

Analysis of Medicolegal Cases in a Tertiary Care Hospital of South Kerala

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Abstract

Medicolegal cases (MLC) are presented to Emergency department (ED) of almost all hospitals in our nation after the Supreme Court guidelines stating that 'the paramount duty of a doctor is to save the life of a person'. Hospitals should be equipped with infrastructure as well as treating doctors in combating such cases where documentation and treatment should be meticulously done.

This study is conducted in a tertiary care hospital in South Kerala where profile of MLC was analysed during the years 2016 -17. A total of 10,001 cases were studied which is unique compared to previous studies. Males dominated in the MLC with road traffic accident (RTA), fall from height and work place injuries formed the major share in the pattern of cases. Most of these cases were presented to ED between first and sixth hour of occurrence.

Key words: Medicolegal cases, Emergency department, demographic profile

Introduction

Any case of injury or ailment where some criminality is involved is called a Medicolegal Case (MLC)^[1]. MLC are identified by the treating doctor based on history and clinical examination. In the Emergency department (ED) of a tertiary care hospital, MLC forms the major share of cases and it is important for the hospital to handle the legal implications of such cases. With the emergence of specialization in Emergency medicine, identifying and handling of MLC meticulously has significance in reducing the burden of a clinician. As per the guidelines of Supreme Court of India, it is the paramount duty of a doctor to save a patient in emergency. It is important for the hospital to tackle MLC and give lifesaving treatment as well as to do all necessary medicolegal certifications and formalities to the patients. Profiling of MLC 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 was conducted in an 800 bedded postgraduate teaching institution in South Kerala.

Material and Method

The present study was conducted on 10,001 MLC patients admitted to the casualty department of Pushpagiri Institute of Medical Sciences, Tiruvalla from January 2016 to December 2017. The demographic profile based on age, sex, month wise distribution was done for various patterns of MLC presented to the ED. All the data were analysed and demonstrated using tables and graphs. Ethical approval was taken from ethical review board of the institution and the administration of concerned hospital ensuring data confidentiality.

Inclusion criteria

All the MLC registered during January 2016 to December 2017 in the medicolegal case record book were included.

Exclusion criteria

Cases found non-medicolegal were excluded.

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Aims and Objectives

1. Profiling of MLC coming to the ED of Pushpagiri Institute of Medical Sciences, Tiruvalla
2. Suggestions for improving medico-legal work in Casualty.
3. To make recommendations to administrative authorities according to outcome of study.

Observations and Results

A cross sectional study on medicolegal cases presenting to the ED of a tertiary care medical college hospital was performed and the demographic profile and pattern of cases were analysed and tabulated. MLC of the years 2016 and 2017 were included.

In the year 2016, the total number of MLC was 4972. Of which, 3381(68%) were males and 1591(32%) were females. The age group classification was done and tabulated as < 20 years, 20 to 40 years, 40 to 60 years, 60 to 80 years and more than 80 years. Among all the age groups 20 to 40years (40%) and 40 to 60 years (28%) constituted the major share with male gender preponderance (Table1).

The patterns MLC studied were categorised in to road traffic accident (RTA), assault, fall from height, poisoning, burns, hanging, drowning, various bites and work pace and domestic injuries. Age wise and

gender wise distribution was done. In the year 2016, 2163 RTA (43.5%) and 1686 fall from height (33.9%) were recorded and formed the major share. In both the categories there was male dominance (Fig.1). Among all the patterns of MLC, majority of cases belonged to the age group 20 to 40 years (59%) and 40 to 60 years (25%) (Table 1). Month wise distribution of cases were studied and September month (477) case recording the highest and November month (336) showing the least (Fig.2). The time of reporting to ED from time of incidence were also calculated for all cases. 30% cases reported within the first hour.42% cases reported within 1 to 6 hours, whereas 26% presented between 6 to 12hours. Only 2% cases presented to ED as late as more than 12 hours (Table.2).

