

Pattern of Medicolegal Cases Reported at a Tertiary Care Centre, Udaipur, Rajasthan: A Retrospective Study

Pranav Kumar¹, Pooja Singh², Shantilal Pargi³, Khusboo Kumari⁴, Anis Ahmed⁵

¹Associate Professor, Department of Forensic Medicine, ²Assistant Professor, Department of Pharmacology, ⁴Postgraduate Student, Department of Biochemistry, ⁵Professor and Head, Department of Forensic Medicine, Pacific Institute of Medical Sciences, Udaipur, ³Associate Professor, Department of Forensic Medicine, Ananta Institute of Medical Science & Research Center, Rajsamand

How to cite this article: Pranav Kumar, Pooja Singh, Shantilal Pargi et. al. Pattern of Medicolegal Cases Reported at a Tertiary Care Centre, Udaipur, Rajasthan: A Retrospective Study. Medico Legal Update 2023;23(3).

Abstract

A medicolegal case is a case of injury or illness where the attending doctor, after taking history and clinical examination of 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. It is a responsibility of a registered medical practitioner to judge each case properly and in doubtful cases, it is better to inform the police. This saves the doctor from unnecessary and needless allegations later. This study was carried out retrospectively on Pattern of Medicolegal Cases reported to casualty department of Pacific Institute of Medical Sciences, Udaipur, a tertiary care teaching hospital from 1st January 2022 to 31st December 2022. The main objectives of the study were to highlight the pattern of medicolegal cases. Data was collected and analyzed. Out of 297 cases studied, RTA constitutes a majority of cases (61.95%), followed by poisoning (15.83%), trauma by animal (8.08%) and fall from height (4.04%). 241 (81.15%) were males and 56 (18.85%) were females. The majority of the victims belonged to 21-30 years of age 91 (30.64%). The rural victims constituted 245 (82.50%) compared to the urban counterparts, 52 (17.50%). Maximum number of medicolegal cases reported to casualty between 12 pm - 6 pm, 108 (36.36%). Most of the cases were reported during rainy season 117 (39.39%). The study concludes that the burden of medicolegal cases demands exact fixation of MLC, proper documentation, report submission, prevention and its rational management.

Key Words: Medicolegal cases (MLC), Road Traffic Accident (RTA), Pattern, Casualty department.

Introduction

A medicolegal case is a case of injury or illness where the attending doctor, after taking history and clinical examination of 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. It is the

responsibility of a registered medical practitioner to judge each case properly and in doubtful cases, it is better to inform the police. This saves the doctor from unnecessary and needless allegations later.¹

The casualty department is the backbone of every hospital. It deals not only with medical and surgical emergencies round the clock but also deals with a

Corresponding Author: Pranav Kumar, Associate Professor, Department of Forensic Medicine, Pacific Institute of Medical Sciences, Udaipur, Rajasthan.

Email ID: docpranav3@gmail.com

Mobile: 9045840598

huge number of medicolegal cases which comprises accidents, assaults, burns, poisoning, sudden deaths, operative deaths, suicide, homicide, any suspicious deaths and cases referred from police or court.²

The pattern of medicolegal cases is of importance for those, who are directly or indirectly concerned with law and order, who treat them and also who are bothered with etiology, manner of causation and their documentation.

The present study attempts to highlight the pattern of medicolegal cases reported at a tertiary care centre, PIMS, Udaipur, Rajasthan. The result of this study could be useful in interpreting the pattern of medicolegal cases and then strategic planning can be made accordingly for the benefit of the community and people at large in this region.

Material and Method

The present study was conducted in the casualty department of Pacific Institute of Medical Sciences, Udaipur, a tertiary care teaching hospital from 1st January 2022 to 31st December 2022. During this period a total of 297 medicolegal cases recorded in the medicolegal register of the hospital were included in the study. This study is a retrospective study, and the main objective of the study was to highlight the pattern of medicolegal cases. Information regarding various parameters of the study were obtained in standardized proforma from medicolegal register and hospital record of individual patient. The relevant data thus obtained was analyzed and observations were presented in tables and compared with other studies.

Inclusion Criteria: All cases which were registered as medicolegal case and entered in medicolegal register in casualty department of Pacific Institute of Medical Sciences, Udaipur.

Exclusion Criteria: Any medicolegal case who admitted before and after the start of this study.

