ORIGINAL ARTICLE

# AUDIT OF SHARP WEAPON DEATHS IN METROPOLIS OF KARACHI –AN AUTOPSY BASED STUDY

**Farhat Hussain Mirza, Qudsia Hasan*, Akhtar Amin Memon, Syeda Ezz-e-Rukhshan Adil**

**Department of Forensic Medicine, Dow Medical College, DUHS, *Ziauddin Medical University, Karachi, Pakistan**

**Background:** Sharp weapons are one of the most violent and abhorrent means of deaths. This study assesses the frequency of sharp weapon deaths in Karachi. **Methods:** This was a cross sectional study, and involves the deaths by sharp weapons autopsied in Karachi during Mar 2008–Feb 2009. **Results:** This study reports that the frequency of sharp weapon deaths in Karachi is similar to some other studies conducted in different regions of Pakistan, yet it is very high as the population of Karachi is way more than any other metropolis of Pakistan. Our study reported that out of 2090 medico-legal deaths in Karachi during the study period, 91 deaths were due to sharp weapons, including 73 (80.2%) males and 18 (19.8%) females. 100% of the deaths were homicides, so none were suicides. Deaths were more frequent in age group ranging from 20–39 years (59.3 %). **Conclusion:** Sharp weapon deaths continue to be a means of quite a number of deaths in Karachi. Such violence depicts intolerant and frustrated nature of the citizens.

**Keywords:** Autopsy, homicide, sharp weapon, death

## INTRODUCTION

Sharp force trauma commanded the position of weapon of choice for killing man and wild animals throughout the world since the time immemorial. It has always been a crucial and condemnable method of fatalities, either suicidal or homicidal. It is regarded as an extremely violent manner of killing. If homicidal, it indicates extreme hatred for the dead from the murderer and at many times, the mental instability of the murderers.[1] Sharp Weapons still stand as a very frequent cause of medico-legal deaths. The usual weapons for cutting and stabbing in today's era in this area especially are knives, daggers, ice picks, hatchets and choppers. It has been observed that these weapons are used in enmity, robberies, street crimes, snatching especially in public transport and some times by the addicts. Such vicious means of deaths are indicative of extreme violence; increasing frequency of which leads our attention towards the developing sense of frustration and lack of tolerance, indicative of mental disturbances in individuals.[2]

Death by Sharp Weapons is an underrated issue which needs proper attention. In Pakistan, very limited work has been done on sharp weapon injuries, and has reported a declined trend. A three-year study from Hyderabad reported 10% of the unnatural deaths to be due to sharp weapons.[3] A study from Abbottabad reported sharp weapons to be the means for 5% of homicidal deaths.[4] Our study aimed to audit the deaths by sharp weapons in Karachi, directing the attention of the concerned authorities towards this dreadful issue in this major and most populated metropolis of Pakistan.

Death by Sharp Weapons is an underrated issue which needs proper attention. Some studies within Pakistan have reported sharp weapons to be the second most important means of homicidal deaths.[5,6]

## MATERIAL AND METHODS

This was a descriptive cross-sectional study, extending over a period of 1 year from March 1, 2008 to February 28, 2009 that included all reported sharp weapon deaths autopsied at Civil Hospital, Jinnah Postgraduate Medical Centre, and Abbasi Shaheed Hospital, Karachi.

The cases included in this study were those where the death could only be attributed to direct effect of use or infliction of sharp edged/pointed weapons.

The medico-legal deaths in Karachi by means other than sharp weapons, or the deaths which were not autopsied or the dead bodies were handed over to relatives directly were excluded.

A detailed autopsy was performed in each case of 2,090 medico-legal deaths during the study period, to determine the cause and manner. Details were collected for those identified to be due to sharp weapons.

Statistical data was analysed using SPSS-15. The frequency and percentages were calculated for all categorical variables including gender, manner and body parts affected of sharp weapon deaths. The Mean±SD was calculated for age.

