

## Trends of Post Mortem Examination Cases brought to Tertiary Care Hospital

Dr. R.V.Bhagora<sup>1</sup>, Dr.Jainik P. Shah<sup>2</sup>, Dr.Amit.P.Parmar<sup>3</sup>, Dr.D.J.Parmar<sup>4</sup>,  
Dr. S. D. Kalele<sup>5</sup>, Dr. T. C. Patel<sup>6</sup>

### ABSTRACT

**Background:** The most important duty of a doctor is to save the life of patient; however, after providing first aid & resuscitative measures, the Casualty Medical Officer has to carry out exhaustive documentation of medico legal cases especially while examining the female victims of physical trauma, domestic violence, attempts of suicide & sexual assault. **Objectives:** To study the pattern of medico legal cases in females with regard to age, marital status, and residential backgrounds; those reported for medico legal examination, during one year study period. To find out the incidence and trends of sexual assault in relation the socio demographic characteristics of the female victims of sexual violence.

**Study Design:** Retrospective Study. **Setting & Duration:** This study was conducted from 1st January 2013 to 31st December 2013, in Causality Department of tertiary care Hospital attached with Government Medical College, Bhavnagar. **Results:** Out of the total 1270 cases, we received Firearm injuries 247 and 284 cases were injured due to Road Traffic Accidents. With highest cases of natural death in 340 cases and lowest was strangulation 1. **Conclusion:** Public awareness, proper legislation & strict law enforcement are required to reduce such incidences.

**Key Words:** Casualty, Medico legal, Physical Violence, Sexual assault

<sup>1,2</sup> Assistant Professor, <sup>3,4</sup> Associate professor, <sup>5</sup>Professor and Head, <sup>6</sup>Resident Doctor

Department of Forensic Medicine and Toxicology, Govt. Medical College, Bhavnagar, Gujarat

**Corresponding author mail:** [rajani.bhagora@yahoo.com](mailto:rajani.bhagora@yahoo.com)

Conflict of interest: None

### INTRODUCTION

The Case of injury or ailment, in which investigations by the law enforcing agencies are required to fix the responsibility regarding its causation, is known as Medico Legal Case.

These cases are an integral part of medical practice that is frequently encountered by Medical Officers working in Casualty Department and dealing with Police/Court cases.

All medico legal cases have some legal implications because the attending doctors, after taking history and careful examination of the victim think that some investigation are required to be done by law enforcing agencies in order to establish facts of the case against accused, under law of the state <sup>1</sup>.

The Casualty Department is the backbone of every hospital because almost all emergency cases report initially to this department. In addition to the medical emergencies, the cases of medico legal nature are also examined by the doctors known as Medico Legal Officers (MLOs) & Casualty Medical Officers (CMOs); both for examining the male & female victims <sup>2</sup>. Such cases constitute substantial proportion of the workload in Casualty Department of Government Hospitals. Studying the pattern & magnitude of the medico legal cases is an important aspect to be used for reducing the preventable casualties. It will also be helpful to study the crime rate in those areas <sup>3</sup>.

Along with other medico legal cases of physical trauma, firearm injuries & road traffic accidents; the increasing number of sexual assault also put an extra burden over the doctors & paramedics because of the fact that incidence

of sexual violence against women is increasing worldwide shocking the global statistics. All over the World, about 20% of women have been sexually abused in their childhood <sup>4</sup>. Higher rate of sexual assault has been reported in other Asian countries as well. Sexual violence among 60% of the women was reported in Japan <sup>5</sup> while 25% of women in India<sup>6</sup>, while 53-62% women suffered from sexual violence in Bangladesh and 19% of the women in North Carolina, United States <sup>7</sup> are reported to be the victims of sexual assault during their life.

The efforts have been done in this study to identify the magnitude & trends of different medico legal cases in Bhavnagar; the 4<sup>th</sup> largest city of Gujarat. The finding of this study will also provide a snapshot about burden of medico legal cases in this populous city which could be used by the Law enforcing agencies for further strategies to improve the Law & order situation and to reduce the potentiality of those crimes.

