

Pattern of Medico-legal Cases Treated at a Tertiary Care Hospital – Retrospective Study

Chandrashekar J¹, K H Thippeswamy²

Abstract

Background: Medico legal cases are essential component of medical practice. These cases differ among regions based on socio-economic status, cultural diversities, and capability of law enforcing agencies. The present study was undertaken to study the profile of medico legal cases. **Aims and Objectives:** To know the pattern and profile of medico legal cases in a tertiary care hospital. **Materials and Methods:** This is a retrospective study in which 460 medico legal cases were studied. These cases attended in casualty department, East Point College of Medical Science and Research Centre from 1st January 2016 to 31st December 2016 and the information was collected with respect to their age and sex, time of occurrence, manner of poisoning, cause of medico legal case. **Results:** The males were dominant group (72.16%). The most of the victims were of the age group 21-40 years (53.04%). The road traffic accident cases had the highest incidence of medico legal cases (45.65%), followed by poisoning (26.08%). More number of cases were reported in between 12 p.m. to 6 p.m. (35.43%) and the manner of injuries were accidental in nature in majority of the cases (60.08%). **Conclusion:** The present study showed that the maximum number of medico legal cases are accidental in nature, seen more among males and young age group. Road traffic accidents are one of the foremost causes of medico legal cases. The emerging medico legal cases are neglected epidemic in most of the developing countries comprising a considerable public health problem.

Keywords: Medico legal, tertiary centre, Road traffic accident, Assault, poisoning.

© 2018 Karnataka Medico Legal Society. All rights reserved.

Introduction:

A medico legal case 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 land.¹

Medico legal cases form a major component of emergencies brought to casualty of all

teaching hospitals, which is mainstay to deal with all such cases.²

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 huge number of medico-legal cases which comprises accidents, assaults, burns, poisoning, sudden deaths, operative deaths, suicide, homicide, any suspicious deaths and cases referred from police or court.³

The reporting of medico-legal cases is imperative to recognize the burden of medico-legal cases, calculate their risk and for the avoidance of preventable casualties in future.⁴

The present study attempts to highlight the pattern and profile of medico-legal cases

¹Assistant Professor,² Associate Professor, Department of Forensic Medicine & Toxicology, East Point College of Medical Science & Research Centre, Bengaluru-560049, Karnataka, India

Correspondence: Dr. Chandrashekhar J
Email- chandudrrex@gmail.com
Contact- 9620824624

Received on 30.10.2017

Accepted on 22.12.2017

presenting in casualty department and also provides vital data for administrators, health officials, philanthropists, social workers, NGOs to use strategies in order to reduce these incidences.

Materials and Method:

This study was a retrospective hospital based observational study. Four hundred and sixty cases categorized as Medico-Legal Case were studied from the casualty records from Jan 2016 to Dec 2016.

Related general information like the age, sex, types of medico-legal cases, occurrence of the incident, manner of poisoning, were collected from the medico-legal case register maintained in the hospital. Other parameters of case were studied from the case sheets of respective medico legal cases.

The relevant details were analyzed, grouped, and tabulated by taking various parameters like age, sex, types of medico legal cases, manner of poisoning, occurrence of the incident for obtaining observations.

Results:

Out of 460 medico legal cases studied, 76.52% (352) were male and 23.47% (108) were females (Table 1).

The different types of medico legal cases managed in the casualty is shown in Table 2.

Table 1: showing age and sex distribution of MLC cases

Age in years	Male	Female	Total	% of total
1-20	84	32	116	25.21
21-40	188	56	244	53.04
41-60	52	16	68	14.78
61 & above	28	04	32	06.95
Total	352 (76.52%)	108 (23.47%)	460	

Maximum number of patients (53.04%) belonged to age group 21-40 years, followed by patients (25.21%) who belonged to 01-20 years and patients (14.78%) belonging to 41-

60 year age group, 6.95% patients belonged to age group 61 years and above.

Table 2: showing cause of medico legal case

Type of medico legal case	Male	Female	Total	% of total
Road traffic accident	182	28	210	45.65
Poisoning	80	40	120	26.08
Assault	52	08	60	13.04
Fall	24	16	40	8.69
Snake bite	06	04	10	2.17
Hanging	02	06	08	1.73
Electrocution	05	03	08	1.73
Insect bite	01	03	04	0.86

In relation with time of occurrence of medico legal cases, maximum cases were from 12 pm. to 6 pm, 163 cases (35.43%), followed by 121 cases (26.30%) from 6 pm to 12 am and 103 cases (22.39%) from 6 am to 12 pm. The least affected time slot was 12 am to 6 am, 73 cases (15.86%) (Table 3).

