CAUSE OF DEATH PROFILE AMONG HOMICIDES IN SOUTH INDIA: A CROSS SECTIONAL DESCRIPTIVE STUDY

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ABSTRACT

Introduction: As per Global Burden of Armed Violence Report, 2011, the average annual global violent death rate between 2004 and 2009 was 79 per million. Over 520 000 individuals die from interpersonal violence each year on a global scale. Very often, the newspapers scream headlines about the rising incidence of these most horrific crimes taking place in different parts of the Vijayapura city in Karnataka, India which has piqued the interest of law enforcement and researchers alike.

Materials & Methods: The study was conducted in the Forensic Medicine department of a tertiary care medical center in South India during a 2-year period from June 2013 to May 2015. Detailed history was sought from the police, victim's relatives and friends, visits to or photographs of the scene of occurrence. Complete autopsy findings to ascertain the cause of death were included.

Results: Male to female ratio was 1.79:1. The commonest motive for homicide was revenge which included 25 cases (37.31%). The commonest method to cause death of a person in the study is blunt weapons 31 cases (46.27%) followed by 25 cases (37.31%) were occurred by sharp weapon. Defense injuries were noted in only 23 cases (35.38%). Shock and hemorrhage are the most common cause of death in this study i.e., 39 cases (58.20%) followed by head injury which were observed in 24 cases (35.82%).

Conclusion: Shock and hemorrhage followed by head injury constituted major causes of death as these led to rapid blood loss and death.

Keywords: *homicide, cause of death, blunt force trauma*
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INTRODUCTION

In the present-day world violence is clearly recognized as a global public health problem. Violence and injuries account for 9% of global mortality and 12% of all disability adjusted life years (DALY). As per Global Burden of Armed Violence Report, 2011, the average annual global violent death rate between 2004 and 2009 was 79 per million. Over 520 000 individuals die from interpersonal violence each year on a global scale. 90% of violent deaths occur in low- and middle-income countries, and within those nations, the socioeconomically disadvantaged are more vulnerable. The burden is unequally divided[1]. The cases registered under offences against human body depict an increase of 5.1% in 2021 over 2020 (10,47,216 cases) and the crime rate has increased from 77.4 in 2020 to 80.5 in 2021[2].

Very often, the newspapers scream headlines about the rising incidence of these most horrific crimes taking place in different parts of the Vijayapurcity in Karnataka, India which has piqued the interest of law enforcement and researchers alike. Murder apparently shows no partiality here. How safe exactly is the city, is a question that has been debated in print with increasing intensity. Where exactly does the problem lie? In the current situation, where murders have become common place, the police system has become an almost natural target. The reasons for murder in the city are many. They include murder for monetary gain, domestic and family feuds, serial killings and gang wars. Very often, murders are committed over petty issues too. There is lack of such studies in this region and therefore the present study is undertaken.

OBJECTIVES

AIMS AND OBJECTIVES OF THE STUDY

1.To study the baseline characteristics of the victims like age, sex and socio-economic status of victims.

2.Todescribe the weapon used to commit the crime and the cause of death.

3.Todeterminethe various medico legal issues associated with homicidal deaths like place of occurrence, motive etc

MATERIALS AND METHODS

The study was conducted in the Forensic Medicine department of a tertiary care medical center in South India during a 2-year period from June 2013 to May 2015. Ethical clearance was obtained from the Institutional Ethics Committee. Universal sampling was followed to include medico legal autopsy with alleged/registered history of homicide. Detailed information regarding the circumstances of crime was sought from the police, victim's relatives and friends, visits to or photographsof the scene of occurrence. Socio Economic status of the victim was determined based on Modified Kuppuswami's classification (2007 revision) *.Complete autopsy examination was carried out on all cases with full pathological examination and toxicological profiling where ever required.

RESULTS

Sex distribution of the cases studied had a male predominance 43 (64.18%) male cases to 24 (35.82%) female cases with a male to female ratio of 1.79:1. Out of the 67 cases included in the study, 3 cases (4.48%) were in the age group of 0 to 10 years, 4 cases (5.97%) were in the age group of 11 to 20 years, 25 cases (37.31%) were in the age group of 21 to 30 years, 13 cases (19.40%) were in the age group of 31 to 40 years, 9 cases (13.43%) were in the age group of 41 to 50 years, 6 cases (8.96%) in the age group of 51 to 60 years, 4 cases (5.97%) in the age group of 61 to 70 years and 3 cases (4.48%) were in the age group of 71 to 80 years. Maximum number of cases were seen in the 21 to 30 years age group. Youngest case was a male of age 2 days and oldest case was a male of age 80 years.Out of 67 cases, maximum number of victims are in upper lower socio-economic class i.e., 23 cases (34.33%), followed by 16 cases (23.88%) are in lower class, 14 cases (20.89%) were in upper middle class and 13

