

**Study of COVID-19 Impact on Medico Legal Cases Registered at Mediciti Hospital, Ghanpur Village, Medchal Mandal, Telangana.****Rathod Vinayak<sup>1</sup>, Sanjana Goud Teegala<sup>2</sup>, Sandeep Battilu<sup>3</sup>**<sup>1</sup>Assistant Professor, Department of Forensic Medicine and Toxicology, Mediciti Institute of Medical Sciences, Ghanpur Village, Medchal Mandal, Telangana 501401,<sup>2,3</sup>MBBS, Mediciti Institute of Medical Sciences, Ghanpur Village, Medchal Mandal, Telangana 501401.

Received: 09-02-2023 / Revised: 14-03-2023 / Accepted: 05-04-2023

Corresponding author: Dr. Rathod Vinayak

Conflict of interest: Nil

**Abstract****Background and Objectives:** In every tertiary care hospital, casualty deals with the emergency cases of which the majority are Medico legal cases. The knowledge about the incidence of Medico legal cases is important to recognise the socioeconomic burden. The present study was conducted to scrutinize different Medicolegal cases at the emergency department of Mediciti Hospital, Medchal. The idea of the study was to find out frequency of several types of medico legal cases at casualty of Mediciti Hospital, Medchal.**Materials and methods:** It was a record based cross sectional study in which all the MLC cases registered in MLC record book from March 2020-March 2021 were analyzed. The data was collected on age, sex, type of Medico legal cases, road traffic accidents, mode of occurrence, month-wise distribution of medico legal cases and the time of occurrence. Results were expressed in numbers and percentages.**Results:** Out of all 355 registered medico legal cases, of which 258(73.2%) were males and 94(26.76%) were females. Maximum cases were from the age group of 20-29 years i.e., 127(43.09%). Majority of the MLC's registered we are due to road traffic accidents 144(39.7%) followed by Assault 49(13.8%), falls-43(12.7%), poisoning-43(12.1%), and injury at workplace-43(12.1%), accidental-14(3.9%), snake bite-8(2.2%) and others (7.4%).**Conclusion:** The present study shows RTAs account for a major part of MLCs. By proper education and training of safety measures among public decreases the cases. Enforcement of strict laws reduces the incidence of road traffic accidents. And also, strict laws should be amended to reduce the incidence of Assault.**Keywords:** Assault, Injuries, Medico legal cases, Road Traffic Accidents.

This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.

**Introduction**

Medicolegal cases constitute the majority of casualty cases in a hospital. A Medicolegal case is a case of injury or illness where the attending doctor, after eliciting history and examining the patient, thinks that some investigation by law

enforcement agencies is essential to establish and fix responsibility for the case in accordance with the law of the land[1]. Injury is defined under Sec. 44 I. P. C. as any harm, whatever illegally caused to any person in body, mind, reputation or

property [2]. Medicolegal cases form a major component of emergency brought to the casualty of all tertiary care hospitals.[3] Documentation of medicolegal cases is an integral aspect for the prevention of preventable casualties in future and to study the burden of the medicolegal cases in area.[4] Road traffic accidents have been increasing at an alarming rate throughout the world<sup>5</sup>. Despite the documentation, injuries are still not recognized as a major public health problem in our country.[5] The present study was conducted to find out the different categories of medicolegal cases and characteristics of the victims documented at the emergency department of Mediciti Hospital, Medchal[6]

### Aim & Objectives

1. To find out the frequency of various types of medicolegal cases at Emergency department of Mediciti hospital, Medchal.
2. To analyze the age-sex distribution of the medicolegal cases in Mediciti Hospital, Medchal

### Materials and Methods

#### Study Design:

It is a retrospective hospital medical record based observational study.

**Sample Size:** Total of 355 registered MLCs were studied from March 2020 to March 2021.

**Data Collection:** A pre – designed proforma was used to note the additional information like demographic profile, Marital status, Residence, history of the case, mode of injury, occupation, date and time of incidence, date and time of admission, date of discharge, duration of hospital stay and condition on discharge. The collected data was analyzed and depicted in form of tables by using similar studies. Ethical approval letter was taken from Local Ethical Committed of the institution.

**Inclusion Criteria:** All the cases registered as medicolegal in the MLC record register of the emergency department of Mediciti Hospital, Medchal are included in the study.

**Exclusion criteria:** Cases which are not medicolegal cases and cases in which history incomplete were excluded from this study.

