Original Article

Prevalence of Homicidal Injuries by Sharp Force Trauma at Sukkur

Afzal Memon, Mohammad Akbar Kazi, Waqar Shaikh

ABSTRACT

OBJECTIVE: To document the prevalence of most frequently targeted anatomical sites of the body focused on gender vulnerability due to sharp force trauma, referred for autopsy at the mortuary of medico-legal section of Civil Hospital Sukkur

DURATION AND SETTING: Medico-legal section of Civil Hospital Ghulam Mohammad Mahar Medical College Sukkur from January 2008 to December2010.

STUDY DESIGN: Descriptive, retrospective

MATERIAL METHODS: Medico-legal record of 100 cases autopsied from 2008-10 at the mortuary of medico-legal section Civil Hospital, GMMMC Sukkur, were thoroughly examined. The variables considered were gender, age, injury pattern, cause of death, defense wounds and common anatomical sites involved in homicidal outcome. Findings were expressed in numbers and percentages in a performa designed for the above study.

RESULTS: The record of 100 autopsied cases at medico-legal section of Civil Hospital, GMMMC Sukkur, showed that homicidal injuries by sharp force trauma were common with age group 29-30 years, males were 65(65%) and the females were 35(35%) the mean age remained 30.88. 18 (18%) showed single injury and 82(82%) have multiple injuries. 46(46%) of death was due to hemorrhage and the rest 54 (54%) was due to injury to vital organs. Defense wounds were seen in 26(26%) and the remaining 74 (74%) were without defense wounds. The commonest anatomical part targeted in males was abdomen 25(25%) and in females was neck 30(30%).

CONCLUSION: The study showed that injuries by sharp force trauma were common with age group 29-30 years with male dominance. The injuries were multiple and majority of victims had no defense wounds. The most targeted anatomical area in males was abdomen and in neck females. In majority of the cases, cause of death was injury to vital organs. The onset of sharp force fatalities will be reduced if proper laws are framed to strengthen law enforcing agencies to apprehend the culprits for appropriate punishments according to law.

KEY WORDS: Sharp force trauma, Homicidal injuries and autopsy.

This article may be cited as: Memon A, Kazi MA, Shaikh W. Incidence of Homicidal Injuries by Sharp Force Trauma at Sukkur. J Liaquat Uni Med Health Sci. 2015;14(01):03-5.

INTRODUCTION

Medico- legal investigation of death is the most crucial and significant function of a medical examiner in the criminal justice system[1]. The medical examiner is primarily concerned to determine the cause, manner and time since death in all sudden, suspicious and unnatural deaths, referred through law enforcing agencies to the medico legal facilility attached to public sector Hospital[2]. Application of sharp force leads to open wound by break in the continuity of skin and underlying tissues[3]. The most common instruments causing it are knife, a sharp cutting glass, sword, razor, metal fragment, scissor and axe[4]. Characteristic of the weapon used such as shape, size and manner of infliction is important, which affect shape and dimensions of the wound.

In Pakistan, very limited work has been done on sharp weapon injuries, and has reported a declined trend. A two-year study from Hyderabad reported 10% of the unnatural deaths due to sharp weapons[5]. A one year study from Abbottabad reported 7.9% cases of physical trauma due to sharp weapon[6]. Our study aimed to know the incidence of homicidal deaths by sharp weapon at Sukkur, directing the attention of the concerned authorities towards this dreadful issue of this major and most populated metropolis city of Pakistan. Death by sharp weapons is an under rated issue which needs proper attention. Some studies within Pakistan have reported sharp weapons to be the second most important mean of homicidal deaths[6].

MATERIAL AND METHODS

A retrospective study was conducted at Medico-legal section of civil hospital Ghulam Mohammed Mehar Medical College Sukkur for periods of 03 years (Jan 2008 - Dec. 2010).This study included all the cases of death from sharp force trauma. Relevant information, was recorded in pre designed proforma from the available record spread over a period of three years. The

cases autopsied during this period having sharp edge homicidal injuries were 100 in number. These cases were segregated to find out the incidence on the basis of grouping them according to gender, age, percentage for number of injuries (single or multiple), weaponry, cause of death, defense injuries sustained and predilection for site of homicidal wounds infliction. This gathered information was tabulated and calculations performed. The result derived, conclusion was reached at and suggestions recommendations furnished.

RESULTS

A record of 100 cases autopsied at Medico legal section of Civil Hospital, GMMMC Sukkur were reviewed during the study period and it was observed that injuries by sharp force trauma was common in males 65/100 (65%) and females were 35/100(35%). The common age group involved was 20-29 years 30/100 (30%). The mean age was 30.88. 18/100 (18%) victims have single injury, 82/100 (82%) of victim have multiple injuries. Cause of death due to damage to vital organs was 54/100 (54%) and 46/100 (46%) was due to hemorrhage. The defense injuries were found in 75/100 (75%) victims and were not seen in remaining 25/100 (25%) cases. The common sites involved in homicidal outcome includes head and face 10/100 (10%), thorax 20/100 (20%), neck 30/100 (30%), abdomen 25/100 (25%), upper locomotors 10/100 (10%) and lower locomotors 05/100 (05%) was seen.

