. Tampering with evidence in forensic practice is very common nowadays. Malingering is encountered in civil as well as in criminal cases. Individuals have been known to exaggerate their mild injuries in order to obtain benefit from them.

According to a study by Vidhate et al.[11], the younger population, particularly males, is disproportionately impacted. Gorea et al.[12] examined a total of 757 medico-legal injury cases and found that 62 of the 159 cases involving severe injuries were fraudulent. According to a study by Bhullar et al.[13] on fabricated wounds, males (84.6%), people in the 21–40 age range (57.7%), were the most frequently seen study participants while upper limbs (80%) was the most common site affected.

According to study conducted by Kumar et al.[14], 84 out of 650 cases of medicolegal injuries with a history of alleged assault were found to be fabricated. Males outnumbered the females. For both male and female victims, the age range of 21 to 40 years had the highest number of instances. The vast majority of the injured were from rural areas. The largest percentage of male cases (31.9%) were in the agricultural sector, followed by other private employees including shop owners, day laborers, or the jobless people. All the reported females were housewives.

In our study, the males outnumbered the females, and most of them were in age group 19-30 years. The males in this demographic age group are the most socially active, hence there is a significant likelihood of intergroup violence. This finding is consistent with most of the studies such as Kohli et al,[15] Singh et al.,[16] Pattowary et al.,[17] Fedakar et al.,[18] Hagras et al.[19]The incidence of these gunshot injuries were more from the rural areas (79.2%) as compared to urban area (20.8%) which is consistent to study conducted by Malik et al.[20]This is possibly because breaking the law is simpler in rural areas, where it is easier to get illegal weaponry. Unemployed and farming was found to be the most prevalent occupation, which is pretty obvious in this study given the predominance of the rural population. The fact that more individuals work in agriculture is also related to the fact that land conflicts are very common. This finding is similar to study conducted by Shashikant et al.[21]

In this study, it was observed that extremities were the most preferred site for fabrication of injuries and there were less cases of fabricated or self-inflicted injury over the chest and abdomen region which contain vital organs. Similar findings were seen in the study conducted by Swarnkar et al.[22]

Most of the attempts of these fabricated gunshots are intended to attract Section 307 of Indian Penal Code to accused so that heavier punishment could be caused (Whoever does any act with such intention or knowledge, and under such circumstances that, if he by that act caused death, he would be guilty of murder, shall be punished with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine; and if hurt is caused to any person by such act, the offender shall be liable either to imprisonment for life, or to such punishment as is herein before mentioned).[23]It also seems that the victim's main motto is to allege or accuse a person of opposition to attempt of murder.

5. Conclusion

The present study shows that instances of fabricated gunshot injuries are higher in younger age males especially among those who belong to lower socioeconomic status and were unemployed. The Forensic specialists should meticulously record all of the injuries, and if they are unable to conclude that they are fake, they should instruct the police to consider circumstantial evidence. When it is difficult to determine whether the injury is fake or real, the assessment should be done in accordance with the forensic analysis and medical treatment records. The only way to avoid miscarriage of justice is to rely on unbiased forensic practice. Laws should be appropriately modified to punish those who injure themselves to implicate others for alleged crime. The

collaborative efforts of all the investigating agencies and medical professionals can help to prevent the fabrication of injuries, which will not only decrease needless court cases but also eliminate unwanted harassment of innocent people.

6. Ethical Clearance

Taken from Institutional Ethical Committee.

7. Source of Funding

None.

8. Conflict of Interest

None.

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Author biography

Kashif Ali, Assistant Professor https://orcid.org/0009-0008-7947-0537

Mohd Kaleem Khan, Associate Professor https://orcid.org/0000-0002-8952-3654

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