cases (19.40%) were lower middle cases and in 1 case was not known. Out of 67 cases in the study, 46 cases (68.66%) were registered as homicidal followed by 9 cases (13.43%) were registered as accidental and 3 cases (4.48%) were registered as suicidal and 1 case (1.49%) was registered as natural and 8 cases (11.94%) were registered as suspicious deaths. Out of 67 cases, the motive of revenge has a greater number of cases i.e. 25 cases (37.31%) noted in this study followed by arguments are noted as 13 (19.40%), arguments were 6 cases (8.95%), only one case was due to property gain, others were observed were 14 cases (20.89%), and 8 cases (11.94%) were not known exact motive.

Homicides distributed based on motive:

Table 1:

SI.NO	MOTIVE	NUMBER	PERCENTAGE
1	Arguments	6	8.95%
2	Revenge	25	37.31%
3	Financial conflicts	13	19.40%
4	Property gain	1	1.492%
5	Others	14	20.89%
6	Not known	8	11.94%
	Total	67	100%

Homicides distributed according to pattern of homicide by lethal weapons:

Table 2:

SI.NO	**PATTERN OF**	**NUMBER**	**PERCENTAGE**
	HOMICIDE		
1	Blunt	31	46.27%
2	Sharp	25	37.31%
3	Blunt & Sharp	09	13.43%
4	Firearms	02	2.99%
	Total	67	100.00%

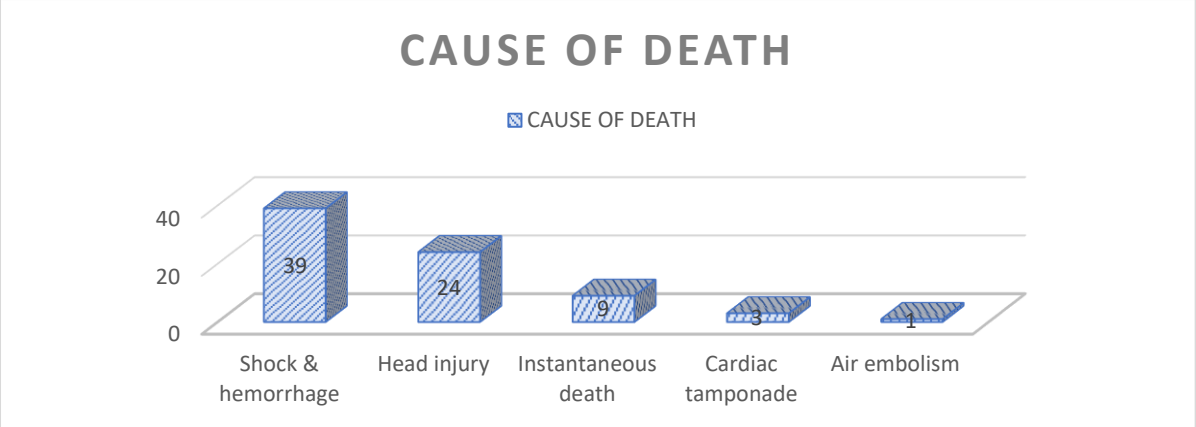
The commonest method to cause death of a person in the study is blunt weapons 31 cases (46.27%) followed by 25 cases (37.31%) were occurred by sharp weapons and 9 cases (13.43%) were occurred by both blunt & sharp weapons. Only 2 cases were registered as firearms.

Cases distribution based on the presence or absence of defense injuries:

Table 3:

S.N0	DEFENCE INJURIES	NUMBER	TOTAL	PERCENTAGE
1	Present a)Blunt injuries b)Sharp injuries c)Both types	 09 06 08	23	35.39%
2	Absent	42	42	64.61%
Total		65	100 %	Total

Out of 65 cases (excluding fire arm cases), defense injuries were noted in only 23 cases (35.38%), in which 9 cases were due to blunt force and 6 cases were due to sharp force and 8 cases were due to both blunt and sharp force trauma



Cases distribution based on the cause of death: Graph1

Out of 67 cases, shock and hemorrhage is the most common cause of death in this study i.e. 39 cases (58.20%) followed by head injury which were observed in 24 cases (35.82%), 9 cases (13.43%) were instantaneous death and 3 cases were cardiac tamponade cases and only 1 case was air embolism.

