

Original Research Article

## Unintentional/Intentional Injuries Among the Registered Cases at the Medical Record Department (MRD) at the Teaching Hospital of North India

Mehar Bano<sup>1</sup>, Anupama Arya<sup>1</sup>, Sadhana Awasthi<sup>2</sup>, CMS Rawat<sup>3</sup>

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### Abstract

**Background:** Indirect estimates by the World Health Organization (WHO) and the Global Burden of Diseases Study (GBD) suggest that unintentional injuries account for 3.9 million deaths worldwide <sup>1</sup>, of which about 90% occur in low- and middle-income countries. The majority of these deaths are attributable to road traffic injuries, falls, drowning, poisoning and burns <sup>1</sup>. **Objective:** To assess the profile of unintentional/intentional injuries from the tertiary centre along with identifying some underlying causes of their occurrence. **Methods:** Retrospective hospital based cross-sectional study is carried out of 2 years in which the medico-legal case sheets were looked in for the necessary details from the medical record department (MRD) of the tertiary care centre. **Results:** Poisoning exceeded amongst the various medicolegal cases i.e. 46.7% in 2012 and 57.3% in 2013. Males are predominantly involved. In certain cited causes, the cases might be attributed to familial stress, accidental inhalation of insecticides and others. **Conclusion:** Poisoning was the commonest form of unintentional/intentional injury reported with organophosphorus pesticides commonly taken. Familial stress, accidental inhalation were some of the contributing factors revealed in some of the cases.

**Key words:** Burden of Diseases, unintentional injury, Poisoning, Medico-legal cases

### Authors:

1. Assistant Professor, Deptt of Community Medicine, GMC Haldwani, 2. Associate Professor & 3. Professor & HOD, Deptt of Community Medicine, GMC Haldwani-Uttarakhand

### Corresponding Author:

Dr Mehar Bano  
Assistant Professor  
Deptt of Community Medicine  
GMC- Haldwani-263139, Uttarakhand  
Email id: [meharbano1204@gmail.com](mailto:meharbano1204@gmail.com)

### Introduction:

Medico-legal cases (MLC) constitute a considerable segment of emergencies brought to emergency medicine department of a tertiary care hospital. Therefore, apart from medical emergencies the doctor needs to be sensitive about MLC which constitute a substantial proportion and their exhaustive documentation is mandatory. <sup>2</sup> A MLC is a case of injury or illness where the attending doctor, after eliciting history & examining the patient, thinks that some investigation by law enforcement agencies is essential to establish & fix

responsibility for the case in accordance with the law of the land. <sup>3</sup>

Profiling of medicolegal cases is an integral aspect for the prevention of preventable casualties in future and to study the crime rate in area. <sup>4</sup> Five of the 15 leading causes of death in persons 15–29 years of age are unintentional injury related, including road traffic injuries, drowning, burns, poisoning, and falls. <sup>5</sup> Also, as shown in the picture below, WHO has listed unintentional injuries as the 3<sup>rd</sup> cause of death due to environment.

**Fig.1. Top 10 causes of death from the environment(WHO)**



Thus, an attempt is made in this study so that the data findings can supplement the national data of reporting of medico-legal cases which helps in attaining the effective intersectoral counter measures, evaluation and strategies for their prevention. Also, it is desired in this research project to draw attention of policy makers towards low priority issues of intentional/unintentional injuries as deaths, disabilities and impact of socio-economic loss to individuals, families, society & infrastructure. Although in the present study only picture of death due to MLC cases has been shown.

So we study the profile of medico-legal cases reported at the tertiary centre in the 2 years and study selected antecedent underlying factors for their occurrence.

### **Material and methods:**

A hospital based Retrospective Cross-sectional Study among MLC cases reported at the tertiary centre in the 2 years in MRD of GMC Haldwani-Uttarakhand

**Sample size :** Complete enumeration. There were 7 systemic disease case file in 2013 and 5 in 2012 with

2 incomplete MLC case sheet file in 2012 and 1 in 2013. Hence, they were excluded and n=306 in 2012 & n=347 in 2013 were taken for study.