### Observation and Results

**Table 1: Age wise distribution of Medicolegal cases**

Age Group (In years)	Frequency	Percentage
0-9	12	3.38%
10-19	29	8.16%
20-29	157	43.09%
30-39	80	22.53%
40-49	35	9.85%
50-59	23	6.47%
60-69	10	2.81%
70-79	7	1.97%
80-89	0	0
90-99	0	0
unknown	2	0.56%
Total	355	100%

Table 1 shows the victims of age group 20-29 years form the majority of cases- 157(43.09%), followed by 30-39 years -80(22.53%).

**Table 2: Sex Distribution of cases**

Sex	Frequency	Percentage
Male	260	73.23%
Female	95	26.76%
Total	355	100%

From Table 2 Males (73.23%) are more commonly involved as compared to Females (26.76%).

**Table 3: Distribution of cases according to Type of medicolegal case**

History of the case	Number	Percentage
Falls	43	12.10%
RTA	144	39.70%
Poisoning	43	12.10%
Injury at workplace	43	12.10%
Assault	49	13.80%
Snake bite	8	2.20%
Burns	5	1.40%
Dog bite	6	1.60%
Hanging	1	0.28%
Suicidal cuts	1	0.28%
Electric shock	1	0.28%
Others	14	3.90%
Total	355	100%

Table 3 shows the distribution of the cases according to the type of medicolegal case. In the present study road traffic accidents form a major part of the cases- 144(39.7%), followed by assault - 49(13.8%) and falls, poisoning, injury at workplace have equal number of cases I.e., 43(12.7%).

**Table 4: Distribution cases according to mode of occurrence**

Mode of occurrence	Frequency	Percentage
Accidental	257	72.30%
Assault	49	13.80%
Suicidal	49	13.80%
Total	355	100%

Table 4 shows that, for most of the cases mode of occurrence was by accidental- 257(72.3%) followed by suicidal and assault – 49(13.8%) each.

From table 5 it is seen that most of the medicolegal cases occur during winter season-114(32.1%) followed by summer and autumn –109(30.7%) and 97(9.8%) respectively and least during rainy season.

**Table 5: Season wise distribution of cases**

Season	No of cases	Percentage
Winter	114	32.10%
Summer	109	30.70%
Rainy	35	9.80%
Autum	97	27.30%
Total	355	100%

## Discussion

Medicolegal cases represent the major group of all the emergencies presented to the emergency department of any hospital. The social, demographic, and epidemiological transition due to rapid urbanization, mechanization and industrialization has augmented the frequency of such cases.[7]

In the present study a total of 355 MLCs were reported to the emergency department of a Mediciti hospital in Medchal during the period of 1st March 2020 to 31st March 2021.

The present study revealed that the maximum no. of cases were of RTA – 144 cases (39.7%). This finding is in consistence with the studies conducted by Garg V,[8] Haridas SV[9] Saxena A[10] Timsinha S.[11] RTA 's were followed by Assault – 49 cases (13.8%), Poisoning, Falls, Injury at work place-43 cases (12.1%) each, Snake bite - 8 cases (2.2%), Dog bite - 6 (1.6%), Burns – 5 (1.4%), and Others – 14 cases (3.9%).

RTAs are increasing at an alarming rate due to the increasing number of vehicles, poor road conditions, negligence regarding traffic rules and the safety policies.

In our study, Male victims – 260 (73.23%) outnumbered Female victims – 95 (26.76%). This is in consistence with the study conducted by Hussain SN. 12 Males are more vulnerable to accident or injuries contributing to majority of MLCs

In the present study we observed that the age group 20-29 years (43.09%) was most involved in medicolegal cases, followed by 30-39 years (22.53 %). Similar findings were reported by Garg V,[8] Malik Y,[13] Marri MZ[14] Hussain SN [12] as it is the most working age group in the society and is most active phase of life, physically and mentally.

Season wise distribution of cases revealed that the majority i.e. (32.1%) presented during Winter season. And as the data collected for the study was during the

second wave of covid 19, we can see the decline in the emergency cases presenting to the emergency department in the months of December 2020 to February 2021.

## Conclusion

This study shows the decline in emergency cases due to the impact of COVID 19. And the burden of medicolegal cases in a Tertiary Care hospital needs proper documentation and treatment in case of MLCs. The basic preventive measures to overcome the burden of MLCs include education, uniform enforcement of law and order, pre-hospital care, safety standards training, etc. are important. This study helped to know the trend of occurrence of cases in the area.

