

Original Research Article

## A Study on Medico Legal Cases Attended in a Tertiary Care Hospital in South Kerala

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### ABSTRACT

**Background:** Medico legal cases constitute the majority of casualty cases in a hospital. Identifying the pattern and age-sex distribution of medico legal cases reported in a hospital is important for administrators, social workers and NGOs to devise policies to reduce the frequency of these events. With this objective we had conducted a record based study in a tertiary care hospital in South Kerala.

**Materials and methods:** A record based retrospective study is carried out in the Medical Records Department of a tertiary care hospital in Trivandrum, Kerala, India. All cases reported during the period 1<sup>st</sup> January 2014 to 31<sup>st</sup> December 2017 were analyzed. Incomplete records and those found non- medico legal were excluded. Results were expressed in frequency and percentage.

**Results:** A total number of 8615 cases were reported during 2014 to 2017. There is an increase in the number of cases from 2014 to 2016 and a decrease of 9% in 2017. Among the 8615 cases reported, 29.7% were in the age group 20-30 years followed by 19.3% in the 30-40 age group. Majorities are males (71.3%). 36.9% of cases were reported between 12 noon and 6pm followed by 35.0% within the time period 6pm to 12 midnight. Eighty percent of the MLC cases are road traffic accidents.

**Conclusion:** There is an increase in trend in the MLC during the last three years. Majorities are males in the age group of 20-30 years and most of the cases occurred between 12 noon and 6pm. Road traffic accidents constitute the majority of cases.

**Keywords:** Assault; Casualty; Injury; Medico legal cases; Poisoning; Road traffic accidents.

### INTRODUCTION

Medico legal cases constitute the majority of casualty cases in a hospital. A medico-legal case (MLC) is a case of injury or illness where the doctors who attend the case recorded the history and examining the patient. Also some investigation by law-enforcing agencies is essential to establish and fix responsibility for the case in accordance with the law of the land. <sup>[1]</sup> MLC constitutes road traffic accidents, sexual offences, assault, poisoning, suicidal attempt, burns, drug overdose etc. Majority of the medico-legal cases are due to road

traffic accidents. According to the official web site of Kerala police, 1,14,716 road traffic accidents (RTA) occurred during 2014-2016. <sup>[2]</sup> According to National Crime Records Bureau of India, Kerala ranks 3<sup>rd</sup> in suicidal deaths. <sup>[3]</sup> The number and nature of MLCs reported in a hospital depends on the nature of the roads, socio economic factors and cultural diversity of the people residing in that area.

Identifying the pattern and age-sex distribution of MLCs reported in a hospital is important for administrators, social workers and NGOs to devise policies to

reduce the frequency of these events.

**Objective**

To analyze the age-sex distribution and the pattern of medico legal cases attending in a tertiary care hospital in South Kerala.

**MATERIALS AND METHODS**

A record based retrospective study is carried out in the Medical Records Department of a tertiary care hospital in Trivandrum, Kerala, India. All cases reported during the period 1<sup>st</sup> January 2014 to 31<sup>st</sup> December 2017 were analyzed. Incomplete records and those found non-medico legal were excluded. A total number of 8615 cases were analyzed. Data related to the time of reporting the casualty, age, gender, cause of being MLC were collected from the records. SPSS <sup>16</sup> is used for data storing and analysis. Results were expressed in frequency and percentage.

**RESULTS**

Table 1 shows the number of cases registered during 2014 to 2017. There is an increase in trend in the number of cases from 2014 to 2017. Two thousand and seven cases were registered in 2014 followed by an increase of 3% in 2015. In 2016, 15% more cases were reported compared to 2015 and in 2017 there was decrease of 9% compared to the 2016.

