

# Audit of Cases Autopsied in the Mortuary of Khyber Medical College Peshawar during the year 1999

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This study is aimed to collect and publish the data of the unnatural deaths occurring in our environment with special reference to gender vulnerability, pattern of weaponry used, the manner of death, seasonal variations, the target area and the age group at risk. This data can open further avenues of research in the field of prevention and planning by the medical professionals, religious scholars, social scientists, reformers, law enforcers, planner and policy makers, for a peaceful and harmonious society.

**Key words:** Autopsy, medicolegal autopsy, homicide, firearm

Autopsy is a detailed scientific examination of dead person, involving external examination of the corpse, dissection and examination of the contents of the cranial, thoracic and abdominal cavities with definite objectives<sup>1</sup>.

Due to diversity of objectives, the procedure is categorized into two major groups<sup>2</sup>.

- a) The clinical/academic/hospital autopsy from which the medical attendants, with the consent of relatives, seek to learn the extent of the disease for which they were treating the deceased patient. This is conducted by a Pathologist, qualified and trained for the job preferably in the presence of attending/treating physician.
- b) The Medicolegal/coroner's/Forensic autopsy, which is performed on the instructions/permissions of the legal authority responsible for the investigation of sudden, suspicious, obscure, unnatural, litigious or criminal deaths. List of such cases is exhaustive, but generally includes deaths due to act of criminal violence, mechanical interference with the respiratory passages, physical and environmental agents and poisoning. Even natural deaths occurring suddenly and under suspicious circumstances come under this category.

Such deaths are regrettable, un tolerable, unacceptable and repugnant to normal standards of society so state reacts sharply and initiates investigations through a legal agency which may be a coroner, a medical examiner, a Procurator - fiscal, a Magistrate, a Judge or the Police, the system varying considerably from country to country<sup>3</sup>.

In Pakistan, Hospital autopsies are not conducted due to resentment shown by relatives due to religious taboos and social customs, except in Armed forces where it is mandatory to carry out post mortem examinations in all cases of sudden deaths even if the cause of death is obvious and natural<sup>4</sup>, whereas conduction of Medicolegal autopsy is a statutory duty performed by an authorized Medical Officer, designated by the provincial government<sup>5,6</sup>.

Khyber Medical College, Peshawar has an ideal set up of autopsy services. All the unnatural deaths occurring in metropolis of Peshawar are autopsied in the mortuary located at the department of Forensic Medicine and Toxicology. Further, Medicolegal case referred to government hospitals of Peshawar from different parts of the province for treatment, if dies, is also brought to this department for the autopsy.

Autopsies are conducted by trained Medical Officers posted in the department under the direct supervision of qualified academicians. The arrangement serves two purposes, catering the need of society to investigate/detect any foul play and training of undergraduates and postgraduates to produce competent medical manpower of this specialty to meet the future requirements.

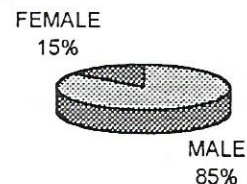
## Materials and methods

A total number of 681 deceased were autopsied in the department during the year 1999. All the cavities were routinely opened without any bias. In case, where anatomic cause of death could not be ascertained, the representative tissue/organs/biological fluids were sent for detailed examination; for microscopy to the department of Pathology and for analytical chemistry to the inbuilt Toxicology laboratory located in the department.

## Results

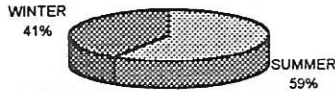
- Male subjects dominated the female number with ratio of 11:2

SEX PREVALANCE

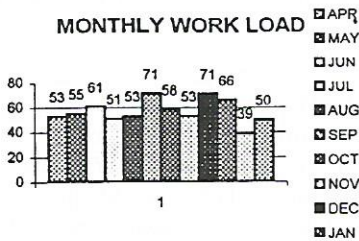


- Summer (April To October) being the preferential season for committing crime than the winter (November to March), ratio being 3:2

SEASONAL VARIATION

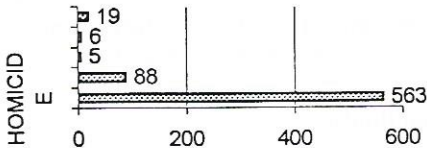


MONTHLY WORK LOAD



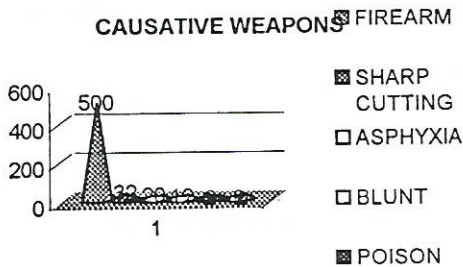
- Homicides out number the other manners of death with an alarming ratio of 5:1, suicide is a rare phenomenon, accidental deaths occupies the intermediate position.

MANNER OF DEATH



- Firearms predominate the spectrum of causative agents, sharp cutting/ penetrating weapons are sporadically used, where 'as violent forms of interference with respiratory passages and use of conservative blunt instruments are at the lowest ebb.

