Original Research Paper

Profile of Pattern of Medico-Legal Cases in the Casualty of A Teaching Hospital of Western Region of Nepal

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Abstract

The casualty Department of any hospital is an important area as most of the medical emergencies and almost all medico-legal cases report first to casualty of a hospital. The prime duty of a doctor is to treat and save the life of the patient, however once treatment is over then the same doctor has to carry out exhaustive documentation of medico-legal cases. This study was aimed to understand the pattern of Medico-legal cases and epidemiological factors in this region. This prospective study was carried out during the period of 1st January 2013 to 30th July 2014. Total 1735 medico-legal cases recorded/admitted in medico-legal register of the casualty department were included in the study which comprised of information regarding various parameters obtained from medico-legal register and hospital record of individual patient. The study revealed that RTA (50.71%) constituted majority of medico-legal cases followed by physical assault (16.81%) and poisoning (11.81%) with male preponderance. Maximum numbers of victims (26.50%) were in the age group 21-30 years followed by age group 11-20 years (19.79%).Majority of the medico-legal cases came from Kaski district 56.74%.

Key Words: Medico-legal cases, Profile, Casualty

Introduction:

A medico-legal case is a case of injury or illness related to legal matters where attending doctor after proper history, examination, and elicitation of findings in a patient gives opinion and suggests; some investigation by law force agencies is essential to establish and fix responsibility for the case in accordance with the law of the land.

The casualty department is backbone of every hospital as all medical cases of medical emergencies along with substantial proportion of medico-legal cases first report to the casualty. [1] Profiling of medico-legal cases is an essential aspect for the prevention of preventable casualties in future and to study the genuine crime in the area. [2]

Profiling helps in knowing the burden of medico-legal cases on different departments. Ours is a tertiary care hospital where different medico-legal cases are reported.

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The study is based on medico-legal cases reported to the casualty of Manipal Teaching Hospital. It was therefore undertaken to find out and analyze the distribution of medico-legal cases, the burden of medico-legal cases in respective departments, and the various epidemiological factors.

It would be helpful to the Medico-legal expert and law enforcing agencies such as the police and the judiciary and ultimately in the process of scientific crime detection and proper administration of justice at large in such cases.

Material and Methods:

A hospital based prospective study was conducted on medico-legal cases reporting to casualty of Manipal Teaching Hospital during the period of 1st January 2013 to 30th July 2014.

Total 1743 medico-legal cases recorded/admitted in medico-legal register of the casualty department were included in the study which comprised of information regarding various parameters obtained from medico-legal register and hospital record of individual patient.

The data obtained were entered in Microsoft excel worksheet and then analyzed. Observations were presented in tables and graphs, discussed and compared with other studies.

Observations and Results:

The casualty department gets various types of medico-legal cases and maximum cases reported were of Road Traffic Accident

884 followed by physical assault 293 cases. (Table 1) In our study out of 1743 cases, maximum number of cases 462 was reported in the age group 21-30 years followed by age group 11-20 years which showed 345 cases. (Table 2) In respect to gender distribution, 1137 were male as compared to 606 female and male to female ratio was 1.87:1. (Fig. 1)

The hospital is surrounded by as many as 16 districts and cases came from all most all districts. In our study most of the medico-legal cases came from Kaski district (56.74%)) as compared to other districts (43.26%). (Fig. 2)

The casualty medical officer seeks opinion from subject experts about that cases which he found on first examination. In the present study we found that opinion from expert was sought in all cases.

In 941cases opinion was taken from single department and in 536 cases from more than two departments. (Table 3) In present study most commonly opinions were sought from Surgery department (1025), followed by Orthopedics department (291) and Medicine department (245). (Table 4) In this study maximum number of cases were reported in the month of summer (516) followed by winter (438) and rainy season. (Fig. 3)

Discussions:

Present study revealed that maximum number of cases were of RTA (50.71%) followed by physical assault (16.81%) and poisoning (11.81%) this may be attributed to rapid increased in registered vehicles with poor road infrastructure carelessness of the drivers followed by rash and negligent driving supported by consumption of alcohol. Our finding was consistent with studies conducted by other workers. [3]

In this study male outnumbered female. Similar findings were also reported by Marri Murad and Malik Yogendra. [4, 2] This is because males are more involved in outdoor activities, aggressive and main bread earner for the family, so this makes them more vulnerable to accident or injury. The male to female ratio was 1.87:1 which is consistent with findings of Garg Vishal. [3]

Most common age group involved in medico-legal cases was between 21-30 years as this age group is economically most productive and lead more active life, involved in outdoor sports and outdoor house hold activities making them more susceptible to accident or injury.