Observations and Results

In this one-year retrospective study from 1 January 2022 to 31 December 2022, a total number of 297 medicolegal cases were reported and studied. Out of all cases, maximum number of cases were RTA (61.95%) followed by poisoning (15.83%), trauma by animal (8.08%) and fall from height (4.04%). (Table 1)

Present study showed that out of total cases reported in casualty, male cases (81.15%) predominant over female cases (18.85%). (Table 2) It is also observed that maximum cases were between 21-30 years of age (30.64%) followed by between 11-20 years (21.55%), 31-40 years (21.55%). Number of medicolegal cases reported between the age, 11-20 year and 31-40 year were same (21.55%). Minimum cases (4.04%) were reported at age 61 & above years. (Table 3)

In our study, also observed that more numbers of victims belong to rural habitat (82.50%) as compared to urban habitat (17.50%). (Table 4) Maximum number of cases were reported between 12 p.m. to 6 p.m. (36.36%) followed by 6 p.m. to 12 a.m. (36.03%), 6 a.m. to 12 p.m. (16.84%). Time of arrival of cases was the time mentioned in medicolegal register. It was observed that minimum cases were reported between 12 a.m. to 6 am (10.77%). (Table 5)

In our study maximum number of cases registered in casualty were in rainy season (39.39%) followed by winter season (36.03%). Minimum number of cases reported in summer season (24.58%). (Table 6)

Table 1: Patterns of Medicolegal Cases

Types of Medicolegal Cases	Cases (N)	Percentage (%)
Injury by self	3	1.01
Firearm injuries	2	0.67
RTA	184	61.95
Thermal injuries	6	2.02
Violent asphyxia	4	1.35
Sexual offences	0	0.0
Assault	7	2.35
Fall from height	12	4.04
Trauma by animal	24	8.08
Poisoning	47	15.83
Brought dead	8	2.69
Total	297	100

Table 2: Sex wise Distribution

Sex	Medico legal cases (N)	Parentage (%)
Male	241	81.15
Female	56	18.85
Total	297	100

Table 3: Age Wise Distribution

Age(years)	Causes (N)	Percentage (%)
0-10	20	6.74
11-20	64	21.55
21-30	91	30.64
31-40	64	21.55
41-50	30	10.10
51-60	16	5.38
61 & above	12	4.04
Total	297	100

Table 4: Rural/Urban Wise Distribution

Habitation	Number of cases	Percentage (%)
Rural	245	82.50
Urban	52	17.50
Total	297	100

Table 5: Time of Arrival at Casualty

Time	Cases (N)	Percentage (%)
6 am-12 pm	50	16.84
12 pm-6 pm	108	36.36
6 pm-12 am	107	36.03
12 am-6 am	32	10.77
Total	297	100

Table 6: Season Wise Distribution

Season	Cases (N)	Percentage (%)
Summer (March-June)	73	24.58
Rainy (July-October)	117	39.39
Winter (November-February)	107	36.03
Total	297	100

Discussion

In the present study, a total of 297 medicolegal cases were reported to casualty department of a tertiary care hospital, PIMS, Udaipur. Out of which, maximum number of cases reported to casualty were Road Traffic Accidents, 184 (61.95%) followed by Poisoning 47 (15.83%) which is consistent with other studies^{3,4,7-10} reason being hilly area, poor road

condition, not-following the traffic rules, rash driving and increasing population day by day.

Malik Y. et. al.⁵ & Yadav A. et. al.⁶ studies showed that maximum cases reported to casualty were of poisoning, which differs from present study, reason may be these two studies conducted in rural area, where most of the people are farmer, uses pesticides in their agricultural activities and easy availability of pesticides among them makes them prone.

In our study, it was observed that most of the victims were male 241 (81.15%) than female 56 (18.85%) which is consistent with other Studies^{3-6,9,10} reason being males are more exposed to outdoor activities, their dominance in the society and they have to work outside to earn daily bread, while females usually stay at home.

In our study most victims 91 (30.64%) were from age group 21-30 year followed by 31-40 year 64 (21.55%) and 11-20 Year 64 (21.55%) which is similar to other studies. (3-6,9,10) the reason being that they are active, economically productive and involved in outdoor activities.

