Original Research Article

# A study of pattern of defence wounds in autopsy at Government Royapettah Hospital, Kilpauk Medical College, Chennai

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## Abstract

During the homicidal act, a victim usually tries to defend himself/herself, and due to these attempts he/she could sustain injuries, mostly localized on the upper limbs these are called defence injuries. The nature of these wounds varies depending on the type of weapon used, amount of force and the state of consciousness at the time of attack. We analyzed autopsies of all homicidal cases with defense injuries in Royapettah hospital during a 3-year period. A total of 80 cases of homicide were studied. Defensive injuries were registered in 23 victims of murder. The majority (63.71%) of victims with defense injuries were males. About 31.2% of victims were aged from 21 to 30years. Homicides were mostly (90.14%) performed by mechanical weapons. In a half (50.7%) of the cases they were present on both forearms of the victim, followed by the hands. Bruises were the most frequent form of defense injuries (91.3% out of 23 cases). The aim of this research was to analyze important medico-legal characteristics of defense injuries, particularly regarding their importance in forensic expertise of homicides.

**Key Words:** Homicidal deaths, defense injuries, autopsy, Royapettah hospital.

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## INTRODUCTION

Death is inevitable to every living matter. Death of a person might occur in many ways. It can be natural death or unnatural death like accidents, suicides or homicides. Premature ending of life by another individual has increased in the recent years. The injuries seen over the body, suggest the preparation done by the assailant (s) to kill their victim. As the common notion goes "DEAD BODY DO SPEAK", comes into picture when we see the injuries over the body. It not only suggests the preparation but also at times, speaks about the hatred, and the motive behind the final act. Injury also speaks about the weapon causing it, Time of infliction, force used to cause it and when it was caused? One among that is so called defense injuries. Defense wounds are not uncommon upon the victims of homicide. Based on the presence of such injuries it can be opined that the victim was conscious, could comprehend the attack and provided resistance during the assault. Correct diagnosis of homicide is made with the support of medical evidence (i.e., autopsy finding), along with the statement given by the suspects or other witnesses. Defense wounds over the body form a valuable evidence for reconstructing the scene of offence in homicidal deaths[1].

## MATERIALS AND METHODS

This cross sectional study was conducted on the dead bodies of both sexes brought for medico legal autopsy with history of homicidal death, at the department of Forensic Medicine, Royapettah Hospital, Chennai, during

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the period from January 2014 to December 2016 for a period of 36 months. Ethical clearance was obtained. Examination of injuries was done cautiously, as mentioned in the standard textbooks of forensic medicine. All the findings pertaining to the case are recorded in the Performa considering the objectives of the study, which is later coded into a chart and analyzed. Post mortem examination of the case was carried out as per the standard procedure.

**Inclusion Criteria:** All cases subjected for autopsy at Royapettah hospital, Chennai with alleged history of homicide.

**Exclusion Criteria:** Extremely decomposed and skeletonized bodies are excluded.

## RESULTS

The present study is a cross sectional study on 80 cases of homicides for a period of 3 yrs autopsied at the Royapettah hospital, Chennai. The present study was under taken to know the pattern of defence injuries in homicidal deaths. A total of 80 cases of homicide were studied. Defensive injuries were present in 23 victims of murder. The majority (67.61%) of victims with defense injuries were males. About 25% of victims were aged from 21 to 30years. Homicides were mostly (90.14%) performed by mechanical weapons. In a half (50.7%) of the cases they were present on both forearms of the victim. Bruises were the most frequent form of defense injuries (36.61% out of 71 cases).

