Forensic Medicine

Autopsy Evaluation of Homicidal Deaths in Western Mumbai Region -2 Years Prospective Study

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Original Research Article

Abstract: Killing of an individual is the highest level of aggression found in all cultures. Though the pattern and method of homicide is different in different cultures and geographical regions the motive and intention behind remains same such as property dispute, revenge, infidelity arguments and scuffle. This prospective study is conducted for the purpose of the evaluation incidence of homicide, socio-demographic profile of victims and pattern of injuries on body region in the Dept of Forensic Medicine at H.B.T. Medical College, Mumbai from the period of Jan 2015 to Dec.2016 The study reveals homicidal deaths accounted for 2.11% of autopsies and the predominance of male victims 54.5% cases. 60% victims were in the age group 21-40 years. Maximum homicides took place at victim's residence 45.45%. Friends of victims were involved in 30.3% cases. Arguments were main motive 45.45%. Most of cases were brought dead 58%. Hard and blunt weapon is most common type of weapon used 39.4%.head was the commonest body part targeted for homicide and head injury is most common cause of death 39.39%. Defence wound was seen in 42.4 % case and incised wound is the most common type of defence injury 42.8%.
Keywords: Homicide, autopsy, sharp edged weapon, stab injury, murder, culpable homicide.

INTRODUCTION

Homicide is killing of human being by another human being .There are two types of homicides i) lawful which includes excusable and justifiable homicide ii). unlawful or culpable homicide (sec.229 of IPC) which includes culpable homicide amounting to murder (300 of IPC)and culpable homicide not amounting to murder (304 of IPC) [1].

To constitute the offense of murder the two elements are i.e. Men's rea means guilty mind or preplanning with afore thought and actus reus means actual execution of planning are essential. While in offense of culpable homicide not amounting to murder the first component of preplanning i.e. men's rea is absent. The offense of culpable homicide not amounting to murder is often committed by sudden and grave provocation during the scuffle or arguments [2].

The Mumbai western suburbs have population approximately 6.2 million. There are various offenses affecting the body like rape, attempt to murder, grievous hurt, abetment of suicide, kidnapping etc. of which homicide is most heinous crime against the body known to mankind right from old civilisation to present day. It has grave implication on society. The detection and separation of such offender from society is matter of vital importance for maintaining safety and security in the entire society. The identification of profile of risk factors of victim of homicide may prevent or reduce the rate of homicide. Therefore this study was conducted to evaluate the incidence and trends of committing homicides for the cases which are brought to autopsies at department of forensic medicine at H. B. T. College, Mumbai for period of two year 2015 and 2016.

MATERIALS AND METHODS

The present prospective study is conducted in the department of forensic medicine and toxicology at H.B.T. medical college for the period of two years i.e. 1st January 2015 to 31st December 2016. The data includes cases of homicide referred for post mortem by police station from western Mumbai (western suburbs)

region which comes under the jurisdiction of H. B. T. medical college.

Inclusion criterion
- All case investigated by investing officer under 302 of IPC.
- The cases with no history of homicide at the time of death but turned to be homicide after autopsy.

Exclusion criterion
- Cases of infanticides.
- Custodial (judicial and police) homicides.

The proforma was prepared with different parameter used in study like age ,sex, occupation marital status, place of incidence , survival period, motive , accused – victim relation ,weapon of offense,

types of injuries, location of injuries, defence wound and cause of death. The information about the socio-demographic profile of cases was obtained from police inquest, ADR forms, statement of relatives of victims, hospital papers and history obtained from relative, friends accompanying with deceased person. Details of crime scene are obtained from crime scene visit or photographs of crime scene. All autopsies of homicidal deaths were meticulously conducted. Autopsies were examined and evaluated both externally and internally. Emphasis was given on mechanical injuries causing the death and defence wound on body.

RESULTS /OBSERVATIONS
Total 3114 autopsies were conducted in period of 2 year Jan 2015- Dec. 2016 out of which total 66 (2.11%) cases were of homicide (Table-1).

