

ANALYSIS OF AUTOPSY RECORD OF UNNATURAL DEATHS IN PESHAWAR DISTRICT

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ABSTRACT

Objective: This study was undertaken to describe the unnatural deaths and their causes in Peshawar and its suburbs.

Methodology: This descriptive study was conducted at the Department of Forensic Medicine and Toxicology, Khyber Medical College, Peshawar. Autopsy data from January 2009 to April 2012 was analyzed and only those cases were selected for the study where the cause of death was unnatural i.e., homicide, suicide, accidental or undetermined.

Results: Of a total of 3,265 autopsies due to unnatural causes during 40 months period, 2,839 (87%) were males and 426 (13%) were females. There were 2,856 cases of homicide – 2,475 (87%) were males and 381(13%) were females, 317 were accidental deaths - 281 (89%) males and 36 females (11%), 66 were suicide cases - 61 (92%) males and 5 females (8%) and 26 were undetermined deaths - 22 males (85%) and 4 (15%) females. Most victims were aged 20-40 years. Most common cause of death was firearm - 2370 cases, blunt trauma 279 cases and bomb blast/explosives 167 cases.

Conclusion: The rate of unnatural deaths in Peshawar is very high. Autopsies done during the study period were a lot more than previous years. Homicide is the most common manner of death with firearms being the most common weapon used. Strict laws should be implemented to limit illegal weapons. Surveillance must be increased in all parts of the city to reduce the loss of precious human lives.

Key Words: Medicolegal autopsy, Homicide, Unnatural death.

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INTRODUCTION

During the last decade, Pakistan and especially Khyber Pakhtunkhwa province has seen a significant rise in violence. A significant contribution comes

from militancy whether in Afghanistan or in tribal areas of Pakistan. Sharp rises in bomb blasts have been seen in the past few years which has adversely affected the society. In Pakistan, many deaths go unreported and every dead body is not brought for autopsy except when law enforcement agencies like police demand so. Unnatural deaths are the main reason for performing medicolegal autopsies. In Pakistan, possession of weapons is allowed for citizens but many citizens also possess illegal weapons. Firearms, whether prohibited or non-prohibited, are available easily in the region. Similar is the case with drugs. Almost all drugs are available over the counter and can be easily used for suicidal or homicidal purposes. Our country's law and order situation has also not improved rather deterioration is seen with time; It is not unreasonable to say that the KPK province is the least monitored province in terms of surveillance. After numerous bomb blasts, suicide attacks and looting of government and civilian property, there is hardly any monitoring of citizens by security cameras and law enforcement agencies. And this is the reason the situation is not improving. In

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an area where people who commit crime, whether it is homicide by firearm/stabbing, negligence on road resulting in accidents, are not held accountable and brought to the court of law, there is hardly any way to expect a decrease in unnatural deaths. The Department of Forensic Medicine and Toxicology in Khyber Medical College receives all bodies for autopsies from district Peshawar and suburbs and has carried analysis of autopsy record in the years 2001¹, 2002², 2003³ and 2004⁴. This descriptive study was initiated covering a period from January 2009 to April 2012. It offers a chance to compare the situation with that of the past, with other cities of Pakistan and other countries and also highlights the steps to be taken to improve the situation.

METHODOLOGY

This is a descriptive study that analyzes autopsy data related to unnatural deaths, handled by Department of Forensic Medicine and Toxicology, Khyber Medical College, Peshawar from January 2009 to April 2012. The department receives cases for autopsy from Peshawar District and its suburbs. Only those cases where cause of death was unnatural i.e. homicidal, suicidal and accidental were included in the study. Doubtful cases were also included and grouped as undetermined. The data was classified according to region, gender, age, manner of death and types of weapons used or the causative agent/circumstances for death in each homicidal, accidental, suicidal or undetermined case. Cross tabulation between manner of death and sex of the deceased

was also done. Data entry and analysis was done using SPSS 16.0.

RESULTS

In the study period (January 2009 to April 2012), a total of 3,265 cases of unnatural deaths were presented for autopsy to Forensic Medicine and Toxicology Department, Khyber medical college Peshawar. Highest number of cases were in 2009.

Of the 3,265 cases, 2,839 were males and 426 were females (see Table 1). Approximate ages of the autopsies conducted were 0-19 years n=597 (18.2%), 20-40 years n=1721(52.7%), 41-60 years n=685 (20.9%) and 60 or above n=262(8.0%).