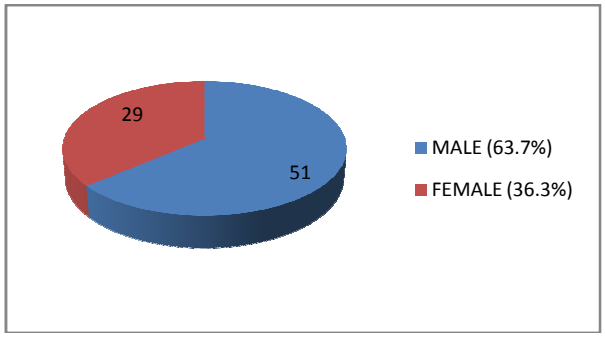


**Figure 1:** Sex distribution of murder victims

**Table 1:** Age distribution of murder victims

| AGE GROUP | NO. OF CASES |
|---|---|
| 1-10 | 3 (3.7%) |
| 11-20 | 3 (3.7%) |
| 21-30 | 25 (31.2%) |
| 31-40 | 17 (21.2%) |
| 41-50 | 15 (18.7%) |
| 51-60 | 12 (15%) |
| 61-70 | 3 (3.7%) |
| 71-80 | 1 (1.2%) |
| 81-90 | 1 (1.2%) |
| 91-100 | 1 (1.2%) |
| **TOTAL** | **80** |

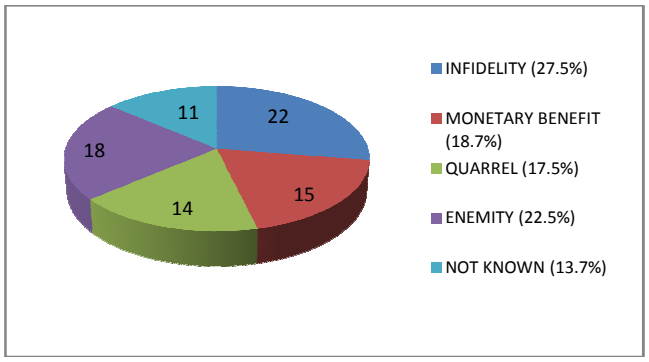


**Figure 2:** Distribution of precipitating factors

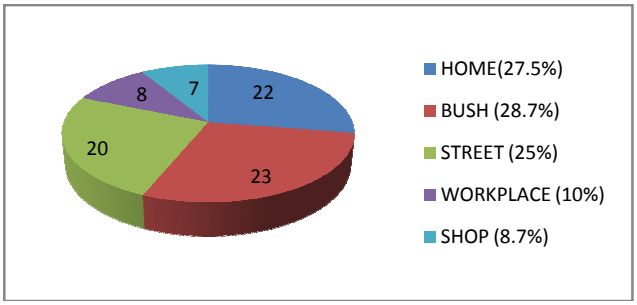


**Figure 3:** Place of homicide

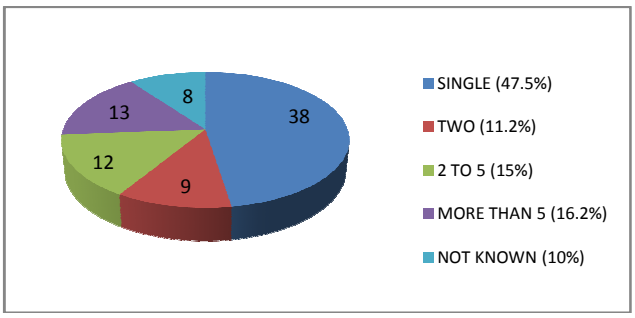


**Figure 4:** Number of assailants

**Table 2:** Nature of the alleged weapon

| Nature of Alleged Weapon | No. of Cases |
|---|---|
| Blunt, Light | 3 (3.7%) |
| Blunt, Heavy | 28 (35%) |
| Sharp, Light | 11 (13.7%) |
| Sharp, Heavy | 17 (21.2%) |
| Ligature- Rope, Cloth | 9 (11.2%) |
| Firearm | 3 (3.7%) |
| Poison | 2 (2.5%) |
| Not Known | 7 (8.7%) |
| **Total** | **80** |

