

FREQUENCY AND PATTERN OF MEDICO-LOEGAL CASES AND GENDER DISPARITY IN PESHAWAR

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ABSTRACT

Objective: To determine the frequency and pattern of medico-legal cases and gender disparity in Peshawar.

Materials and Method: It was a cross-sectional study. The study was conducted in the Forensic Medicine department Khyber Medical College (KMC), Peshawar. The data was collected over a period of 06 months (Sept 2018- Feb 2019). Data was obtained from the record room of Medico-legal clinic after obtaining consent from the institutional and departmental head. Non medicolegal cases, old injury cases, hospital acquired artifacts were excluded. For data analysis SPSS 20 was used. Data was collected in terms of age, sex, and diagnosis mentioned in the records.

Results: Total cases were 1095, of which 869 (79.4%) were males and 225 (20.6%) were females. The maximum number of medico-legal cases were from the age group of 21-30 years i.e., 385 (35.2%). 670 (61.27%) were residents of urban area. Most of the medico-legal cases registered were due to assault 297 (27.2%) followed by medical examination of prisoners 283(25.9%), road traffic accidents 215 (19.7%), fall from height 75 (6.9%), Suicidal poisoning 62 (6.5%), domestic injuries 72 (6.5%), burn 24 (2.2%), unknown found at bus station 24(2.2%), child abuse (1.3%) & female sexual assault 12 (1.1%).

Conclusion: Majority of the victims were males, young adults and urban inhabitants. Most common indication for medico-legal cases was assault followed by medical check-up of prisoners and road traffic accidents.

Key Words: Medico-legal cases, Physical Assault, Road traffic accidents, Suicidal Poisoning

INTRODUCTION

All those cases in which there is a suspicion of foul play or the resulting injuries are the product of hurt i.e self harming or by someone else with the intention to harm directly or indirectly the individuals' body mind reputation or property, such cases are referred to medico-legal clinics to determine the exact nature of injuries, cause of injury, weapon used¹. All such cases are termed as medicolegal cases. In simple language it is a medical case with legal implications for the attending doctor where the attending doctor, after eliciting history

and examining the patient, thinks that some investigation by law enforcement agencies is essential².

Emergency department of Khyber Teaching hospital is a very busy in terms of patient management and care. All the medico-legal cases are brought and registered in the casualty. The duty medico-legal officer examined the injuries to give legal cover to the victim in the mean time the patient also received medical treatment in causality. The study was conducted to determine the frequency and pattern of medico-legal cases reported at a tertiary care hospital and to highlight the vulnerable gender, age, residence and the cause.

MATERIAL AND METHOD

The study was conducted in a tertiary care hospital in Peshawar. It was a cross-sectional study. The causality department of Khyber teaching Hospital receives more than 200 emergency cases daily. The data was collected after obtaining written permission from Ethical Review Board and institutional head. All the reported MLC cases in the medico-legal case record book for first 6 months (1st Sept 2018 – 28th Feb 2019) were included in the study. 1095 medico-legal cases were reported over the period of 06 months. Routine medical examination for fitness of prisoners and accused under police custody were not included in the study. Data was collected in various parameters from medico-legal case register like gender, age, residence, pattern of injuries most common weapon used and an indication for medico-legal cases. Inclusion criteria

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include Physical assault, road side accidents, sexual assault, poisoning, sexual assault and burns.

RESULTS

Out of 1095 cases, male female ratio was 4.6:1.12. It was observed that 869 (79.4%) were males and 225 (20.6%) were females. In the present study, maximum number of cases 385 (35.2%) were from the age group of 21-30 years followed by 259 (23.7%) from the age group of 31- 40 years. It was observed that, the number of males involved in medico-legal cases was more than females in each age group. Difference in the percentages of males and females was more in all age groups (**Table 1**).

