

Head: The Most Common Targeted Area in Murders

Targeted Body
Area in
Murders

1. Azhar Masud Bhatti 2. Babur Rashid Chughtai 3. Muhammad Iqbal

1. Ex-Senior Demonstrator of Forensic Medicine, KEMU, Lahore, DHS (EPI), Punjab & EDO (Health), Gujranwala
2. Prof. of Forensic Medicine, WMC, Wah Cantt. 3. Asstt. Prof. of Forensic Medicine, WMC, Wah Cantt.

ABSTRACT

Objectives: To identify the most targeted area in homicidal injuries which may be helpful in crime control in society.

Study Design: Retrospective and observational study.

Place and Duration of study: This study was carried out on 5 years autopsies reports collected from THQ Hospital Taxila from 2009 to 2013 and analysis was done with emphasis on most common targeted area of the body during this period.

Materials and Methods: Autopsy registers containing reports from 2009 to 2013, along with police papers and treatment notes were taken from THQ Hospital Taxila and analyzed with reference to most targeted area, kind of weapon used, age, sex, injury pattern and nature of injuries

Results: During total 5 year tenure total 279 autopsies were conducted. Among total 279 autopsies 234 (83.87%) dead bodies were of males while only 45 (16.13%) were belonged to females. 138 (49.46%) dead bodies were of adult age between 20-40 years, among these 112 (81.16%) belonged to males and 26 (18.84%) to females. In 88 (31.54%) cases head was targeted. The 2nd most common area of target was the chest, 76 (27.24%) persons were hit on the chest. In 33 (11.83%) persons abdomen was the target while 28 (10.04%) bodies were with neck injuries. Firearm was the most common weapon causing 177 (63.44%) deaths. Blunt weapon remained the 2nd mostly used weapon claiming 22 (7.88%) lives. Use of sharp edged weapon was restricted only to 7 (2.5%) persons. In total 40 cases (14.34%) no cause of death could be found.

Conclusion: The analysis may offer some help to bring the crimes under control.

Key Words: Head, Chest, Target.

INTRODUCTION

The word autopsy is derived from Greek and is translated as "to see with one's own eye"¹. Autopsy is mandatory in all cases of un-natural deaths. A Forensic autopsy is performed to determine the cause, and the manner of death in people dying sudden, unexpected, violent, drug related, or otherwise suspicious deaths². The only thing worse than no autopsy is the partial autopsy, in every case the autopsy must be complete³. Analysis of autopsies performed in an area may be helpful to make certain amendments in the laws to control the crimes. Homicide means purposeful killing undertaken with the intension of causing the death of the victim. Common motives for homicide include trivial altercations, jealousy, revenge, romantic triangle, robbery, sexual assault, burglary and dispute in drug transactions⁴.

Head injury is defined as morbid state resulting from gross or subtle structural changes in the intracranial contents of the skull with or without involvement of skull or extra cranial structures, due to direct or indirect mechanical force⁵. There are three main components of the head; the scalp, skull and brain⁶. Skull has three tables, outer table the strongest and inner table (weakest) and in between two, there is dipole⁷. Of all the regional injuries those of head are most common and accounts for 25% of all deaths due to violence⁸. It

is also true that when a victim is pushed or knocked to the ground, he often strike the head⁹.

Globally head injury is a major problem for health services, not only in industrialized but also in developing world. Every year in UK about one million patients are admitted to the hospitals with head injuries of varying severity¹⁰. Approximately 300 per 100000 of the population per year require hospital admission in connection with head injury in Britain¹¹. Head injury is classified as coup injury and contre-coup injury. Injury at the site of impact is coup and opposite to the site of impact is contre-coup injury¹².

The firearms remained the most common used weapons in cases of homicides as in other studies also¹³. There is something happening new every day¹⁴, as modernization of firearm weapons increases their lethal power many times. On the skull a special phenomenon occurs on entry and exit wound, a making sloping surface or edge caused by firearm weapons called beveling. Beveling will occur on inner table of the skull on entry and on outer table of skull on exit wound¹⁵.

MATERIALS AND METHODS

The autopsy reports of duration from 2009 to 2013 along with police papers and treatment notes were collected from THQ Hospital Taxila. Complete analysis regarding age, gender, manner of death, opinion of the Authorized Medical Officers, kind of weapon used,

with particular emphasis on area wise distribution of injuries was made. Total 279 autopsies were carried out during tenure of 5 calendar years.