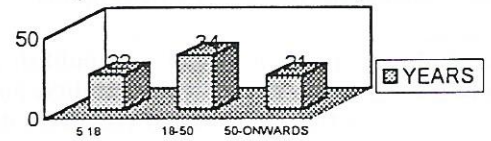
CAUSATIVE WEAPONS



- The third decade of life being the more vulnerable period for unnatural deaths followed in line by 4<sup>th</sup> and 5<sup>th</sup> decade.
- Upper torso in the elective site for killing by firearm and sharp cutting weapon, whereas cranial and abdominal cavities occupy the 2<sup>nd</sup> and 3<sup>rd</sup> position in order of priority.

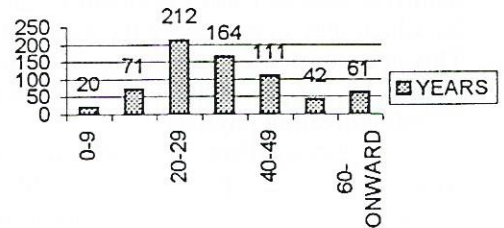
- In traffic accidents cerebro-cranial trauma is responsible for 2/3<sup>rd</sup> of deaths followed by thoracic and abdominal areas.

AGE UNDER RISK (IN TRAFFIC ACCIDENTS)

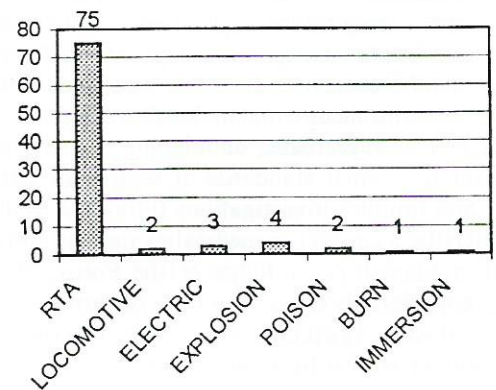


- In accidental deaths, Road traffic accidents remained the major cause of mortality. Surprisingly only the pedestrian were the victims brought to mortuary.
- The deaths due to poisoning remained a rarity.

AGE UNDER RISK (IN ALL UNNATURAL DEATHS)



CAUSE OF ACCIDENTAL DEATHS



Discussion

Crime is a social harm defined and made punishable by law<sup>7</sup>. Unnatural deaths whether homicidal, suicidal or accidental are un-expectable and highly deplorable eventualities. Homicides are further labeled as highly tragic, horrible and humiliating occurrences, an insult for



the society, a challenge to law enforcers and an eye opener for the state.

- This audit reveals that a total number of 681 individuals were autopsied in the year 1999. Which is a comparatively much lesser number than in the previous year. In the year 1998 743 autopsies were conducted<sup>8</sup>. The better law and order situation may be the cause for this decline.
- Customarily, in NWFP male is the main target of rivalry and revenge. Female's role in the society especially in maintenance of property, decision making in her and family affairs is dormant, so they are usually spared, killing of female is either mistaken target during darkness of night or her sudden appearance at the scene. However she is intentionally targeted in domestic feuds or for honor's sake. Other authors also document male victim outnumbering the female populace<sup>9</sup>.
- The increase in number of criminal violence leading to death during summer season may bear a relationship of temperature with temperament. In NWFP in summer the inhabitants are generally mobile, active and found in open. Due to high temperature they sleep in open grounds so became prey to their enemy. In contrast, people prefer to remain inside during winter so they are comparatively safe. Chapman and Milroy also noted such seasonal variation<sup>10</sup>.
- Homicides accounts for 82.67% of the total cases. The use of criminal violence is a global phenomenon and its causes varies from country to country and society to society. In Pakistan Zar (money) Zan (Women) and Zamin (Property, land) are considered as prime causes. Incidences of domestic violence, fights over elections, dowry deaths by torching the brides, killing on pretext of illicit relationship/adultery (karokari, honor killing) can also be traced to three Z's. The immediate exciting causes, which has provided a spark to the powder keg in this scenario has been invariably a trivial or ridiculously insignificant and avoidable incident such as loose talk minor joke or exchange of hot words between children and women resulting in an enormous amount of outflow of hot blood from the bodies of their adult male relations culminating in their death and ultimate ruination and liquidation of the entire family<sup>11</sup>. Not infrequently, a single murder or fight has brought in its train, a satanic and vicious circle of vendetta, which has spelt the virtual extinction of the whole family, tribe or an entire village in the course of few years. This sour reality is commonly observed in our tribal/feudal setup throughout the country.
- Predominance of firearms (88%) followed by sharp edged and pointed weapons (5.6%) on the list of causative agents is consistent with the studies of other researchers. Approximately 25000 deaths from firearm occur in the USA each year<sup>12</sup> therefore

gunshot wounds is the 7<sup>th</sup> leading cause of death in USA<sup>13</sup>. The break down of homicide figure for typical year in the US show gun deaths taking up 67% of the index, blunt weapon 11%, edged and pointed weapons 18% and strangulation 2%<sup>14,15</sup>. Another study shows handguns being responsible for 49% of all murders, Rifle 6%, shot guns 9%, cutting and stabling 18%<sup>16</sup>. A recent study by National Centre of Health Strategy shows a sharp rise of shooting fatalities in USA amounting to 30,708 deaths in 1998<sup>17</sup>. In England and Wales, overall firearm accounts for less than 10% of homicides and less than 5% of suicides in man and is most unusual in woman<sup>18</sup>. Increased use of firearms is also reported by Asian authors<sup>19,20,21</sup>. Exception to this observation is a study at Sri Lanka where death by clubbing is more common and shooting is the least occurrence<sup>22</sup>.