Table-1: Total number of autopsy and its relation to homicide autopsies

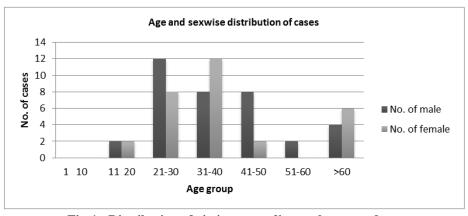| Period	Total autopsies	Homicidal autopsies (%)
Jan 2015- Dec 2015	1524	35(2.3)
Jan 2016- Dec 2016	1590	31(1.9)
Total	3114	66(2.11)

Fig-1: Distribution of victims according to the age and sex

The study reveals the predominance of male victims 36(54.5%) over female victims which account for 30 cases (45.5%). Maximum and same number of victims each 20 cases (30.30%) were found in the age group of 21-30 and 31-40. Victims less than age of 1 year (infanticide) is excluded from study. No case of

homicide is reported in age group of 1-10 years. Total Cases 40 which accounts for 60.60% of total victims were in age group 21-40 years, however least numbers of victims were in the age group of 51-60 years 2 (03.03%) .

Table-2: Socio-Demographic profile of victims

Occupation	Number of cases	Percentage
Student	6	09.09
Housewife	12	18.18
Labourer	8	12.12
Salaried/job	16	24.24
Own business	13	19.69
Acting	4	06.06
Retired	7	10.60
Marital status		
Married	41	62.12
Unmarried	19	28.78
Divorcee	2	03.03
Widow/widower	4	06.06
Place of incidence		
Victims house	30	45.45
Assailant house	10	15.15
Remote place	12	18.18
Work place	8	12.12
Street	6	09.09

It was observed that most of victims 16 (24.24%) belongs to occupation of salaried /job either in government or private sectors followed by victims with own business 13 (19.69%). Majority of victims were married 41(62.12%). The most common place for the homicide observed was victims own house 30 (45.45%) followed by remote place 12 (18.18%) and assistant house 10 (15.15%).
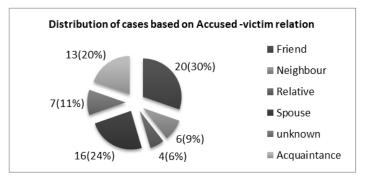

Fig-2: Distribution of homicide according to accused victim relation.

It was observed that in majority of cases accused was friend 20(30%) followed by spouse 16(24%) of victim. Relative 4(6%) of victims were found in least cases.

Table-3: Motive wise distribution of victims in relation to age

Sr. No.	Motive	Age in years			Total (%)
		1-30	31-60	> 60 yrs	
1	Argument	14	14	2	30(45.45)
2	Revenge	0	6	0	6(9.09)
3	Robbery	0	2	4	6(9.09)
4	Love affaire	2	0	0	2(3.03)
5	Infidelity	4	6	0	10(15.15)
6	Financial conflicts	2	4	0	6(9.09)
7	Property dispute/gain	0	0	4	4(6.06)
8	Rape	2	0	0	2(3.03)
10.	Total	24	32	10	66(100)

Arguments were most common motive behind the homicide, followed by Revenge, robbery, and financial conflicts which constitutes 9.09% each. Argument is most common motive in young age group

(1-30 years) which comprises of almost 58.33% of cases. However the robbery and property gain was comprises of 40% of cases each in old age group (>60 yrs)
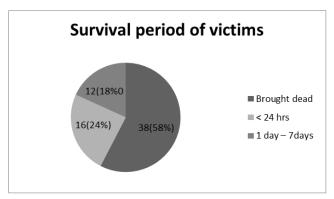

Fig-3: Survival period after infliction of injuries

Most of victims were brought dead 38 (58%).16(24%) victims were died within 24 hours after the infliction of fatal injuries.18% victims were died within 1-7 days after the infliction of injuries.

Table-4: Type of weapons used in cases

Sr. No.	Type of weapon	No. of cases	Percentage
1	Sharpe edged	24	36.36
2	Hard and blunt	26	39.39
3	blunt weapon + Sharp	2	3.03
4	Ligature material	10	15.15
6	Ligature + manual Strangulation	2	3.03
7	Thermal burn	2	3.03
8	Total	66	100

Hard and blunt weapon is most commonly used weapon of offense and observed in 39.39% cases, followed by sharp edged weapon in 36.36% of cases. In 3.035 cases both sharp edged and blunt weapon was used.

