



Demographic profile of fatal sharp force injuries: autopsy study at Tertiary Care Hospital.

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INTRODUCTION

All big hospitals should arrange for autopsy examination. A trend to dispose off cases of sudden deaths without autopsy is unscientific. Havard and Heasman have pointed out the danger of disposing of medicolegal cases without autopsy. Comparison of clinical diagnosis with autopsy finding has 50% disagreement and in half of those cases, the disagreement is the fact and not merely of opinion.¹ In the United States, violent deaths, suicide, homicide and accidents are the leading cause of death in people aged 1-39 and 3rd leading cause of death for people of all ages.² Autopsy plays a pivotal role in assessing cause, mode, manner and mechanism of death. This helps in dispensation of justice particularly in

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ABSTRACT... Objectives: To study the various aspects of fatal sharp force injuries in relation to the age groups, gender, affected body parts, manner of death, residential background & seasonal variation among the victims of unnatural deaths brought for medicolegal autopsy in a tertiary care hospital. **Study Design:** Cross sectional study. **Setting:** Postmortem Unit of DHQ Teaching Hospital, Sargodha. **Period:** 1st January, 2017 to 31st December, 2017. **Material & Methods:** The record of total 103 medicolegal autopsies were studied for the role of age, gender, body parts affected by external injury, area of jurisdiction of medicolegal cases with special consideration to mode, manner and cause of death. **Results:** Amongst the 103 medicolegal deaths, 98(95.15%) were male and rest 5(4.85%) were females. Those medicolegal cases belonged to different age group i.e. 1-10 years of age involved 3(2.91%), 11-21 years 11(10.68%), 21-30 years 37(35.92 %), 31-40 years 23(22.33%), 41-50 years 12(11.65%), 51-60years 14(13.59%) whereas age group of more than 60 years involved 3(2.92%) cases. Most of the victims 62(63.86%) were of rural back ground. Parts of body affected by visible injury included head 27(26.21%), neck 4(3.88%), thorax 13(12.62%), abdomen 2(1.65%), limbs 1(0.97%) while in 46(44.66%) cases multiple injuries were observed over different parts of body. Majority 65(63.10%) cases were homicidal while 8(7.76%) were suicidal, 19(18.44%) were accidental, 8 (7.76%) died in custody of police and 2(1.94%) cases remained undetermined. **Conclusion:** The sharp force injuries were observed in majority of males belonging to the rural areas among the age group of 21-40 years. The most commonly affected body part was head involving 27(26.21%) cases. The prevalence of these deaths was more in the months of June, July (summer) and then November.

Key words: Injuries, Medicolegal Autopsies, Manner of Death, Prevalence, Sharp Force.

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homicidal cases.³ Such vicious means of deaths are indicative of extreme violence, increasing frequency of which leads an attention towards the developing sense of frustration and lack of self-esteem are indicative of mental disturbances in individuals.⁴ Our study aims at audit of the medicolegal autopsies conducted at tertiary care hospital in Sargodha to establish a framework about prevalent cause, mode and means of deaths and relate them to the variables of age, sex, ethnicity and season. It will help to control the effect by eradicating the violence and its contributory factors. Hence justice can be dispensed effectively.

MATERIAL & METHODS

A retrospective study was conducted in autopsy room of DHQ teaching hospital, Sargodha. The medicolegal autopsies reported from 1st January 2017 to 31st December 2017 were included. Information regarding age, gender, parts of body affected by external injury and area of jurisdiction of the particular cases were noted in predesigned proforma. Special consideration was given to the mode, manner and cause of deaths. The data was tabulated and analyzed by descriptive analysis.

RESULTS

Amongst 103 medicolegal deaths, 98(95.15%) were males and 5(4.85%) females. These medicolegal cases belonged to different age groups i.e. from age 1-10 years 3(2.91%), 11-21 years 11(10.68%), 21-30 years 37(35.92%), 31-40 years 23 (22.33%), 41-50years12 (11.65%), 51-60 years 14(13.59%) and more than 60 years 3(2.92%).

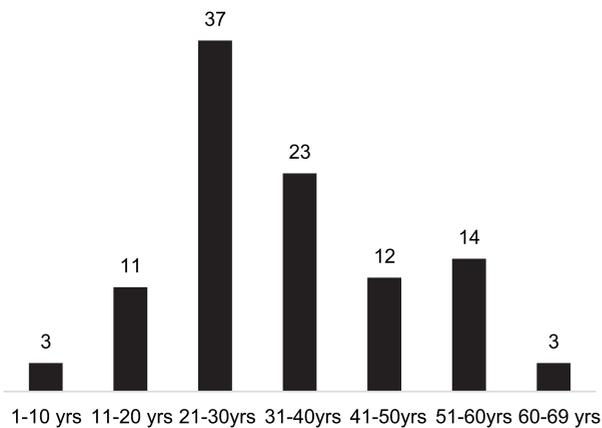


Figure-1. Involvement of different age groups in medicolegal deaths (n=103).

Most of the victims 62(63.86%) were of rural back ground. Parts of body affected by visible injury included head 27(26.21%), neck 4(3.88%), thorax 13(12.62%), abdomen 2(11.65%), limbs 1(0.97%) and multiple injuries 46(44.66%).

Majority of cases were homicidal 65(63.10%) while 8(8.73%) were suicidal, 19(18.44%) were accidental, 8(7.76%) died in police custody and 2(1.94%) cases remained undetermined.