RESULTS

Total 279 postmortem examinations were carried out at THQ Hospital Taxila during 5 years (2009-2013) duration. Year wise distribution is given in Chart No.1.

Age and gender analysis: Regarding age of the victims, overwhelming majority 49.46% (138) belonged to adult age (20-40Years) group, among them 81.16% (112) dead bodies were of males and only 18.84% (26) of females. Age above 40 years remained the 2nd most common age group involved, as out of total 77 autopsies 89.61 % (69) remained of males and 10.39 % (8) of females. 53 bodies were belonged to young age between 12-20 years, 84.91 % (45) males and 15.09% (8) of females. Age between 0-12 years remained the least common age group being the innocent age as total out of 11 postmortems 72.73%(8) bodies were of males and 27.27(3) of females. Gender wise distribution is mentioned in Chart No.2.

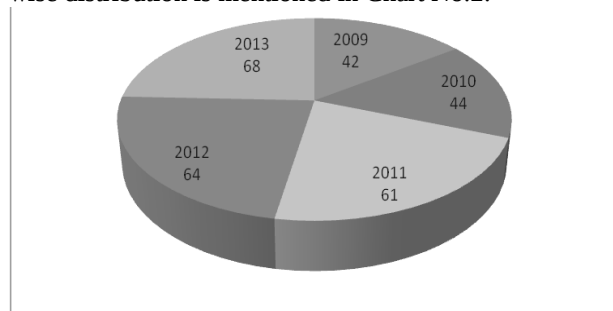


Chart No.1 Yearwise distribution of autopsies

Regional Distribution of injuries: Head remained the most common targeted area, as out of 279 persons 88 (31.54%) were hit on the head. 2nd most targeted area

Table No.1: Regional distribution of homicidal injuries

Year	No.	Head	%	Neck	%	Chest	%	Abdomen	%
2009	42	14	33.33	4	9.52	13	30.95	5	11.90
2010	44	19	43.18	3	6.82	14	31.82	4	9.09
2011	61	24	39.34	4	6.56	14	22.95	4	6.56
2012	64	17	26.56	9	14.06	17	26.56	3	4.69
2013	68	14	20.59	8	11.76	18	26.47	17	25.00
GT	279	88	31.54	28	10.04	76	27.24	33	11.83

Table No.2: Homicidal deaths due to poison, drown and burns

Year	No.	Poison	%	Drown	%	Burns	%	Nil	%
2009	42	1	2.38	-		2	4.76	3	7.14
2010	44	1	2.27	-		-	-	3	6.82
2011	61	3	4.92	-		-	-	12	19.67
2012	64	-	-	3	4.69	-	-	15	23.44
2013	68	2	2.94	1	1.47	1	1.47	7	10.29
GT	279	7	2.51	4	1.43	3	1.07	40	14.34

was chest, as 76 (27.24%) person died due to chest injuries. Overall head and chest injuries claimed 164 (58.78%) lives. Abdomen was at No. 3 as with involvement of 33(11.83%) cases. In 40 (14.34%) autopsies no cause of death could be ascertained. The detail of regional distribution of injuries found, are given in Table No. 1 & 2.

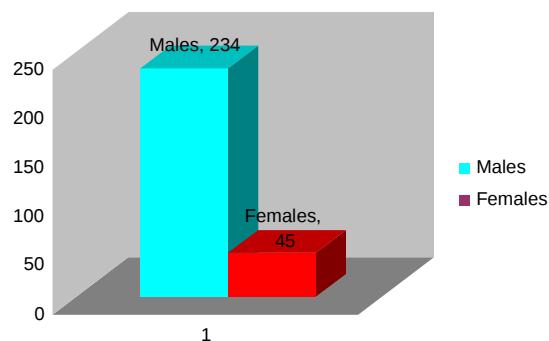


Chart No. 2: Gender wise distribution of autopsies

Manner of death: As for as the manner of death is concerned, most common 199 (71.33%) cases remained of homicide. The other detail is given in the following table No.4.

Kind of weapon used: Firearms remained the most commonly used weapon causing 177(63.44%) deaths. In 22 (7.88%) persons assault was committed with blunt weapon. 7 (6.81%) injuries were caused by sharp edged weapons. Hanging was responsible for causing 19(6.81%) deaths. In 7(2.51%) persons use of poison, in 4 drowning and in 3, burns remained the cause of death. 40 (14.34%) cases remained undiagnosed being negative autopsy.

