



Injury Pattern in Fatal Cases of Incised Wound

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Abstract: The incised wound is the wound which has a clean-cut margin and dangerous only if they penetrate deeply enough to damage a blood vessel of significant size as it is evident in this study. It is a common method of homicide all over the world. Precise examination of the wound along with the type of other wounds considering their site, shape, direction, number and orientation of the wounds in relation to each other etc. provide a number of clues which may be of paramount importance in reconstruction and interpretation of the whole event. This is a retrospective study carried out in Forensic Medicine Department of Sylhet M. A. G. Osmani Medical College Sylhet, Bangladesh from July, 2010 to June, 2011 and in the year of July, 2017 to June, 2018 to observe different patterns of injuries in fatal cases of incised wound. Male are more victimized than female. The pattern of injury that found to be most common is chop wound which means deep gaping incised wound with or without decapitation and along with multiple blunt force wounds like laceration, bruise and abrasion on different sites of the body as defense wounds. The statement of the witness if supplied in the inquest report and medico-legal examination of the wound when not in contradiction can be a valuable evidence. Although in absence of witness and partial decomposition of the wound can make the differentiation of the homicide, suicide, accident most difficult for the forensic pathologist.

Keywords: Incised Wound, Chop Wound, Fatal Outcome

1. Introduction

An incised wound is a clean-cut wound through the tissues (usually the skin and subcutaneous tissues, including blood vessels) caused by sharp-edged instrument. [1] Injuries caused by sharp objects are classified as 'incised' wounds. [2] They are caused by objects with a sharp or cutting edge, most commonly a knife but examples include an axe, shards of glass, broken glasses or bottles, an edge of broken pottery, a piece of metal can also cause these wounds. [3-5] So, In summary and substance, from above discussion, it can be said, The term 'incised wound' covers all types of injury from, for example, a knife, sword, razor, glass or sharp axe etc. [2-4] Although most of these weapons can also cause stab wound, an incised wound is distinguished from a stab

wound by being longer on the skin surface than it is deep. [2-4, 6-8, 12] The clean-cut division by sharp instrument is the criteria of incised wound where the danger lies, as the cutting edge of sharp instrument divides everything in its passage through the skin. [2]

Incised wounds, by their nature, are only life-threatening if they penetrate deeply enough to damage a blood vessel of significant size. Thus, incised wounds over the wrist or neck, where major arteries lie in more superficial tissues, can prove fatal. [3] Cut throat wound is a special entity of incised wound on a vital region and it can be of homicidal, suicidal or accidental origin. [9-11] Chop wound is the deep gaping incised wound which is either cut throat wound or in other site than neck. The forensic pathologists have a challenging task during the ascertainment of the manner of death in cut

throat injuries when presented with no proper history or witnesses. [13]

Sawing or striking or even drawing with a sharp weapon is a common method of homicide in developing countries like Bangladesh, due to poverty, quarrel, over population, joblessness, political unrest, family dispute from etc. All the above mentioned factors lead to a violence which may result ultimately in a fatal outcome. Incised wound is of importance in Forensic Medicine as this is a common method of both suicide and homicide.

The basic criteria of the wound – length indicates the cause of the fatal outcome. Homicidal incised wound need not to be multiple, widely distributed always; it can be single chop wound on a vital spot as evident in this study and that is enough to bring a fatal outcome. The sign of struggle sometimes present and in such case there are multiple wounds found on the body. Sometimes the other sharp force wounds found along with incised wound clearly define the nature of the wounds, especially when those other wounds are also present on the vital spot of the body which has become evident in this study. On the other hand, the orientation of the wounds in relation to each other also indicates the intention of the assailant and thus the nature.

2. Materials and Method

This study is carried out in Forensic Medicine Department of Sylhet M.A.G. Osmani Medical College, Sylhet from July, 2010 to June, 2011 and from July, 2017 to June, 2018 to observe different patterns of injuries in fatal cases of incised wound. Twelve autopsies were included in this study using random sampling. Necessary information gathered from police inquest report and accompanied friends, neighbors and relatives. The study based on physical examination using the usual methods and instruments. No special technique or incision was employed. The variables that are analyzed were sex, age and injury pattern.

3. Results

Among the 12 deceased, 9 were male and 2 were female and sex of 1 was undetermined. Among 12, 11 were adult and 1 was children (below 18 years). Sex and age distribution are shown in tables 1 and 2.

Table 1. Sex distribution.

| Sex | Number |
|--------------|--------|
| Male | 09 |
| Female | 02 |
| Undetermined | 01 |
| Total = 12 | |

Table 2. Age distribution.

| Age | Number | Percentage |
|---------------------------|--------|------------|
| Children (below 18 years) | 03 | 25% |
| Adult (Above 18 years) | 09 | 75% |
| Total = 12 | | |

As mentioned earlier, the pattern of injuries that found to be most common is the chop wound which means deep gaping incised wound with or without decapitation along with multiple blunt force wounds like laceration, bruise and abrasion on different sites of the body as defense wounds. Second common injury pattern is a single incised wound along with other sharp and blunt force wounds like stab wound, laceration, bruise and abrasion on different sites of the body. Third common pattern is the multiple slices or slashes on a specific region or distributed on different sites of the body (Table 3).