In the year 2017 there were 5029 MLC cases recorded. There were 3623 males (72%) and 1406 females (28%). The age groups 20 to 40 years (54.1%) and 40 to 60 years (21.8%) formed the major share and age groups < 20 years (3.5%) and > 80 years (3.7%) contributing the least (Table 1). Among all the patterns RTA 2225(44%) and fall from height 1885 (37%) formed the major share. Males dominated in both the categories with age groups 20 to 40 years (46.5%) and 40 to 60 years (27.3%) were maximum affected compared to other age groups (Fig.3). August recorded with maximum number of cases (481) and February recorded the lowest (359) (Fig.4). 32% cases presented to ED within 1 hour from incidence whereas majority (43%) presented between 1 to 6 hours (Table.2).

TABLE.1 - AGE & SEX WISE DISTRIBUTION OF MLC (2016 and 2017)

Age Groups	Male		Female		Total	
	2016	2017	2016	2017	2016	2017
<20 YRS	406	137	112	52	518 (10.1%)	189 (3.7%)
20- 40	1422	1635	569	1087	1991 (40%)	2722 (54.1%)
40-60	910	908	487	189	1397 (28%)	1097 (21.8%)
60-80	474	817	347	37	821 (16.5%)	854 (16.9%)
>80 YRS	169	126	76	41	245 (4.9%)	167 (3.5%)
TOTAL	3381(68%)	3623(32%)	1591(72%)	1406(28%)		

TABLE 2.- TIME REPORTING OF MLC TO EMERGENCY DEPARTMENT IN 2016 AND 2017

Time period	2016	2017
<1 HR	1492 (30%)	1612 (32%)
1-6 HRS	2089 (42%)	2172 (43%)
6-12 HRS	1293 (26%)	1128 (22%)
>12 HRS	98 (2%)	117 (3%)