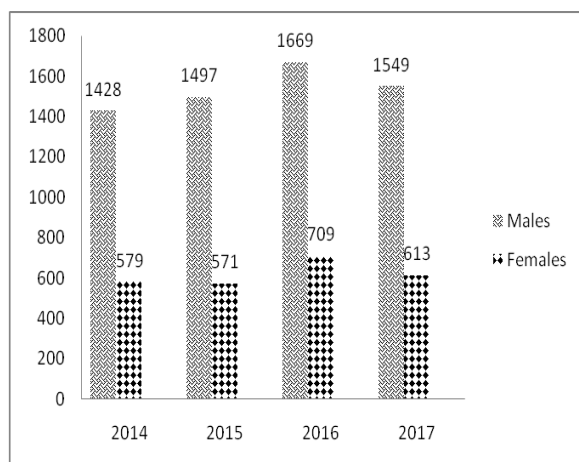
**Table 1. Number of cases registered from 2014 to 2017**

| Year       | Number      | %          |
|------------|-------------|------------|
| 2014       | 2007        | 23.3       |
| 2015       | 2068        | 24.0       |
| 2016       | 2378        | 27.6       |
| 2017       | 2162        | 25.1       |
| <b>All</b> | <b>6453</b> | <b>100</b> |

Table 2 shows the distribution of cases according to age. Highest proportion falls in the age group 20-30 years (29.7%) followed by 30-40 years (19.3%).

| Year         | Age(yrs)              |                         |                         |                         |                         |                        |                       | Total                  |
|--------------|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------|-----------------------|------------------------|
|              | <=10                  | 10-20                   | 20-30                   | 30-40                   | 40-50                   | 50-60                  | >=60                  |                        |
| 2014         | 118<br>(5.9%)         | 244<br>(12.2%)          | 611<br>(30.4%)          | 441<br>(22.0%)          | 273<br>(13.6%)          | 196<br>(9.8%)          | 124<br>(6.2%)         | 2007<br>(100%)         |
| 2015         | 90<br>(4.4%)          | 306<br>(4.8%)           | 611<br>(29.5%)          | 400<br>(19.3%)          | 272<br>(13.2%)          | 227<br>(11.0%)         | 162<br>(7.8%)         | 2068<br>(100%)         |
| 2016         | 140<br>(5.9%)         | 347<br>(14.6%)          | 692<br>(29.1%)          | 419<br>(17.6%)          | 321<br>(13.5%)          | 248<br>(10.4%)         | 211<br>(8.9%)         | 2378<br>(100%)         |
| 2017         | 112<br>(5.2)          | 329<br>(15.2)           | 642<br>(29.7)           | 405<br>(18.7)           | 294<br>(13.6)           | 216<br>(10.0)          | 164<br>(7.6)          | 2162<br>(100)          |
| <b>Total</b> | <b>460<br/>(5.3%)</b> | <b>1226<br/>(14.2%)</b> | <b>2556<br/>(29.7%)</b> | <b>1665<br/>(19.3%)</b> | <b>1160<br/>(13.5%)</b> | <b>887<br/>(10.3%)</b> | <b>661<br/>(7.7%)</b> | <b>8615<br/>(100%)</b> |

Figure 1 shows the distribution of cases according to gender. Out of the total of 8615 cases, 71.2% were males



**Figure 1. Distribution of MLCs according to gender**

Table 3 shows the time of reporting the casualty. More cases were reported during 12 noon to 6pm followed by 6pm to 12 midnight. This may be due to the fact that most of the RTA cases were occurred during this period and a major part of medico legal cases constitute RTA cases.

Table 4 shows the distribution of the pattern of cases reported during 2014 to 2017. Among the various cases registered, RTA constitutes the highest proportion. In 2014, 79.1% of cases were registered it increased to 82% in 2017.

**Table 3. Distribution according to time of reporting**

| Year | Time              |                 |                 |                   | Total          |
|------|-------------------|-----------------|-----------------|-------------------|----------------|
|      | 12midnight to 6am | 6am to 12noon   | 12 noon to 6pm  | 6pm to 12midnight |                |
| 2014 | 107<br>(5.3%)     | 428<br>(21.3%)  | 772<br>(38.5%)  | 700<br>(34.9%)    | 2007<br>(100%) |
| 2015 | 109<br>(5.3%)     | 489<br>(23.7%)  | 790<br>(38.2%)  | 680<br>(32.8%)    | 2068<br>(100%) |
| 2016 | 142<br>(6.0%)     | 535<br>(22.5%)  | 824<br>(34.7%)  | 877<br>(36.9%)    | 2378<br>(100%) |
| 2017 | 125<br>(5.8%)     | 484<br>(22.4%)  | 791<br>(36.58%) | 761<br>(35.22%)   | 2162<br>(100%) |
| All  | 483<br>(5.6%)     | 1936<br>(22.5%) | 3177<br>(36.9%) | 3018<br>(35.0%)   | 8615<br>(100%) |