- Sale/possession of firearm though controlled/restricted in Pakistan, in NWFP guns of every design and form is kept by majority of people especially in the rural areas under the pretext of protection device. This fact may be attributed to the social customs, tribal identity, status symbol and/or real or imaginary enmity or easy availability of the instrument in the tribal areas. Use of firearms are preferred due to their sure results, even from distant areas, consumption of less physical strength than the other instruments, least chances of counter attack and production of terror.
- Though no age is noted immune from unnatural deaths, individuals ranging from 1 day to 85 years of age are found to be the victims. 3<sup>rd</sup> decade of life has shown more vulnerability followed by the 4<sup>th</sup> & 5<sup>th</sup> decade. These years of life are symbol of energy, motivation, mobility, work and intellectual pursuits. Individual is capable of playing an vital role in the society by earning, shouldering the economical burden, nursing and raring the younger once and in building the socio economic structure of a nation. Killing of this age group can be termed as extinction of human resources at an early stage and a national loss requiring a preventive strategy.
- The body areas aimed for homicide is thorax (40.5%) and cranium (35.1%), this election is due to a general knowledge that vital organs responsible for continuance of life (heart, Lungs and Brain) are located here and their hurt is attained by lethal outcome.
- Death due to favorite crime of Victorians, i.e. by poisoning remained a rarity. Only one homicidal death due to Arsenic occurred in the year under study. The decline in homicidal poisoning is also reported by Frank in an American study<sup>23</sup>

#### References

1. Cotton D.W.K, Gross S.S.: Historical introduction, The Hospital autopsy, 1994, New Delhi Japee Brothers, 1-7

2. Knight B: The Forensic autopsy, Forensic Pathology, 1991, London, Edward Arnold, 1-46.
3. Knight B. The development of Medicolegal system Taylor's principles and practice of medical jurisprudence 13 Ed. Mant AK Churchill Living Stone Edinburgh 1986. 1-14.
4. Luqman M, Sattar A, Abbasi S, Sathi TM: Pattern of sudden deaths in armed forces personnel - postmortem study. Pak Armed Forces Medical J. 1995; 45(2)66-71
5. Criminal Procedure code Act-V of 1898, Section-174.
6. Police rules 1934, XXV (25.2)
7. Parikh CK Legal Procedure Text Book of Medical Jurisprudence & Toxicology, 5th ed, 1995. Bombay CBS Publish -1-28.
8. Unpublished data. Autopsies performed in year 1998 at Khyber Medical College, Peshawar
9. Hussain S.S. Preventing Medicolegal Crime, Forensic Medicine & Toxicology 1989 20<sup>th</sup> ed Lahore Carvan Book House 416-422
10. Mian AR Majceed A, Malik MM, Zaheer M. Goraya SU " Analysis of Unnatural Deaths in Rawalpindi during 1997. Pak Armed Forces Med J 1999:49 (1) 68-70.
11. Chapman J. Milroy CM,: Firearm deaths in Yorkshire and Humberside. Forensic Science International, 1992, 57, 181-191
12. Bradford L.W. McCafferty J. Firearm evidence. Gradewohl's legal medicine 3<sup>rd</sup> ed. Ed. Camps F.E. 1976: Bristol: Jhon Wright Sons 191-219.
13. Fatch A. Gun shot wounds, Hand Book of Forensic Pathology 1973 Philadelphia, JB Lippincott. 97-130
14. Fatch A Medicolegal investigation of Gunshot wounds, 1976, Philadelphia J.B Lippincott.
15. Adelson L. Homicide by firearm: the Pathology of Homicide, 1974, Springfield Charles C.Thomas 216-297.
16. Spitz U.W, Fisser R.S. Injury by gunfire, Medicolegal investigation of death, 2<sup>nd</sup> ed, 1980, Springfield, Charles C. Thomas
17. Criminal statistics in England and Wales 1975-1990, HMSO, London
18. Singh RKS. Analysis of changing pattern of unnatural death during 1991-95 Journal of Forensic Medicine & Toxicology 1997: XIV (1) 23- 5
19. CHAO TC: Homicide and suspected homicides in Singapore Med. Sci. Law J 1976, 98
20. Anil K BBA, Pattern of murder cases, Journal of Forensic Medicine & Toxicology 1997, XIII 30-8
21. Eckert WG: Medicolegal work in Sri Lanka, The inform Vol.18(2) April, 1986.
22. Daily Nawa-e-Waqt, April 15<sup>th</sup>, 2001
23. Frank S. Ballistics: Science against crime. 1982 New York Exctor Books, 130-147.