**Table 3:** Distribution of defence wounds in murder victims

| Defence Wounds | Males | Females | Total |
|---|---|---|---|
| Present | 16 (20%) | 7 (8.7%) | 23 (28.7%) |
| Absent | 35 (43.8) | 22 (27.5%) | 57 (71.3%) |
| **Total** | **51(63.8%)** | **29 (36.2%)** | **80 (100%)** |

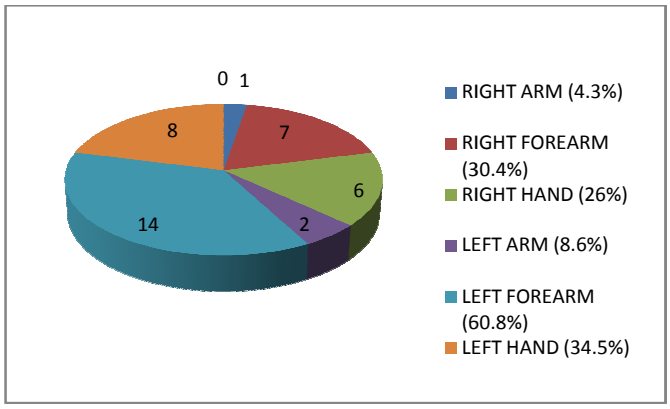


**Figure 5:** Location of defence wounds

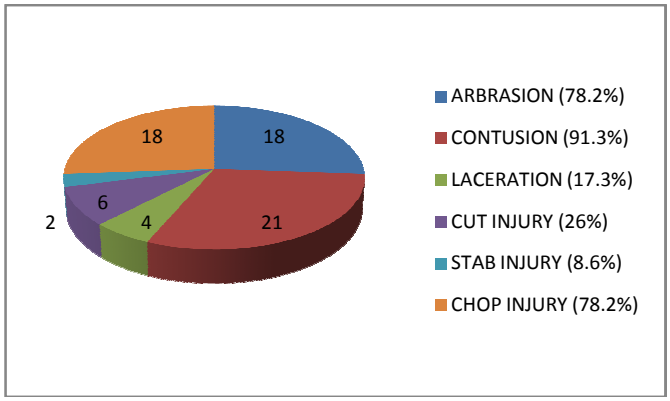


**Figure 6:** Nature of defence wounds

## DISCUSSION

Killing a person by another is known since ages. Only the methods employed has changed which has seen a drastic change in the recent years. There has been a phenomenal rise in the incidence of homicide all over the world and also in Chennai, due to highly intensified struggle for survival in the face of fast industrialization and urbanization. Homicide is prevalent widely all over the world due to rapidly increasing population; urbanization; poverty; unemployment; frustration; illiteracy; prevalent economic, social and political environment; insurgency; terrorism; drug addiction; jealousy; enmity; easy availability of weapon and the widening gap between the rich and the poor. The global average homicide rate is 6.9 per 100,000 populations. The homicide rate of Asia falls between 2.4 and 4.3 per 100,000.Calculations from UNODC homicide statistics noted that in southern Asia most common method employed to kill an individual is by using sharp weapons which accounts for 32%.[2] An injury is any harm, whatever illegally caused to any person in body, mind, reputation or property.[3] Defence wounds are injuries which are suffered by an individual in an attempt to save oneself from assault or while defending oneself from the offenders. Defence wounds are usually noted in those cases where the assault occurred at close range. These may be in the form of abrasions, contusions, lacerations or even incised wounds. Presence of defence wounds in firearm injuries or blasts have also been pointed out by some authors.[4] Classification of defence injuries as 'active' and 'passive' has also been found in the literature. The locations of these injuries are at those parts of the body which are used to defend one self and are commonly found at the back of the forearm, arm and the palm of the hand. Apart from these defence wounds may also be sustained on legs, feet or on the back.[5] Active defence wounds are sustained when the offending weapon is held by the victim in self-defence. These are usually incised wounds sustained on the palm of the hand. Passive wounds are sustained on the extensor aspect of the limbs to protect the vital parts of the body by covering them.[6] Out of 80 cases of homicidal death, defense injuries were present in 23 cases accounting to 63.7%. 57 cases defence injuries were absent (36.3%). The commonest type of defence injuries encountered were incised wounds, chop wounds in sharp weapons, lacerations and contusions in the cases due to blunt weapons/force. Defence injuries were more commonly sustained on upper limb. Most of the defence injuries were found on the hand i.e. 15 cases, out of which 07 cases had only on hand, 05 cases both hand and forearm, one case both hand and sole. Forearm alone was involved in two cases, which substantiate that the victim uses his hand to ward of an attack or to protect his/her vital parts viz. head and chest. And those on sole indicate that the victim was on the ground and hence used his/her legs to ward of attack. Others include the sites like back of chest, shoulder, knee etc. In Dr, Bassappa Hurger In M S Ramaiah Medical College study, Out of 42 cases, 19 victims had defence injuries. and were more common in sharp weapon injuries[7]. Similar observation was made by Rouse D.A[8] wherein he found defence injuries in 45.2% of the fatalities due to injuries and Mohanty S[9] where in 48% had defence injuries. This is in contrast to the observations made by Wahlsten P.