Most cases were reported from Badabair n=389, followed by Chamkani n=271, Khazana n=162, Matra n=156, Matani n=171, Pishtakhara n=147, Tehkal n=117, Bhana Mari n=114, Sarband n=100, Pahari Pura n=97, Hayatabad n=89, Faqirabad n=89.

The most common manner of death was homicide. Table 2 has listed yearly analysis of number of deaths from homicide, suicide, accident and undetermined cases. Highest number of cases were that of homicide n= 2,856 (87.47%). Table 3 shows causes of deaths. The most common cause/weapon of death was firearm which accounted for 2,370 deaths. There were 279 deaths from bomb blast/explosives. There were a total of 66 suicidal deaths (2.02%), 61 in males and 5 in females. Among males and females, the manner of death was not significantly different (chi squared p=0.5).

Table 1: Numbers of each type of unnatural death by year

Year	Male	Female	Total autopsies
2009	909 (87.9%)	125 (12.1%)	1,034
2010	875 (86.5%)	136 (13.5%)	1,011
2011	879 (86.0%)	143 (14.0%)	1,022
2012 (January to April)	176 (88.9%)	22 (11.1)	198
Total	2,839 (86.9%)	426 (13.1%)	3,265

Table 2: Manner of Death

Year	Homicidal	Suicidal	Accidental	Undetermined	Total
2009	900 (87.0%)	22 (2.1%)	105 (10.2%)	7 (0.7%)	1,034
2010	879 (87%)	19 (1.9%)	104 (10.3%)	9 (0.9%)	1,011
2011	906 (88.6%)	18 (1.8%)	88 (8.6%)	10 (1.0%)	1,022
2012 (January to April)	171 (86.4%)	7 (3.5%)	20 (10.1%)	0 (0%)	198
Total	2,856(87.5%)	66 (2.0%)	317 (9.7%)	26 (0.8%)	3,265

Table 3: Method of Unnatural Deaths

Weapon/method	Number	Percentage
Fire arm	2,370	72.6 %
Blunt trauma (road traffic accident)	279	8.5 %
Bomb blast/explosives	167	5.1 %
Asphyxia	130	4.0 %
Blunt weapon	107	3.3 %
Sharp weapon	81	2.5 %
Undetermined	40	1.2 %
Poisoning	21	0.6 %
Drowning	12	0.4 %
Electrocution	12	0.4 %
Miscellaneous	46	1.4 %
Total	3,265	100%

Table 4: Manner of unnatural deaths by sex [n (%)]

	Suicide	Undetermined	Accidental	Homicidal	
Male	61 (2.1)	22 (0.8)	281 (9.9)	2,475 (87.2)	2,839
Female	5 (1.2)	4 (0.9)	36 (8.5)	381 (89.4)	426
Total	66 (2.0)	26 (0.8)	317 (9.7)	2,856 (87.5)	3,265

DISCUSSION

We have described 3,265 cases of unnatural deaths in a 40 month period. In 2001, only 679 cases were received;¹ in the year 2004, there were only 633 cases.⁴ Number of unnatural deaths have increased substantially from 2009 to 2012 with more than 1000 cases each year. The highest number of cases was received in the year 2009. During this year, violence was on the rise and Swat offensive was also launched by the Pakistan Army. The situation has not improved since then.

Most autopsy cases were received from four of the suburbs in Peshawar (Badabair, Khazana, Matra and Matani). This is the first study to report the autopsy record of each town/regions in or around Peshawar District.

Homicide was reported as most common manner of death in previous studies⁴ and the same result was found in this study. This time, the homicide rate is much higher at around 87.47%. During the year 2004, 77.7% of all autopsies were that of homicide and firearm was used in 96.5% cases. In 1999, Peshawar had a homicide rate of 82.67%.⁵ In a 6 year study conducted in New Delhi in 2006, only 107 firearm deaths were recorded but the homicide rate was 92.6%.⁶ It shows that areas with fewer killings also have homicide as the most common manner of death. In a study conducted in Dera Ismail Khan in