**MATERIAL AND METHODS:**

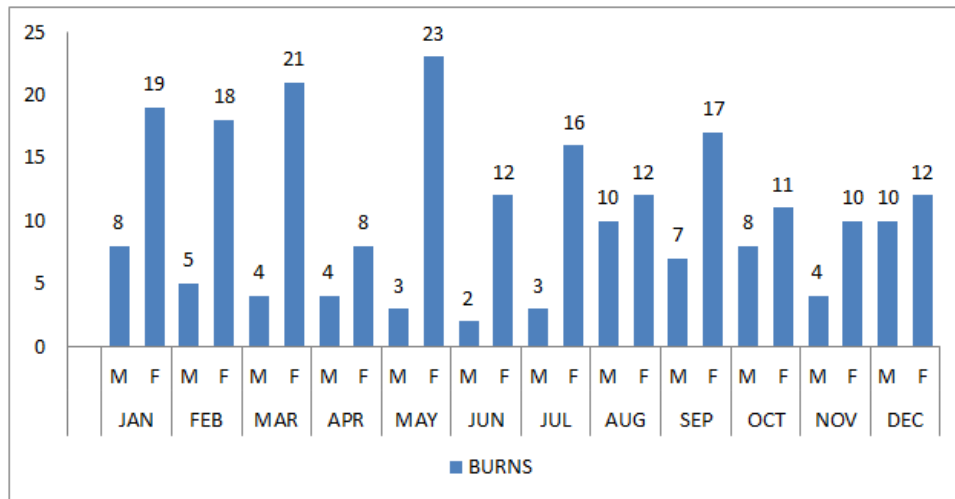
This study was carried out during the period from 1st January 2013 to 31st December 2013, in the Casualty Department of Sir T Hospital (Tertiary Care Health Institution) attached with Government Medical College,

Bhavnagar . Total 1270 cases were presented to Casualty Department for post mortem examination, were included in the study. Information regarding various parameters was obtained by careful study of the medico legal register and hospital record pertaining to those cases. The data was analyzed, observations of the study were shown in table.

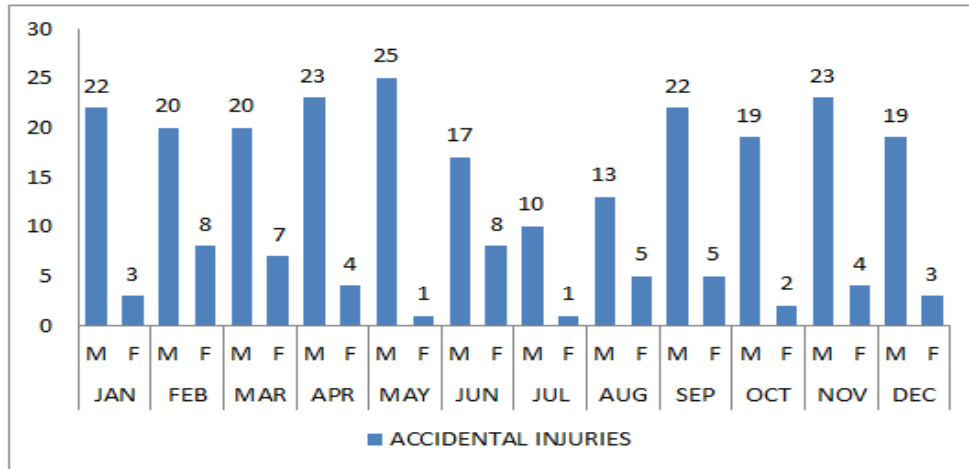
**RESULTS:**

In the year 2013 total 1270 cases were registered as Medico-legal cases from 01st of January to 31st of December. Sex wise distribution of Medico-Legal Cases shows that there were 828 cases were of male and 442 cases were of female. Below table 1 to 10 shows prevalence of different sex and month wise distribution of cases presenting for post-mortem at Sir T Hospital.

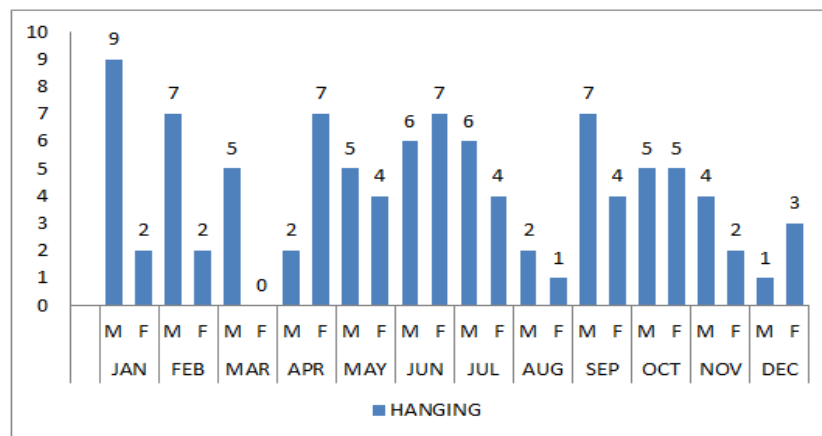
**Table -1:** Distribution of Cases of Burns