[10] wherein he found defence injuries in only 33% of cases and Gupta Avnesh[11] where in only 18.9% of cases had defence injuries. Study conducted in odisha IMS and SUM hospital results show that Out of the 111 homicidal deaths, 31 cases (27.92 %) were found with defence wound. Males were approximately 1.43 times more defensive than females. Most common age group showing defence wound was 21-30yr. Sharp weapon was used in 45.16% cases where as blunt weapon in 38.71% cases. Most common type of defence wound was incised wound (29%), followed by bruise (22.58%). Most common site involved in upper limb was forearm, followed by hand and arm. Active defence wound were found in 16.12% cases and passive defence wound in 64.51% cases. Left hand showed most

defence wound (41.93%) as compared to bilateral hand involvement (32.25%) and right hand involvement (25.8%).[12] Another study shows that Out of the 189 homicidal deaths during the 5-year period of study, defence wounds were noted in 90 cases. Most of the wounds were sustained by males in the age group of 30–44 years. Incised wounds (52.2%) were the most common type of defence wounds followed by chop wounds and abrasions. In 70% of cases the injuries were on one side of the body, the left side being more common. The forearm and the hand were the most affected parts.[13] Study conducted in MMC, mysure result Of the total 216 cases of homicide during this period 88 cases had defence injuries. Males outnumbered females in presence of defence injuries. Sharp weapon was used in 64.8% cases where as blunt weapon in 21.6% cases. The probability that defence injuries can be seen is rising with the number of wounds. Forearm was the commonest site of defence injuries.[14] Another study of total of 205 cases of homicide were studied. Defence wounds were present in 44.4% of cases, out of which 92.3% were male and 7.7% cases were females. Maximum number of cases (45.1%) with defence wounds belonged to age group 20-29 years. Defence wounds present in injuries caused by sharp cutting weapon with stab wound were less (36.55) as compared to hard and blunt object (57.1%). In 30.8% cases defence wounds were present in more than one part of body. In 17.6% of cases alcohol was found in the contents of the stomach on post-mortem examination.[15]

## CONCLUSION

The presence of defence injuries on the body strongly supports the opinion of the autopsy surgeon to establish the homicidal manner of death. A meticulous autopsy with the knowledge of common sites of defence wound along with the circumstantial evidence plays a great role in determining the defence wounds. The fabricated nature of the wound should be ruled out and the age of the injuries should be assessed before framing an opinion. So by considering the defence wound, not only indicating the alertness of the victim but also the relative position of assailant and victim, types of weapon used, manner of death and reconstruction of scene also can be deducted to some extent and thus helps in better justice to the victim.

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