

# To Determine the Pervasiveness of Homicidal Sharp Force Trauma in Rawalpindi and its Relationship with Age and Gender

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## Abstract

**Objective:** To document the incidence of most embattled anatomical sites of the body in cases of sharp force injuries, focused on gender and age susceptibility, referred at the mortuary for autopsy.

**Methodology:** A Descriptive, retrospective Study was conducted in the Medico-legal section of District Headquarters Hospital Rawalpindi for three-year duration from March 2016 to March 2019. The medico-legal record of hundred autopsy cases of the medical-legal department at the mortuary at DHQ Rawalpindi, were examined thoroughly. The variables measured were age, gender, cause of death, injury type, anatomical sites commonly involved and defence wounds in the homicidal outcome. The results were stated as percentages and numbers in the presentation planned for the study.

**Results:** The records of hundred autopsy cases in the medical-legal department showed that the homicidal injuries due to acute force trauma were in the 20-30 years age group, 65 (65%) of men and 35 (35%) of women with 30.88 the average age. 18 (18%) showed single lesions and 82 (82%) had multiple lesions. Of the deaths, 46 (46%) were due to bleeding, while the remaining 54 (54%) were due to injuries to the vital organs. In 26 (26%) of cases, defence wounds were observed and the 74 (74%) remaining had no such wounds. The abdomen was the most usual embattled anatomical part in males 25 (25%) and in women neck in 30 (30%) of bodies.

**Conclusion:** The analysis showed that acute force trauma injuries were male dominant with 20-30 years age group. The injuries were numerous and most of the victims did not have defence wounds. In males, the utmost focused anatomical area was abdomen and in women it was neck. In most cases, the death cause was vital organs injury. If sufficient laws are enacted to enforce law enforcement authorities to keep areas of appropriate penalties in accordance with the law, deaths will be reduced by acute force.

**Key Words:** acute force trauma, autopsy, homicidal injuries.

**Conflict of Interest:** None

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## Introduction

The legal medical examination of death is the supreme important and crucial function of justice in the criminal justice system.<sup>1-3</sup> The officer is anxious with determining the reason, nature and duration of all unnatural suspicious and sudden deaths sent by law enforcement organisations to the medical legal facility of the Sector Hospital.<sup>4-5</sup> The application of sharp force causes an open wound due to the discontinuity of the skin and the rupture of the underlying tissues. The most common tools that inflict these are a knife, a sharp cut glass, a sword, a shaving blade, a metal piece, a pair of scissors

and an axe.<sup>6-7</sup> The weapon characteristics, such as the size, shape and weapon type used, affect the size and shape of the wound. The extraordinarily little work has been completed in Pakistan on injuries due to sharp weapon and a downward trend has been reported. In Hyderabad, a 2-year analysis reported sharp weapons causes 10% of unnatural deaths. The 8% of physical trauma cases reported by Abbottabad's one-year study due to strident weapons<sup>8</sup>. This analysis was held to determine the death rate with sharp weapons by gaining the relevant authorities' attention to this terrible subject in Pakistan. The sharp weapons death is a trivial problem that requires appropriate consideration<sup>9</sup>. Various analysis

in Pakistan have described that in homicidal deaths; the second most important means are sharp force weapons.<sup>10</sup>

## Methodology

This descriptive, retrospective Study was held in the Medico-legal section of District Headquarters Hospital Rawalpindi for three-years duration from March 2016 to March 2019. This study includes all homicidal deaths due to sharp force trauma. In the pre-designed proforma, existing registrations and the relevant information was recorded for three years. Autopsy cases during this period were 100 with sharp edge homicidal injuries. The incidence was determined based on gender, age, injuries frequency (multiple or single), armament, death cause, predilection for site of homicidal wounds infliction and defence injuries sustained. This information was collected in a table and calculations were made. The result was obtained, a conclusion was made, and commendations were provided.

## Results

During the study period, 100 autopsy cases were examined in the medico legal department and it was found that sharp force trauma injuries were common in 65/100 (65%) men and 35/100 (35%) in females.

**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	-

The corporate age group participating was 20-29 years 30/100 (30%). The mean age was 30.88 years. The single injury was noted among 18/100 (18%) victims, multiple injuries in 82/100 (82%) cases. The deaths occurring because of vital organs' injuries were due to haemorrhage 54/100 (54%) and 46/100 (46%).

There were defence injuries seen in (75%) 75/100 victims and 25/100 (25%) remaining cases had no defence injuries.

Common areas causing fatal outcomes include head 10/100 (10%), chest 20/100 (20%), neck 30/100 (30%), abdomen 25/100 (25%), upper limbs 10/100 (10%) and lower limbs 05/100 (05%).

**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 VI: 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

In unnatural deaths, the most common cause of death is due to sharp force weapons. These injuries are the third cause of deaths globally.<sup>10</sup>

Figures from Wales and England show that the supreme usual method of homicide worldwide is due to sharp objects, followed by using sharp weapons, according to analysis in Pakistan, where the firearm was the first chosen weapon of homicide.<sup>11</sup> During the study period, 100 autopsy cases were reported in the medical-legal department, which showed that the age of the victims of acute force trauma was 20-30 years related to the analysis in the Rawalpindi where the common age varies between 28 and 60 years. In the US, age of people who died due to severe trauma was 22 to 51 years, because their growth began much earlier and produced all kinds of violence.<sup>12-13</sup> The homicidal death from sharp force trauma in India ranges from 22 to 31 years. This shows that the rate of sharp trauma is median at an early age

and higher than that of old age<sup>14</sup>. In our study, men were more susceptible to trauma due to sharp force than women.

This study showed that 65% were male and 35% female victims, which contrasted with a Peshawar study that showed that 86.15% were female and 13.85% were male. Here, in this part of Pakistan, more women are exposed to acute trauma. In our study, the injury pattern in 82% had multiple and 18% had single injury related to the analysis in Adana, where the victim suffered a single injury in 47.35%. In this analysis, fatal consequences (cause of death) was 46% bleeding and 54% had vital organs damage.<sup>15</sup> In this analysis, 75% had defensive wounds and 25% had no defensive wounds. This indicates that the victims were ignorant of the attacker's exact homicidal attack as compared to the study in Delhi, where only 36 (14%) and 83 (83%) cases had no defense wounds. In this analysis, the most susceptible anatomical part was the 30% neck compared to the studies performed in Karachi, where the most usual site was the intestine in 30%.

## Conclusion

Most of the cases of acute force trauma were men, and the most common anatomic part of acute force trauma was the abdomen in men and neck in women who were fatal due to bleeding and shock affecting vital organs. The age group however was determined to be between 20 to 40 years of age with maximum percentage.

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### Authors Contribution:

<sup>1,3</sup>Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work & Final approval of the version to be published

<sup>2,4,5</sup> Drafting the work or revising it critically for important intellectual content;