

## Original Article

## PROFILE OF MEDICOLEGAL CASES ATTENDING TRAUMA CENTER OF DISTRICT HEADQUARTER TEACHING HOSPITAL, GUJRANWALA

Muhammad Amjad Bhatti, Shahid Mahmood and Shahid Hanif

**Objective:** To describe demographic characteristics and types of medico-legal cases presenting in trauma center of district headquarter teaching hospital, Gujranwala.

**Material and Methods:** In this descriptive study, two hundred and thirteen (213) medico-legal cases were studied. These cases visited trauma centre of district headquarter teaching hospital, Gujranwala during the year 2012. Medicolegal records were reviewed retrospectively. Demographic profile included age and sex distribution which was described according to the type of injury. Data was analyzed using SPSS version 18.

**Results:** Out of 213 cases studied, 182 (85.45%) were males and 31 (14.55%) were females. Majority of patients were between 11-30 years of age (62.91%). Injury was inflicted by blunt weapons in 92(43.19%) of the cases, whereas firearms and sharp edged weapons were responsible for 26.76% and 10.80% of the injuries respectively. On the other hand, total of 38 (17.84%) experienced road traffic accidents and only 1.41% cases suffered burns.

**Conclusion:** Blunt weapon injury is the most frequently reported medico-legal offense in district headquarter teaching hospital Gujranwala followed by firearm injury. Males are involved in most of these incidences.

**Key words:** Medicolegal, blunt Weapon, Road traffic accidents, injury, burn, firearm injury.

### Introduction

Medicolegal cases constitute a considerable segment of emergencies brought to trauma centers of tertiary care hospitals. A medico-legal case (MLC) is an incidence of injury or ailment about which the attending doctor, after history taking and clinical examination, considers the need for investigations by law enforcing agencies to ascertain legal implications and fix the responsibilities according to prevailing law of the land.<sup>1,2</sup> Common medico-legal cases include alleged cases of assault, accidental injuries, burns, alcoholic intoxications, poisoning and also the cases of negligence by medical professionals.

Number of studies has documented the magnitude and pattern of medico-legal cases in various parts of the world and also in neighboring India, yet scope of medico-legal problems differ by regions based on socio-economic status, cultural variations, performance of law enforcing bodies and level of social services in community. Harish et al.<sup>1</sup> and Agarwal et al.<sup>3</sup> reported that road traffic accidents were the commonest types of medico-legal cases in Indian cities of Bangalore and Patiala respectively, followed by blunt injuries and poisoning. On the other hand, in Quetta Baluchistan, most frequently reported cases were blunt injuries resulting from street fighting followed by road traffic accidents.

Interestingly, in both these countries, there was a male predominance and these events occurred mostly in younger age groups (20-29 years).<sup>4</sup> Furthermore, frequency of medico-legal admissions was higher in summer season.<sup>3,4</sup>

Types of medico-legal cases presenting in emergency departments also highlight a snapshot of social problems, level of intolerance and value system among individuals in the community. Thus, studying frequency and pattern of these cases will provide vital data for administrators, philanthropists, social workers and health officials to devise strategies in order to reduce these incidences. Information can also be used by social scientists to probe further into the circumstances which culminated in such events. Aim of existing study is to describe the demographic profile of medico-legal cases in trauma center of district headquarter hospital Gujranwala and characterize the types of weapons with associated injuries.

### Material and Methods

In this descriptive study, two hundred and thirteen (213) medico-legal cases were studied retrospectively. All of these cases visited trauma centre of district headquarter teaching hospital, Gujranwala during Jan-December 2012. Individuals of all ages and gender were included and those with no medicolegal

Structured proforma was used to collect the data regarding demographic profile and types of injuries. Relevant information was collected by reviewing medico-legal records from the register. Data was first manually transferred to the form followed by its entry in SPSS -18 for data editing and analysis which included computation of frequency distribution and percentages. Formal permission was obtained from concerned hospital authority and institutional ethical review committee to conduct this study.

## Results

Of the 213 individuals included in the study, 182 (84.45%) were males and proportion of females was 14.55%. Majority of the cases were in the age range of 21-30 years (39.44%), followed by age group of 31-40 years (16.90%). Regarding the types of injury, it was found that blunt injuries 92(43.19%) resulting from street fight was the commonest form of assault in Gujranwala requiring medico-legal investigations followed by firearm injury 57(26.76%) and Road traffic accidents 38 (17.84%). All these three types were predominantly frequent among males comparatively. For instance, proportion of blunt injuries among males were 84.78% as compared to 15.22% in females and that of firearm injury and RTA, it was 87.22% and 84.21% in males

respectively. Individuals in age group between 21-30 years were more prone to experience blunt injuries 36(39.13%), Firearm injuries 22(38.60%) and Road traffic accidents 15(39.47%) in comparison to other age groups. Injuries from sharp weapons contributed only 10.80% of cases and mostly among males (86.96%) and these were more pronounced in age group 21-30 years (39.13%). We found less than 2% of the burn cases (mostly males) in the study population which might be an under representation of female cases, attributed to an avoidance of medico-legal proceedings.

