

Patterns of Homicidal Deaths Autopsied at Tertiary Care Institute, Thane: A Five Years Retrospective Study

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ABSTRACT

Background: Homicide is defined as killing of one human being by another human being. Mens rea and Actus reus are the two elements for commission of murder which should work together for constitution of crime. The aims & objectives of this study are to analyze various aspects of homicidal autopsy cases, to find out age, sex wise variation of homicidal cases, to find out distribution of various modes of death and various types of weapons used in homicidal offences and to draw public attention and awareness regarding current patterns of homicidal offences.

Methods: A retrospective study was conducted in department of Forensic medicine, Tertiary care institute during the period from January 2011 to December 2015 which includes 57 deceased persons died due to homicide brought for autopsy.

Results: Among 2764 medicolegal autopsies conducted during the period of 5 years, 57 cases (2.06%) were of homicidal deaths. The present study demonstrated preponderance of male victims 43 (75.44%) over females 14 (24.56%). Major bulk of the male victims belonged to age group 21-30 years. Most commonly used weapon of offence by assailant is sharp edge with tapering end (40.35%) followed by sharp edged heavy weapon (28.07%) and was of Hard and blunt weapon (15.79%).

Conclusion: Homicidal deaths constituted 2.06% of autopsies conducted in five year study. Majority of victims belonged to 3rd and 4th decades and sharp edge weapon were the most common weapon of offence.

Keywords: Homicide, weapon of offence, sharp weapon, manner, victim.

INTRODUCTION

Homicide is defined as killing of one human being by another human being¹. Mens rea and Actus reus are the two elements for commission of murder which should work together for constitution of crime².

The incidence of homicide is increasing world wide and the pattern is also changing because of population

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explosion, frustration, illiteracy, prevalent economic, social and political environment, insurgency, terrorism, drug addiction changing life style, modern needs of the man and easy availability of various type of weapons².

It's a challengeable task for autopsy surgeon to reveal the mystery of death in those cases which initially comes as a natural death and later on turned into homicidal death. It's also challenging to determine weapon of offence, probable position of accused and victim at the time of incidence. Many a times, crime scene visit of forensic expert is helpful to the investigating authority and ultimately for judiciary to award a deterrent sentence to the guilty. Hence, scientific interpretation of autopsy findings along with detailed analysis of circumstances is imperative.

This retrospective study was undertaken to analyze profile of homicide and pattern of injuries to the victims to understand the patterns of murders occurring in Thane region. The knowledge gained through this study can be highlighted to reveal magnitude of the problem and its impact on the society, as well as to find out various way to reduce this menace.

OBJECTIVES

1. To analyze various aspects of homicidal autopsy cases e.g. age, sex, pattern of injuries.
2. To find out distribution of various modes of death and various types of weapons used in homicidal offences
3. To draw public attention and awareness regarding current patterns of homicidal offences.

MATERIAL AND METHOD

A retrospective study was conducted in department of Forensic medicine of Apex institute during a five year period from 1 January 2011 to 31 December 2015. All the cases brought for postmortem examination with alleged history of homicidal death and those cases which were later registered as homicide were included in this study and those cases initially subjected for autopsy with alleged history of homicide but later on registered as non homicidal based on the autopsy findings, circumstantial evidence and investigating agency were excluded. Ethical clearance was obtained from Institutional ethics committee. Post mortem examination of the case was carried out as per standard protocol with preservation of appropriate samples in appropriate preservatives. The data was taken from PM Register as well as from case papers and were analyzed using MS Xcel. Category data was presented as tables and presented as proportions.

RESULTS

A total of 2764 medico legal autopsies were conducted during the period of 5 years. Of these, 57 cases (2.06%) were of homicidal deaths.

Table 1 shows age and sex distribution of deaths due to homicide. There is a preponderance of male victims (43, 75.44%) over females (14, 24.56%). Major bulk (29, 50.88%) of the male victims belonged to age group 21-30 years. Among female victims, majority

belonged to 21-30 years, followed by 11-20 years. The least incidence was noted in above 50 years and below 10 years age group as these groups is least involved in any hazardous activity.