The hospital was also receiving medico-legal case from rural areas. Such cases were referred for medicolegal expert opinion. We have observed that 425 (38.8%) cases were from rural area and rest of the cases i.e. 670 (61.2%) were from urban areas. Most of the cases were registered in the month of Oct (32 %) & minimum number of cases were registered in the month of February (10%). Maximum cases (70 %) were reported during 4 pm to 9 pm. Most of the medico-legal cases were of physical assault (27.2%) followed by police torture victims (23.8%), followed by road traffic accidents (RTA) (19.7%), fall from height (6.9%), suicide poisoning (6.5%), domestic injuries (6.5%), burn 24 (2.2%), unconscious found at bus station 24 (2.2%), child abuse 14 (1.3%) & female sexual assault 12 (1.1%) were reported. (**Table 2**). The routine medical examination for fitness of prisoners and accused under police custody were not included in the study.

Figure 1 shows the distribution of medico-legal cases according to nature of injury and type of weapon used. We observed that the commonly used weapon for assault was rifled fire arm 112 (87.6%) followed by blunt weapon 91 (30.6%) where as sharp injuries as a result of stabbing with knife in cases of robbery at ATM and during night in street was 88 (29.6%).

87% cases (n=215) of road side accidents (RSA) were due to rash driving of motor cycle while 7.3% cases were due to car accidents and 4.6% were reported as pedestrian injuries. Highest incidence of fall from height was observed in children age less than 10 years 24 (14.8%) out of the total 75 (6.9%) fall cases. Suicide poisoning cases (n=62) was found more in young females 46 (74.1%) from age group 11 – 30. Maximum assault cases (n=297) were from the age group of 21- 30 years (33.1%) followed by 31-40 years (28.4%). Males were more in number (214, 72.2%) than females (82, 27.8%). The prevalence of physical assault was found high among males except the age group of 1-10 years where all 4 cases were females. 3.75% Physical assault cases were found to be alcoholic. 189 (21.7%) out of 261 prisoners were males. Most of the prisoners were young 71 (27.3%) and their ages between 21-30 years followed by 31-40 years 65 (24.9%), 13.8% in

41-50 years and 3.9% were 51-60 years. 1.9 % prisoners were elderly i.e above 60 years and all were male. Maximum cases (24, 6.5%) were in the age group of 21-30 years. 21 of which were suicidal poisoning cases. 3 (0.8%) were cases of accidental poisoning. Among females, majority medico-legal cases were (36.8%) were physical assault, followed by RTA (30.5%). 189 male were tortured under police custody. A total number of police torture cases brought for medical examination were 261. A very alarming incident was also reported of child abuse. Most of the children were under 10 years and very victimized near bus station. Out of 14 cases of child abuse 4 for found habitual while 10 were unconscious and their condition was critical when brought to emergency.

DISCUSSION

Total number of medico-legal cases reported during 06 months period were 1095, of which majority (869, 79.4%) were males. Similar findings were reported in Dehli and Miraj cities of India^{3,4}. This was because males were more exposed to outdoor activities as well as disputes in family matters. A study conducted in Faisalabad had also shown the same age group of 21-30 years as in our study; followed by the age group of 31-40 years which was economically productive and also involved in outdoor household activities⁵. In the present study we observed that most of the medicolegal cases were due to rifled fire arm followed by physical assault and the age group 21-30 years was most commonly involved. Similar results were observed in study conducted in 2009 in Akola and 2014 in Quetta^{6,7}. However, in the study by Malhotra et al in 2009 Poisoning⁸ was the most common cause of medicolegal cases. Commonly used weapon for assault was firearm, followed by hard and blunt type and by sharp edged objects in the present study which was in accordance to the study by Haridas et al 2013⁸.