## References

1. Dogra TD, Rudra A. Lyon's Medical Jurisprudence & Toxicology. 11th Ed. Delhi Law House. 2007: 36
2. Justice YV Chandrachud and VR Manohar. The Indian Penal Code. 31st Enlarged Ed. Wadhwa and Company Nagpur. 2006:228.
3. Aggarwal A. Textbook of Forensic Medicine and Toxicology. 1st ed. Himachal Pradesh: Avichal Publishing Company; 2014
4. Malik Y, Chawla R, Sharma G, Malik P, Singh R, Tripathi A et al. Profile of Medico-legal Cases in Casualty of a Rural Medical College of Haryana. J Indian Acad Forensic Med 2013; 35(4): 367-8.
5. Singh Y.N, Bairagi KK and Das KC. An Epidemiological Study of Road Traffic Accident Victims In Medicolegal Autopsies. JIAFM. 2005; 27(3):166-9.
6. Singh D. Spectrum of Unnatural Fatalities in The Chandigarh Zone of North-West India – A 25 Year Autopsy Study from A Tertiary Care Hospital. J Clin Forensic Med. 2003;10(3):145-52.
7. Tajammul N, Chaudhry TH, Hanif S, Bhatti MA. Profile of medico legal

- cases at Jinnah Hospital Lahore. Ann King Edward Med Uni. 2005; 11(3):332-5.
8. Garg V, Verma SK. Profile of medico legal cases at Adesh institute of medical Sciences and research Bhatinda Punjab. J Indian Acad Forensic Med. 2010; 32(2):150-2.
  9. Haridas SV, Pawale DA. A Retrospective Study of Pattern of Clinical Medico-Legal Cases Registered at Tertiary Health Care Centre in Kolhapur District. J Forensic Med, Sci law. 2014;23(2).
  10. Saxena A, Kumar V, Chaudhary SR, Singh J, Awasthi S. Pattern of Medico-legal Cases in the Casualty Department of A Teaching Hospital, Bareilly, Uttar-Pradesh. J Indian Acad Forensic Med. 2015;37(4):338- 40.
  11. Timsinha S, Manjarikar S, Baral MP, Ranjitkar M. Profile of Pattern of Medico-Legal Cases in the Casualty of a Teaching Hospital of Western Region of Nepal. J Indian Acad Forensic Med. 2015;37(1):46-9.
  12. Hussaini SN, Kulkarni CS, Batra AK. Profile of Medico-Legal Cases Coming to Casualty of Government Medical College, Akola. J Forensic Med, Sci Law. 2013;22(2).
  13. Malik Y, Chawla R, Sharma G, Malik P, Singh R, Tripathi A et al. Profile of Medico-legal Cases in Casualty of a Rural Medical College of Haryana. J Indian Acad Forensic Med. 2013; 35(4): 367-8.
  14. Marri MZ, Baloch U. Frequency and pattern of medico legal cases reported at Sandeman Civil Hospital Quetta Baluchistan- 1year study. Med Forum Monthly. 2012;23(9):50-4.
  15. Shyam Sundar Mina, Srikanta Basu, Virendra Kumar, Deepika Mina. Profile of Medico-legal Cases registered at a tertiary care children's hospital, Delhi. Int J Contemporary Pediatr. 2017; 4(4): 1345-1348
  16. Qudsia., et al. Physical Trauma-A leading cause of Medicolegal cases at DHQ Abbottabad. J Ayub Med Coll Abbottabad. 2010;22(2):156-9.
  17. Yadav A, Singh NK. Pattern of Medico-legal Cases in rural Area of Faridabad, Haryana. J Indian Acad Forensic Med. 2013;35(1):60-2.
  18. Siddappa SC, Datta A. A Study Pattern of Medico-legal Cases Treated at a Tertiary Care Hospital in Central L Karnataka. Indian J Forensic Comm Med. 2015;2(4):193-97.
  19. Abhisek Yadav. Pattern of Medicolegal cases in rural Haryana. J Indian Acad Forensic Med. 2013;35(1)60-2.
  20. Waghmode AH, Bodkha P, Chavan RR. Study of medico-legal cases admitted at tertiary care hospital. IP Int J Forensic Med Toxicol Sci. 2020;5(1):1-4.