

## Original Research Paper

# Pattern of Medico-legal Cases in the Casualty Department of A Teaching Hospital, Bareilly, Uttar-Pradesh

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### Abstract

Casualty department is the Heart of any hospital and is an important key area because most of medical and surgical emergencies and almost all medico-legal cases first reported here. It is the duty of first attending doctor to prepare report of all the medico-legal case with all required guidelines. Considering the importance of this work this retrospective study was conducted to analyze the pattern and magnitude of all the medico-legal cases registered in the casualty department of SRMS IMS Medical College Bareilly between January-December 2014. This study revealed that RTA constituted majority (64.39%) of medico-legal cases followed by poisoning (17.80%) and fall from height (3.79%). Majority of cases were male (81.44%). The most of the cases were in the age group 21-30 years (30.68%). The most of cases were reported in casualty between 12 p.m. to 6 p.m. (35.61%) followed by 6 p.m. to 12 a.m. (35.23%). The maximum case were reported in November (17.05%) followed by July (12.5%). The most of cases reported in Rainy season (July-October) (38.64%) followed by winter (34.85%).

**Key Words:** Medico-legal cases, Pattern, Road Traffic Accident, Season, Casualty department

### Introduction:

The casualty department is the very important area of any hospital. Almost all Medical and Surgical emergencies reported first to Casualty Department of Medical College and apart from these emergencies all medico-legal cases are registered in casualty and all medico-legal formalities are require to be fulfilled here.

Casualty Medical Officer (CMO) is the first contact doctor. First and prime duty of CMO is to give First Aid and save the life of patient and another duty of CMO is to do all medico-legal formalities concerned to patients.

A medico-legal cases is a case of injury or illness where attending doctor after eliciting, listing and examining patient; is of opinion that some investigation by law enforce agencies is essential to establish and fix responsibility for the case in accordance with the law of the land. [2]

Profiling of Medico-legal cases is an integral aspect for the prevention of preventable causalities in future and to study the crime rate in area. [3] In present study an attempt is made to know the pattern and magnitude of medico-legal cases in aspect of types of cases, age and sex of cases, time of arrival in casualty department, months and seasons of arrival of cases in casualty and analyze the data and find out suggestion for improvement of medico-legal work in casualty.

### Material and Methods:

This is a record based retrospective study of medico-legal cases registered in medico-legal register in casualty of SRMS IMS Medical College Bareilly from January to December 2014. Related general data like type of medico-legal cases reported in casualty during this period, age and sex of cases, time of arrival, months and season concern in arrival of medico-legal cases in casualty were collected from medico-legal registered. During this study period the total 264 medico-legal cases were registered in casualty of SRMS IMS Medical College Bareilly.

The collected data was analyzed and presented in tables, graphs and pie charts by using various parameters and compared with other studies. Summer season means cases reported in months of March, April, May and June, Rainy season means July, August, September and October and Winter season

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means November, December, January and February.

### **Observations and Results:**

In this one year retrospective study from 1 January 2014 to 31 December 2014, a total number of 264 medico-legal cases were reported and studied. Out of all cases, maximum number of cases were RTA (64.39%) followed by poisoning (17.80%) and fall from height (3.79%). Minimum number of cases reported was sexual offences (Rape) (0.38%). (Table 1)

In our study maximum cases were between 21-30 years of age (30.68%) followed by between 11-20 years (21.59%), 31-40 years (21.59%). Number of medico-legal cases reported between age, 11-20 year and 31-40 year were same (21.59%). Minimum cases (3.41%) reported were between age 60 to above years. (Table 2)

Present study showed that out of total cases reported in casualty male cases (81.44%) predominant over female cases (18.56%). (Table 3) Maximum number of cases were reported between 12 p.m. to 6 p.m. (35.61%) followed by 6 p.m. to 12 p.m. (35.23%), 6 a.m. to 12 p.m. (17.80%). Time of arrival of cases was the time mentioned in medico-legal register.

It was observed that minimum cases were reported at night time i.e. 12 a.m. to 6 am (11.36%). It was also observed that maximum numbers of cases were reported between 12 p.m. to 12 a.m. (70.84%) in comparison to 12 am to 12 p.m. (29.16%). (Table 4)

In our study maximum number of cases registered in casualty were in November (17.05%) followed by July (12.50%). Minimum number of cases was reported in January (3.41%). (Table 5) This study also showed that maximum cases reported in Rainy season (38.64%) followed by winter (34.85%) as compared to summer (26.52%). (Table 6)

### **Discussion:**

Present study showed that maximum cases reported to casualty were RTA. This finding was consistent with other studies. [1, 2, 6-8, 10, 11] Malik Y [3] and Yadav A [4] studies observed that maximum cases reported to casualty were of poisoning which differ to our study. It may be because both medical institutes are situated in rural area with most of the people involved in agriculture related activities with more accessibility to pesticides in their studies.