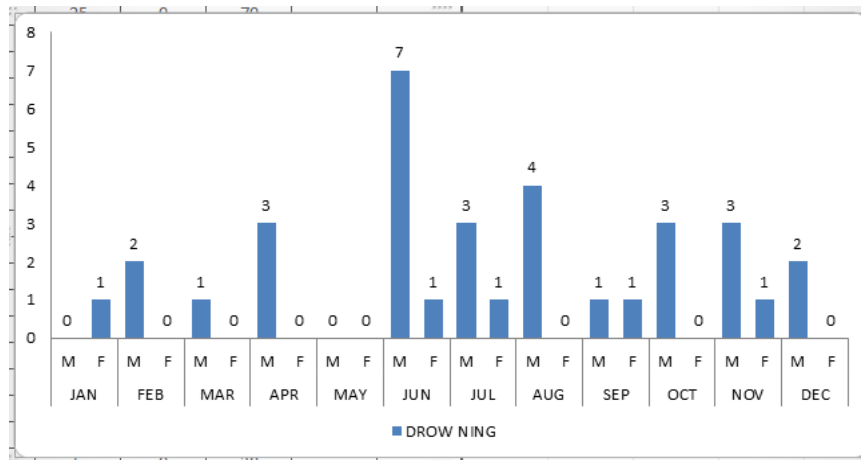
**Table -2:** Distribution of Cases of Accidental Injuries