## Discussion

Medicolegal cases are an integral part of medical practice in emergency departments of major hospitals. Owing to legal implications, these cases also pose an additional work load on staff dealing with these emergencies. An apparently looking trivial trauma may have severe damage to underlying organs and a high index of suspicion is required to make clinically and medico-legally an accurate diagnosis. Organizing statistics about the types of medico-legal insults provide an important insight into the trend of social problem occurring in the community. It has been observed that in Gujranwala region, street fights are more prevalent since we found more blunt injuries

**Table-1:** Age wise distribution of medico-legal cases presenting in DHQ hospital Gujranwala (n=213).

Age Group	All Cases N (%)	Bunt Injury (Streest Fight) N (%)	Firearm Injury N (%)	Sharp weapon injury N (%)	RTA* N (%)	Burns N (%)
0-10	10 (4.69)	04 (4.35)	03 (.26)	01 (4.35)	02 (5.26)	0
11-20	50 (23.47)	22 (23.91)	13 (22.81)	05 (21.74)	09 (23.68)	0
21-30	84 (39.44)	36 (39.13)	22 (38.60)	09 (39.13)	15 (39.47)	02 (66.67)
31-40	36 (16.90)	16 (17.39)	10 (17.54)	04 (17.38)	06 (15.79)	01 (33.33)
41-50	20 (9.39)	09 (9.78)	05 (8.77)	02 (8.70)	04 (10.54)	0
51-60	08 (3.76)	03 (3.26)	02 (3.51)	01 (4.35)	01 (2.63)	0
61+	05 (2.35)	02 (2.18)	02 (3.51)	01 (4.35)	01 (2.63)	0
Total	213 (100)	92 (43.19)	57 (26.76)	23 (10.80)	38 (17.84)	03 (1.41)

\* RTA : Road Traffic Accidents

**Table-2:** Gender wise distribution of medico-legal cases presenting in DHQ hospital Gujranwala (n=213) .

Age Group	All Cases N (%)	Bunt Injury (Streest Fight) N (%)	Firearm Injury N (%)	Sharp weapon injury N (%)	RTA* N (%)	Burns N (%)
Male	185 (84.45)	78 (84.78)	50 (87.72)	20 (86.96)	32 (84.21)	02 (67.0)
Female	31 (14.55)	14 (15.22)	07 (12.28)	03 (13.04)	06 (15.79)	01 (33.0)
Total	213 (100)	92 (43.19)	57 (26.76)	23 (10.80)	38 (17.84)	03 (1.41)

\* RTA : Road Traffic Accidents

Cases in this study. This is in contrast to the results reported by Harish et al.<sup>1</sup> in Bangalore, whereas road traffic accidents were common (75.3%). However, our results are consistent with a study in Quetta Baluchistan.<sup>4</sup> Almost every study pertaining to profiling of medico-legal cases<sup>1,3,5</sup> found male's involvement in these incidences. This may be due to the male dominance in this region and engagements of these men in day to day chores. Females are usually spared in matters of conflicts.<sup>7</sup> Low reporting of road traffic accidents in this study may be due to the settlements among parties outside court of law and not entered into the records. These observations are consistent with other studies.<sup>6,8,9</sup> Young and productive age group has been observed to be affected and the majority of the patients belonged to 11-30 years age group (62.91%). This has great socioeconomic impact as any kind of trauma leading to temporary or permanent physical or psychological disability will not only affect the individual and his family in general but society as a whole.<sup>10,11</sup> Individuals in this age group are vulnerable to homicidal or accidental injuries owing to their exposure to environmental factors at work place, on the roads and recreational areas. This vulnerability is amplified by lack of education, improper socialization and with ego centric personalities.<sup>12,13</sup> Firearm injuries have contributed a great deal in morbidity and mortality around the world especially in Western countries,<sup>14,15</sup> where two third of homicidal injuries and deaths are attributed

to these firearms. Yet, only quarter of cases in this study were due to firearms. Reasons for this difference may be the lack of access to these firearms compared to western countries. Furthermore, injuries due to sharp edged weapons were observed in only ten percent patients and this finding is consistent with the reports of Shaikh et al.<sup>15</sup> and Tajjamaal et al.<sup>16</sup> Some studies have covered the factors like seasonal variation, urban-rural distribution, time of admission of medicolegal cases.