**Methodology:** The investigator looked in the MLC files deposited in the MRD section from various departments of the hospital in the years 2012 & 2013 for the data collection. The variables in semi-structured questionnaire for which the information was collected includes age, sex, type of MLC case, district, refer from, date of admission & discharge, time of incident if available, factors responsible for the occurrence of MLC case if noted in the file, treatment given and outcome of these cases. The master chart was made in microsoft excel 2007.

### **Operational definitions used in the study:**

**Hanging:** It is a form of asphyxia which is caused by suspension of the body by ligature which encircles the neck, the constricting force being the weight of the body.<sup>6</sup>

**Strangulation/Throttling:** Application of external pressure on the neck either by bare hands, or by ligature, or by any other material. It is a form of asphyxia caused by constriction of the neck without suspending the body. Strangulation that is effected by a ligature is called ligature strangulation while that which is accomplished by bare hands is called manual strangulation or throttling.<sup>6</sup>

**Drowning:** It is a form of asphyxia due to aspiration of fluid into air passages caused by submersion in water or other fluid. Complete submersion is not necessary for submersion of the nose and mouth alone for a sufficient period can cause death from drowning.<sup>6</sup>

**Poisoning:** It occurs when any substance interferes with normal body functions after it is swallowed, inhaled, injected or absorbed.<sup>6</sup>

**Burns:** A burn is an injury to the skin or other organic tissue primarily caused by heat or due to radiations, radioactivity, electricity, friction or contact with chemicals (WHO fact sheet on burns)

**Stab injury:** This type of injury is produced from the penetration of pointed/sharp instruments/weapons on to the depth of the body i.e is deeper than its length, generally knives, broken glass bottles and tools etc.<sup>7</sup>

**Assault:** It is an unlawful act that places another person without that person consent in fear of immediate bodily harm.<sup>6</sup>

**Fire-arm injury:** A bullet passing through a body produces a wound at the point of entrance on the skin known as entry wound & another at the point of exit of the bullet known as exit wound. The injuries produced by FA vary, depending on the projectile, the muzzle velocity, distance, angle of firing & part of the body involved.<sup>7</sup>

**Suicide:** It is death caused by self directed injurious behaviour with any intent to die as a result of the behaviour. (CDC 2011)

The miscellaneous group comprises of fall from height (FFH), fall from stairs, beaten case, animal bite,

trauma/injury like body part caught in machine and sexual assault case.

Ethical approval was taken for the study from the college ethical committee and permission letter obtained from the medical superintendent of the hospital before carrying out the study.

**Statistical analysis:** The collected secondary data is collated, checked for errors and entered into ms excel 2007. The analysis was done using percentages in SPSS-18 (IBM-SPSS).

**Results:**

Amongst the medico-legal cases recorded in the year 2012 & 2013, the poisoning, burn and assault/stab injury & miscellaneous were found in greater percentages which is 46.7%, 19%, 13.4% & 10.1% in 2012 and 57.3%, 13.5%, 8.9% & 13.3% in 2013 respectively. The gun shot injury cases was 4.6% in 2012 and 0.9% in 2013. However, train accident and prisoner cases was 0.7% & 1.6% respectively in 2012 and 1.7% & 2.6% in 2013. No alcoholic

intoxication was found in 2013 which is 0.7% in 2012.

**Table 1: Profile of other medico-legal cases in the year 2012 & 2013**

Medico-legal cases	2012	2013
	Number (%)	Number (%)
Burn	58 (19)	47(13.5)
Poisoning	143(46.7)	199 (57.3)
Assault/stab injury	41 (13.4)	31 (8.9)
Hanging/strangulation/drowning/t hrottling/cut throat	8 (2.6)	4 (1.2)
Firearm/gun shot injury	14 (4.6)	3 (0.9)
Miscellaneous	31 (10.1)	46 (13.3)
Prisoner	5 (1.6)	9 (2.6)
Train injury/accident	2 (0.7)	6 (1.7)
Alcoholic intoxications	2 (0.7)	0 (0)
Unclassified	2 (0.7)	2 (0.6)
Total	306 (100)	347 (100)