Table 3. Distribution according to the injury pattern.

| Injury pattern | Percentage |
|--|------------|
| Chop wound which means deep gaping incised wound with or without decapitation along with multiple blunt force wounds like laceration, bruise and abrasion on different sites of the body as defense wounds | 41.6% |
| A single incised wound along with other sharp and blunt force wounds like stab wound, laceration, bruise and abrasion on different sites of the body | 33.4% |
| Multiple Slices or Slashes on a specific region or distributed on different sites of the body | 25% |

4. Discussion

Length, direction, site, shape, number and orientation of the wounds in relation to each other, etc. constitute an injury pattern. An incised injury is distinguished from a stab wound by being longer on the skin surface than it is deep. [2-4, 6-8, 12] This means extension of the damage not at the depth; but lengthwise. it is not necessary that death will occur after a vital organ is injured but if a major blood vessel is divided cleanly by the sharpness of the weapon, then severe bleeding can lead to the ultimate fatal outcome. The most important fact that should be in mind is the viscera of a dead body on the autopsy table are not in the same position as when the same person was alive in standing or bending over position in a state of emotional tension at the time of an assault. During fight, fright and flight the victim may be moving or changing position in a variety of postures which change by the second. [1] So, It is unpredictable as to which region and blood vessel of the body to be found injured in case of incised wound when the struggle is sufficient and lasting for a considerable length of time which is evident in this study. The unpredictability seems much more obvious as it should be in mind that the whole process of injuring a person is not a static event, but a dynamic event as mentioned above and there are a lot of interactions between the victim and the assailant unless it is sudden surprised attack which is also not uncommon. Direction can provide valuable clue not only as to the relative position of the assailant and the victim, but also about the nature as well as the determination or aggression of the assailant in homicidal case. Multiple slices or slashes on the back or in such a position as cannot be easily reached by a suicide are homicidal. [1] In such case the assailant strikes out with a swiping action rather than the thrust of a stabbing attack so that if it contacts a body it will

slice the skin and tissues it passes by whether it is horizontal or vertical in direction. [1] The slash may be deeper at the entry end or the exit point, though it seems true that many such injuries tend to dig in near the point of first contact and become progressively more shallow as the wound approaches the distal end as clearly evident in this study. [2]

Chop wound which means deep gaping incised wound with or without decapitation along with multiple blunt force wounds like laceration, bruise and abrasion on different sites of the body as defense wounds found in this study is a special entity of incised wound as it is caused by fairly heavy sharp weapon. Decapitation with a clear-cut sharp impression on the cervical vertebra indicates the medico-legal nature of the event very much obviously. Presence of vertebral notch and spinal cord cuts, which require a substantial amount of force and pressure via sharp tools, indicates homicide. [10]

There is nothing said straight as a whole about medico-legal nature of, but it is said that most of the chop wounds are homicidal. [1] The type of the weapon is fairly heavy sharp-cutting weapon which can disarticulate a joint. A chop wound injuring major arteries and veins cause immediate hypovolaemic shock or causing decapitation of the head initiates immediate coma.

A single incised wound along with other sharp and blunt force wounds like stab wound, laceration, bruise and abrasion on different sites of the body indicates struggle for a considerable length of time with considerable resistance. It also indicates the attack was not a surprised one or under intoxication or even during sleep. The presence of defense injuries on the body strongly supports the opinion of the autopsy surgeon to establish the homicidal manner of death. When most of them are blunt, it indicates the effort to restrain the victim before inflicting final blow with sharp weapon.

A common form of homicide is multiple Slices or Slashes on a specific region or distributed on different sites of the body. The number of incised wound is an important factor in determining the nature of the wound. The multiple number of wounds in any region, especially on inaccessible region and of considerable length when present, indicates about the intention of the assailant to confirm death and thus the nature of event. Other sharp force injury along with the incised wound gives idea about the medico-legal nature of the event, especially when the other wound is on a vital spot or traversed into considerable depth of the body as evident in this study.

The typical cut throat injury on the front of neck severing important structures of the neck like trachea, carotid vessel and jugular vessel is not found in this study. In such incised wound death occurs more commonly from hypovolemic shock resulting from severe hemorrhage. Other causes include asphyxia, air embolism etc.

5. Conclusion

The conclusion that can be drawn from the discussion is the tremendous variation of the patterns of Incised wound in

fatal cases from very much less data available and even after that almost all age groups and sex found present here.

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