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Profile of medico-legal cases in the Casualty of SAMC and PGI, Indore

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Abstract

In any medical college or hospital, emergency cases are dealt in casualty department, where first interaction between doctors and patients takes place. Among all the emergency cases, medicolegal cases are also dealt and a detailed MLC report is made by the attending doctor. After giving primary treatment and life saving measures to the patient, a MLC report is made and information is given to the police department as earliest as possible. Considering the importance of medicolegal work in casualty, a retrospective study was conducted in the casualty department of Sri Aurobindo Medical College and PGI, Indore for a period of 1 year, from 1st June 2016 to 31st May 2017. During the study period a total of 1421 patients came to casualty, out of which 44 were brought dead. Majority of cases were male (75.36%) and 57.70% cases were of road traffic accident (RTA), followed by cases of fall from height (10.13%), poisoning (9.21%) and assault (8.02%). In most of the cases opinion was taken from single department (64.70%). Surgery department was involved in majority of cases (52.94%), followed by orthopedics department i.e. in 43.28% cases.

Keywords: Medicolegal cases, Casualty, RTA, Medicolegal expert

Introduction

A medico-legal case is a case of injury or ailment where attending doctor after taking history and clinical examination of the patient thinks that some investigations by law enforcing agencies are essential so as to fix responsibility regarding the case. It is the responsibility of a registered medical practitioner to judge each and every cases properly and in doubtful cases, it is better to inform the police. This saves the doctor from unnecessary and needless allegations later.(1)

All emergency cases, be it medical or surgical, comes to the casualty of any hospital and Casualty Medical Officer (CMO) is the first doctor to attend the patient, so his first and prime duty is to give First Aid and save the life of patient and another duty is to do all medico-legal formalities concerned to patients. Profiling of Medico-legal cases is an integral aspect for the prevention of preventable causalities in future and to study the crime rate in that area.(2)

The present study is based on medico-legal cases reported to the casualty of Sri Aurobindo Medical College and PGI, Indore for a period of 1 year, from 1st June 2016 to 31st May 2017. In this study, not only the epidemiological profile of patient, but other factors such as involvement of various departments in medicolegal cases has been considered, which would be helpful to the Medico-legal experts 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.

Materials and Method

This was a retrospective study of medico-legal cases registered in medico-legal register in casualty of Sri Aurobindo Medical College and PGI, Indore for a period of 1 year, from 1st June 2016 to 31st May 2017. During the study period a total of 1421 medico-legal cases were registered in the casualty. The collected data was analyzed and depicted in form of tables, graphs and pie charts by using various parameters and compared with other similar studies.

Aims and Objectives

1. To study the profile of medicolegal cases coming to casualty of SAMC and PGI, Indore.
2. To give suggestions for improving quality of Medicolegal work in casualty.
3. To make recommendations to administrative authorities according to outcome of study.

Observations and Results

In the current study, a total of 1421 medico-legal cases were reported, out of which, male predominance was noted with 75.36% of cases and females were 24.64% (Fig. 1). Taking religion into consideration, most of the cases were from Hindu community (93.94%), followed by Muslims in 5.91% cases and Christians were 0.14%. Majority of cases (70.02%) belonged to urban area and 29.98% cases came from rural background (Fig. 2). Opinion was taken from single department in 64.70% cases, 2 department opinions were sought in 25.92% cases, whereas more than two departments were involved in 9.07% cases (Table 1). Surgery department was called for intervention in maximum number of cases i.e. 52.94%, followed by orthopedics department in 43.28% cases

and other departments were also referred as shown in Table 2. Maximum patients coming to casualty were from the age group of 21-30 years i.e. 35.81%, followed by 20.26% cases belonging to 31-40 years age group (Table 3). Majority of cases (66.23%) reported to casualty within 1 hour from the time of incidence, whereas 4.5% cases reported after 12 hours of incidence (Fig. 3). Alleged manner of incidence was accidental in 81.84% cases, suicidal in 9.73% of cases and homicidal in 8.42% of cases (Fig. 4). Out of total cases reported to casualty, majority (57.70%) were of road traffic accident (RTA), followed by fall from height in 10.13%, poisoning in 9.21% cases and assault accounted for a total of 8.02% cases, whereas 3.09% cases were brought dead (Table 4). When month wise distribution of cases were analyzed, maximum number was observed in month of March (11.11%), followed by September in 9.28% cases. (Table 4)