**Table 2a): Socio-demographic profile of burn, poisoning & assault cases in the 2 years**

Characteristics	Burn		Poisoning		Assault	
	2012 (n=58)	2013 (n=47)	2012 (n=143)	2013 (n=199)	2012 (n=41)	2013 (n=31)
Mean age (years)	28.71 ± 14.36	27.97 ± 15.6	26.06 ± 9.29	27.84 ± 13.7	38.56 ± 18.89	35.35 ± 15.79
Median age	26 years	24 years	24 years	24 years	35 years	32 years
Age range	1.5 to 69 years	3 to 70 years	3 to 60 years	1 to 80 years	16 to 84 years	16 to 88 years
Male:Female	27:31	26:21	86:57	102:97*	33:8	20:11
Single:married:widower	19:39:0	15:32	57:85:1	107:92	12:29	9:22
<b>Religion</b>	2012 (n=58)	2013 (n=47)	2012 (n=143)	2013 (n=199)	2012 (n=41)	2013 (n=31)
Hindu	51 (87.9%)	41 (87.2%)	122 (85.3%)	168 (84.4%)	35 (85.4%)	23 (74.2%)
Muslim	7 (12.1)	6 (12.8%)	19 (13.3%)	28 (14.1%)	5 (12.2%)	7 (22.6%)
Others	0%	0%	2 (1.4%)	3 (1.5%)	1 (2.4%)	1 (3.2%)
<b>States</b>	2012 (n=58)	2013 (n=47)	2012 (n=143)	2013 (n=199)	2012 (n=41)	2013 (n=31)
Uttarakhand	53 (91.4%)	40 (85.1%)	138 (96.5%)	193 (97%)	40 (97.6%)	31 (100%)
UP	5 (8.6%)	7 (14.9%)	5 (3.5%)	6 (3%)	1 (2.4%)	0%

\*In 2013 the 7 cases of poisoning were reported in pregnant women.

The median age of poisoning cases in 2012 & 2013 and burn in 2013 was 24 years and those of burn cases in 2012 was 26 years with higher median age of 32 & 35 years respectively in 2012 & 2013 of assault cases. The

male sex is invariably involved more than female sex as shown by the sex ratio. Predominantly belonged to Hindu religion and were residing in Uttarakhand state.

**Table 2b): Descriptive Profile of Burn, Poisoning and Assault Cases in the 2 Years**

Referred from	2012 (n=58)	2013 (n=47)	2012 (n=143)	2013 (n=199)	2012 (n=41)	2013 (n=31)
District hospital	29 (50%)	15 (31.9%)	57 (39.9%)	59 (29.6%)	14 (34.1%)	9 (29%)
CHC	6 (10.3%)	10 (21.3%)	14 (9.8%)	36 (18.1%)	7 (17.1%)	11 (35.5%)
PHC	3 (5.2%)	0 (0%)	2 (1.4%)	4 (2%)	2 (4.9%)	0 (0%)
Private hospital	0 (0%)	3 (6.4%)	8 (5.6%)	9 (4.5%)	1 (2.4%)	0 (0%)
Not referred	20 (34.5%)	19 (40.4%)	62 (43.4%)	91 (45.7%)	17 (41.5%)	11 (35.5%)
Time taken to reach tertiary centre	2012 (n=45)	2013 (n=34)	2012 (n=112)	2013 (n=151)	2012 (n=29)	2013 (n=23)
≤1 hr	3 (6.7%)	0 (0%)	21 (18.8%)	29 (19.2%)	1 (3.4%)	0 (0%)
>1-6 hr	9 (20%)	16 (47.1%)	64 (57.1%)	81 (53.6%)	9 (31%)	9 (39.1%)
>6 hr	33 (73.3%)	18 (52.9%)	27 (24.1%)	41 (27.2%)	19 (65.5%)	14 (60.9%)
Duration of hospital stay (days)	2012 (n=56)	2013 (n=43)	2012 (n=124)	2013 (n=171)	2012 (n=39)	2013 (n=30)
Median duration	5 days	7 days	2 days	2 days	7 days	6 days
Range of duration stay	1 to 37 days	1 to 47 days	1 to 11 days	1 to 14 days	1 to 57 days	1 to 18 days
Treatment taken	2012 (n=58)	2013 (n=47)	2012 (n=143)	2013 (n=199)	2012 (n=41)	2013 (n=31)
Conservative	57 (98.3%)	47	143	199	27 (65.9%)	21 (67.7%)
Operation	1 (1.7%)	0%	0%	0%	14 (34.1%)	10 (32.3%)
Outcome of cases	2012 (n=58)	2013 (n=47)	2012 (n=143)	2013 (n=199)	2012 (n=41)	2013 (n=31)
Discharged	23 (39.7%)	26 (55.3%)	106 (74.1%)	123 (61.8%)	34 (82.9%)	29 (93.5%)
Lama	7 (12.1%)	15 (31.9%)	12 (8.4%)	60 (30.2%)	4 (9.8%)	2 (6.5%)
Expired	22 (37.9%)	3 (6.4%)	20 (14%)	15 (7.5%)	1 (2.4%)	0 (0%)
Referred	6 (10.3%)	3 (6.4%)	5 (3.5%)	1 (0.5%)	2 (4.9%)	0 (0%)

