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A record based study of frequency and pattern of medico-legal cases reported at a tertiary care hospital in Miraj

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ABSTRACT

Background: Medico-legal case (MLC) can be defined as a case of injury or ailment, etc., in which investigations by the law-enforcing agencies are essential to fix the responsibility regarding the causation of the said injury or ailment. Medico-legal cases are an integral part of medical practice that is frequently encountered by medical officers working in casualty. Hence the present study is carried out to find out the frequency and pattern of medico-legal cases reported at a tertiary care hospital and to highlight the vulnerable gender, age, residence and the cause.

Methods: It is a record based cross sectional study in which all the MLC cases registered in MLC record book during a period of 6 months (January 13– June 13) were included. Cases found non medico-legal were excluded. Variables considered were gender, age, residence and cause. Findings were expressed in numbers and percentages.

Results: Total cases were 2350, of which 1866 (79.4%) were males and 484 (20.6%) were females. Maximum cases were from the age group of 21-30 years i.e., 828 (35.2%). 1440 (61.27%) were residents of urban area. Most of the medico-legal cases registered were due to assault (27.2%) followed by medical examination of prisoners(25.9%), road traffic accidents (19.7%), fall (6.9%), snake bite (6.6%), poisoning (4.3%), domestic injuries (4.3%), unknown bite (2.2%), unknown found at railway station (1.6%), brought dead (0.6%), burn (0.2%) & others (0.5%).

Conclusions: Majority of the victims were males, young adults and urban inhabitants. Most common indication for medico-legal cases was assault followed by medical check-up of prisoners and road traffic accidents.

Keywords: Medico-legal cases, Assault, Road traffic accidents, Snake bite, Poisoning

INTRODUCTION

Medico-legal case (MLC) can be defined as a case of injury or ailment, etc. in which investigations by the law-enforcing agencies are essential to fix the responsibility regarding the causation of the said injury or ailment. In simple language it is a medical case with legal implications for the attending doctor where the attending doctor, after eliciting history and examining the patient, thinks that some investigation by law enforcement agencies is essential. ^{1,2} All the medico-legal cases are registered in casualty. Casualty department is very crucial

for any hospital as all the medical and surgical emergencies first report there. Further it serves as an outpatient department after the routine outpatient department hours.

Medico-legal case is an integral part of medical practice that is frequently encountered by medical officers working in emergency department. For such patients, not only treatment, but exhaustive documentation is also mandatory. The on-duty doctor in the casualty department has to first stabilize the patient of any emergency. He is also duty bound to register a particular case as a medico-legal case whenever indicated and has

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to examine the same. In the present study an attempt is made to know the workload of medico-legal cases and their pattern.

The objectives of the study was to assess the frequency and pattern of medico-legal cases reported at a tertiary care hospital and to highlight the vulnerable gender, age, residence and the cause.

METHODS

It is a record based cross-sectional study. It is carried out in the casualty department of a tertiary care hospital in Miraj during the month of September 2013. All the reported MLC cases in the medico-legal case record book for first 6 months (1st January – 30th June) of the year 2013 were included. Cases found as non-medicolegal and those with incomplete entry were excluded. Data was collected in various parameters from medico-legal case register like age, gender, residence, and indication for medico-legal cases.

Inclusion criteria

All the medicolegal cases registered during 1st January 2013 to 30th June 2013 in the medicolegal case record book were included.

Exclusion criteria

Cases found non-medicolegal and those with incomplete entry were excluded.

RESULTS

Total number of medico-legal cases included in the study were 2350 from the record of medico-legal cases from 1st January 2013 to 30th June 2013. Out of 2350 cases, 1866

(79.4%) were males and 484 (20.6%) were females. In the present study, maximum number of cases (828, 35.2%) were from the age group of 21-30 years followed by 23.7% from the age group of 31- 40 years. The individuals of geriatric age group were also involved in the medico-legal cases. For both males and females, maximum cases were from the age group of 21-30 years followed by 31-40 years. It is observed from Table 1 that, the number of males is more than the number of females in each age group. Difference in the percentages of males and females was less in the age group of 1-10 years as compared to other age groups (Table 1).