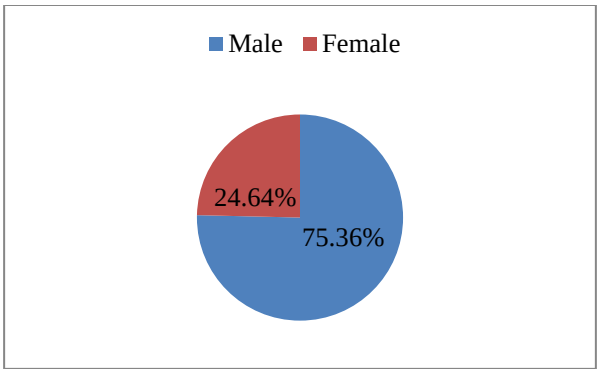

Fig. 1: Gender wise distribution of cases

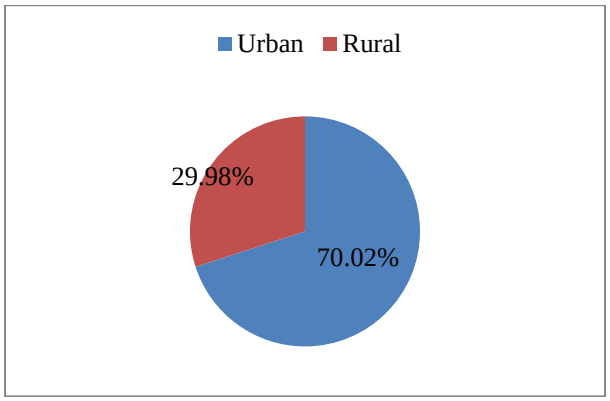

Fig. 2: Region wise distribution of cases

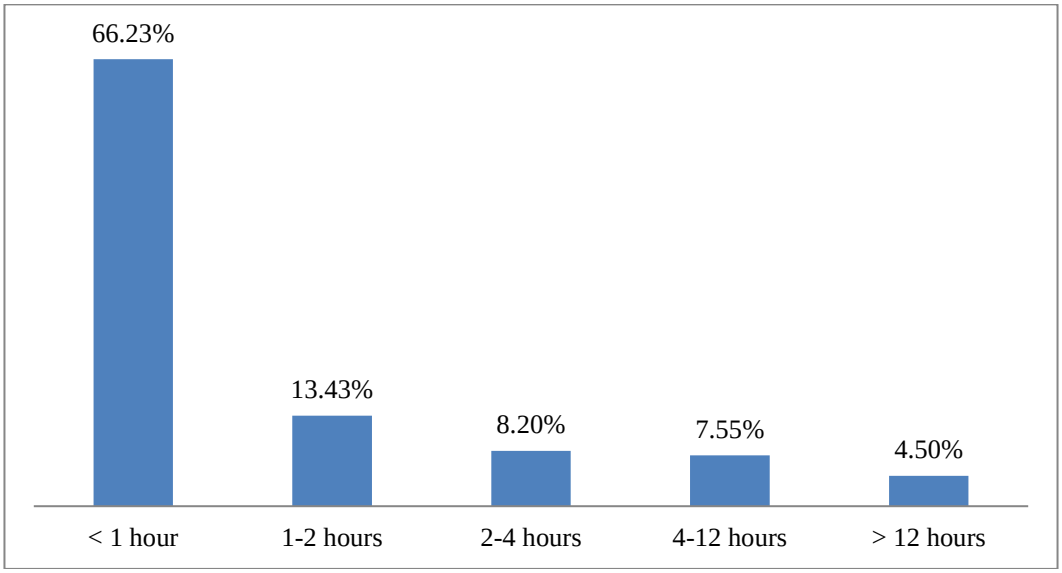

Fig. 3: Time period between incidence and reporting to casualty

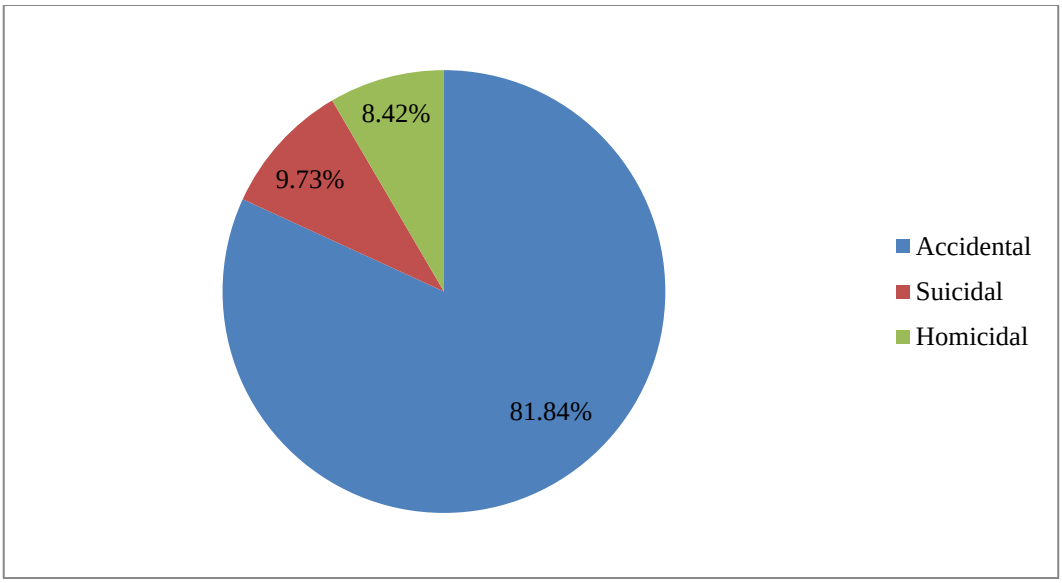

Fig. 4: Alleged manner of incidence

Table 1: Opinion taken from number of departments in each MLC

No. of Dept.	Cases	Percentage
1 Dept. opinion	891	64.70%
2 Dept. opinion	357	25.92%
>2 Dept. opinion	129	9.07%
Total	1377	100%

Table 2: Opinion taken from departments

Name of department	Cases	Percentage
Surgery	729	52.94%
Orthopedics	596	43.28%
Medicine	163	11.83%
OMFS	242	17.57%
Ophthalmology	51	3.70%
Neurosurgery	86	6.24%
ENT	112	8.13%
Pediatric surgery	56	4.06%
Obstetrics & Gynaecology	1	0.07%
Gastroenterology	1	0.07%
Pediatrics	1	0.07%

Table 3: Age wise distribution of cases

Age group (Yrs)	Cases	Percentage (%)
0-10	77	5.41%
11-20	229	16.11%
21-30	509	35.81%