This finding was similar to findings of other studies. [3, 5, 6] Maximum number of medico-legal cases was from Kaski district (56.74%) when compared to other districts (43.26%). Our hospital is located in Kaski District and it being the oldest and largest Tertiary Care Hospital in the district the casualty covers not only large number of cases from the same district but also from other districts of the region.

Present study showed that maximum number of medico-legal cases reported in summer season. This may be because summer months is a more active month, there is great deal of work or outdoor activities done making people more prone to injuries.

It was observed that all variety of medico-legal cases occurred in all months of the year without any specific distribution except for lightening cases which was seen only during the month of May and June.

This may be due to reason that this part of the Nepal is mainly a hilly region, so thunder storms occurs frequently during this two pre-monsoon months causing casualty. The usual victims of lightening were those working in fields and doing outdoor activities.

Opinion from expert was sought in most of the cases. Single department opinions (53.98%) were most common but more than one department opinions (30.75%) were also not uncommon. Maximum opinions were sought from Department of Surgery (58.80%), followed by Orthopedics (16.69%) and Medicine (14.05%) which shows the workload in these respective departments. Surprisingly in only two cases expert opinion was obtained from Forensic Medicine Department.

Conclusion and Recommendations:

There should be great reformation of medico-legal service in Nepal. The first attending doctor in the casualty i.e. casualty medical officer is mostly MBBS and he seeks opinion from experts regarding medico-legal cases.

This leads to increased workload of different departments. This sometimes led to shifting of responsibility of duty while giving a medico-legal opinion by the first treating doctor.

This aspect forces us to think whether the current hours allotted to the subject of Forensic Medicine for practical training of students during MBBS curriculum is sufficient or we should demand increase in time in the curriculum?

In Nepal there is no posting under Forensic Medicine department during the period of internship so the limited knowledge gained at MBBS does not suffice to opine on medico-legal cases. Therefore for better exposure to medico-legal cases posting under Forensic Medicine Department has to be mandatory.

The sensitive job of medico-legal works should be given to interns and medical officer under supervision of senior officers as part of their training in the field and also to avoid imprecision in giving the opinion.

Poor opinion is no good than any opinion at all as the later can mislead the case and leads to administration of injustice.

Therefore there is a need to increase awareness on the role of clinicians with respect to their ethical responsibilities as providers. There is also a need to formulate standard operating procedure (SOP) in the context of doctors, nurses and police and their respective medico-legal roles.

References:

1. **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 vol. 22(2)2013.
2. **Malik Y, Chawla R, Sharma G, Malik P, Singh R, Tripati A.** Profile of Medico-legal cases in casualty of a Rural Medical College of Haryana. Journal of Indian Academy of Forensic Medicine, 2013.35(4) p.367.
3. **Garg V, Verma S.K.** Profile of Medico-legal Cases at Adesh Institute of Medical Sciences and Research, Bathinda, Punjab. JIAFM, 2010.32(2); 150-152.
4. **Marri MZ, Baloch U.** Frequency and pattern of Medico-legal cases reported at Sandeman Civil Hospital Quetta Baluchistan- 1 year study.
5. **Salgado MSL, Colombage SM.** Analysis of fatalities in road accidents. Forensic Sci Int. 1998; 36:91-6.
6. **Jha N, Agrawal CS.** Epidemiological Study of Road Traffic Accident Cases: A study from Eastern Nepal. Regional Health Forum WHO South- East Asia Region. 2004; 8(1): 15-22.

Table 1: Categories of Medico-Legal Cases

Category	Cases	Percentage (%)
RTA	884	50.71
Physical Assault	293	16.81
Poisoning	206	11.81
Thermal Burns	86	4.93
Sexual assault	1	0.05
Brought dead	70	4.01
Fall from height	102	5.87
Near drowning	15	0.86
Near hanging	24	1.37
Electrical injury	17	0.97
Occupational injury	3	0.17
Fire arm injuries	13	0.74
Blast injuries	3	0.17
Alcohol intoxication	9	0.51
Lightening	17	0.97
Total	1743	100

Table 2: Age Wise Distribution of Cases

Age group (Yrs)	Cases	Percentage (%)
0-10	165	9.46
11-20	345	19.79
21-30	462	26.50
31-40	272	15.60
41-50	181	10.38
51-60	129	7.40
61 & above	189	10.84
Total	1743	100

