ORIGINAL ARTICLE

Spectrum of Firearm injury cases brought to Medicolegal Department in Sandeman (Prov) Hospital Quetta during 2000

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ABSTRACT

Aim: To study pattern of firearm injuries in firearm victims brought to the medicolegal department of Sandeman (Prov) Hospital Quetta during the year 2000.
Design: Observational Descriptive Study
Duration of study: One year
Methods: The study was conducted in Avicenna Medical College, Lahore based on the data of firearm cases of the year 2000, collected from the Medicolegal Depart. Sandeman Hospital Quetta.
Results: Out of a total of 387 cases the most frequent cases of firearm found in the age group of 21-30yrs, 170 cases(43.9%) and 2nd most common age group was 31-40yrs, 100 cases(25.8%) ,the 3rd most common age group was 41-50yrs containing 70 cases (18%) , which was followed by next age group 11-20yrs 30(7.8%). A least pattern above 60yrs age group contained only 7cases (1.8%) and the remaining age groups including 0-10 yrs& 51-60yrs contained very least number of cases only 5(1.3%) each was found.
Conclusion: The firearm injury is more frequent in 21-30 years age group. The Young males are more commonly affected and must be targeted for made aware of lifestyle adjustments such as training to refrain from anger or disputes. The most common site of injury is Thorax and lungs.
Keywords: Firearm injury, medicolegal, thorax & lungs

INTRODUCTION

Besides high death toll firearm injuries cause significant morbidity, long-term physical and psychological disability for individuals, families, communities and societies[1,2]. Despite stringent legislation in the UK and elsewhere in the world, the use of firearms in criminal activities continues to increase. Weapons are becoming cheaper and easier to obtain as a result of the excessive and sometimes indiscriminate supply of arms and ammunition by governments and the acts and actions of national and international terrorist groups[3]. The incidences of violent crimes with gunshot injuries have become increasingly more common, reflecting the deterioration of law and order in our society. These are common in the low and middle incomecountries[1,4]. Violent injuries are the eighth leading cause of death, worldwide[5]. Gun related violence is the most common in poor urban areas and in conjunction with gang violence, often involving juveniles or young adults[6,7]. In the United States, the risk of death from firearms injuries versus death by RTA is relatively high[8,9]. On the other hand, in European countries; rates of death from firearm injuries are lower. In Sweden, for example, the mortality rate due to firearm injuries is about 200 per year, mainly due to suicides[10]. The same is true for Finland[11] and Denmark[12]. In 2010, guns took the lives of 31,076 Americans in homicides, suicides and unintentional shootings. This is the equivalent of more than 85 deaths each day and more than three deaths each hour[13]. There is an un equal ratio when we compare death rates due to firearm among developed and developing countries[14]. In Pakistan, especially according to the statistical data, the use of firearm weapon continues to increase with each passing year[1]. Due to tribal culture and borders with Afghanistan, almost all kinds of sophisticated weapons manufactured are smuggled throughout Pakistan. Studies on patterns of firearm related homicide well- documented almost among all the western countries. However, in a country as Pakistan where illegal use of firearms is a common practice, proper documentation of homicidal firearms are available of few cities[14]. There were a gap between the trends and results which were on medical record, so this study was planned to know the different

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pattern variations of firearm injuries in firearm victims brought to the medicolegal department in Sandeman (Prov) Hospital Quetta.

MATERIALS AND METHODS

The study was conducted in Avicenna Medical College, Lahore and data of all firearm fatalities, were collected from the medico legal department of the Sandeman (Prov) Hospital Quetta and data collected during the period from January 2000 to December 2000. Our study was attempted to define the circumstances, motives, extent and severity of firearm-related injuries in their victims. All firearm death records were thoroughly reviewed the information like, demographic data of the victim and time interval between incidence, and medico legal examination &examination of the characteristics of firearm injuries like range and number of entry/exit wound, type of weapon used. A detailed history was taken from attendants or the persons accompanying the injured person. Police papers like, inquest report was thoroughly studied and relevant findings were noted at same time. This is an observational descriptive study and data of 387 cases of firearm injuries were recorded, compiled and analyzed.

RESULTS

Table 1: Gender

Valid	Frequency	%	Valid%	Cumulative%
Male	350	90.4	90.4	90.4
Female	37	9.6	9.6	100.0

Table-2 Age of the Victims

Valid	Frequency	%	Valid%	Cumulative%
0-10yrs	5	1.3	1.3	1.3
11-20yrs	30	7.8	7.8	9.0
21-30yrs	170	43.9	43.9	53.0
31-40yrs	100	25.8	25.8	78.8
41-50yrs	70	18.1	18.1	96.9
51-60yrs	5	1.3	1.3	98.2
>60yrs	7	1.8	1.8	100.0

A total of 387cases of firearm injuries were recorded during the study period. Data wereanalyzed on using SPSS version 20.Firearm victims showed in table-1,out of 387, 350(90.6%) males and 37 (9.4%) females and the ages of victims showed in table-2 ranged from 0 to more than 60 years.The most frequent cases of firearm injuries found at the age of 21-30yrs, 170(43.9%) and 2nd most common in age group of 31-40yrs, 100(25.8%), and in 3rdmost common group was 41-50yrs containing 70(18%), which is followed by next age group 11-20yrs 30(7.8%) were found.A least pattern above 60yrs age group contained only 7cases (1.8%) and the remaining age groupsincluding 0-10 yrs.& 51-60yrs contained very least number of cases 5(1.3%) each was found. In age group from 0-10yrs the minimum age of the child was 10yrs.