The higher percentage of referral of the MLC cases to the tertiary centre was from district hospital which is 50% & 31.9% in 2012 & 2013 (burn cases), 39.9% & 29.6% in 2012 & 2013 (poisoning) and 34.1% & 29% in 2012 & 2013 (assault). Due to record based hospital data, the number varies amongst the cases for knowing the time taken to reach tertiary centre. Most of the burn (73.3% in 2012 & 52.9% in 2013) and assault (65.5% in 2012 & 60.9% in 2013) had reached the tertiary centre in

> 6hours unlike poisoning cases (57.1% & 53.6% in 2012 & 2013 respectively) were reaching in 1 to 6 hours. Excluding the number of cases who got discharged on the same day of admission and these numbers are n=2 in 2012 & n=4 in 2013 (burn), n=19 in 2012 & n=28 in 2013 (poisoning) and n=2 in 2012 & n=1 in 2013 (assault), the median duration of hospital stay of these cases varied from 2 to 7 days. The conservative management was mostly given to them except the assault cases and one burn

patient in 2012. The case fatality rate of burn cases in 2012 & 2013 was 37.9% & 6.4% respectively, 14% & 7.5% in 2012 & 2013 of poisoning cases and 2.4% of assault cases in 2012.

**Table 3: Selected Antecedent Factors and some characteristics of Burn and Assault Cases in the 2 Years**

Type of Burn	2012 (n=58)	2013 (n=47)
Thermal	54 (93.1%)	38 (80.9%)
Electrical	2 (3.4%)	8 (17%)
Unspecified	2 (3.4%)	1 (2.1%)
% of Burn	2012 (n=58)	2013 (n=47)
≤50%	17 (29.3%)	32 (68.1%)
>50%	36 (62.1%)	13 (27.7%)
Not specified	5 (8.6%)	2 (4.3%)
Site of Burn#	2012 (n=58)	2013 (n=47)
Upper limbs	26 (44.8%)	10 (21.3%)
Lower limbs	18 (31%)	9 (19.1%)
Chest	16 (27.6%)	12 (25.5%)
Face/neck	13 (22.4%)	8 (17%)
Back	11 (19%)	2 (4.3%)
Head/scalp	3 (5.2%)	0 (0%)
Abdomen	7 (12.1%)	7 (14.9%)
Cause of Thermal Burn	2012 (n=54)	2013 (n=38)
Flame burn	24 (44.4%)	21 (55.3%)
Cylinder burst/leaking gas stove	4 (7.4%)	9 (23.7%)
Miscellaneous*	15 (27.8%)	8 (21.1%)
Not specified	11 (20.4%)	0 (0%)
Type of assault	2012 (n=41)	2013 (n=31)
Physical	15 (36.6%)	12 (38.7%)
Stab injury	6 (14.6%)	10 (32.3%)
Unspecified	20 (48.8%)	8 (25.8%)
Sexual assault?gang rape	0%	1 (3.2%)
Cause of physical assault	2012 (n=15)	2013 (n=12)
Hit on abdomen	2 (13.3%)	2 (16.7%)
Beaten by iron rod/lathi/sticks	8 (53.3%)	6 (50%)

