

# A Clinical Analysis of the Medicolegal Cases Presented at Khawaja Muhammad Safdar Medical College, Sialkot

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## ABSTRACT

**Objective:** To determine the clinical pattern of the medicolegal cases presented at Khawaja Muhammad Safdar Medical College, Sialkot

**Material and Methods:** It was a retrospective Hospital based cross-sectional study, which was conducted at medicolegal clinic of government Khawaja Muhammad Safdar Medical College, Sialkot. All the cases those, who were presented at emergency department (medicolegal clinic) with history of industrial injuries, Road traffic accidents, burns, Assault, Falls and Poisoning and others with either of age and gender were included. This analysis was of one year from January 2020 to December 2020. All the data was recorded via self-made study proforma and analyzed by using SPSS version 20.

**Results:** A total of 1079 medicolegal incidents were analysed. Out of all blunt injury, sharp weapon injury, poisoning, acid intake and road traffic incidences were found to be commonest as 27.20%, 20.60%, 15.60%, 12.40% and 10.20% respectively. Blunt injuries, sharp weapon injuries, gunshot injuries and alcohol intake incidences were significantly higher among males and poisoning and acid intake incidences were significantly high among females ( $p < 0.05$ ). Blunt injuries, sharp weapon injuries, alcohol and poisoning events were seen significantly high almost during winter season from January to march ( $p < 0.001$ ).

**Conclusion:** In the study conclusion, blunt injury, sharp weapon injury, poisoning, acid intake and road traffic incidences were observed to be the commonest medicolegal incidences. These events mostly observed during January to March duration. However blunt injuries, sharp weapon injuries, gunshot injuries and alcohol intake incidences were mostly observed among males, while poisoning and acid intake incidences among females.

**Keywords:** Medicolegal events, gender, season

## INTRODUCTION

Medico-legal cases remain important aspect of medical practice that medical officers encounter in the emergency room frequently.<sup>1</sup> Hurts, injuries, and wounds come in a variety of forms, but they most commonly occur due to assaults. By definition, assault refers to the threat or force applied to another's body in a hostile or angry manner, whereas battery refers to when the assaults are completed and somebody has actually implemented force on to the victim's body.<sup>2,3</sup> All incidents that indicate to a probable criminal behaviours, such as gunshot injuries, injuries caused by a sharp or blunt-edged weapons, homicide, sexual assault, and poisoning, fall into the term "medicolegal cases".<sup>4,5</sup> Management of medicolegal cases is important in clinical practice and make up a significant portion of emergency medical situations.<sup>4</sup> A case is termed as "medicolegal" if the attending doctor, after taking the patient's history and evaluating him or her, believes that the law enforcement agency should be involved in order to maintain and hold accountability of the case.<sup>6,7</sup> Medico-legal incidents make up a large portion of the emergencies referred to all teaching hospitals' casualty departments, which are the basis for dealing with all such instances. The administration of medical and legal services in such situation's accounts for a significant percentage of the hospital's workload.<sup>6,8</sup> Although this study has been conducted to determine the clinical pattern of the medicolegal cases presented at Khawaja Muhammad Safdar Medical College, Sialkot.

## MATERIAL AND METHODS

It was a retrospective Hospital based cross-sectional study, which was conducted at medicolegal clinic of government Khawaja Muhammad Safdar Medical College, Sialkot. All the cases those, who were presented at emergency department (medicolegal clinic) with history of industrial injuries, Road traffic accidents, burns, Assault, Falls and Poisoning and others with either of age and gender were included. All the non-medicolegal patients were excluded from the study. This analysis was of one year from January 2020 to December 2020. All the data was collected in terms of age, gender and type of the events declared as per medicolegal record. All the data was recorded via self-made study proforma. Data was analyzed by using SPSS version 20. Numerical variable like age was analyzed in form of mean and standard deviation. Categorical variables like gender and type of incident were computed in the form of frequency and percentage. Type of the incidents were subjected to were discriminates between both genders by applying the chi-square test and a p-value  $\leq 0.05$  was considered as significant.