Table No.3: Manners of deaths

Year	No.	Homicide	%	Suicide	%	Accident	%	Nil	%
2009	42	32	76.19	5	11.90	2	4.76	3	7.14
2010	44	35	79.55	3	6.82	3	6.82	3	6.82
2011	61	41	67.21	5	8.2	3	4.92	12	19.67
2012	64	41	64.06	-	-	8	12.5	15	23.44
2013	68	50	73.53	9	13.24	2	2.94	7	10.29
GT	279	199	71.33	22	7.88	18	6.45	40	14.34

DISCUSSION

An evil is almost always in a society, there could hardly any society in the world which can be considered absolutely crime free. It is generally the un-justice, delay in dispensation of justice, along with deteriorating moral values in a community results in rapid rise of crimes. The population in our country is rapidly developing into two major economic classes, very rich and very poor families with progressively declining middle class, is another cause of crimes.

In present days all over the world, dispensation of justice through legal system has become much dependent on medical science¹⁶. The victim is taken to medical facility for an examination and collection of existing evidence¹⁷. Forensic evidence is physical or trace evidence that can be significantly matched with a known individual or item. Every criminal could be linked to the crime she or he committed by examination of transferred trace evidence¹⁸, facts or circumstances that tend to implicate a person in a crime. It is very much unfortunate that medico-legal investigations in our country are of much low standard as compared with developed countries.

Though the murder is least common of all crimes but this offense receives the greatest attention from the law enforcement agencies and media¹⁹. Forensic autopsy is primarily conducted to know the cause of death, meaning disease or injury that initiated the lethal chain of events that led to death²⁰. In the past it was assumed that the murderer must have been a man of physical strength, great courage and daring. But with the modernization of weapons with particular reference to the firearms these qualities are no more required to commit a murder, Just press the trigger and life is over. Homicidal manner of killing remains on the top as in every society²¹. Number of persons committed suicide remained at minimum as suicide is prohibited not only in our religion but under our law also²².

In our study the Head remained the most common target, almost similar results in other studies conducted²³⁻²⁴. Of all injuries those of head and neck are the most common and most important in forensic practice²⁵. The incidence of head injuries is going up with the speeding mechanization of modern life²⁶. There is 33.5 % increase in head injury admission in UK in the last decade²⁷. Traumatic brain injury,

according to the World Health Organization, will surpass many diseases as the major cause of death and disability by the year 2020. With an estimated 10 million people affected annually by head injury, the burden of mortality and morbidity that this condition imposes on society, makes the traumatic brain injury, a pressing public health and medical problem²⁸.

Although the brain is well protected within strong, bony skull but it is not well restrained within this compartment and injuries to the brain result from differences between the motion of the skull and brain. Severe injury to the brain may occur without any external visible injury to the skull and scalp.

The firearms remained the most common used weapons for homicide is also indicated in other studies²⁹. Free availability, frequent use of these lethal weapons, constantly deteriorating law and order situation in the country have make us a gun culture state of society. Possession of firearms by males is much more common in our country as compared with females, being the male dominant society. But Possession of firearms in USA is more common in females than in males. Mostly adult persons (20-40 years) are the victims of homicide, is consistent with other studies also³⁰.

CONCLUSION

Strict statutory control over fatal weapons and rapid dispensation of justice are required to minimize the offence of homicide from our country.

REFERENCES

1. Bell Suzanne. Encyclopedia of Forensic Science. 1st ed. Noida India: Saurabh Printers; 2005.p.26.
2. Dolinak David, Matshes Evan. The Forensic Autopsy. Forensic Pathology. 1st ed. London: Elsevier academic Press; 2005.p.66.
3. Biswas Gautam. Review of Forensic Medicine and Toxicology. 1st ed. New Delhi India: Rajkamal Electric Press; 2010.p.66.
4. Godwin Grover Maurice. Criminal Psychology and Forensic Technology. 1st ed. Florida USA: CRC Press; 2001.p.105.
5. Singh Baljeet, Verma Anoop K, Rupani Raja. A short review of Forensic Medicine and Toxicology.

