



“PATTERN & PROFILE OF MEDICOLEGAL CASES REGISTERED AT NIIMS, GAUTAM BUDH NAGAR: A CROSS-SECTIONAL STUDY.”

Forensic Medicine

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ABSTRACT

Introduction: World-wide there is a growing trend in the medicolegal cases. For physicians working in the Casualty department, these situations are important component of their practice. The current study aims to provide some insight into the trends and characteristics of medicolegal cases (MLC) that come into our medical college's emergency department, at Gautam Budh Nagar. **Aims & Objectives:** To examine several kinds of medicolegal cases, victim characteristics, frequency and pattern at our institute's emergency department in order to identify the gender, age and reason that is most vulnerable. **Methodology & Result:** This cross-sectional study is a record-based study, with all MLC cases entered into the MLC record book over two-year period (Nov. 2021- Oct. 2023) were included. Non-medical cases were excluded. Total number of cases were 196, with 61.5% of males and 38.5% of females. The age group that had the most case was 20-30 years or 37.5% of the total cases. Road Traffic Accidents (RTA) accounted for the majority of MLCs registered; these were followed by Physical assault (9%), Poisoning (4.5%) and found dead cases (3.5%). **Conclusion:** The public's understanding of safety standards, appropriate education and training can help to lower the incidence. In order to manage and record these instances more effectively, the doctors who deal with MLC cases must receive pre-induction training from the concerned specialists.

KEYWORDS

INTRODUCTION:

When performing their professional duties, medical practitioners are subject to legal and ethical obligations. The majority of doctors who operate emergency rooms encounter situations that are referred to as "medicolegal cases" (MLCs) either at the time they occur or later on. A medicolegal case is an injury or illness case in which the attending physician determines, after taking the patient's history and performing an examination, that a law enforcement agency investigation is necessary to determine and assign responsibility for the case in compliance with the law of the land (1). Injury is described as "any harm whatever caused illegally to a person's mind, body, reputation and property" in Section 44 of the Indian Penal Code (2). The type of roads, socioeconomic conditions, and the cultural diversity of the local population all affect the quantity and kind of MLCs that are reported to a hospital. According to estimates, the mortality rate from accidents will surpass that of communicable diseases in countries such as Bharat by 2030 (3). In order to develop strategies to lower the prevalence of these instances, administrators, social workers, and non-governmental organisations must identify the pattern and age-sex distribution of MLCs recorded in a hospital. Therefore, the purpose of this study is to shed light on the characteristics and trends of medicolegal cases that come into the emergency room and offer accurate data to various authorities

AIMS & OBJECTIVE:

To analyse the age-sex distribution and pattern of medicolegal cases presenting in Emergency department of our medical college.

MATERIALS AND METHODS:

Research Instrument:-

It's a retrospective hospital medical record based observational study.

Sample Design:

196 cases registered as MLC were studied from November 2021 – October 2023.

Data Collection:

Information was gathered about age, gender, and the kind of occurrence that was reported in the medical file. The total number of cases over the specified period were grouped under the following categories to study the profile of different instances:- road traffic accidents, assault, fall from height, found dead, poisoning, burns, hanging, electrocution, and other forms of trauma.

Inclusion Criteria:-

All cases which were registered under medicolegal cases were included. Non- medicolegal cases were excluded. The data was analysed by using SPSS 22.

RESULTS:

In our study, a total of 196 cases registered as MLC were studied. A male preponderance was noted with male: female ratio of M:F::3:2. The values are projected in a pie diagram [Figure 1].

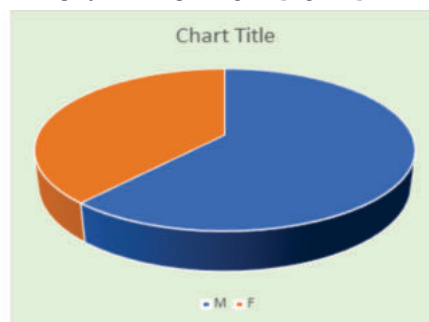


Figure 1: Pie diagram showing frequency of cases in males & females

Of total 196 cases, we found, we found maximum of road traffic accident (RTA) [144 cases], followed by poisoning [9 cases], found dead [7 cases], electrocution [4 cases], 2 cases each of fall from height & hanging. These are illustrated in bar diagram [Figure No 2].

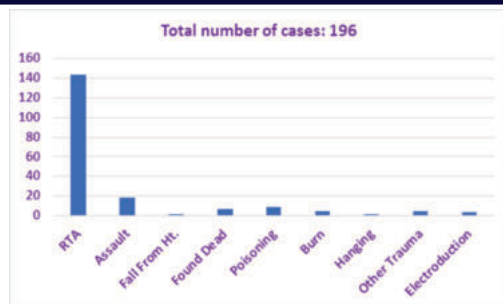


Figure 2: Bar diagram showing different types of medico-legal cases in our hospital

We also categorized our cases according to age. Maximum of RTA cases [54 cases] were noted in the age group of 21-30 years followed by 32 cases in age group of 31-40 years. Among cases of assault, 7 cases were noted in age group of 21-30 years, 5 cases in age group of 31-40 years and 3 cases each in group of 11-20 and 41-50 years of age group. Maximum cases of poisoning were noted in age group of 11-20 years [4 cases]. 2 cases each of electrocution were noted in the age group of 11-20 & 41-50 years. Two cases each of burn were noted in age group of 0-10 & 31-40 years. One case each of hanging was noted in age group of 11-20 & 21-30 years. Three cases of patients were brought dead in age group of 61-70 years. These findings are summarized in Table no 1.