**Table -3:** Distribution of Cases of Hanging



**Table -4:** Distribution of Cases of drowning



**Table -5:** Distribution of Cases of Homicidal/ Suicidal

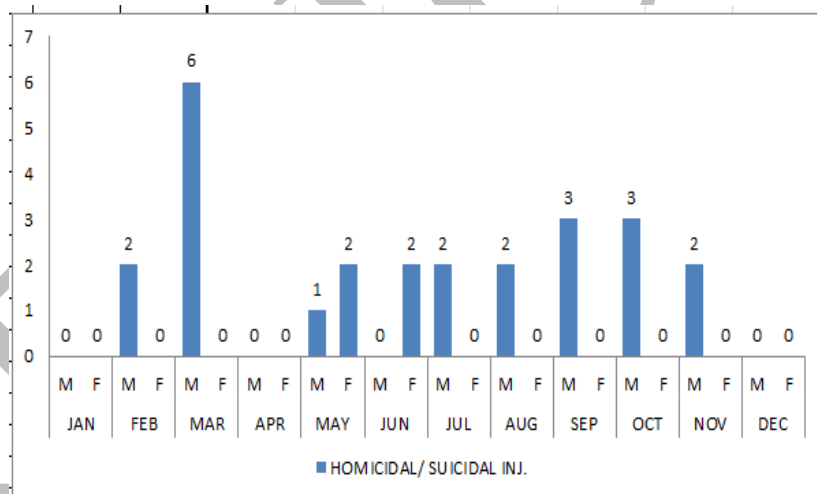


Table -6: Distribution of Cases of Poison

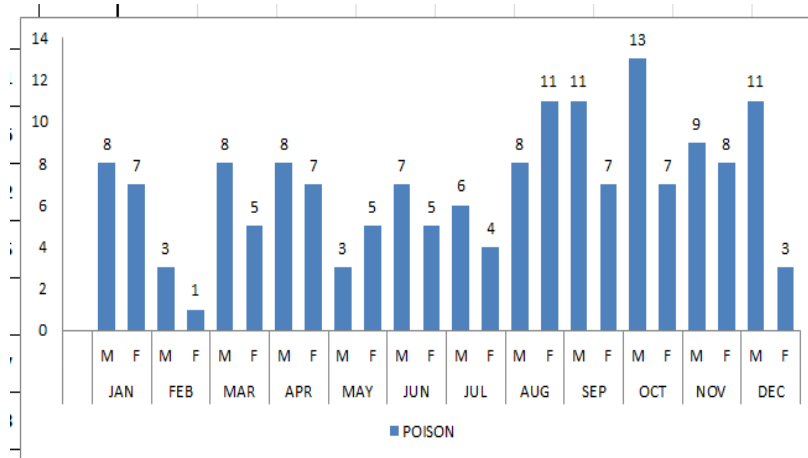
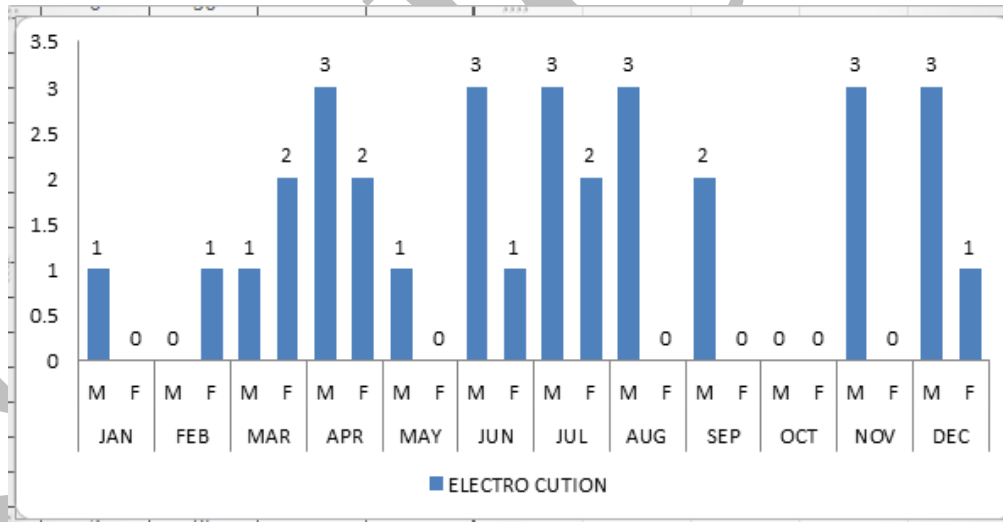


Table -7: Distribution of Cases of Electrocutation



**DISCUSSION:**

Distribution of all cases are shown in table 8

**Table -8:** Distribution of all Cases from Jan 2013 to Dec 2013

MONTH	SEX	BURNS	INJURIES	HANGING	DROW- NING	ELECTRO- CUTION	STRANGU- LATION	HOMICIDAL/ SUICIDAL	POISON	NATURAL	PENDING	TOTAL	TOTAL
JAN	M	8	22	9	0	1	0	0	8	16	1	65	102
	F	19	3	2	1	0	0	0	7	5	0	37	
FEB	M	5	20	7	2	0	0	2	3	23	0	62	98
	F	18	8	2	0	1	0	0	1	6	0	36	
MAR	M	4	20	5	1	1	0	6	8	25	0	70	111
	F	21	7	0	0	2	0	0	5	5	1	41	
APR	M	4	23	2	3	3	0	0	8	28	0	71	106
	F	8	4	7	0	2	0	0	7	7	0	35	
MAY	M	3	25	5	0	1	0	1	3	20	1	59	102
	F	23	1	4	0	0	0	2	5	8	0	43	
JUN	M	2	17	6	7	3	0	0	7	28	0	70	115
	F	12	8	7	1	1	0	2	5	9	0	45	
JUL	M	3	10	6	3	3	0	2	6	25	1	59	94
	F	16	1	4	1	2	1	0	4	6	0	35	
AUG	M	10	13	2	4	3	0	2	8	25	0	67	107
	F	12	5	1	0	0	0	0	11	11	0	40	
SEP	M	7	22	7	1	2	0	3	11	15	2	70	108
	F	17	5	4	1	0	0	0	7	4	0	38	
OCT	M	8	19	5	3	0	0	3	13	31	3	85	117
	F	11	2	5	0	0	0	0	7	7	0	32	
NOV	M	4	23	4	3	3	0	2	9	28	2	78	108
	F	10	4	2	1	0	0	0	8	5	0	30	
DEC	M	10	19	1	2	3	0	0	11	25	1	72	102
	F	12	3	3	0	1	0	0	3	8	0	30	
Total		247	284	100	34	32	1	25	165	370	12	1270	1270

In the present study we found that sex wise most of the Medico-legal cases were males (65.19%). Similar findings were reported by Garg V<sup>8</sup>, Malik Y<sup>9</sup>, Marri MZ<sup>10</sup> and Hussaini SN<sup>11</sup>. This is because males are more exposed to outdoor activities as well as disputes in family matters. Also male by nature indulge in more violent activities as compared female. They were main breadwinners of the family. Collectively therefore they were more vulnerable and exposed to such situations which fall as MLCs in our study.