Fight in group	2 (13.3%)	2 (16.7%)
By jangli hathi	1 (6.6%)	0 (0%)
Unspecified	2 (13.3%)	2 (16.7%)
Cause of stab injury	2012 (n=6)	2013 (n=10)
By sword/ knife	6 (100%)	0%
By knife/hammer/darati	0%	10 (100%)

#Multiple responses

\*The miscellaneous group in 2012 comprises of burn due to stove burst (n=3), scald burn (n=3), syrup spill (n=1), accidental burn due to burning of bed by mortein coil (n=1), to propel mosquito from cowshed (n=1), to protect wife (n=2), burning wood (n=2), self pouring kerosene oil (n=1). Whereas the miscellaneous group in 2013 includes scald burn (n=6) and due to wife protection (n=2).

Thermal burn was seen in maximum 93.1% with n=24 of flame burn and in 62.1% cases in 2012 and only in 27.7% cases in 2013, more than 50% of body area is burnt. The upper limbs were commonly affected in 44.8% in 2012 & 21.3% in 2013. Regarding the descriptive profile of assault, the physical assault was found in 36.6% in 2012 and 38.7% in 2013 with varied reasons of hit on abdomen, fight in group, beaten by iron rod etc. There was one sexual assault case reported in 2012.

**Table 4: Type of poison intake with underlying causes in some of the MLC cases in the 2 years**

Year	Type of Poison	Subtypes	Number
2012	Insecticides	Organophosphorus	80 (n=28 celphos)
		Anti cockroach	3
		Lice killer	1
		All out	2
		Unspecified substance	13
	Tablets	Sedative	18
		Others	2 (1 is renal stone ayurvedic tab) other is antidepressant
	Others		13
	Rodenticides		8
	Not specified any substance		3

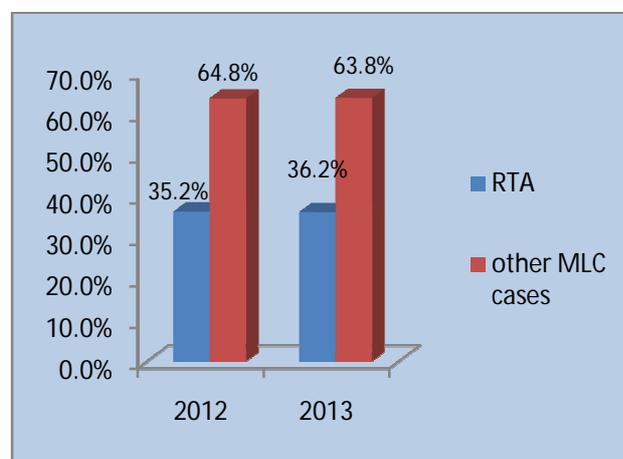
	Querrel with family	n=4
	Aggressive behaviour	n=2
	Scolded by mother d/t poor studies	n=1
Causes of poison intake	Beaten by mother for girl with 15 wk pregnancy	n=1
	Unknown domestic stress	n=3
	Stress as husband expired*6m nths	n=1
	Stress due to marriage against family will	n=1
	Stress for no child*4 years	n=1
	Stress for poor performance in studies	n=1
	<b>Job related</b>	<b>Number</b>
	Due to job problem	n=2
	<b>Others</b>	<b>Number</b>
	By mistake	n=1
	Argument with teacher	n=1

The type of substance consumed by the cases in 2012 was insecticides (69.2%), tablets (14%), rodenticides (5.6%). The other category category in 2012 includes harpic (n=2), mushroom (n=2), corrosive/phenyl (n=2), acid (n=1), nail paint remover (n=1), bioenzyme (n=1), aconite (n=1), peanut/food poisoning (n=1), petrol smell (n=1), unknown (n=1). The causes like familial, job related in the form of quarrel, stress were attributed for the poison intake. In 2013, the insecticides was found in 67.3% cases, tablets & rodenticides each with 7%. The other category in 2013 comprises of food poisoning (n=3), corrosive/phenyl (n=6), plant seeds (n=2), whitener (n=1), perfume (n=1), tv cleaner (n=1), kerosene oil (n=1), harpic (n=1), chemical poisoning (n=1). In 2013, besides the familial cause, there were n=2 cases in whom the poisoning was