Table 3: Opinion Sought per MLR

No. of opinion in one MLC	Cases	Percentage
Single Department opinion	941	53.98
Two Department opinion	536	30.75
More than two Department opinion	266	15.26
Total	1743	100

Table 4: Opinion Sought from Departments

Name of Department	Cases	Percentage
Surgery	1025	58.80
Orthopedics	291	16.69
Medicine	245	14.05
ENT	62	3.55
Dental	60	3.44
Ophthalmology	58	3.33
Forensic medicine	2	0.12
Total	1743	100

Fig. 1: Gender Wise Distribution of Cases

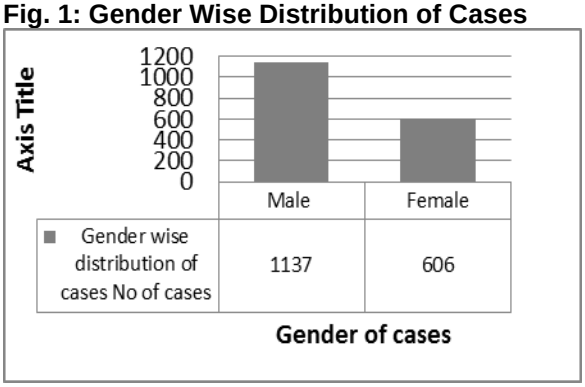

Fig. 2: Area Wise Distribution of Cases

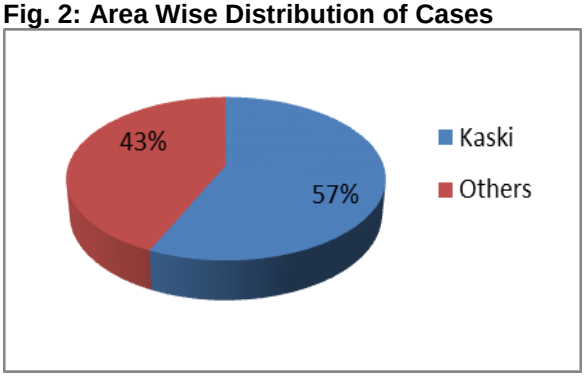

Fig. 3 Monthly Distributions of Total Cases

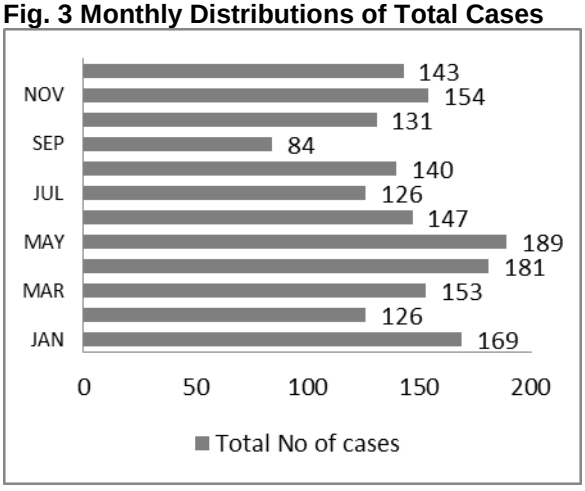

Table 5
Monthly Distribution of Different Categories of Medico-legal Cases

Categories	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
RTA	84	58	81	94	100	75	63	76	38	70	80	65	884
Poisoning	20	20	21	25	23	21	19	19	7	10	5	16	206
Physical assault	26	23	26	27	41	16	17	19	17	19	31	31	293
Fall from height	10	9	7	13	6	9	9	12	6	5	9	7	102
Hanging	4	2	0	2	3	1	0	3	2	0	4	3	24
Drowning	2	1	3	2	2	0	1	1	1	1	0	1	15
Burns	20	5	8	8	7	3	5	2	7	5	10	6	86
Lightening	0	0	0	0	5	12	0	0	0	0	0	0	17
Electric injury	1	2	0	2	1	4	1	0	1	4	1	0	17
Brought dead	2	3	5	7	4	5	5	6	4	6	11	12	70
Occupational injury	0	0	0	0	0	1	1	0	0	0	1	0	3
Firearm injury	0	0	0	0	0	1	0	0	0	10	0	2	13
Blast injury	0	2	0	0	0	0	0	1	0	0	0	0	3
Alcohol intoxication	0	2	2	1	0	0	0	0	1	1	2	0	9
Sexual assault	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	169	128	153	181	192	148	121	139	84	131	154	143	1743