Gunshot injuries and fatalities were the major problem of the tribal areas. Gun-related violence is most common in poor urban areas involving juveniles and young adults. In one study, done in this region, 234 cases of firearm were autopsied during the period of three year from Jan 2012 - Dec 2015. 187 (80%) were victims of homicidal attacks, 24 cases (10%) had history of accidental firearm injuries and in 12 cases (5%) fatalities were suicidal and in the remaining 12 (5%) the cause(s) of firearm injuries were dacoits⁹. In another done in Abbasi Shaheed Hospital Karachi for a period of five years from 2009-14, out of 2006 autopsies performed for medico-legal purposes; 47.05% (n=944) deaths were identified to be due to firearms. Out of these 944 firearm deaths; 98.62% (n=931) were declared homicidal and 1.37% (n=13) were suicidal. Sadly this shows the deadly usage of firearms in our population.¹¹ In another study at Bahawalpur 248 (84%) men were autopsied out of 297 cases while only 49 (16%) were women. The number of bullets and site of impact

Table 1: Age and gender wise distribution of medico-legal cases.

Variables	Male (n=869) 79.4%		Female (n=225) 20.6%		Total (n=1095)	
Age in years	Cases	%	Cases	%	Cases	%
1-10	17	1.9	21	9.3	38	3.4
11-20	101	11.6	47	20.8	148	13.5
21-30	340	39.1	45	20.0	385	35.2
31-40	190	21.8	35	15.5	225	20.5
41-50	101	11.6	35	15.5	136	12.4
51-60	78	8.9	21	9.3	99	9.0
>60	42	4.8	11	4.8	53	4.8
Total	869		225		1095	

Table 2: Gender disparity of Medical cases

	Medicolegal Cases	Male (n=869)		Female (n=226)		Total (n=1096)	
		Cases	%	Cases	%	Cases	%
1	Physical Assault	124	14.2	173	58.2	297	27.2
2	RTA	150	17.2	65	28.8	215	19.7
3	Fall from Height	31	3.5	44	19.5	75	6.9
4	Suicidal Poisoning	13	1.4	49	21.7	62	5.6
5	Snake Bite	04	0.4	06	2.6	10	1.0
6	Domestic Injuries	18	2.0	54	24	72	6.5
7	Sexual Assault	-	-	12	5.3	12	1.1
8	Bus Station poison-ing	18	2.0	06	2.6	24	2.2
9	Burns	9	1.0	13	5.7	24	2.2
10	Child Abuse	9	1.0	5	2.2	14	1.3
11	Police Torture	189	21.7	75	33.3	261	23.8
12	Other causes	18	2.0	08	3.5	26	2.3

Table 3: Shows gender disparity of pattern of injuries recorded

Variable	Pattern of injuries recorded n=289								
	Male				Female				
	Fire Arm	Blunt	Sharp	Total	Fire Arm	Blunt	Sharp	total	
1	Head and Face	13	11	4	28	2	4	6	12
2	Fore Arm	11	9	13	33	3	6	7	16
3	Chest	12	5	7	24	5	11	13	29
4	Abdomen	22	2	11	35	14	3	13	30
5	Back of Trunk	1	7	3	11	-	4	5	9
6	Legs	7	6	2	15	14	10	1	25
7	Others	3	4	1	8	4	7	3	14
	Total	71	46	41	154	41	45	47	135

of firearm determines the survival rate. Most common pattern of firarm injury in males was chest and abdomen whereas in females it was legs followed by abdomen¹¹. There was a yearly increase in the number of patients in peshawar, with 184 patients in 2008; 199 in 2009; 114 in 2010^{9,10,12}. In present six month study the number of fire-arm injuries has increased to 112. The result of impact of firarm injuries recorded in our study was similar with studies conducted in Karachi in2011 ans 2013. It was found that limbs were involved in 14 (12.5 %) patients; abdomen injuries in 36 (32%) patients; head and face in 21 (11.2%) patients; and multiple injuries in 6 (2%)^{12,13}.

CONCLUSION

It was concluded that majority of the medico-legal cases were due to physical assault follower by firearm. Most common age group involved was 21-30 years. Most common causes of MLC in the age groups of 1-10 years and 11-20 years were poisoning and RTA respectively.

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