In the present study we observed that most of the Medico-Legal Cases are due to assault (22.36%) and the age group 21-30 years was most commonly involved. Similar results were observed by Bhullar DS<sup>12</sup> and Aggarwal KK<sup>13</sup>.

In Present Study we have seen that maximum cases were observed in October followed by June which is also similar with other studies<sup>8,9,10</sup>.

If we see total case highest no was having natural cause of death (26.77%), which shows, if some mechanism is developed, will reduce burden of the hospital.

## CONCLUSION

This study shows the load of medico-legal cases at the tertiary care hospital and hospital not only caters to the needs of patients who reports for their illness but also carry out legal responsibilities to examine, document and certify medico-legal cases. The doctors who are involved in treatment of such medico-legal cases need to be more trained in this field. Also due to increase in accidents and violence cases, hospitals have the need for round the clock availability of such medico-legal experts in sufficient number to deal effectively with such cases to better serve of laws of land. There is dire need for round the clock availability of medico legal experts in casualty departments. There is a need of doctors along with trained nurses & paramedical staff to deal with medico legal cases without any loss of time and of course to reduce the anxiety of the victims. The law enforcing agencies should also play their role to eliminate the violence from the society especially.

**Study limitation:** We found that all unconscious cases brought, even though they are suffering from natural diseases were registered as Medico-Legal Cases. But to avoid



the inflation of number of Medico-Legal Cases we suggest that when an unconscious case is brought and if it is a known case of any disease undergoing treatment for that, then it should not be registered as Medico-Legal Cases case. But while treating the case, if treating doctor suspects any foul play then these cases to be registered as Medico-Legal Cases.

**REFERENCES**

1. Hussaini SN, Kulkarni CS, Batra AK. Profile of Medico-Legal cases coming to casualty of Government Medical College, Akola. *Journal of Forensic Med Sci and Law* 2013; 22 (2):1-5.
2. Instructions regarding the conduct of Medico legal and Post-mortem examinations, revised up to December 2007. Surgeon Medicolegal Punjab 6- kutchery Road, Lahore.
3. Vishal G, Verma S K. Profile of Medico legal cases at Adesh institute of Medical sciences and research, Bhatinda, Punjab. *Journal of Indian academy of Forensic Medicine* 2010; 32 (2):150 – 2.
4. Krug EG, Mercy JA, Dahlberg LL, Zwi AB. The world report on violence and health. *Lancet*: 2002; 5 (360):1083-8.

5. Niaz U. Violence against women in South Asian countries. *Archives of Mental Health*2003;6(3): 173-84.
6. Babu BV, Kar SK. Domestic violence against women in eastern Indian: a population study on prevalence and related issues. *BMC Public Health* 2009; 9:129.
7. Cloutier S, Martin SL, Poole C. Sexual assault among North Carolina women: prevalence and health risk factors. *J Epidemiol Community Health* 2002; 56:265-71.
8. Garg V, Verma SK. Profile of medico legal cases at Adesh institute of medical Sciences and research Bhatinda Punjab, *J Indian Acad Forensic Med*;2010;32(2):150-2
9. Malik Y, Chawla R, et al. Profile of medico legal cases in causality of a rural medical college of Hariyana, *J Indian Acad Forensic Med*;2013;35(4):367-68. Vol 23, Number 2 *Journal of Forensic Medicine, Science and Law* (Jul-Dec 2014) A Journal of Medicolegal Association of Maharashtra
10. Marri MZ, Baloch U. Frequency and pattern of medico legal cases reported at Sandeman Civil Hospital Quetta Baluchistan- 1year study.

11. 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; 22(2)
12. Bhullar DS, Aggarwal KK. Medico Legal Diagnosis & Pattern of Injuries with Sharp Weapons, J Indian Acad Forensic Med; 2007; 29(4):112-114
13. Aggarwal KK, Kumar Rakesh, Sharma Meena. A retrospective study of medico legal cases presenting in the emergency of rajindra hospital Patiala in the year 2009, J Punjab Acad Forensic Med Toxicol; 2011; 11(2): 77-80.