		Food intake	n=1
2013	<b>Type of poison</b>	<b>Subtypes</b>	<b>Number</b>
	Insecticides	Organophosphorus	n=94 (n=37 celphos)
		All out	n=7
		Anti cockroach	n=1
		Unspecified	n=32
	Tablets	Sedatives	n=5
		Others	n=6
		Unknown tab	n=3
	Others		n=17
	Rodent		n=14
	Not specified substance		n=20
	<b>Cause of poisoning</b>	<b>Familial</b>	<b>Number</b>
		Querrel with family	n=7
Stress due to husband left home		n=1	
Negative comments by mother		n=1	
<b>Others</b>		<b>Number</b>	
During spraying in field		n=2	
Stress due to son accident in road traffic accident	n=1		

attributed due to accidental inhalation of insecticides during spraying in field.

Fig. 2: Distribution of total MLC cases in the 2 years



The proportion of other MLC cases being greater with 64.8% (n=306) in 2012 and 63.8% (n=347) in 2013 than that of road traffic injuries with 35.2% (n=166) in 2012 & 36.2% (n=197) in 2013 in the 2 consecutive years respectively.

## **Discussion**

India is on the threshold of becoming a developed nation. Being a tropical country, it faces a mammoth burden of communicable diseases. Over the years, success has been achieved in controlling communicable diseases but non-communicable diseases contribute to pose a significant health problem. Infact, non-communicable diseases and injuries account for 52% of deaths in India.<sup>8</sup> Injuries are increasingly recognised as a global public health epidemic. Injuries represent 12% of the global disease burden and third most important cause of overall mortality.<sup>9</sup> Unintentional injuries contributed to 4.9% of deaths.<sup>8</sup>

In Kashmir study<sup>10</sup>, out of 1136 case studied from 1<sup>st</sup> Jan 2014 to 30 June 2014 i.e 6 months, 841 (74.03%) were males & 295 (25.97%) were females. Majority of patients were between 21-30 years of age (28.3%) followed by 11-20 years & 31-40 years age groups. RTA constituted the majority of cases (48.08%) followed by assault (30.63%), poisoning (9.24%), buns (3.08%), fall from height, FFH (2.82%), machine injury (1.06%), strangulation/hanging (0.18%), drowning (0.18%), firearm injury/stone pelting (4.75%). In the present study also, there is male preponderance of 62.1% in 2012 and 59.1% in 2013 and most the young productive age group is effected with MLC cases i.e 50% in <25 years in the 2 years and 36.9% in 2013 & 39.9% in 2012 in the 25-49 years age group. In the current study, the RTAs had constituted only 36% cases unlike 48.08% in Kashmir study.

Injuries due to road-traffic, occupational accidents, burns, poisoning, suicides & violence are observed to be major causes of mortality and morbidity in the SEAR countries.<sup>11</sup> This is in contrast to the findings of the present study where the poisoning cases with 46.7% in 2012 & 57.3% in 2013 exceeded the RTA cases of nearly 36% in the 2 calender years and burn cases of 19% in 2012 &

13.5% in 2013. Also, the poisoning cases with 46.7% in the study constituted the majority of medico-legal cases. This finding is different to the study done by Hussaini et al in Akola, Maharashtra who reported that burns (21.87%) constituted maximum MLC cases followed by assault (19.72%), poisoning (18.70%) & RTA (16.99%), alcohol intoxications (8.62%).<sup>12</sup> But poisoning cases were reported highest in 84/202 cases in a study done by Yogendra Malik et al in Haryana<sup>13</sup>

The major causes of childhood injuries in SEARO was road-traffic, drowning, burns & fall.<sup>14</sup> Childhood poisoning constituted 2.1% of the total paediatric admissions.<sup>15</sup> In the study, it was found that poisoning cases in the age group upto 18 years was 19.5% (28/143) in 2012 and 20.1% (40/199) in 2013.