## RESULTS

The total number of medico-legal deaths reported during the study period was 2,090 out of which 91 were due to sharp weapons giving an incidence rate of 4.35%. All (100%) of the 91 deaths were found to be homicidal, forming 8.06% of the 1,129 homicidal deaths during the study period.

Out of these 91 deaths, 73 (80.2%) were males and 18 (19.8%) females. The age range in which the most (54, 59.3%) of deaths occurred was of 20–39 years (Table-1).

**Table-1: Frequency of age group involved in sharp weapons deaths**

| Age group | Frequency | Percentage |
|---|---|---|
| **19 years and less** | 9 | 9.9 |
| **20–39 years** | 54 | 59.3 |
| **40–59 years** | 19 | 20.9 |
| **≥60 years** | 9 | 9.9 |
| **Total** | **91** | **100** |

Most (67, 60.9%) of the deaths were due to stab wounds while 19 (20.87%) were cut throats and 5 (5.49%) were decapitated. It was also noted that out of these 67 stab wounds deaths, abdomen was involved in majority of the cases (n=48, 71.64%). Chest was involved in 08 cases (11.94%) while 11 cases involved both chest and abdomen (16.41%). Table-2 shows the frequency of body parts involved in deaths by sharp weapons with damage to intestines being the most common (44%) followed by neck (26.4%).

**Table-2: Frequency of body parts involved in deaths by Sharp Weapons**

| Body Parts Involved | Frequency | Percentage |
|---|---|---|
| **Neck** | 24 | 26.4 |
| **Intestines** | 40 | 44.0 |
| **Lungs** | 9 | 9.9 |
| **Heart** | 7 | 7.6 |
| **Liver** | 8 | 8.8 |
| **Kidneys** | 2 | 2.2 |
| **Spleen** | 1 | 1.1 |
| **Total** | **91** | **100** |

## DISCUSSION

Our study reports 91 sharp weapon deaths among all the 2090 medico-legal deaths; giving 4.35% incidence of sharp weapons deaths in Karachi from Mar 2008 to Feb 2009. Studies conducted in other regions of Pakistan show a similar trend. A study conducted at Peshawar show that during the period of 3 years from Nov 1999 to Oct 2002, 63 (3.058%) deaths out of 2,060 cases brought for autopsy occurred due to sharp weapon injuries[7], while a study from Lahore during Jan to Jun 2000 reported 23 (10.8%) sharp weapon deaths out of 213 medico-legal cases giving a slightly high incidence of the casualties due to sharp weapons[8].

A very significant finding of our study was that 100% of the 91 sharp weapon deaths were homicides, thus constituting 8.06% of the total 1,120 homicidal deaths reported during our study period, which is slightly higher than a study from Abbottabad that reported 5% sharp weapon deaths out of the 40 cases of homicides.[4]

A few other studies of Pakistan, have reported a relatively higher rate of sharp weapon deaths. In a study from Larkana from Jan to Dec 1998, 17% cases were due to sharp weapons.[9] One year study at Faisalabad reported 25.5% out of 188 homicidal deaths were due to sharp weapons.[6]

The global statistics show that sharp edged and pointed weapons are still being used for causing wounds as well as deaths, though the ratio as compared to firearms displays decline in majority of countries, barring England and India, where deaths following cutting and stabbing phenomenon shows a rising frequency. The official statistics for England and Wales indicate that the use of sharp object is the most common mechanism of homicide (29%), while firearms accounting for only 9%, while among the first world countries, rates of homicide by cutting or piercing range between 0.2 (France) and 1.1 (USA) per 100,000.[10] Assault using a knife is common in the UK. Between Feb 1992 and Dec 1996, 120 individuals died or received hospital treatment in Edinburgh only after being assaulted with a knife, 20 (17%) of them died as a result of injuries.[11] A study of homicides involving knives and other sharp objects in Scotland, 1981–2003 show that there is rapid increase in homicide involving knives and over 20 years, the homicide rate rose by 83%, whilst that involving knifes increased by 164%.[12] A review of sharp injury fatalities in New York city in 1999 showed that there were 120 deaths, 101 homicides, 17 suicides and 2 accidents. The cause of death in 112 was due to stab(s) and 8 were incised wounds. Additionally, the detection of ethanol and/or illicit drugs was 61% in homicide and 12% in the suicidal group.[13] Trends in the incidence and severity of stab wounds in Sweden, from 1987–1994 disclosed that the total number of deaths was 45 out of 1,315 cases of stab wounds recorded during that period, i.e., 3.4% fatality ratio.[14] A study of stab wounds was made on patients who attended the Accident and Emergency Department of Glasgow Royal Infirmary during 1978–1983. There were 318 patients, the majority (304) were males. The most common sites of wounds were chest (143 patients) and the abdomen (113 Patients).[15] In Oslo and Copenhagen, 141 homicides by sharp force were committed in the ten year period from 1985–1994, which accounted for 33% of homicides in this period.[16]