31-40	288	20.26%
41-50	177	12.45%
51-60	88	6.19%
61& above	53	3.72%
Total	1421	100%

Table 4: Monthly distribution of different categories of MLC from June 2016 to May 2017 (n= 1421)

Category	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Total	Percentage
RTA	63	48	71	67	76	67	58	64	72	94	73	67	820	57.70%
Assault	12	4	12	13	10	3	6	12	12	10	10	10	114	8.02%
Fall from height	13	8	8	16	14	7	9	9	11	20	15	14	144	10.13%
Occupational Injury	10	5	7	11	6	3	4	5	9	12	6	3	81	5.70%
Poisoning	9	8	14	11	14	10	12	8	11	15	7	12	131	9.21%
Burn	2	8	6	1	4	3	4	3	4	2	4	5	46	3.23%
Electrocution	3	0	0	4	4	0	0	1	0	2	5	2	21	1.47%
Snake/ Insect bite	1	1	0	1	0	1	1	1	1	0	1	3	11	0.77%
Alcohol Intoxication	0	0	1	0	1	0	0	0	1	0	0	0	3	0.21%
Drowning	1	0	0	1	0	0	0	0	0	0	0	0	2	0.14%
Self strangulation	0	0	0	0	1	0	0	0	0	0	0	0	1	0.07%
Hanging	0	0	0	0	0	1	1	0	0	0	0	0	2	0.14%
Hit by animal	0	0	0	0	0	0	0	1	0	0	0	0	1	0.07%
Brought Dead	5	3	4	7	1	6	1	3	3	3	4	4	44	3.09%
Total	119	85	123	132	131	101	96	107	124	158	125	120	1421	100%