DISCUSSION

ALLEGED HISTORY:

Out of 67 cases in the present study, 46 cases (68.66%) were registered as homicides at the time of autopsy. 9 cases (13.43%) were registered as accidental deaths as the victims were found dead by the road side with injuries and in 3 cases (4.48%) registered as suicidal because of the injuries present over the victim's body lead them to register it as suicide. And in 1 case (1.49%) the reasons were the history of natural disease and absence of external injuries lead them to register it as natural death and in 8 cases (11.94%) the investigating officer suspecting foul play based on the alleged history by the deceased relatives or the injuries present on the body but later upon autopsy were registered as homicides, which emphasizes the need of the autopsy surgeon visiting the scene of the incident before the autopsy.

Present study is comparable with studies made by Huger B S et al.[3], consisting of 75.50% were suspected as homicidal deaths. Our study is not comparable to the Wahlten P et al.[4], where in only 4% of the cases the police did not suspect homicide prior to autopsy.

MOTIVE:

In present study for most of the homicides (37.31%) the motive was revenge which included the enmity, gang rivalry, business contracts etc. Financial conflicts were responsible for the 19.40% of homicides, most of them occurring in the alone places and money related. Other reasons include marital discord, socio-economic stress, sexual jealousy, and gang rivalry etc. altogether constituting 20.89% of the cases.

Similar observations were made by Hugar B S et al.[3] where in the main motive was revenge (26.50%), Vougiouklakis T et al.[5] where in the main motives were conflicts (23.1%) and revenge (23.1%)

The present study is in contrast to studies conducted by James Alan Fox[6] where in argumentswere the most frequent cited circumstance among those that were known, Accoring to Wahlsten P et al.[4] where in quarrelling while drinking was the most common circumstance (28%) leading to homicide. Kominato Y et al.[7], where in argument conflict was the most common motive (43.9%),

PATTERN OF HOMICIDE BY LETHAL WEAPONS:

Our study shows that Death due to blunt weapon injuries 31 cases (46.27%) outnumbered those due to sharp weapon injuries 25 cases (37.31%). This is attributed to the easy availability of various blunt weapons in this area. In one case the assailant used sharp weapon to cause fatal injury and made it sure by strangulating his wife. In one case the

assailant used multiple methods (blunt, sharp and firearm) to cause fatal injury.

Most of the blunt and sharp weapon injuries were pre-meditated and mainly involved gang rivalry whereas few blunt weapon injuries were unpremeditated and assailants used the blunt weapon available at the scene of occurrence. Only 2 cases were due to fire arm injury as the law in India is strict as compared to western countries where gun licensing is relaxed.

Similar observations were made by Dhaval J et al,[8] Vijayakumari N et al.[9], where blunt weapon injury was the most common cause of death and Mohanty M K et al.[10] where blunt weapon injuries accounted for 36.5%. Our study contrast to the studies by Hugar B S et al.[3], Kumar V et al.[11] where sharp weapons were the most commonly used and Karn A et al.[12], Syed Amjad Agha et al.[13]noticed firearms were the most common means used for homicide.

DEFENSE INJURIES:

In the present study 23 victims had defense injuries. The commonest type of defense injuries encountered were incised wounds, chop wounds in sharp weapons, lacerations and contusions in the cases due to blunt weapons/force. Defense injuries were more commonly sustained on right side (commonly upper and lower limbs were involved) and were more common in blunt weapon injuries.

Similar observation was made by Hugar B S et al.[3] where he found defense injuries in 19 cases and Mohan S et al.[14] where in 48% had defense injuries.

The present study is inconsistent with the observations made by Wahlsten P et al.[4]where he found defense injuries in only 33% of cases

CAUSE OF DEATH:

In our study, Death due to shock and hemorrhage is more in this study i.e. 33 cases (49.25%) than those of head injury 21 cases (31.34%) is due to injuries sustained by the victims were leading to more blood loss. Instantaneous death is mainly due to involvement of vital organs.

Similar observations were made by Karn A et al.[12], Vijayakumar N et al.[9] where shock and hemorrhage is the most common cause of death. Present study contrast to the studies made by Dhaval J et al.[8], Vougiouklakis T et al.[5] where head injury was the most common cause of death.

CONCLUSION

This study finds that in most homicides the motive was fueled by some form retribution be it group rivalry or financial disharmony. Deaths due to blunt weapon injuries outnumbered those due to sharp weapon injuries which is attributed to the easy availability of various blunt weapons in the vicinity of crime scene. Defense injuries were uncommon but when present the commonest type encountered were incised wounds, chop wounds in sharp weapons, lacerations and contusions in the cases due to blunt force. Shock and hemorrhage followed by head injury constituted major causes of death as these led to rapid blood loss and death.

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