## RESULTS

A total of 1079 medicolegal incidents were analysed. Out of all blunt injury, sharp weapon injury, poisoning, acid intake and road traffic incidences were found to be commonest as 27.20%, 20.60%, 15.60%, 12.40% and 10.20% respectively as showed in figure 1.

Blunt injuries, sharp weapon injuries, gunshot injuries and alcohol intake incidences were significantly higher

among males ( $p < 0.05$ ), while poisoning and acid intake incidences were significantly high among females ( $p < 0.05$ ), however other medicolegal incidences were statistically insignificant according to gender ( $p > 0.05$ ) as showed in table.1

Blunt injuries, sharp weapon injuries, alcohol and poisoning events were seen significantly high almost during winter season from January to march ( $p < 0.001$ ), while rest of the events were statistically insignificant as per monthly analysis as showed in table.2

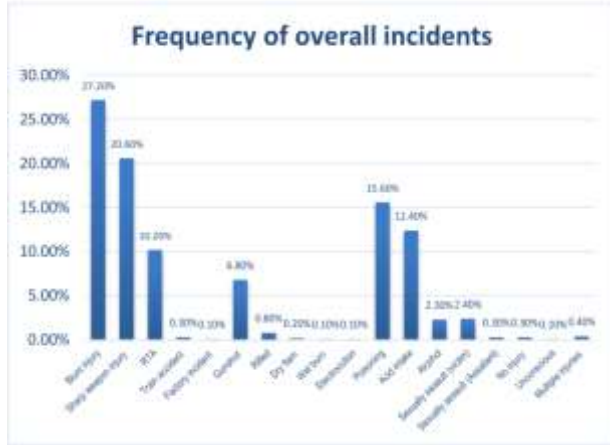


Fig 1: Frequency of overall medicolegal incidences n=1097

Table.1 Medicolegal incidents according to gender

Variables	Gender		Total	p-value
	Male	Female		
Blunt injury	188	105	293	0.001
Sharp weapon injury	121	101	222	0.058
RTA	66	44	110	0.274
Train accident	03	0	03	0.121
Factory incident	01	0	01	0.372
Gunshot	47	26	73	0.054
Rifled	07	02	09	0.177
Dry flam	01	01	02	0.877
Wet burn	0	01	01	0.261
Electrocution	0	01	01	0.261
Poisoning	66	102	168	0.001
Acid intake	26	108	134	0.001
Alcohol	25	0	25	0.001
Sexually assault (victim)	13	13	26	0.542
Sexually assault (Assailant)	03	0	03	0.121
No injury	02	01	03	0.701
Unconscious	01	00	01	0.372
Multiple injuries	03	01	04	0.435

Table.2 Medicolegal incidents according to monthly basis

Medicolegal incidence	Months												Total	p-value
	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec		
Blunt injury	39	27	33	24	19	19	23	26	31	18	16	18	293	0.001
Sharp weapon	26	30	18	19	14	20	15	20	15	15	14	16	222	0.001
RTA	19	5	17	10	6	8	5	10	12	6	6	6	110	0.431
Train accident	1	0	0	0	1	0	0	0	0	0	0	1	3	0.503
Factory Incident	0	0	1	0	0	0	0	0	0	0	0	0	1	0.934
Gunshot	6	6	5	5	7	11	6	6	5	4	6	6	73	0.018
Rifled	1	1	0	0	0	0	1	1	1	1	2	1	9	0.539
Dry flame	2	0	0	0	0	0	0	0	0	0	0	0	2	0.254
Wet burn	0	0	0	0	1	0	0	0	0	0	0	0	1	0.152
Electrocution	0	0	0	0	0	0	0	0	0	0	1	0	1	0.071
Poisoning	30	14	10	12	16	14	12	10	11	10	10	19	168	0.001
Acid intake	7	11	11	14	10	10	18	12	12	10	8	11	134	0.001
Alcohol	10	1	3	2	0	0	0	2	0	1	4	2	25	0.008
Sexual assault	Victim	3	3	2	3	3	2	1	1	1	1	3	26	0.001
	Assailant	0	0	0	0	1	0	1	1	0	0	0	3	
Miscellaneous	No injury	0	0	1	0	0	0	0	0	1	0	1	3	0.001
	Unconscious	0	0	0	1	0	0	0	0	0	0	0	1	
	Multiple injuries	0	0	0	4	0	0	0	0	0	0	0	4	