Table 1: Age and sex wise distribution of death due to homicide

Age	Male	%	Female	%	Total	%
11-20	6	10.52	6	10.53	12	21.05
21-30	22	38.60	7	12.28	29	50.88
31-40	10	17.54	1	1.75	11	19.30
41-50	3	5.26	0	0.00	3	5.26
>51	2	3.51	0	0.00	2	3.51
Total	43	75.44	14	24.56	57	100.00

As seen in table 2, the most commonly used weapon of offence by assailant was sharp edged weapon with tapering end (23, 40.35%), followed by sharp edge, heavy weapon (16, 28.07%), followed by hard and blunt weapon(9, 15.79%). Among females, asphyxial deaths were more common among by using ligature material or hands. The only victims of firearm injury were two males.

Table 2: Type of weapon used in homicidal cases

Weapon	Male	Female	Total	%
Hard and blunt	8	1	9	15.79
Sharp edged with tapering end	16	7	23	40.35
Sharp edged and heavy	15	1	16	28.07
Soft Ligature	0	3	3	5.26
Hard ligature	1		1	1.75
Manual force by hand	0	2	2	3.51
Electrocution	1	0	1	1.75
Firearm	2	0	2	3.51
Total	43	14	57	100.00

Table 3 shows the gender differentials in the involvement of body parts which received the fatal injury. Of the 57 cases, 12 (21.10%) demonstrated fatal injuries over the head. Chest received fatal injuries in (9, 15.80%) cases. However, neck received fatal injuries in 7 (12.30 %) cases. Head was most common region involved among males and the neck region involved in females.

Table 3: Part of body on which fatal homicidal injury conceived

Body part involved	Female	Male	Total	%
Head	1	11	12	21.1
Head+ Chest	0	1	1	1.8
Neck	6	1	7	12.3
Neck + Abdomen	0	1	1	1.8
Head + Neck	1	5	6	10.5
Neck + Chest + Abdomen	1	2	3	5.3
Chest	3	6	9	15.8
Abdomen	1	2	3	5.3
Chest + Abdomen + Back	0	5	5	8.8
Multiple parts involving whole body	1	4	5	8.8
Miscellaneous	0	5	5	8.8
Total	14	43	57	100.0

In majority of victims cause of death was shock and haemorrhage (28, 47.46%), followed by head injury (11, 18.64%) and mechanical asphyxiation (9, 15.25%). Death due to shock and haemorrhage, mostly by stab wounds followed by chop wounds. A single case of decapitation brought for postmortem examination in which head was missing and body with ante mortem clean cut at cervical region brought for examination which showed brutality of assailant. Among asphyxia deaths, death by ligature strangulation and manual strangulation were common. A rare case was seen in which victim was initially beaten by wooden stick (having tramline contusions over back) and later on was exposed to electric current to the fingertips leading to death due to electrocution.

Table 4: Distribution of cases according to cause of death

Cause of death	No. of cases	%	Total %	
Shock and haemorrhage by sharp edge weapon due to	Stab wound	21	36.84	70.12
	Chop wound	11	19.30	
	Incised wound	5	8.77	
	cut throat	2	3.51	
	Decapitation	1	1.75	
Shock and haemorrhage by hard and blunt impact	Head injury	4	7.02	12.28
	Facio-maxillary injury	2	3.51	
	multiple injuries	1	1.75	

Asphyxial death	Ligature strangulation	3	5.26	12.27
	Throttling	2	3.51	
	Gaging	1	1.75	
	smothering with multiple injuries	1	1.75	
Miscellaneous	Firearm injuries	2	3.51	5.26
	Electrocution	1	1.75	
Total		57	100.00	100.00

DISCUSSION

The empirical evidence from many different countries shows consistently that the bigger the city the higher the crime rate. Due to increase in urbanization and industrialization homicides are one of the major offences which is on a rise. Financial disputes, infidelity, love affairs, poverty, stress, poor educational and recreational facilities, migratory population, easy accessibility of addictive substances and weapons of violent offences, poor temperament, unemployment, substance abuse etc. are some provoking circumstances for such type of violent offences.

During the study period, from Jan 2011 to Dec 2015, a total of 2764 medico-legal post-mortem examinations were done at tertiary care institute in Thane, among which 57 deaths were of homicide. So homicidal rate 2.06% which is quite near to Zanzrukiya, Parmar and Shah^{3,4,5}. Some authors like Hugar, Rastogi and Patel^{2,6,7} showed higher rate.