- 1st ed. New Delhi India: Army Printing Press; 2005.p.79.
6. Moor L Keith, Dalley F Arthur. Head. Clinically Oriented Anatomy. 5th ed. Baltimore USA: RR Donnelley & sSons;2006.p.886.
7. Dikshit PC. Regional injuries. Text Book of Forensic Medicine and Toxicology. 1st ed. New Delhi India: Peepee Publishers;2007.p.200-202.
8. Vig K. Regional injuries. Text book of Forensic Medicine and Toxicology. 4th ed. Noida (India): Elsevier; 2009.p.351.
9. Rao Nageshkumar G. Text Book of Forensic Medicine & Toxicology. 2nd ed. New Delhi India: Replika Press; 2010.p. 234.
10. James Jason Payne, Byard Roger W, Corey Tracey S et al. Head Trauma. Encyclopedia of Forensic and Legal Medicine. 1st ed. London: Elsevier Academic Press;2005.p.461.
11. Lindsay Kenneth W, Bone Ian, Callander Robin. Neurology and Neurosurgery Illustrated. 4th ed. London UK: Churchill Livingstone;2004.p.216.
12. Niaz B. Regional Injuries. Forensic Medicine and Toxicology. 1st ed. Multan: Carvan Book Centre; 2005.p.171.
13. Siddiqui BA, Saeed A, Masud Uzma. Epidemiology of homicidal deaths in Sargodha Pakistan. Prof Med J 2013;20(5): 793-97.
14. Clair St. J Jami. Crime laboratory Management. 1st ed. London UK: Elsevier Academic Press; 2003.p.1.
15. Dodd Malcolm J. Bone injury, the skull and concept of beveling. Terminal ballistics. 1st ed. Florida: Tylor and Francis; 2006.p.103.
16. Apurba N. Principles of Forensic Medicine including Toxicology. 3rd ed. Kolkata (India): New central book Agency;2010.p.2.
17. Hazelwood Robert R. Burgess Ann Wolbert. Practical aspects of rape investigation. 3rd ed. Florida USA: CRC Press; 2001.p.278.
18. Michael Grieve. Introduction. In: Houck Max M. Trace evidence analysis. 1st ed. London UK: Elsevier Academic Press;2004.p.1.
19. Becker Ronald F. Death Investigation. Criminal Investigation. 2nd ed. London UK: Jones and Bartlett Publishers;2005.p.225.
20. Wright Ronald K. Investigation of traumatic deaths. 2nd ed. New York US: Tylor and Francis; 2005.p.43.
21. Demetriades C, Murray J, Sinz B, et al. Epidemiology of major trauma and trauma deaths in Los Angeles County. J Am Coll Surg 1998;187(4): 373-83.
22. Section 325, Of offenses affecting the human body. Pakistan Penal Code. Lahore: Mansoor Book Depo;2010.p.118.
23. Jawad I, Khokhar JI, Iqbal M. Third decade of life: The most vulnerable age in homicidal firearm deaths in Lahore. Med Forum 2013;7:51-54.
24. Aijaz ASM, Rehman KI. Pattern of homicidal deaths in Peshawar and effects of ban on local manufacturing of firearms. J SZMC 3(2):277-81.
25. Saukko Pekka, Knight Bernard. Head and spinal injuries. Knight's Forensic Pathology. 3rd ed. London: Arnold; 2004.p.174.
26. Modi NJ. Regional injuries. Modi's Medical Jurisprudence and Toxicology. 13th ed. Lahore Pakistan: Zahid Bashir Printers; 2010.p.49.
27. Shephard R. Regional injuries. Simpson's Forensic Medicine. 12th ed. London (England): Arnold; 2003.p.70.
28. Hyder Adnan A, Wunderlich Colleen A, Puvanachandra Prasanthi. The impact of traumatic brain injuries: A global perspective. Neuro Rehabilitation 2007; 22(5):341-353.
29. Hussain Z, Shah MM, Afridi HK. Homicidal deaths by Firearms in Peshawar. An autopsy study. J Ayub Med Coll Abbottabad 2006;18(1):44-4
30. D Visvanath, SR Jagannatha, K Ananda. Homicidal Deaths a Postmortem study. Ind J FM &T 2012;6(11)154-55.

Address for Corresponding Author:**Dr. Babur Rashid Chughtai,**

Prof. of Forensic Medicine, WMC, Wah Cantt.