In this study, the majority of the medicolegal cases comprised of rural population 245 (82.50%) as compared to the urban 52 (17.50%) which is consistent with other studies.^{6,11} reason being our medical college is situated in rural area, hence patients from rural area are more than the patients residing in urban area. As majority lives in rural areas having low level of education, poor condition of basic amenities and land disputes that run into generations makes them prone.

In this study, maximum number of medicolegal cases reported to casualty between 12 pm - 6 pm, 108 (36.36%) reason behind most of the people involved in outdoor activities during this period of time and minimum reported between 12 am - 6 am, 32 (10.77%) during this time people usually remain asleep. which is consistent with other studies.^{3,4,7,9}

Season wise distribution of medicolegal cases revealed that majority i.e. 117 (39.39%) presented during rainy season, followed by winter 107 (36.03%) and summer 73 (24.58%) which is consistent with other studies^{3,4} reason being hilly area with narrow gaze road, become slippery with altered visibility

during rainy season.

Conclusion

In our study, Rural, Young age (21-30 yrs) males are commonly involved, and Road traffic accidents are one of the leading pattern among medicolegal cases followed by poisoning and trauma etc. comprising a considerable public health problem. The magnitude of problem needs to be addressed and comprehensive approach for preventive strategies ought to be developed by public health authorities.

The emergency department of any medical college not only treats the patients but also carry out legal duties like examination, documentation and reporting of medicolegal cases. which puts a lot of burden on the emergency department and the duty doctor, mostly they are MBBS only, not an expert in forensic medicine, need to be trained in handling medicolegal cases.

The duty doctor should be well acquainted with the guidelines when dealing with medicolegal cases. Reorientation courses and Continuing Medical Education programs of casualty duty doctor are recommended for getting acquainted with the management & handling of medicolegal cases.

A uniform Medicolegal Manual must be formulated by National Medical Commission (NMC) i.e "How to Handle Medicolegal Cases."

RTA cases can be reduced by implementing strict road traffic rules, improving the road condition by concerned authorities, at the same time users of the road and vehicles also realize their responsibility in following traffic rules.

Conflict of Interest: Nil

Source of Funding: Self-funded.

Ethical Permission: Institutional ethical committee.

References

1. Dogra TD, Rudra A. Lyon's Medical Jurisprudence & Toxicology. 11th ed. New Delhi: Delhi Law House; 2005. p. 367
2. Aggarwal A. Textbook of Forensic Medicine and Toxicology. 1st ed. Himachal Pradesh: Avichal Publishing Company; 2014.
3. Atul S, Vinod K, Chaudhary SR. Pattern of Medicolegal Cases in the Casualty Department of A Teaching Hospital, Bareilly, Uttar-Pradesh. J Indian Acad Forensic Med. Oct-Dec 2015;37(4): 338-340.
4. 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):150-152.
5. Malik Y, Chawla R, Sharma G, Malik P, Singh R, Tripathi A. Profile of Medico-legal Cases in Casualty of a Rural Medical College of Haryana. J Indian Acad. Forensic Med. 2013; 35(4):367-368.
6. Yadav A, Singh NK. Pattern of Medico-legal Cases in rural Area of Faridabad, Haryana. J Indian Acad. Forensic Med.2013; 35(1): 60-62.
7. Gupta B, Singh S, Singh H, Sharma RK. A one Year Profile of Medico-legal Cases at Tertiary Care Hospital in Western Uttar Pradesh. Medico-LegalUpdate.2012; 12(2):30-35.
8. Bhullar DS, Aggarwal KK. Medico Legal Diagnosis & Pattern of Injuries with Sharp Weapons, JIAFM 2007; 29(4):112-114.
9. Mahes M, Trangadia, Rahul A. Mehta, Nita H. Rada, B. D. Gupta. Profile of Medico-Legal Cases in Tertiary Care Hospital in Jamnagar, Gujarat: Retrospective Study of One Year. Journal of Research in Medical and Dental Science. 2014; 4(2):57-62.
10. Haridas SV, Pawale DA. A Retrospective Study of Pattern of Clinical Medico-Legal Cases Registered at Tertiary Health Care Centre in Kolhapur District. J of Forensic Medicine, Science and law. 2014; 23 (2)
11. Manoj KK, Jyotish G, Tulsi M. Profile of Medicolegal Cases at Rajendra Institute of Medical Sciences, Ranchi, Jharkhand from 2014-2015. IOSR Journal of Dental and Medical Sciences. Nov 2016; 15 (11):12-14.