TABLE I: SEX DISTRIBUTION (n=100)

Sex	Number of cases	Percentage
Male	65	65%
Female	35	35%

TABLE II: AGE DISTRIBUTION

Age	Male	Female	Total	Percentage
0-09	0	3	03	3%
10-19	15	7	22	22%
20-29	19	11	30	30%
30-39	15	10	25	25%
40-49	08	02	10	10%
50-59	04	01	05	5%
60-69	04	01	05	5%
70-79	00	00	00	-
80-89	00	00	00	-

TABLE III: INJURES PATTERN

Injury	Number of cases	Percentage
Single	18	18%
Multiple	82	82%

TABLE IV: CASUE OF DEATH

Cause	Number of cases	Percentage
Hemorrhage	46	46%
Damage to vital organs	54	54%

TABLE V: DEFENSE WOUNDS

Defense wounds	Number of cases	Percentage
Seen	75	75%
Not seen	25	25%

TABLE IV: COMMON SITES INVOLVED IN HOMICIDAL OUTCOME

Site	Number of cases	Percentage
Head & Face	10	10%
Neck	30	30%
Thorax	20	20%
Abdomen	25	25%
Upper loco motor	10	10%
Lower loco motor	05	05%

DISCUSSION

Sharp weapons are one of the most violent means of death force trauma commonly seen in unnatural violent deaths[7]. These injuries are the 3rd leading cause of violent deaths in the world. The statistics of England and Wales shows that the most common method of homicide worldwide is by use of sharp objects[8], this in line with the studies in Pakistan, where firearm is the first weapon of choice followed by sharp weapon[9].

During the period under study 100 cases were reported for autopsy at medico-legal section, Civil Hospital Ghulam Mohammed Mahar Medical College Sukkur, which shows common age of victims died due to sharp force trauma were 20-29 years as compared to the study conducted at Karachi metropolis where the common age ranges from 20-39 years[10]. In USA the age of persons died due to sharp force trauma was 21 to 50 years because their development begins much earlier resulting in all sorts of violence[11]. In India the death due to sharp force trauma ranges from 21-30 years[12]. This indicates the rate of sharp force trauma

is more in earlier age as compared to mid and old age. In our study males remain more vulnerable to sharp force trauma as compared to females. This study showed 65% were males and 35% were females victims which is in sharp contrast to a study from Peshawar[9] that showed 86.15% male and 13.85% female. Here in this part of Pakistan more female fallen victims of sharp trauma.

The injury pattern in our study was multiple in 82% and the cases of single injury were 18 % as compared to study conducted in Adana, Turkey where the victim suffered a single injury in 47.35%[11].

In our study the fatal outcome (cause of death) was hemorrhage 46% and damage to vital organs was 54%.

In our study the defense wounds were present in 75% cases and 25% cases were without defense wounds. which shows that he victims were unaware of the homicidal attack by the assailant as compared to the study conducted at Delhi where the defense wound were present only in 35(15%) and 85(85%) cases were without defense wounds[13].

In our study the most vulnerable anatomical part involved was neck 30% as compared to studies conducted at Karachi[7], where the most common site involved was intestine in 40%.

CONCLUSION

The majority of the cases of sharp force trauma were males and the commonest anatomical part involved due to sharp force trauma was neck in females and abdomen in males which prove fatal due to hemorrhage and shock involving the vital organs.

REFERENCES

1. Awan NR. Principles of forensic Medicine and toxicology Lahore Pakistan 1st edition 2009- p.23.
2. Criminal procedure code Act-V of 1898, section 174.
3. Mant AK. Text book of Taylor's principles and practice of medical jurisprudence 13th edition. Churchill Livingston, Edinburgh London Melbourne & New York 1984; p-227.
4. Soukk P, Knight B. Text book of knight's Forensic Medicine 3rd edition Arnold London, Great Britain, 2004; p-154.
5. Yousfani GM, Memon MU. Spectrum of unnatural deaths in Hyderabad an autopsy based study. Journal of Dow University Health Sciences Karachi. 2010;4(2):54-57.
6. Hassan Q, Bashir MZ, Shah MM. Physical Trauma –A leading cause of medico-legal causes at DHQ Hospital Abbottabad. J Ayub Coll Abottabad 2010;22(2):156-9.
7. Butt W.HK, Khusboo H. Incidence of death due to lethal sharp weapon injuries. URJ of Medical and Medical sciences. October 2013;1(4):44-8.
8. Bernnan IR, Moore SC, Shephered JP. Non-firearm weapon use and injury severity: priorities for prevention. Inj prev 2006;12:395-9.
9. Marri MZ, Bashir MZ, Munawar AZ, Khalil ZH, Khalil IU. Analysis of homicidal deaths in Peshawar, Pakistan. J Ayub Med Coll Abbottabad 2006;18(4):30-3.
10. Mirza FH, Hasan Q, Memon AA, Adil SE. Audit of sharp weapon deaths in metropolis of Karachi – an autopsy based study. J Ayub Coll Abottabad 2010; 22(4):207-9.
11. Ahmet H, Nemci C, Mete K G, M Hakan O, Ramazan K. homicide in Adana, Turkey; A-5-year review. American J. forensic Medicine & Pathology June 2005. Vol. 26;(2):141-145.
12. Mohanty MK, Kumar TS, Mohanram A, Palimar V. Victims of homicidal deaths- an analysis of variables. J Clin Forensic Med. 2005;12(6):302-4.
13. Gupta A, Rani M, Mittal AK, dikshit PC. A study of homicidal deaths in Delhi. Med Sci Law. 2004 apr;44(2):127-32.

AUTHOR AFFILIATION:

Dr. Afzal Memon *(Corresponding Author)*
Professor, Department of Forensic Medicine
Indus Medical College
Tando Mohammad Khan, Sindh-Pakistan.
Email: drafzalmemon@yahoo.com

Dr. Mohammad Akbar Kazi
Associate Professor, Department of Forensic Medicine
Liaquat University of Medical & Health Sciences, Jamshoro.

Dr. Waqar Shaikh
Assistant professor, Department of Forensic Medicine
Ghulam Mohammad Mehar Medical College, Sukkur.