2007-2008, the rate of homicide was 76% and deaths due to firearm were 59.07%.⁷ Similarly high rates were found in Faisalabad and Lahore in the past too.^{8,9} Our study found that firearms caused 72.58% of all deaths. Easy availability, possession of illegal weapons, no limit on number of licensed weapons kept by a citizen and negligible surveillance by security agencies are the main contributing factors. We will compare figures of USA and UK here as both countries have different laws regarding arms. In USA, possession of weapons is also legal but rate of homicide is far less than Pakistan because of better security, surveillance and higher literacy rate. In New Mexico, USA, a study suggested that homicide prevention efforts should be directed against non-firearm methods as the firearm use was very low.¹⁰ In a study conducted in Georgia USA¹¹, the homicide rate was 48% and firearm was used in 88% of the cases in a 20 year period. Although a high rate of firearm use was found but rate of homicide is still very low compared to our study. Interesting results are found when the literature of UK is studied. In a study conducted in England and Wales from 1998-2007, out of a total of 91,232 trauma cases, there were only 487 cases (0.53%) of firearm.¹² It is extremely low rate as compared to ours. Ban on possession of weapons, better health and emergency services and extensive surveillance has led to this dramatic fall in firearm victims.¹³ In another 16 year study from 1975-1991 in UK, firearm accounted for

less than 10% of all homicides¹⁴. It has been very clearly reported from USA that a reduction in the firearm homicide cases can be achieved if extensive background checks on citizens are done prior to issuance of arms license¹⁵. The authors call for legislation to be done to address this issue.

Unnatural deaths were higher in males than females. In 2001, there were 89 (13.1%) unnatural female deaths out of total of 679.¹ The situation is still the same as in our study the rate of female deaths was 13.04% too. Similar rates have been reported from Abbottabad¹⁶.

We found 8.54% cases of blunt trauma mainly due to road traffic accidents but a higher rate has been reported from Abbottabad and USA^{11, 16}. The presence of surveillance system on roads is stressed again to decrease this rate.

We have reported cases of bomb blast for the first time in this study. It must be noted that casualties in bomb blasts are very high but not every victim is subjected to autopsy therefore, only 167 cases (5.11%) were recorded during the 40 months in Peshawar and its suburbs. In the year 2009, there were 14 bomb blast incidents in Peshawar District, 15 blasts in 2010, 10 blasts in 2011 and 8 bombings from January 2012 till April 2012¹⁷. Literature review was also not very rewarding for KPK as few studies have been conducted in our province. Data from CMH Peshawar was analysed and published in 2012 which showed that 69% of military casualties were due to IEDs (Improvised Explosive Devices)¹⁸. In D.I Khan, deaths due to bomb blast injuries were reported higher than ours 24.04% of all unnatural deaths⁷. In another study conducted in Karachi, the fatalities in only two bomb blast incidents were reported to be 140 which is very close to our figure 167 (number of autopsies in 14 bomb blast incidents)¹⁹. Studies to find out the impact of blasts on the society and the cost of human lives should be done in future. One of the limitations of this study is deaths which are referred for autopsy are only a selected group and may not be a true representative sample.

Use of sharp weapons, blunt trauma and asphyxial deaths were very low compared to firearms and this is seen in many other studies in Pakistan. However the incidence of blunt trauma injuries and deaths due to sharp weapons is higher in UK^{20, 21}.

Deaths by suicide in Peshawar were lower than other cities of Pakistan. The rate in Pakistan varies; in a study published in 2008, highest rate was seen in Larkana (Sindh, Pakistan); it also reported that rates in men are always higher than females. The authors also recommend that standard system of recording suicidal deaths must be started to determine the actual rates²². It is interesting to mention that in

a 24 year UK study, the rate of suicide in migrant population was studied and suicide rate among Pakistani migrants were consistently reported low²³. The religion plays a vital role here as in Islam suicide is forbidden (haram) to all Muslims. Lower rate in Muslim countries is also reported by another UK study²⁴.

Road safety is major concern in our city. The cases of blunt trauma mostly from traffic accidents in Peshawar were 279 (8.54%). Here again, many deaths go unreported and actual number of deaths cannot be ascertained. This was also reported in a study from Karachi²⁵.

CONCLUSION

Unnatural deaths, mostly due to firearms have increased substantially in the last 3 years. Strict measures need to be taken to monitor and control the possession of illegal firearms. Law and order in the suburbs of Peshawar needs to be improved. Detailed analysis of bomb blast incidents and suicides is required to know the actual loss of human lives and steps needed to tackle this problem.

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CONTRIBUTORS

ZHK supervised the whole project, helped in the data analysis and final review of the manuscript. MN helped in data analysis, study design and interpretation of results. MA wrote the manuscript for the first time and did script modifications later on, as advised by reviewers. MZIK, SHA and F helped in data collection, data entry, writing and reviewing the manuscript. All the authors contributed significantly to the research that resulted in the submitted manuscript.