This study has shown male predominance with male: female ratio of 3.07:1. This preponderance of male victims might be due to their aggressive nature, outdoor activities and risk taking behaviour and females are less exposed to violence in our country due to cultural and religious reasons. Similar findings were seen in studies of Rastogi, Santosh and Singh^{6,8,9}.

Almost half of homicidal deaths were seen in 21 to 30 years age group, followed by 31-40 years age group (which together comprises 70.20% of total victims). Male predominance was seen in every age group. These findings are in line with Parmar DJ et al⁴, Hugar BS et al², Dhiraj B et al¹⁰. However, Kominato Y, et al.¹¹ reported 46-55 years group to be the most commonly involved age group. This could be because the age group of 21 to 30 years (especially males) is of youngsters

who start their responsibilities of earning, marriage and having enormous struggle changing socio-economic trends. This vulnerable age group get frustrated easily and are prone for violence

Regarding modes of death, majority of homicide victims died due to Haemorrhagic shock (82.39%) which was followed by Asphyxial deaths contributing in 12.27% of cases. Rastogi and Zanzrukiya also found similar observations^{6,3}.

Considering fatal injuries, maximum 12 (21.10%) cases demonstrated fatal injuries over the Head (Cranio-cerebrum) followed by fatal injuries over chest(15.80%) and neck(12.30%) Head is most commonly involved region among death due to hard and blunt impact. Fatal injuries over head, neck and in combination comprises(43.86%) which comprises major bulk among homicidal death as the head face and neck region is easily accessible to physical blows and even single impact causes fatal injury. These findings corroborate with observations of Parmar DJ et al⁴, Mishra PK et al¹² and Shah JP et al⁵. However, Prajapati et al¹³ considers the chest and abdomen and Zanzrukiya K et al³ who described the neck as a chief body part receiving the fatal injuries.

If we consider the frequency of the type of weapon used for homicide, death due to sharp edge weapon with tapering end weapon injuries (40.35%) were the commonest pattern followed by sharp edge heavy weapon injuries (28.07%) followed by hard and blunt weapon (15.79%) which can be attributed to the easy availability of various sharp weapons in the city. Most of the sharp weapon injuries were pre-meditated and mainly involved gang rivalry where as most of the blunt weapon injuries were unpremeditated and assailants used the blunt weapon available at the scene of occurrence². This finding is similar to the studies conducted by Gupta¹⁴(57.40%) and Wahlsten¹⁵(39.00%). Only two cases were due to fire arm injury were found in present study as the law in India is very strict and very difficult to get gun license. Whereas in western countries studies by Ullha et al¹⁶ and Alan Fox¹⁷, showed that firearms were the most common means used for homicides.

CONCLUSION

In present study it was observed that there is a great difference exists between male and female homicidal

victims in relation to the method of killing, weapon of offence, the location of the crime, the motive and the relationship with the offender. Arguments being one of the most common reason for death of female and most of females victim cases their close relatives are the accused person, whereas among males, acquaintances and strangers were the most common assailants and the revenge was the main reason. Therefore investigation of the crime scene of death, circumstantial knowledge and the victim's past history are important factors in solving homicide cases.

Homicidal deaths constituted 2.06% of autopsies conducted in five year study. Majority of victims belonged to 3rd and 4th decades and sharp edge weapon were the most common weapon of offence. We believe that intolerance is common denominator in this age group. Though, continuous research in this field is need of hours to constitute strategies which can foil unlawful human killings.

LIMITATIONS

1. Study was confined to a particular area.
2. The information about the victims, and the circumstances was based on the history provided by the police, panchnama, victim's relatives and friends and only in few cases crime scene of occurrence was visited and the photograph of scene of occurrence were taken.

RECOMMENDATIONS

1. As most of the victims and offenders were in 21-40 years age group the problems of this age group like unemployment should be addressed by the Government, marital disputes and family problems should be addressed by referring the parties to an appropriate authority.
2. Strict enforcement of law on possession of dangerous weapons like sharp heavy cutting weapons, pointed weapons or firearms.
3. Awareness about the hazards of alcohol to be conveyed to the public.
4. In the Indian scenario the investigating officer, the forensic expert and the judiciary system work independently and not in tandem as in the western countries where there is established homicide

unit is constituted who share their knowledge in solving a crime. Hence investigating officer should work or co-ordinate with the forensic expert in solving homicides.

Ethical Clearance: The study was carried out after obtaining ethical clearance from the Institutional Ethics Committee.

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Conflict of Interest: Nil

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