One year study between Aug 2004 and Jul 2005 at Casualty Department of Mulago Hospital, Kampala, Uganda showed 3,778 patients were entered in the study and the mortality due to stabs/cuts was 5.4%.[17] In a study in Turkey 3,183 autopsies conducted in Istanbul between 1988 and 1989 showed that 195 deaths (6.1%) were due to stab wounds.[18] In another study conducted in Adana, Turkey, there were 2,951 medico-legal autopsies conducted during 5 years (1997–2001) out of which 620 (21%) autopsies were of homicidal deaths, 515 (83.06%) were males and 105 (16.94%) females, 182 (29.35%) were cases of stabbing, which make 6.16% of all autopsies conducted during the study period.[19] Homicidal deaths in medico-legal autopsies at Kuala Lumpur, Malaysia were 217 out of total number of autopsies performed over a 5 year period from 1999–2003. Injuries caused by sharp weapons were most common (41%) cause of death.[20] In New Delhi, during period of 1992–1996, out of 3,886 medico-legal

autopsies, only 232 (5.9%) were homicidal deaths and sharp weapon injuries were most common, i.e., 34.9%.[21]

Karachi lies in middle in the ratio of sharp weapons casualties, but it is still a major concern considering that Karachi is the most populated city of Pakistan and number of medico-legal deaths here is huge; fire-arms being the most important means, which covers up the still prevailing means of sharp weapons which itself is a menace but is hidden under the massive effects of firearms.[5,6]

Among the victims, males were 4 times more frequent than females. Similar male-dominance has also been reported by other studies in Pakistan. Kaheri *et al*[7] reported male deaths by sharp weapons to be 5 times more dominant than females in Peshawar, while Qadir *et al*[9] reported a similar 4:1 male to female ratio in deaths by sharp weapon in Larkana. Males in our society, due to their more outgoing nature, socialising with community, and aggressive nature are more prone to involve themselves in a conflict that can be the cause of enmity leading to their deaths by homicide. A significant finding of our study is that the majority (59.3%) of the cases belonged to age group 20–39. This is again because young individuals due to their more aggressive approach can easily develop enemies who can avenge themselves in the form of homicides.

A noteworthy finding is that none of the sharp weapon deaths in our study were due to suicides. Studies within Pakistan have reported sharp weapons to account in some measures of suicides. A study conducted in Faisalabad reported suicides by sharp weapons to comprise 4.2% of the reported suicides. Suicides by stab wounds are rare, while hanging, firearm and poisoning stand as more common ways now.

We found that most of the deaths were due to stab wounds in abdomen out of which 40 cases involved rupturing of intestine leading to haemorrhage. The sites of the wounds and the multiplicity of the injuries easily distinguish a homicidal from suicidal stab wound. The severity of stab wounds is based exclusively on the location and depth of penetration. Important considerations include type of weapon used, i.e., knife, dagger, sword or even ice pick, length, shape, straight or curved and manner of assault (overhand versus underhand).

## CONCLUSION

Sharp weapon deaths continue to be a means of quite a number of deaths in Karachi. Such violence depicts intolerant and frustrated nature of the citizens.