Most common manner of poisoning was suicidal, 112(93.33%) followed by accidental, 8(6.66%) (Table 4)

Table 3: Distribution of medico legal cases according to time of incident and sex

Time of Incident	Male	Female	Total	% of total
12am to 6am	50	23	73	15.86
6am to 12pm	81	22	103	22.39
12pm to 6pm	115	48	163	35.43
6pm to 12 am	106	15	121	26.30
Total	352	108	460	

Table 4: Showing manner of poisoning

Manner of poisoning	Number	% of total cases
Suicidal	112	93.33
Accidental	08	6.66
Homicidal	00	0

Discussion:

The social, demographic and epidemiological transition due to rapid urbanization,

mechanization and industrialization has augmented the frequency of such cases.⁵

In the present study a total of 460 medico legal cases reported to casualty department of a tertiary care hospital of rural Bangalore. It was observed that most of the cases were of male (76.52%). Our findings were consistent with the study conducted by Trangadia MM et al (males 72.77%).⁶ The male predominance is due to the fact that males were active in various day to day outdoor activities and other social activities as per customs. Also male by nature indulge in more violent activities as compared to female.

It was observed that most of the cases were between age group 21-40 years (53.04%) followed by 1-20 years (25.21%) and 41—60 years (14.78%) least number of cases were seen among age group more than 60 years (6.95%). Similar results were also obtained by Hussaini SN et al⁷, Yadav et al¹⁰, Trangadia et al⁶. This can be due to the fact that this age group peoples were more active, and productive involve themselves in outdoor activities so they are more prone to accidents. In the present study road traffic accidents constituted 45.65%, poisoning constituted 26.08%, assault constituted 13.04%, Fall from height constituted 8.69%. The findings of our study are consistent with study by Garg et al¹, Benomran et al⁸ and Gupta et al⁹. Poor road condition prevailing for a decade in both urban and rural areas, increasing population in the city day by day, ignorance regarding the law contributes maximum number of road traffic accidents.

Maximum incidence of medico legal cases took place in between 12 p.m. to 6 p.m. because in this time of day people are maximally involved into their activities. This is consistence with the study of Garg et al¹ and Gupta et al⁹. 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. Minimum incidences of medico legal cases were seen between 12 am to 6 am time period because people usually remain asleep.

In the present study majority of the medico legal cases were accidental (60.08%) in nature followed by suicidal (26.08%) and assault/homicidal in 13.04% of cases. Our study results are not consistent with the study conducted by Yadav A¹⁰, where assault cases (39.6%) are almost equal to accidental manner (38.1%) of medico legal cases.

In this road traffic accidents form highest number of medico legal cases. The reason being national highway, connecting Kolar. The non-obedience of traffic rules, drink and drive contribute to increase in such incidences. Proper implementation of traffic rules, proper roads, can decrease the number of road traffic accidents. Also proper education of the public about the traffic rules and the consequences of its violation, avoiding drink and drive could reduce the number of such cases. The poisoning cases were found to be the second highest number of medico legal cases and majority of the poisoning patients are from the rural area. The reason could be that the agriculture is major profession in rural Bangalore and this hospital is a tertiary care centre, patients are being referred from the peripheral health centres.

Conclusion:

The present study showed that the maximum number of medico legal cases are accidental in nature, seen more among males and young age group. Road traffic accidents are one of the foremost causes of medico legal cases. The non-obedience of traffic rules and drink and driving contribute to increase in such incidences. Proper implementation of traffic rules, proper roads, can decrease the number of road traffic accidents. Also proper education to the public about the traffic rules and the consequences of its violation, avoiding drink and drive could reduce the number of such cases, road traffic accident case is followed by poisoning cases, Suicidal poisoning cases have a high incidence in rural population. So emergency department should be well equipped with all the antidotes and drugs which are used for the treatment of

agricultural poisons. The doctors are not only involving in treating the patient but also carrying out legal responsibilities to examine, document and certify medico legal cases so the doctors involved in treatment of medico legal cases need to be more trained in this field. Also due to increase in accidents and violence cases, hospitals have the need for round the clock availability of such medico legal experts in sufficient number to deal effectively with such cases.

Conflict of Interest: Nil

Ethical Permission: Obtained

Funding source: None

References:

1. Garg V, Verma SK. Profile of medicolegal cases at Adesh Institute of Medical Sciences and Research, Bathinda, Punjab. *J Indian Acad Forensic Med.* 2010; 32(2):150-2.
2. Timsinha S, Kar SM, 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):46-49. Doi: 10.5958/0974-0848.2015.00010.X
3. Aggarwal A. Textbook of Forensic Medicine and Toxicology. 1st ed. Himachal Pradesh: Avichal Publishing Company; 2014.
4. Sivarajasingam V, Morgan P, Matthews K, Shepherd J, Walker R. Trends in violence in England and Wales 2000-2004: an accident and emergency perspective. *Injury.* 2009;40(8):820-825.
5. Sidappa Sc, Datta A. A study Pattern of Medico-Legal Cases Treated at a Tertiary Care Hospital in Central Karnataka. *Indian J Forensic comm. Med.* 2015;2(4):193-197.
6. Trangadia MM, Mehta RA, Rada NH, Gupta BD. 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; 2(4): 57-62.
7. Hussaini SN, Kulkarni CS, Batra AK. Profile of Medico-Legal Cases Coming to Casualty of Government Medical College, Akola. *Journal of Forensic Medicine, Science and Law* 2013; 22(2).
8. Benomran FA. The Medico-Legal Science in Dubai: 2002-2007. *Journal of Forensic and Legal Medicine* 2009; 16: 332-7.
9. 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-Legal Update* 2012;12(2):30-5.
10. 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.