**DISCUSSION**

A big constitution of the load of work medical site and institutes consists of the legal and the clinical facilities that are provoking to organize to medico-legal episodes.<sup>4</sup> In this study the blunt injury, sharp weapon injury, poisoning, acid intake and road traffic incidences were found to be commonest as 27.20%, 20.60%, 15.60%, 12.40% and 10.20% respectively. Similarly, Altaf R et al<sup>4</sup> reported that among commonest medicolegal events, the blunt injuries were, 31.33% road traffic accident events were 39.33%

and sharp weapon injuries were 18.67%. In another international study the prevalence of penetrating trauma was most common 86.8% in medicolegal events followed by 13.3% of firearm injuries 13.3%. Consistently Cheema TN et al<sup>10</sup> demonstrated that the cases of blunt trauma were most common 55%, followed by sharp-edged weapon incidents were 28%, sexual assault events were 7%, poisoning cases were 3% and firearms injuries were 2%. Yogesh G et al<sup>11</sup> reported that most common medico legal events were physical trauma, suicide, and sexual assault.

However, the Malik R et al<sup>6</sup> conducted the study at tertiary care Hospital of Rawalpindi, and reported that the commonest medicolegal events were of RTA these findings were in contrast with our study. On other hand the Malik Y et al<sup>13</sup> stated in their study the most common cases seen at casualty of poisoning and these findings were also vary from current study. Our findings were also differing from the findings of Hussain SN et al<sup>14</sup>, who demonstrated that the burnt medicolegal events were most common. The above difference in medicolegal events may because of small and large sample size and selection criteria of the studies and this may because of seasonal variations as in this study Blunt injuries, sharp weapon injuries, alcohol and poisoning events were seen significantly high almost during winter season from January to march (p<0.001).

In this study males were mostly seen among medicolegal events and these findings were similar to the study of Seema N et al<sup>2</sup> as the out of all cases males were 87.3% and females were 12.7%. Altaf R et al<sup>4</sup> also found males in majority 59.3% as compared to females 40.9%. In an Indian study of Siddappa SC et al<sup>12</sup> reported that, out of all study subjects' males were 71.76% and females were 28.23%. This male pre-Domenici may because of in Pakistan and Indian countries the males were mostly involved in outdoor activities specially in road traffic and weapon association.

In this study the blunt injuries, sharp weapon injuries, gunshot injuries and alcohol intake incidences were significantly higher among males (p<0.05), while poisoning and acid intake incidences were significantly high among females (p<0.05). Similar findings were seen in the study of Malik R et al<sup>6</sup> as blunt injuries, RTA, sharp weapon injuries and Firearm injuries were commonest among males and poisoning events were commonest among females. Although in the study of Kulkarni P et al<sup>15</sup> stated that the higher percentage of males were involved in medico legal cases as 72.33% and 27.67% females.

## CONCLUSION

In the study conclusion, blunt injury, sharp weapon injury, poisoning, acid intake and road traffic incidences were observed to be the commonest medicolegal incidences. These events mostly observed during January to March duration. However blunt injuries, sharp weapon injuries, gunshot injuries and alcohol intake incidences were mostly observed among males, while poisoning and acid intake incidences among females. As the blunt injury, sharp weapon injury, poisoning and RTA events are the most differentiating episodes of the study, hence the proper enactment of the relevant laws are needed today.

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