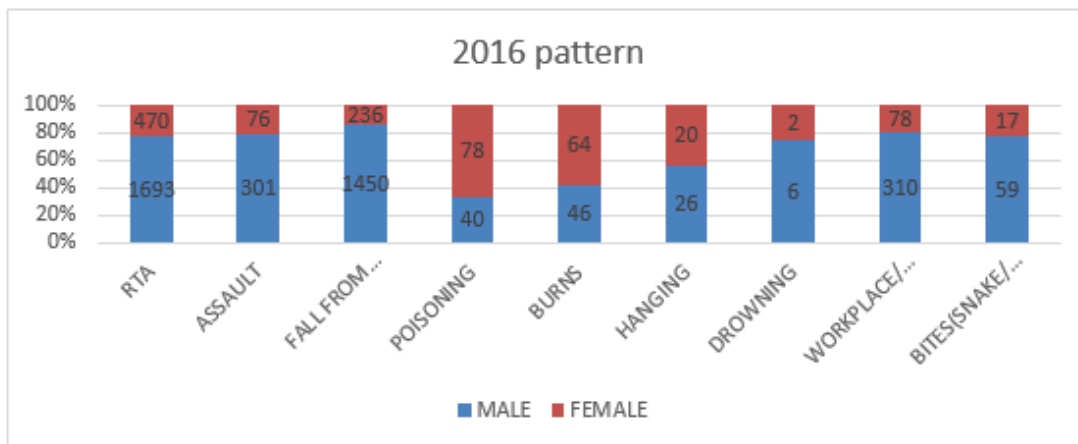


FIG.1 MLC PATTERN IN 2016 WITH GENDER DISTRIBUTION

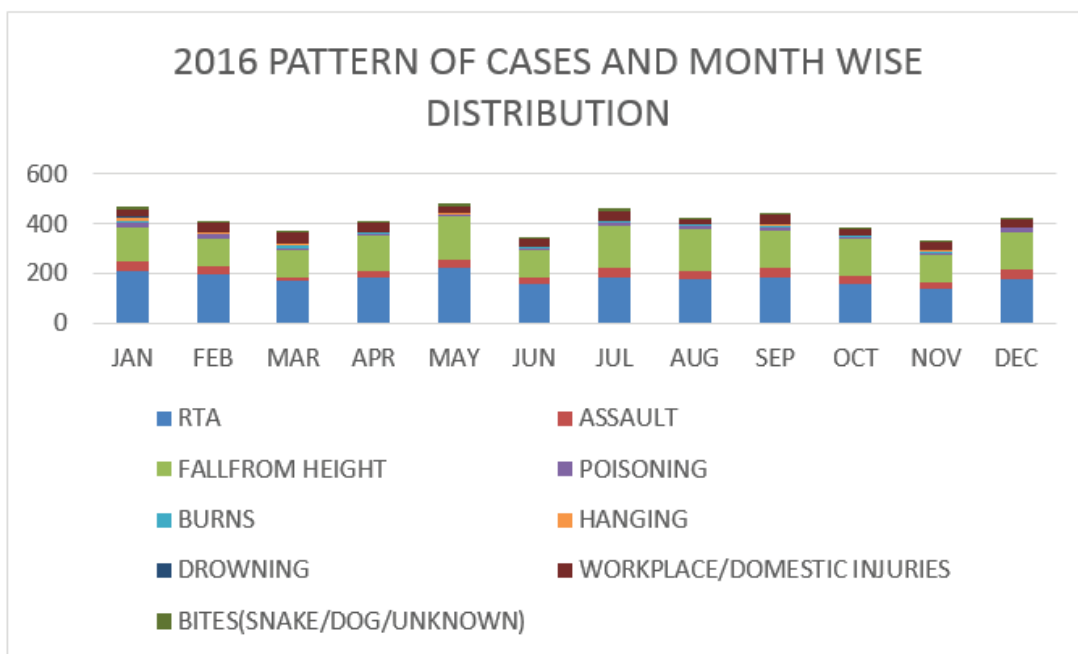


FIG.2. PATTERN OF MLC IN 2016 WITH MONTH WISE DISTRIBUTION

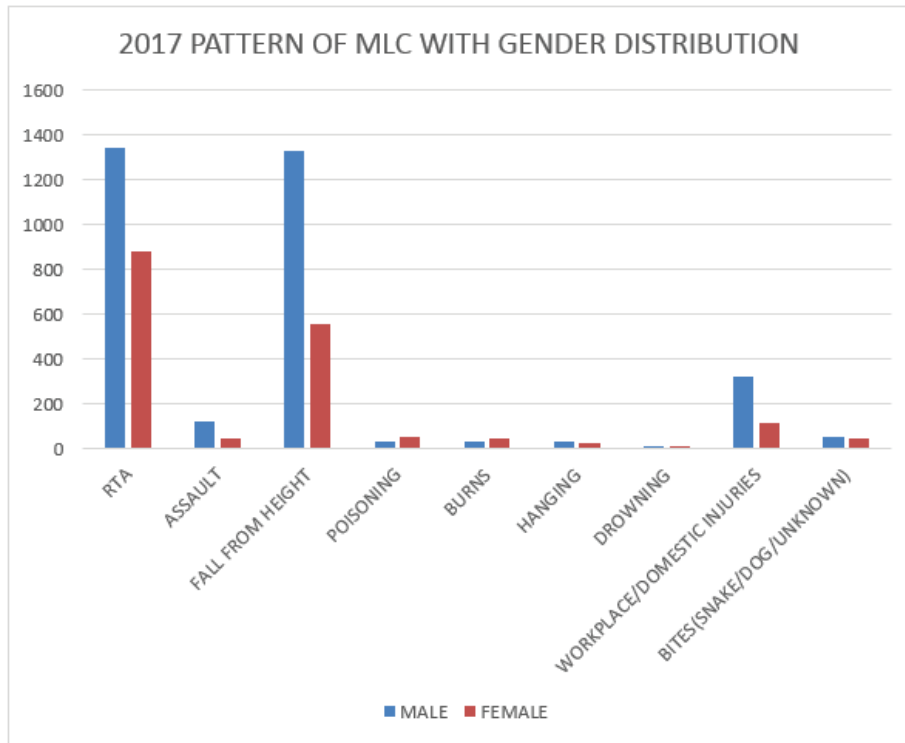


FIG.3 MLC IN 2017 WITH GENDER DISTRIBUTION

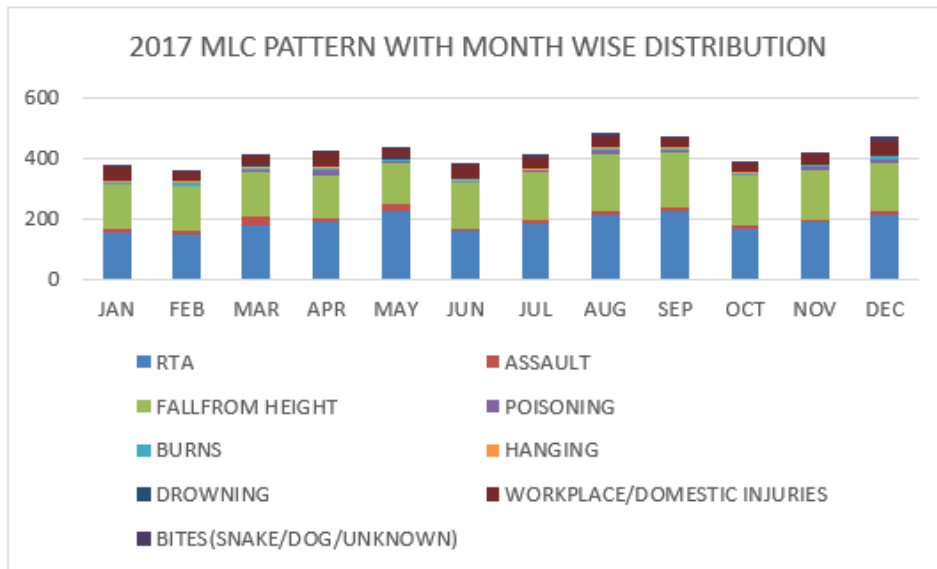


FIG.4 MLC IN 2017 WITH MONTH WISE DISTRIBUTION

Discussion

In the present study, 10,001 MLC were studied for a period of 2 years (2016 – 17) which is a unique study for this geographical region. The study was conducted in an 800 bedded tertiary care private teaching institution situated in a municipal area serving nearly 25 km radius

population. This institution was equipped with round the clock emergency facilities and services from speciality and super speciality departments.

The study indicated male dominance in number as well as most of the pattern of cases involved. This could be because of males who are mostly involved in outdoor

activities, travelling and heavy manual jobs. The similar findings were found in study conducted by A. Yadav et al. in 2013 where males were dominant (67.6%). Other studies in 2010 and 2011 also have similar results^[3-6].

The age group of 20 years to 40 years, followed by 40 years to 60 years were involved in majority of cases. This also suggests the healthy adults in working class were mostly subjected to injury due to their involvement in trade, agriculture and other fields of work. The RTA were the majority in both the years which could be due to multiple factors including over speeding, bad roads and the influence of alcohol in these age groups. Fall from height and work place injuries also showed a good number which could be due to heavy work and lack of safety awareness and measures among the working class.

It is important to note that in both the years, poisoning and hanging cases were dominated by females. The manner of these cases is mostly suicidal points towards the atrocities and cruelty with gender discrimination which is still prevalent in the study population.

Time of reporting to ED after the incidence were studied. Most of the cases were reported within first hour and 6 hours. This indicates the awareness, cooperation of public along with good connectivity to this centre.

Conclusion

1. Males were predominant in most of the MLC in both years

2. Young age group with working class were involved in most of the patterns of MLC. So, measures should be taken to prevent injuries by providing safety awareness, security checks, and by maintaining strict laws by the Government authorities.

3. The bulk of cases up to 10,001 in two years shows the importance of a tertiary care in a densely populated area. This should be an eye opener for the government as well as Planning Commission to know about the need of establishment of such tertiary care

centres in our country.

Conflicts of Interest: There are no conflicts of interest.

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Ethical Clearance: Obtained from institutional research board and ethical committee

Abbreviations

MLC - medicolegal case

ED – Emergency department

RTA – road traffic accident

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