Hussain SN [5] study also showed maximum number of case reported to casualty were of burn which was differ to our study because at Akola Govt. Medical College all medico-legal cases reported to casualty and

also due to fact that there are very few private burn unit in Akola and surrounding district so that all such cases report to casualty of Akola Govt. Medical College.

In our study maximum numbers of cases reported to casualty were from age group 21-30 years (30.68%) followed by 31-40 years (21.59%) and 11-20 years (21.59%), similar to other authors studies. [2-5, 9-11] This may be due to fact that individual of these age group lead more active life, involved more in outdoor, sports and recreation activities and take risk for work, which leads to more injuries and accidents among these group.

In our study male (81.44%) outnumbered female (18.56%) as seen in others. [2-5, 9-11] This is because males are more involved in outdoor activities so they are more vulnerable to accident or injuries.

Present study showed that maximum number of medico-legal cases reported to casualty between 12 p.m. to 6 p.m. (35.61%) because in this time of day most of people are maximally involved into their activities.

This is similar with the study of Garg V [2], Gupta B [7] and Mahesh & Rahul. [10] As the day progress frustration of person was increased and the temperature and humidity level of environment was also high during this time period of day. [10] This study also showed that minimum number of medico-legal cases reported to casualty between 12 am. to 6 am.(11.36%). [10]

Our study showed that maximum number of medico-legal cases reported to casualty were in month of November (17.05%) followed by July (12.5%). This is differ with the study of Mahesh & Rahul [10], Garg V [2] and Hussian S.N [5], their studies reported maximum number of cases were noted in to the month of October and September. Discrepancies may be due to fact that later studies were conducted in rural setup where people are more involved in agricultural activities.

In this study maximum number of medico-legal cases were reported during Rainy season (38.64%), followed by winter (34.85%) and summer season (26.52%).

Garg V [2] and Hussian SN [5] studies showed similar result in respect of Rainy season but differ in winter and summer season. Reason of difference is that our Medical College is situated near Bareilly-Nainital Highway and in winter season there is dense fog which was responsible for RTA cases. That was the mean reason in our study number of cases in winter was grater then summer.

**Conclusions & Recommendations:**

The casualty department of any hospital is not only deal medical and surgical emergencies but also carry out legal responsibilities to examine documentation and certify medico-legal cases, this puts a lot of burden on casualty department and on first contact doctor, most of time they are MBBS only. The doctor those are involved in handling medico legal cases need to be more trained.

Casualties of Medical Colleges have lot of exposure of medico legal cases, so hospital has the need for round the clock availability of Forensic experts. Most of the time first contact doctor in casualty is MBBS only.

They are not expert in handling medico-legal cases so we focus to thing to demand increases in time in practical training of students during MBBS in the curriculum. The 15 days posting under Forensic Medical Department during internship should be mandatory for better exposure to medico legal cases.

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**Table 1: Profile of Medico-Legal Cases**

Types of medico-legal cases	cases (N)	Percentage (%)
Injury by self	01	0.38
Firearm	02	0.76
RTA	170	64.39
Thermal	04	1.52
Violent Asphyxia	03	1.14
Sexual offences	01	0.38
Assault	05	1.89
Fall from Height	10	3.79
Trauma by Animal	01	0.38
Poisoning	47	17.80
Accidental	08	3.03
Trauma by train	06	2.27
Brought Dead	06	2.27
Total	264	100

**Table 2: Age Wise Distribution**

Age (years)	Cases (N)	Percentage (%)
0-10	18	6.82
11-20	57	21.59
21-30	81	30.68
31-40	57	21.59
41-50	28	10.61
51-60	14	5.30
61 to above	09	3.41
Total	264	100

**Table 3: Sex Wise Distribution**

Sex	Medico legal cases	Percentage (%)
Male	215	81.44
Female	49	18.56

**Table 4: Time of Arrival at Casualty**

Time	Cases	Percentage (%)
6 am -12 pm.	47	17.80
12pm -6 pm.	94	35.61
6pm. -12 am.	93	35.23
12am. -6 am.	30	11.36
Total	264	100

**Table 5: Month wise Distribution**

Months	Medico legal cases	Percentage (%)
January	9	3.41
February	19	7.20
March	17	6.44
April	18	6.82
May	16	6.06
June	19	7.20
July	33	12.5
August	17	6.44
September.	21	7.95
October	31	11.74
November	45	17.05
December	19	7.20
Total	264	100

**Table 6: Seasonal Distribution**

Seasons	cases	Percentage (%)
Summer(March- June)	70	26.52
Rainy(July-October)	102	38.64
Winter (November-February)	92	34.82
Total	264	100