Train injury/accident cases were 0.7% in 2012 & 1.7% in 2013. They did not occur due to increase in number of trains & passengers i.e no railway fault but human own factor is involved here. The most common underlying substance in poisoning cases was pesticides being 55.9% in 2012 and 47.2% in 2013. Our country, India being predominantly agricultural dependant the pesticides are widely used & easily available for intentional & unintentional intake. The miscellaneous group comprises of falls, trauma/injury cases due to machine etc. encountered in 23.4% cases in the 2 years. Falls from rooftops, balconies, windows and staircases is responsible for the largest number of non-fatal injuries. Machine injuries occur due to unsafe man-machine interaction. In the present study, the suicidal rate was 5.22% (16/306) in 2012 and 3.45% (12/347) in 2013. It has been seen that nearly 70% of suicides in all countries has been reported in the age-group of 15-34 years with M:F ratio of 1:1.2 to 1:1.3 from different countries. Poisoning, hanging, self-immolation and drowning are the most commonly reported methods of suicide.<sup>16</sup>

Gender Roles influence burn injuries through risk exposure. This is evident in the proportion of work related industrial accidents, which affect more men versus the proportion of home accidents, which affect women & children more. While cooking, women in lower middle income countries may be involved in multiple tasks while preparing meals,

including caring for younger children and lapse in supervision is associated with an increased burn injury risk<sup>17,18,19,&20</sup> The practice of wearing loose fitting clothing such as saris while cooking has also been associated with increased burn injury risk<sup>21,22</sup> This finding is invariant to the present study where in 2013 the lesser (44.6%) of females affected with burn injury but in 2012 the higher (53.4%) of females were affected. Males involved more may be due to work related and protection of wife and also the underlying cause is hidden in most cases being retrospective data. Poisoning from intentional substance abuse as well as from unintentional toxic exposures remains a significant health concern for hospital emergency departments. The organophosphorus poisoning was reported in 31% , sedative drug overdosage in 5.8%, rodenticides in 4.3%, mortein in 4.9% in a study by anita paritekar & anushka waskar<sup>23</sup> whereas in our study the percentage of organophosphorus poisoning was 55.9% (80/143) in 2012 and 47.2% (94/199) in 2013, that of sedatives was 12.5% (18/143) in 2012 and 2.51% (5/199) in 2013 and that of rodenticides was 5.6% (8/143) in 2012 and 7.03% (14/199) in 2013. The study<sup>13</sup> observed that single department opinion was most common (147/202). Maximum opinion were sought from medicine(85/202), surgery (82/202) and ortho department (63/202) which is consistent with workload of these departments in other study.<sup>24</sup> Whereas in the present study the single department reference opinion was sought in 68.8% in 2012 and 81.6% in 2013. Maximum opinion was sought from medicine (36.4%) and psychiatry (31.2%) in 2012 while in 2013 maximum opinion was sought from psychiatry department(49.4%).

**Conclusion & Recommendation:** The relative percentage of poisoning cases was highest with 46.7% in 2012 & 57.3% in 2013 having insecticides reported maximum in 69.2% in 2012 and 67.3% in 2013. Half of the various MLC cases in the 2 calender years was found in younger age group i.e < 25 years with male sex predominantly involved in 62.1% & 59.1% in 2012 & 2013 respectively. The alcohol presence was reported in only one-tenth of MLC cases in the 2 years. The case fatality rate of MLC cases was 17% in 2012 and only 6.6% in 2013. Hence the frequency & pattern of MLC cases will provide vital data to administrators, health

officials, social workers, NGOs to devise strategies in order to reduce these incidences.

**Limitation:** Barring the percentage of suicidal attempt, the study could not illustrate the manner of attempt as accidental or homicidal in these MLC cases. Being hospital based retrospective data collection, the underlying factors in these unintentional/intentional cases could not be made out.

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**Conflict of interest:** None

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