Discussion

In our study, male (75.36%) outnumbered female (24.64%), which is consistent with other studies.[2-7] This is because males are more involved in outdoor activities so they are more vulnerable to accident or injuries. It was observed that urban victims constituted 70.02% and the rural victims were 29.98%. Similar findings were also observed by Hussaini SN et al,[5] who found 55.91% in urban population and 44.08% in rural population and Siddappa SC,[8] who found 52.48% in urban population and 47.52% from rural population. Our Medical College is situated in city; hence patients from urban area are more than the patients residing in rural area. Opinion from expert was sought in most of the cases. Single department opinions (64.70%) were most common which is similar with the findings of Timsinha et al,[9] who observed single department involvement in 53.98% cases. Maximum opinions were sought from Department of Surgery (52.94%), followed by Orthopedics (43.28%), then Oro-maxillofacial Surgery department (OMFS) (17.57%) and Medicine department (11.83%), which shows the workload in these respective departments. Maximum opinion taken by surgery department was also observed in the study of Timsinha et al[9] (58.80%). In our study maximum numbers of cases reported to casualty were from age group 21-30 years (35.81%), followed by 31-40 years (20.26%) and 11-20 years (16.11%), which is similar to other studies.[2-7] This may be due to fact that individual of these age group lead more active life, involved more in outdoor, sports and recreation activities and take risk for work, which leads to more injuries and accidents among these group. In our study it was observed that majority of the victims (66.23%) reported to casualty within 1 hour of the incidence, followed by 13.43% of the victims within 1– 2 hours of the incidence. Our findings are consistent with study conducted by Yadav A et al[4] and Siddappa SC,[8] who observed 51.94% cases within 1 hour and 20.12% within 1- 2 hours of incidence. It can be explained by the fact that urban population have tertiary care hospital in their close vicinity and also have more health awareness as compared to rural population. In the present study, majority of the medico-legal cases were accidental (81.84%) in nature, followed by suicidal (9.73%) and then homicidal in 8.42% of cases. Our study is consistent with Siddappa SC,[8] who observed 69.03% accidental cases, followed by suicidal in 20.24% and then homicidal in 10.72% cases. Our study is inconsistent with study conducted by Yadav A et al,[4] where assault cases (39.6%) were almost equal to accidental cases (38.1%).

Present study revealed that maximum cases reported to casualty were of RTA (57.70%). This finding was consistent with other studies.[3,6,7,8,9] More number of accidental cases may be due to our medical college being situated on the side of a busy state highway and also a nearby situated big square, where most of the time traffic signal is not working (despite multiple complaints) and also because of absence of any traffic police on that square to manage traffic. Malik Y[2] and Yadav A[4] observed in their study that maximum cases reported to casualty were of poisoning which differ from our study. Our study was also in contrast with the findings of Hussain SN,[5] who observed maximum number of cases reported to casualty were of burn.

Conclusions and Recommendations

Casualty of a medical college receives all type of emergency cases including medico legal cases. Lots of medico legal work is done, which puts a lot of burden in the casualty. Most of the time duty of CMO is done by a MBBS doctor who is not specialist in handling medico legal cases. Expertise comes with experience but it is seen that MBBS doctor working as CMO lacks experience and hence have less knowledge and expertise. The sensitive job of medico-legal work should be done under the supervision of senior medical officers as part of their training in the field, so as 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 may lead to administration of injustice.

The present study showed that the maximum number of medico-legal cases were of road traffic accident, seen among young individuals and mostly in urban inhabitants. Such incidences can be prevented by giving proper education, awareness, training of safety standards by administrators and by law enforcement agencies. Moreover, a national drive or program should be started, just like "Swachh Bharat Abhiyan". There should be a road-safety program in which all the cities of our country must be ranked on the basis of various criteria like standard of roads, functioning of traffic signals, obeying of traffic rules by the citizens etc.

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