The prevalence of these deaths was more in the

months of June, July (summer) and November.

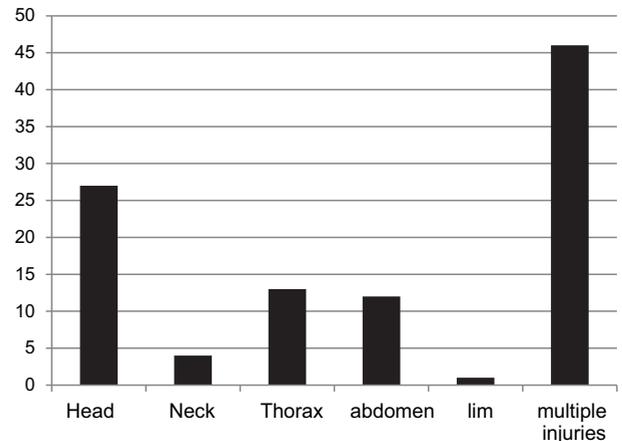


Figure-2. Parts of body affected in medicolegal deaths.

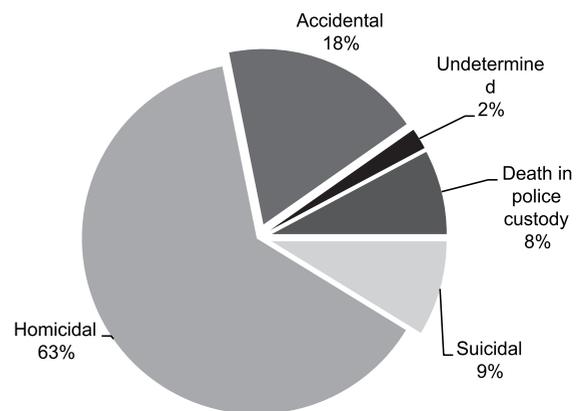


Figure-3. Mode of death in medicolegal cases.

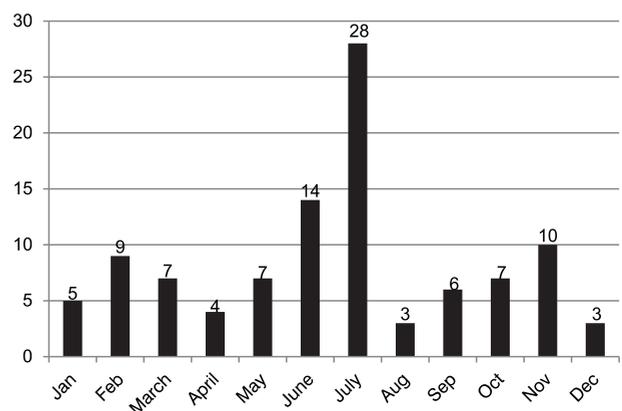


Figure-4. Seasonal variation of medicolegal deaths.

DISCUSSION

Wounds originated from the use of pointed objects or objects having sharp edges are named as “sharp force injuries.” Sharp force injuries

consist of injuries with comparatively well-defined linear separation of tissues. It occurs when a sharp-edged or a pointed object touches the skin and underlying tissues.⁵ It is very common to use sharp weapon in cases of homicidal as well as suicidal situation.^{6,9} In Pakistan the incidence of sharp edged is quite high as in other parts of the world.^{3,10,11}

The instruments used for this type of sharp force injury include razors, blades, scalpel, scissors, box cutter, saws etc. Similar types of weapons were used to cause wound in study done in 2008, where commonly used objects were knives (62%) and razor blades (15%).¹²

In recent study, we investigated total 103 medicolegal cases. There were obvious male predominance 98 cases (95.15%). In a study at Charles Nicholas Hospital, 636 victims were autopsied over a period of ten years, out of which majority (79.7%) were males.¹³ Similarly, most of the cases of homicide have male prevalence.^{7,11,14,15,16}

The age prevalence in our study was between 21-30 years. This is in contrast with other studies and the age factor seems to be variable among different studies. In one study the age range of medicolegal deaths was between 21-40 years^{3,17} and in other it was 20-39 years.¹⁸ Most of the victims 62(63.86%) were of rural back ground.⁷

The locations of wound in these cases were targeted at multiple sites in most of the cases 46 (44.66%). In contrast, head trauma (64.2%) is major site of injury in case of blunt trauma.⁷ Other parts of body affected by visible injury included head 27 (26.21%), neck 4(3.88%), thorax 13(12.62%), abdomen 2(11.65%) and limbs only 1(0.97%).

The prevalence of these deaths was more in the months of June, July (summer) and then November. In contrast newer studies suggest that there is little effect of seasons and the temperature aggression theory seems to be wrong.^{19,20}

CONCLUSION

The sharp force injuries were observed in majority (95%) males with ages of 21-40 years belonging to the rural areas. The most commonly affected body part was head. The prevalence of deaths due to sharp force injuries was more in the months of June, July (summer) and then November.

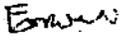
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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author(s) Full Name	Contribution to the paper	Author(s) Signature
1	Summyia Sadia	Planning & designing of study, Collection & processing of data / Manuscript writing.	
2	Bashir Ahmad Siddiqui	Statistical analysis / References writing.	
3	Kishwar Naheed	Authentication of references / Literature review & proof reading	
4	Altaf Pervez Qasim	Comparison with other studies.	
5	Farwa Naqvi	Manuscript Editing / Discussion.	
6	Fariha Tariq	Tabulation of results / Critical review / Proof reading.	