**Table 4. Pattern of MLC cases reported**

|                    | 2014        | 2015        | 2016        | 2017        |
|--------------------|-------------|-------------|-------------|-------------|
| RTA                | 1587(79.1%) | 1563(75.6%) | 1902(80.0%) | 1775(82.1%) |
| Assault            | 150(7.5%)   | 132(6.4%)   | 141(5.9%)   | 127(5.9%)   |
| Poisoning          | 66(3.3%)    | 76(3.7%)    | 70(2.9%)    | 55(2.5%)    |
| Drug over doze     | 71(3.5%)    | 77(3.7%)    | 89(3.7%)    | 72(3.3%)    |
| Injury             | 38(1.9%)    | 43(2.1%)    | 40(1.7%)    | 31(1.4%)    |
| Fall from height   | 34(1.7%)    | 88(4.3%)    | 36(1.5%)    | 35(1.6%)    |
| Burns              | 17(0.8%)    | 17(0.8%)    | 28(1.2%)    | 6(0.3%)     |
| Suicidal attempt   | 15(0.7%)    | 26(1.3%)    | 4(0.2%)     | 8(0.4%)     |
| Brought dead       | 10(0.5%)    | 7(0.3%)     | 13(0.5%)    | 4(0.2%)     |
| Hanging            | 8(0.4%)     | 20(1.0%)    | 25(1.1%)    | 21(1.0%)    |
| Drowning           | 0(0%)       | 6(0.3%)     | 2(0.1%)     | 1(0.0%)     |
| Fall into well     | 5(0.2%)     | 2(0.1%)     | 6(0.3%)     | 4(0.2%)     |
| Unconscious        | 2(0.1%)     | 4(0.2%)     | 6(0.3%)     | 3(0.1%)     |
| Lightning          | 0(0%)       | 1(0%)       | 0(0%)       | 0(0.0%)     |
| Animal injury/bite | 0(0%)       | 2(0.1%)     | 4(0.2%)     | 1(0%)       |
| Human bite         | 1(0%)       | 1(0%)       | 0(0%)       | 0(0%)       |
| Fire explosion     | 2(0.1%)     | 2(0.1%)     | 1(0.0%)     | 1(0.0%)     |
| Domestic violence  | 1(0%)       | 0(0%)       | 0(0%)       | 0(0%)       |
| DSH                | 0(0%)       | 1(0%)       | 10(0.4%)    | 17(0.8%)    |

## DISCUSSION

The present study indicates an increase in trend in MLC cases during the past three years. Males (71.3%) are more compared to females (29%). This confirms with the study conducted by Dileep Kumar R et al, [4] Santhosh Chandrappa Siddappa et al, [5] Timsinha et al [6] and Brahmankar TR et al. [7] This may be due to the fact that males are more exposed to vehicle use and outdoor activities. The most common age group is 20-30 years (29.7%) followed by 30-40 years (19.3%). This agrees with the studies conducted by S. N. Hussaini et.al, [8] Muhammad Amjad Bhatti et al, [9] Haridas et al, [10] and Santhosh Chandrappa Siddappa et al. [5] Considering the time of occurrence, maximum number of MLC took place between 12 noon and 6 pm followed by 6pm to 12 mid night. This is the time when most of the human activities take place and vehicle uses are more. This agrees with the report of Trangadia MM et al, [11] Santhosh Chandrappa Siddappa et al, [5]

Yatoo GH et al. [12] By analyzing the pattern of cases it is observed that maximum number of MLC are RTA followed by assault. This agrees with the findings of Dileep Kumar R, [4] Timsinha et al, [6] Hussaini et al, [8] Trangadia MM et al, [11] Yatoo G H et al. [12]

## CONCLUSION

The present study shows an increase in trend in medico legal cases. Most of the victims are males in the age group of 20-30 years and RTAs accounts the major part of MLCs. By imparting proper education and awareness among public the frequency of these cases can be reduced. Strict laws should be enforced to reduce the road traffic accidents. Better training should be given to doctors who handle these cases.

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