For instance, Gupta et al.<sup>2</sup> found that medicolegal cases are more frequent in summer season (April-June), during office hours, urban areas and along certain highways. Similar issues were missing in existing study. These factors were not included since relevant information was lacking in the records. However, concerned authority should take necessary measure to bridge this gap for future research endeavors.

## Conclusion

Blunt weapon injury is the most frequently reported medico-legal offense in district headquarters teaching hospital Gujranwala followed by firearm injury and road traffic accidents. There is a male predominance in all forms of these medico-legal assaults.

*Department of Community Medicine  
Gujranwala Medical College, Gujranwala  
[www.esculapio.pk](http://www.esculapio.pk)*

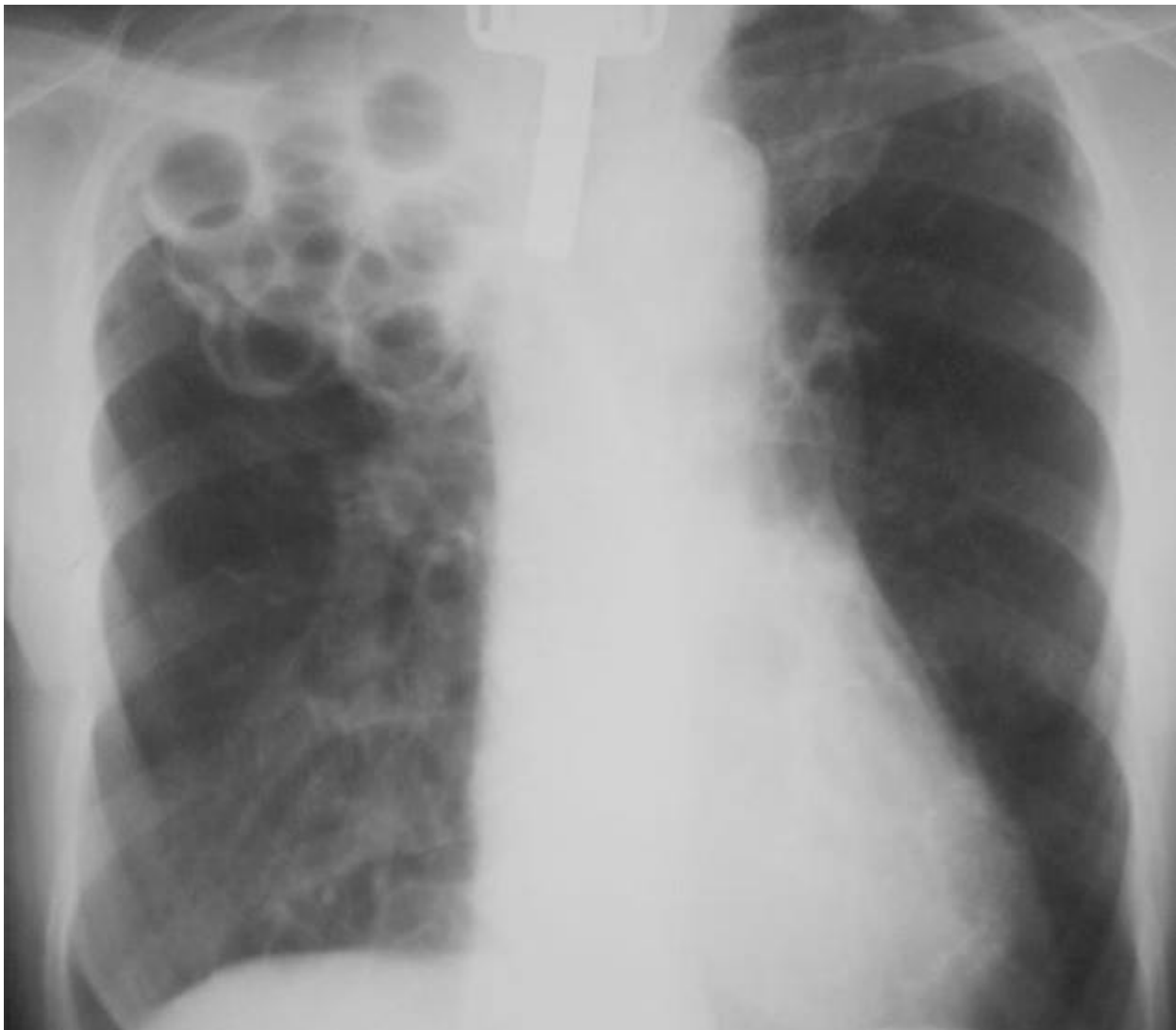
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## Picture Quiz

What is the finding in this X-ray Chest?



See answer on Page # 50