Table No. 1: Distribution of different types of medico-legal cases according to age groups

Age (years)	RTA	Assault	Fall from height	Found dead	Poisoning	Burn	Hanging	Electrocution	Other trauma	Total
0-10	0	0	0	2	0	2	0	0	0	04
11-20	21	3	0	0	4	1	1	2	1	33
21-30	54	7	1	0	1	0	1	0	0	64
31-40	32	5	1	0	3	2	0	0	2	45
41-50	14	3	0	0	1	0	0	2	2	22
51-60	12	0	0	2	0	0	0	0	0	14
61-70	11	0	0	3	0	0	0	0	0	14
>70	0	0	0	0	0	0	0	0	0	0
Total	144	18	2	7	9	5	2	4	5	196

We noted majority of MLC cases in males [115 of 196 cases]. Among females, we noted 79 cases. The cases of RTA were more in males [88 of 144 total cases]. Assault cases were also found to be more in males [14 of 18 cases]. Cases of poisoning, hanging, burn and brought dead were found to be more in females. These findings are depicted in Table no 2.

Table No. 2: Gender-wise distribution of medico-legal cases:

	M	F
RTA	88	56
Assault	14	4
Fall From Ht.	2	0
Found Dead	2	5
Poisoning	3	6
Burn	1	4
Hanging	0	2
Other Trauma	3	2
Electrocution	2	0
Total	115	79

On studying the variation of cases in different months of year over the period of last 2 years. We noted 53 cases in 2021-22 and 143 in 2022-23. We found that cases have increased in 2022-2023 with maximum cases in December followed by March & July. These variations are shown in Table No 3.

Table No.3: Frequency of cases in different months in year 2021-22 & 2022-23

Month	Years 21-22	Year 22-23	Total
Nov	3	8	11
Dec	3	19	22

Jan	4	9	13
Feb	3	12	15
Mar	10	15	25
Apr	3	12	15
May	7	11	18
Jun	3	10	13
Jul	6	15	21
Aug	4	11	15
Sep	2	11	13
Oct	5	10	15
Total no. of cases	53	143	196

The comparison of frequency of cases in both years over the different months have been depicted in a line diagram [Figure No. 3].

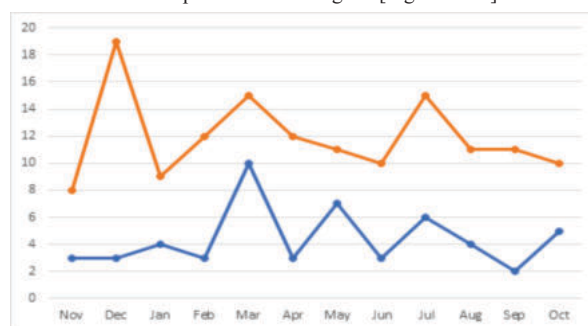


Figure 3: Line diagram showing the trend of cases over different months in 2021-2022 [blue line] & 2022-2023 [orange line].

DISCUSSION:

In our study, males (61.5%) outnumbered females (38.5%) and male to female ratio was 3:2. In previous studies done by different authors (Malik *et al* (4) Hussaini *et al* (5)) also reported male predominance over females. Main reason for this may be summarised as males are more involved in outdoor activities in this region.

In the current study, the age group of 21–30 years accounted for the greatest number of cases (64, 32%), followed by the age group of 31–40 years (45, 23%). These results are consistent with research conducted by Muhammad Amjad Bhati *et al* (6) and Haridas *et al* (7). Given that they are both in their prime years and are involved in livelihood activities, the larger percentage in the study may be explained by their respective lives' productivity.

The majority of instances in this study were reported in the month of March (13%) and the least number in the month of September (6%). While Sangwan *et al*'s study (8) produced results that were different from the current study, Jitender *et al*'s study (9) discovered outcomes that were similar. March may have more incidents than other months since it's the post-harvest season, when there are more field and outdoor activities. Bad road conditions and a rise in traffic density add to this rise in incidents.

Road traffic accidents (RTAs) accounted for the majority of the cases reported to our emergency room (73%), which agrees with the findings of Dileep K R (10), Timsinha *et al* (11) and were closely followed by physical assaults (9%). Poisoning cases (4%) and deceased cases (3%), in order of frequency, came next. Research by Yadav and Malik *et al* found that poisoning was the most common cause of casualties, which is not consistent with the results of our investigation.

According to our study, 77% of instances had an unintentional occurrence, while 4% had suicidal thoughts. About 3% of instances had dead cases that had an unclear cause of death. Tomar and Sangwan *et al* (12). presented comparable findings. The results of a study by Yadav *et al* differed from ours in that the percentage of accidental cases (38%) was nearly equal to that of assault cases (39%). This discrepancy can be explained by the semi-urban, agriculturally oriented terrain surrounding our institute.

CONCLUSION:

We all are aware that MBBS graduates, who are not specialists in managing medico-legal matters, staff the emergency rooms of the majority of hospitals. Consequently, forensic medicine specialists and

other concerned departments should review the field of medico-legal work in order to prevent any inconsistencies in the expert opinions they provide. We found that there were more men than women in the current study, and that the men were also younger in age. The most frequent aetiology for this is automobile accidents. Improved road conditions, better lightening on the roads, stricter licencing requirements, and increased administrator training for safety standards through road safety initiatives are all necessary to prevent such incidents.

Conflict of interest: None

Source of Support: Nil

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