Table 3: Body region

Valid	Frequency	%	Valid%	Cumulative %
Head & Neck	30	7.8	7.8	7.8
Thorax	160	41.3	41.3	49.1
Abdomen	70	18.1	18.1	67.2
Pelvis	90	23.3	23.3	90.4
Upper Limb	27	7.0	7.0	97.4
Lower Limb	10	2.6	2.6	100.0

The most common region foundin fire arm injuries showed in table-3 were Thorax 160(41.3%), and the 2nd most common region in firearm injuries were pelvis 90(23.3%), and the 3rd common region abdomen 70(18.1%) was found.A least region was Head & neck 30(7.8%) followed by Upper limb 27(7%) and very least region in firearm injuries was lower limb 10(2.6%) found. In all above regions 75% from far distance injuries and 25% from near distance injuries were found. History of incidence, weapons used during the incidence and pattern of injuries mentioned 80% were rifled firearm injuries and 20% from smooth bore weapons used for such injuries. Occupational history showed, 30% victims were jobless, 20% were farmers, 20% were labourers, 5% were students, 10% were drivers, 10% were housewives, 5% were shopkeepers were found in cases. In 80(80%) of firearm cases, the injuries were caused by homicidal attacks, whereas in 10 cases (10%) had history of accidental firearm injuries obtained; in 5 cases (5%) fatalities were suicidal and in the remaining 5(5%) the cause(s) of firearm injuries were due to dacoity.

DISCUSSION

Firearm injury is a common problem in our community because of the legally and illegally acquired firearms by the people, increasing violence, communal clashes, armed robbery attacks, domestic violence, other forms of interpersonal violence, unintentional discharges or suicidal attempts[15]. In our study the most frequent cases of firearm victims found at the age of 21-30yrs, 170(43.9%) and 2nd most common in age group of 31-40yrs, 100(25.8%) , and in 3rd most common group was 41-50yrs containing 70(18%), which were followed by next age group 11-20yrs 30(7.8%) found. A least pattern above 60yrs age group contained only 7cases (1.8%) and the remaining age groups including 0-10 yrs& 51-60yrs contained very least number of cases 5(1.3%) each were found with a geographical distribution mostly in the major cities of Balouchistan. There was no any association of occupation found in

risk of firearm injuries, in which most of the victims were engaged in simple occupations such as labour, farming, taxi driving; a good number of students were also victims[16].In almost all the cases, high velocity weapons were used as firearms. The manner of injury in vast majority of cases were homicidal with few accidental suicidal and robbery cases. The victims received an average of 2 wounds to the body, with a distribution in the Thorax, abdomen in the majority of cases, followed by the pelvis & in extremities . Multiple internal injuries were also sustained by most of the victims. Such findings are in agreement with other studies on firearm injuries from various parts of Pakistan. Several studies have pointed out that young males are most often the victims of firearm injury[17] in their study on homicidal deaths in Peshawar concluded that males constituted 86.15% of the victims of homicide and 32% of victims were in the third decade of life[18]; in their 12-year study from Lahore conclude that 88%were males with 42% being in the age range of 21–30 years. Studies from other parts of Pakistan also report similar findings.This reflects the fact that males are more involved in disputes and rivalry at younger ages and have ready access to firearms as compared to females; in most cases, the females are considered accomplices or partners of the intended victim or are innocent bystanders[19]. However the high frequency (52.5%) of females involved in Sindh 23 may reflect different life styles in which females and males have almost equal access to victimization or that females are targeted in particular in Sindh where the tradition of 'karo- kari' is in practice[19]. The body regions involved in firearm injuries do not reflect a uniform pattern. In our study, the most frequently targeted part was the Thorax, Another study in Peshawar supports the same[19]. There is a need to decrease the number of firearms weapons used and sold in Pakistan. We need to eradicate illicit local community gun manufacturing units. It is obvious that private gun ownership should be strictly limited and the illegal availability should be prevented. Elimination of these illegal countries made fire arms is of the utmost importance in order to curb the high homicidal firearm fatality rate in this region[16].

CONCLUSION

- The firearm injury is more frequent in 21-30 years age group
- The Young males are more commonly affected and must be targeted for lifestyle adjustments such as training to refrain from anger or disputes.
- The most common site of injury is Thorax and frequently injured organs are lungs.

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