Table- 5: Distribution of cases according to region of body involved in fatal injuries with its type

Sr. No	Region of body	No. Of cases	%	Type of fatal injury					
				PA	C+F	L +F	S	I	T
1	Head	26	39.4	0	1	25	0	0	0
2	Neck	18	27.3	12	0	0	0	6	0
3	Chest	6	9.09	0	0	0	6	0	0
4	Abdomen	12	18.18	0	0	0	12	0	0
5	Multiple region	4	6.06	0	2	0	0	0	2
6	Total	66	100	12	4	25	18	6	2

(PA: pressure abrasion, C+F: contusion and Fracture, L+F: laceration and fracture, S: stab wound, I: incised wound, T: Thermal injuries)

Head was observed as most common body part targeted in homicides and accounts for 39.4% cases, followed by neck 27.3% and abdomen 18%. Head injury (laceration and fracture) is most common injury seen in 37.87% cases, followed by stab injury 27.27% and pressure abrasion 18.2% (ligature mark)

Table-6: Distribution of cases as per defence wound

Sr. No.	Defence wound	No. of cases	Percentage
1	Present	28	42.42
2	Absent	38	57.57
3	Total	66	100

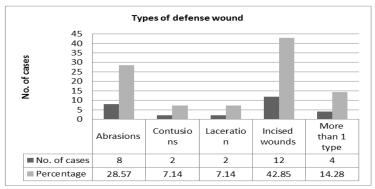Defence wounds seen in 42.42% cases, however absent in 57.57% cases

Fig-4: Distribution of cases according to types of defence wounds

Incised wound was most common type of defence wound observed in 42.83% cases, followed by abrasion in 28.57% cases.

Table -7: Distribution of cases according to causes of deaths

Sl. no	Cause of deaths	No. of cases	%
1	Shock and haemorrhages due to stab wound	18	27.27
2	Shock and haemorrhages due to multiple injuries and fractures	2	03.03
3	Head injury	26	39.39
4	Shock and haemorrhages due to cut throat	6	09.09
5	Asphyxia due to strangulation	12	18.18
6	Thermal burns	2	03.03
7	Total	66	100

Head injury is the most common cause of deaths and accounts for 39.39% of cases followed by shock and haemorrhages by stab injuries 27.27% and asphyxia due to strangulation 18.18% cases.

DISCUSSION

During the study period total 3114 autopsies were conducted of which 66 were of homicide accounting 2.11% of total autopsy done over period of two year i.e. Jan 2015 to Dec 2016. Findings of our study were consistent with study of Shailesh Jhaveri, Sandip Raloti *et al.* study 2.31% in the city of Surat [3], Dhaval J. Parmar, Love R. Bhagora *et al* .2.4%. In Bhvanagar city [4] and some extent to study of Prashanth Mada, P. Hari Krishna where homicide comprises of 3.24% of total autopsies in Hydrabad region [5], study of Dr. Basappa S. Hugar, Dr. Girish Chandra Y P *et al.* 4.32% conducted in Bangalore region [6]. However findings are in contrast with Sachidananda Mohanty, Sujan Kumar Mohanty *et al.* study where homicides constitute 6.9% of homicides [7], B. C. Shivakumar study 4.76% [8] and Ashok K. Rastogi study 4.25% [9] .these differences is due to variation in geographical and development of different region of India. Percentages of homicides are more in southern region in comparison of western region of India.

Our study shows predominance of male victims (54.5%) which is consistent with Sandip Raloti

[3], Dr. Basappa S. Hugar [6], Dhaval J. Parmar [4], B. C. Shivakumar study [8] Prashanth Mada [5] Sachidananda Mohanty [7], and Ashok K. Rastogi study [9]

The most important finding of the study is the commonly affected age group of victims, 21 - 30, 31-40 years and each contributes for 30.30% of cases which together comprises for 60.60% cases. Findings of our study Correlates with other studies such as, Sandip Raloti [3], Dhaval J. Parmar [4], Prashanth Mada [5], Dr. Basappa S. Hugar [6], Sachidananda Mohanty [7], B. C. Shivakumar study [8] and Ashok K. Rastogi study [9]. In all these study there is predominance of victims of age group 21-40 which comprises of more than 60% of cases. The high incidence of cases in the age group of 21-40 may be due to person in this age group are more aggressive, short tempered and least tolerant which leads to arguments and scuffle and ultimately end to crime of homicide. The study shows overall predominance of male victims which is consistent with study of Sandip Raloti [3], Prashanth Mada [5], Basappa S. Hugar [6], Sachidananda Mohanty [7], Dhiraj Buchade [10].