Maximum (1440, 61.27%) cases were from urban area and rest of the cases i.e. 910 (38.73%) were from rural areas. Most of the cases were registered in the month of May (32 %) & minimum in February (10%). Maximum cases (70 %) were reported during 4 pm to 9 pm.

Most of the medico-legal cases registered were due to assault (27.2%) followed by the routine medical examination for fitness of prisoners and accused for police custody (25.9%), road traffic accidents (19.7%), fall (6.9%), snake bite (6.6%), poisoning (4.3%), domestic injuries (4.3%), unknown bite (2.2%), unknown found at railway station (1.6%), brought dead cases (0.6%) and burn (0.2%). Others group includes the cases of complications due to disease process, suspected illegal abortion etc (Table 2). Figure 1 shows the distribution of medico-legal cases according to the various indications.

We observed that the commonly used weapon for assault was hard and blunt type object (608, 95.0%) followed by sharp edged objects (32, 5.0%). Around 87% cases of the road traffic accidents were on two-wheeler while 4.3% were pedestrians. Out of the total 162 fall cases, 24 (14.8%) were alcoholic. 86.3% of the Poisoning cases were suicidal type (Table 2).

Table 1: Age and gender wise distribution of medico-legal cases.

Variables	Males		Females	5	Total	
Age in years	No.	%	No.	%	No.	%
1-10	46	56.1	36	43.9	82	3.5
11-20	216	79.4	56	20.6	272	11.6
21-30	704	85.0	124	15.0	828	35.2
31-40	434	78.1	122	21.9	556	23.7
41-50	254	75.6	82	24.4	336	14.3
51-60	112	74.7	38	25.3	150	6.4
>60	100	79.4	26	20.6	126	5.4
Total	1866	79.4	484	20.6	2350	100.0

Maximum assault cases were from the age group of 21-30 years (33.1%) followed by 31-40 years (28.4%). Males were more in number (462, 72.2%) than females (178, 27.8%). Males were more than females in each age group except the age group of 1-10 years where all 4 cases were females (Table 3). Out of total assault cases

3.75% were found to be alcoholic, 22.8% of them had head injuries.

572 (93.7%) out of 610 prisoners were males. Maximum cases of prisoners (43.3%) were in the age group of 21-30 years followed by 24.9% in 31-40 years, 13.8% in 41-50

years, 3.9% in 51-60 years and rest of them were above 60 years who were males.

52.8% of the total RTA cases were in the age group of 21-40 years. Around 80% were males. 37.2% of RTA cases had head injuries. 10% of them were found to be alcoholic.

Among the total poisoning cases, 64 (62.7%) were males and 38 (37.3%) were females. Maximum cases (58, 56.9%) were in the age group of 21-30 years all of which

were suicidal poisoning cases. 8 (7.8%) were in the age group of 1-10 years and all of them were accidental poisoning cases.

Among females, majority (36.8%) were assault cases, followed by RTA (30.5%).

Most common cause of MLC in the age group of 1-10 years was poisoning followed by fall. In the age group of 11-20 years most common indication of MLC was RTA. In all other groups, assault was the most common cause.

Table 2: Various indications of medico-legal cases.

S. N.	Indication for Medicolegal o	ases	No. of cases	Percentage (%)
1	Assault	Blunt and hard object (608) Sharp and pointed object (32)	640	27.2
2	Medical Check-Up of prisone	rs	610	25.9
3	Road Traffic Accidents	Pedestrian (20) Two Wheeler (402) 3/4wheeler (40)	462	19.7
4	Fall	Alcoholic (24) Non Alcoholic (138)	- 162	6.9
5	Snake Bite		154	6.6
6	Poisoning	Suicidal (88)	102	4.3
		Accidental (14)		
7	Domestic Injuries	101	4.3	
8	Unknown Bite	51	2.2	
9	Unknown Found At Railway Station	38	1.6	
10	Brought Dead	14	0.6	
11	Burn	4	0.2	
12	Others	12	0.5	
Total			2350	100

