Original Article

"EPIDEMIOLOGY OF FIREARM WEAPONS INJURIES AT DISTRICT HEAD QUARTER TEACHING HOSPITAL, GUJRANWALA"

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ABSTRACT

Objective: Firearm weapons injuries are an important component of the medico legal examination. The current study was planned to know the epidemiology of firearm weapons injuries, to update the junior Medicolegal Examinersabout the appropriate recognition, interpretation and investigationof firearm weaponsinjuries.

Material and method: The present study comprised of fifty seven cases of firearm weapons injuries presented in Trauma Centre of D.H.Q/Teaching Hospital, Gujranwala, during the year 2012 including 50 Males (80.72 %)and07 Females (12.28 %). Their medico legal record was reviewed retrospectively;Demographicprofile, including age and sex distribution was recorded. Firearm weapons injuries were described according to distance, manner of infliction of injury and area of distribution.

Results: The age ranged from 1 to above 60 years. The maximum number22 (38.6%) were of age between 21-30 years (Table 1) out of 57 cases, 50 (87.72%) were male and 07 (12.28%) were female (Table 2).Cases of far distance fire were 47 (82.46%), near distance fire were 6(10.52%) and loose contact fire were 4 (7.02%)(Table 3).Regarding manner, 55 (96.49%) werehomicidal and 2 (3.51%) were by friendly hand (Table 4). Urban cases were 45 (78.95%) and rural were12 (21.05%)(Table 5).

Conclusion: Most of firearm weapons injury cases at District Head Quarter Teaching Hospital Gujranwala are of distant fire and are homicidal. Most cases are from urban areas.

Key words: **Weapons, Injuries, Minor**

INTRODUCTION

A firearm is a device to propel a projectile by the expansive force of gases generated as a result of combustion of powder in a closed space.[1] A firearm weapons injury is defined as a penetrating injury from a weapon that uses a powder charge, these are pistols, revolvers, handguns and shot guns.[2]

There has been an increase in the medicolegal cases due to firearm weapon, while blunt and sharp edged weapon injuries have decreased to a considerable extent.[3,4] One major cause for this increase is easy availability of firearm weapon in our country. Easy handling causing grave damage by keeping oneself away from the enemy target has made the firearm weapons most favorable choice to the people involved in enmity, target killing and terrorism.[5,6] Most intentional injuriesoccur in family disputes over land.[7-9] The presence of a gun in a house is associated with a fivefold increase in the risk of suicide and three fold increased risk of homicide. Abuse of firearms[10,11] and resulting injuries result in major cost of life and health. The resources spent for medicolegal cases[12] and law enforcementmust be considered a major public health and safety concern.[13, 14]

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MATERIAL AND METHODS

ThisStudy was conducted at trauma Centre, Department of Forensic Medicine,DHQ Teaching Hospital, Gujranwala. The study of firearm cases duringthe year 2012 was conducted.The caseswere of all ages, sex, includingminor and severe injuries. The datawere evaluated from medicolegal certificates. The variables were age, sex, distance of fire, manner of infliction and area of distribution, urban / rural.

RESULTS

Table-1: Age wise distribution of Firearm cases presenting in DHQ Teaching Hospital Gujranwala (n=57).

Age Group	No	% age
0-10	03	5.26%
11-20	13	22.81%
21-30	22	38.60%
31-40	10	17.54%
41-50	05	8.77%
51-60	02	3.51%
61+	02	3.51%
Total	**57**	100%

Table-2: Gender wise distribution of firearm cases presenting in DHQ / Teaching Hospital Gujranwala (n=57)

Gender	No	% age
Male	50	87.72%
Female	07	12.28%
Total	57	100%

Table-3: Distance of fire (n=57)

Distance	No	% age
Far Distance	47	(82.46)%
Near Distance	06	(10.52)%
Loose Contact	04	(7.02)%
Total	57	100%

Table-4: Manner of infliction of injury (n=57)

Manner	Male		Female	
	No	% age	No	%age
Homicidal	48	84.21%	07	12.28 %
Friendlyhand	02	3.51%	-	
Suicidal	-	-	-	-
Total	50	87.72%	07	12.28 %

Table-5: Urban / rural area distribution (n=57)

Area	No	% age
Urban	45	66.67%
Rural	12	21.05%
Total	57	87.72%

DISCUSSION

Firearm weapons (especially unlicensed) areeasily available in the country. In this study,87.72% victims offirearm injuries were males while 12.28% were females. This fact that the male victims are involved more commonly than female victims has been established in other studies as well[15-17]. This study depicts that the maximum number of victims belonged to 3rd decade of life (21-30 years). This age group individuals are physically strong, full of energy and adventure and challenge or provocation. The number of victims of firearm injuries in other decades of life is less.

Firearm injuries inflicted within arm`s length in this study were 10 (near distance and loose contact), while the far distance(beyond arm`s length) firearm cases was47. Presence of burning effect, blackening and tattooing was the basis to decide that the injury was inflicted within arm`s length. Absence of these findings was the criteria to decide that the injury was inflicted beyond arm`s length. Firearm injuries beyond arm`s length almost rule out the possibility of its being suicide, self inflicted.This study shows that most of the cases 45 (79%)belong to urban area while

12 (21%) belong to rural area.The emergency treatment in all the teaching hospitals is being provided by the Government. The emergency surgery has to be provided in many of such cases.

LIMITATION

Thelimitations of the present study werea limitednumber of firearm cases in this center. There is need to collect statistics from all medicolegal centers for complete evaluation of the problem. This will enable us to suggest measures to minimize the victims of firearm injuries in our society.

CONCLUSION

Most of firearm injury cases are of distant fire and are homicidal. Most cases are from urban areas. The preponderance of males as victims in such a high percentage inactive, energetic age group has added to this problem.

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