Study reveals the most common place of occurrence of homicidal attack was the victims own house 45.45% which indicates that most of homicides accused and victims were closely related with easy access to victims home. The victims and accused were

well acquainted with each other. The findings were similar to study of Prashanth Mada [5] and Dr. Basappa S. Hugar [6]. Argument and scuffles between accused and victims was the most common motive found in this study (45.45%). The most common motive of homicides scuffle and arguments indicates that homicides were not predetermined and planned. The arguments and scuffle with sudden and grave provocation leading to death of victims. The findings were consistent with study of Prashanth Mada [5], Ashok K. Rastogi [9], However inconsistent with study Basappa S. Hugar [6] , Sachidananda Mohanty [7] and B. C. Shivakumar study [8]. Which reveals the enmity /revenge as common motive behind the homicide?

Maximum number of victims (57.57%) brought dead and no single victim survived for a week. This may be due to injury to vital organ and multiple injuries over multiple regions of the body. Findings were consistent with study of Sandip Raloti [3], Basappa S. Hugar [6].

The important finding revealed in present study is the commonest type of weapon used in homicides was hard and blunt weapon (39.39%). The findings were consistent with study of Prashanth Mada [5], Ashok K. Rastogi 31.7% [9] Dhiraj Buchade *et al* 37.2%. [10]. Where common weapon of choice was hard and blunt weapon.Use of only hard and blunt weapons for homicide could possibly be unpremeditated/unplanned aggressive/ explosive response of person to sudden and grave provocation in arguments primarily. These hard and blunt object were easily available everywhere. The findings were contrast with Dhaval J. Parmar *et al.* [4], Basappa S. Hugar [6] , Sachidananda Mohanty [7], and B. C. Shivakumar [8] where the common weapon of choice was sharp and pointed weapon. However the studies of Basappa S. Hugar [6] Sachidananda Mohanty [7] and B. C. Shivakumar [8] also show contrast in motive of homicide which was revenge/enmity. Exclusive use of sharp edged weapon observed in (36.36%) homicidal cases. The use of only sharp edged weapon points towards premeditated/planned crimes with motive of robbery, revenge or property dispute.

The most common body region involved in homicide was head (39.3%) the findings is consistent with of Prashanth Mada (30%) [5], and contrast with study Sandip Raloti [3] where multiple regions (43.4%) were involved. The common fatal injury observed was laceration (37.87%) followed by stab (27.27%) and ligature mark/ pressure abrasion (18.18%). The finding is consistent with study of Prashanth Mada *et al.* [5] however inconsistent with Sandip Raloti *et al* study [3] where common injury was stab wound.

The defence wound present in 42.12 % of cases and commonest defence wound observed was incised wound (42.85%) findings are consistent with study of Prakash M. Mohite study which shows defence wounds were present in 44.4% of which incised wound accounts for 57. 14% of total cases with defence wound [11].

The common cause of death was head injury/cranio-cerebral injuries observed in 39.39% followed by shock and haemorrhages due to stab injuries 27.27% and asphyxia due to strangulation 18.18%. Strangulation was most common cause of death seen in females and 2 cases there was sexual assault committed. The findings were consistent with of Prashanth Mada *et al.* Study [5] and inconsistent with Dhaval J. Parmar *et al.* [4], Sachidananda Mohanty *et al.* [7] study in which most common cause of death was shock and haemorrhages due to stab injury and head injury /cranio-cerebral injuries was the second commonest cause of death. It can be pointed out that these studies show the differences of motive of homicide type of weapon used and preparedness of crime.

CONCLUSIONS

The trends of homicides are varying from region to region. The social and demographic factors are affects the crime of homicide. Most common age group involved in homicide was 21-40 years 60.60%, the victims are well acquainted with accused and most common place of crime was victims own house all these findings indicated that homicides were as result of arguments and scuffle between them. The victims in this young age group are more aggressive and less tolerant, proper anger and stress management through the psychiatry counselling of this age group may lower homicide rate.

The sharp and pointed weapon was used as weapon of choices in planned homicide with motive of revenge or robbery. However hard and blunt weapon was used as weapon of choice in unplanned/ unpremeditated homicides as these weapons are easily available everywhere.

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