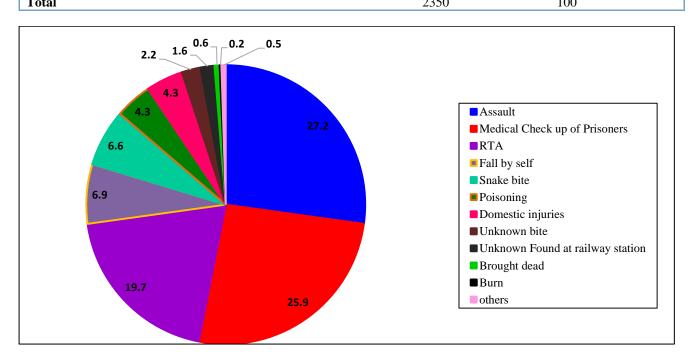


Figure 1: Various indications for medico-legal cases

Gender Age in Males **Females** Total years Count Column N % Count Column N % Count Column N % 1-10 0 0.0% 4 2.2% 4 0.6% 11-20 54 11.7% 16 9.0% 70 10.9% 21-30 160 34.6% 52 29.2% 212 33.1% 31-40 128 27.7% 54 30.3% 182 28.4% 41-50 60 34 94 13.0% 19.1% 14.7% 51-60 26 5.6% 12 6.7% 38 5.9% >60 34 7.4% 3.4% 40 6.2% 6 462 100.0% 178 100.0% 640 100.0% Total

Table 3: Age and gender wise distribution of assault cases.

1838 out of 2350 cases i.e. 78.2% were referred to the specialist department. Maximum cases were referred to Surgery department 1112 (47.3%), followed by 394 (16.7%) cases to Orthopedics Department, 260 (11.2%) to Medicine department and 72 (3.1%) to ENT department. 1230 were referred to single department, 260 were to two departments and 80 were referred to more than 2 departments.

DISCUSSION

Total no. of medico-legal cases reported during 6 months period were 2350, of which majority (1866, 79.4%) were males. Similar findings were reported by Haridas et al, Garg et al, Malik et al, Marri et al and Hussaini et al.³⁻⁷ This is because males are more exposed to outdoor activities as well as disputes in family matters.

Like other studies, present study had also shown the age group of 21-30 years as most commonly involved age group in medico-legal cases, followed by the age group of 31-40 years which is economically productive and also involved in outdoor household activities.³⁻⁷

In the present study we observed that most of the medicolegal cases were due to assault and the age group 21-30 years was most commonly involved. Similar results were observed by Haridas et al, Bhullar et al and Aggarwal et al. 3.8.9 However, in the study by Malhotra et al 'Poisoning' was the most common cause of MLC. 10

Commonly used weapon for assault was hard and blunt type object followed by sharp edged objects in the present study which is in accordance to the study by Haridas et al.3

After 'assault', 'medical check-up of the prisoners and accused for fitness' was the most common cause of MLC followed by 'RTA'. Similar findings were found in the study by Haridas et al.³

10% of the RTA cases were found to be alcoholic which could be the cause of RTA.

The most common age group involved in poisoning was 21-30 years. Similar results were found in the studies by Haridas et al, Aggarwal et al, Sharma et al and Gupta et al.^{3,9,11,13}

All the cases of poisoning in the age group of 21-30 years were of suicidal type whereas all the poisoning cases in the age group of 1-10 years were of accidental type.

Among females, 36.8% were assault cases. This may be due to domestic violence. "Abandoned persons" was a new group found in this study of which 65% were above 60 years.

Most common causes of MLC in the age groups of 1-10 years and 11-20 years were poisoning and RTA respectively. In all other groups, assault was the most common cause.

CONCLUSION

Majority of the victims were young adult males, urban residents with the most common cause being assault. 33% cases needed multidisciplinary care.

Recommendations

Proper counseling for developing positive attitude and controlling the aggression in youth have to be promoted. Strategies for alcohol control should be stringent. Caring shelters for elderly should be promoted. MBBS curriculum should give proper emphasis on emergency care and management of poly-trauma cases.

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Institutional Ethics Committee

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