## REFERENCES


1. Wilcox DE. The relationship of mental illness to homicide. American Journal of Forensic Psychiatry. 1985;6(1):3–15.
2. Faretra G. A profile of aggression from adolescence to adulthood: an 18-year follow-up of psychiatrically disturbed and violent adolescents. Am J Orthopsychiatry. 1981;51:439–53.
3. Yousfani GM, Memon MU. Spectrum of Unnatural Deaths in Hyderabad: An Autopsy Based Study. J Dow Uni Health Sciences 2010;4(2):54–7.
4. Hassan Q, Shah MM, Bashir MZ. Homicide in Abbottabad. J Ayub Med Coll Abbottabad 2005;17(1):78–80.
5. Marri MZ, Bashir MZ, Munawar AZ, Khalil ZH, Khalil IR. Analysis of Homicidal Deaths in Peshawar, Pakistan. J Ayub Med Coll Abbottabad 2006;18(4):30–3.
6. Bashir MZ, Saeed A, Khan D, Aslam M, Iqbal J, Ahmad M. Pattern of homicidal deaths in Faisalabad. J Ayub Med Coll Abbotabad 2004;9(1):57–9.
7. Kaheri GQ, Hussain Z, Saeed A, Balouch ZA, Memon A, Khalil IR. Sharp injury fatalities in Peshawar. Med Channel 2003;9(4):41–44.
8. Tajammul N, Chaudhry TH, Hanif S, Bhatti MA. Profile of Medicolegal cases at Jinnah Hospital Lahore. Ann King Edward Med Uni 2005;11:332–5.
9. Qadir G, Aziz K. The study of homicidal deaths in Larkana. Pak Postgrad Med J 2000;11(2):79–80.
10. Brennan IR, Moore SC, Shepherd JP. Non-firearm weapon use and injury severity: priorities for prevention. Inj Prev 2006;12:395–9.
11. Webb E, Wyatt JP, Henry J, Busuttil A. A comparison of fatal and non fatal knife injuries in Edinburgh. Forensic Sci Int 1999;99(3):179–87.
12. Leyland AH. Homicides involving knives and other sharp objects in Scotland, 1981-2003. J Pub Health 2006;28(2):145–7.
13. Gill Jr, Catanese C. Sharp injury fatalities in New York City. J Forensic Sci 2002;47:554–7.
14. Bostrom L, Heinius G, Nilsson B. Trends in the incidence and severity of stab wounds in Sweden 1987-1994. Eur J Surg 2000;166:765–70.
15. Swann IJ, Macmillan R, Watson AA. A study of stab wounds. Archives Emerg Med 1985;2:31–6.
16. Rodge S, Hougen HP, Poulsen K. Homicide by sharp force in two Scandinavian capitals. Forensic Sci Int 2000;109(2):135–45.
17. Demyttenaere SV, Nansamba C, Nganwa A, Mutto M, Lett R, Razek T. Injury in Kampala, Uganda: 6 years later. J Can Chir 2009;52(5):146.
18. Katkici U, Ozkok MS, Orsal M. An autopsy evaluation of defence wounds in 195 homicidal deaths due to stabbing. J Forensic Sci Soc. 1994;34:237–40.
19. Hilal A, Cekin N, Gulmen MK, Ozdemir MH, Karanfil R. Homicide in Adana, Turkey: a-5 year review. Am J Forensic Med Pathol 2005;26(2):141–5.
20. Kumar V, Li AK, Zanial AZ, Lee DA, Salleh SA. A study of homicidal deaths in medicolegal autopsies at UMMC, Kuala Lumpur. J Clin Forensic Med 2005;12:254–7.
21. Gupta A. A study of homicidal deaths in Delhi. Med Sci Law 2004;44(2):127–32.
22. Saeed A, Bashir MZ, Khan D, Iqbal J, Raja KS, Rehman A. Epidemiology of suicide in Faisalabad. J Ayub Med Coll Abbottabad 2002;14(4):34–7.



## Address for Correspondence:

**Dr. Farhat Hussain Mirza,** Department of Forensic Medicine, Dow Medical College, DUHS, Karachi, Pakistan.
**Cell:** +92-300-9230198
**Email:** captdrmirza@hotmail.com