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ORIGINAL ARTICLE

An autopsy study of 74 cases of cut throat injuries

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KEYWORDS

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Abstract: The present prospective autopsy study was carried out during the period July 2009 to May 2012 in Kingston, Jamaica. A total of 74 cases of cut throat injury were studied. All the cut throat injuries irrespective of those directly or indirectly contributing to the death were studied. Males dominated the list of victims, contributing to 71.62% (n = 53). Majority of those were in the age group 21–30 (n = 25) and 31–40 (n = 26) which contributed to 33.78% and 35.13% respectively. Majority of the cases were homicides contributing to 97.29% (n = 72) of cases, only 2.7% were suicides and accidental cut throat were never reported. Males dominated the homicides category contributing to 72.22% (n = 52) of the cases. Gang and relationship crisis (homosexual and heterosexual) were the major motivating factors, each contributing to 39.19% (n = 29) and 32.43% (n = 24) of the cases, respectively. The disease suffered by individuals were the least motivating factors contributing to 1.35% of cases (n = 01). The most common cause of death was exsanguinations in 49.95% (n = 34) of cases followed closely by asphyxia due to aspiration of blood i.e. 36.49% (n = 27) of cases and air embolism was the least cause of death, contributing to 4.05% (n = 03) of cases. Cut throat injury was associated with other injuries like gunshot wound, chop wounds and stab wounds in 13.52% of (n = 10) autopsies. Chop injuries contributed to maximum number of other injuries in homicides (n = 46). The most preferred place for the crime was an open field or farm (n = 26). Majority of the cut throat wounds were situated in zone II level contributing to 66.21% (n = 49) of cases. Majority of the wounds were directed from left to right in 75.68% (n = 56) of cases and the cervical vertebra was affected in 8.11% (n = 06) of cases. Major weapon of choice was machete contributing to 83.78% (n = 62) of injuries. The low income group was the most affected group contributing to 91.89% (n = 68) of cases.

1. Introduction

In vertebral anatomy, the throat (Latin: Gula) is the anterior part of the neck, in front of the vertebral column. It consists of larynx, trachea, pharynx, vital blood vessels – carotid and jugular, oesophagus, cricoid, thyroid and hyoid bone. It is sometimes considered a synonym for fauces.[1] Anterior neck injuries are varied in extent, case and extent, and they may

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be intentional or accidental.[2,3] The present prospective study was carried out between July 2009 and May 2012 in Kingston. All the cut throat injuries examined, irrespective of the injury directly or indirectly contributing to the death were studied. Injuries to the throat comprises one of the major methods adopted to kill or as a mean to severe the head, so as to conceal the victims identity or as a mode of revenge. With the presence of vital blood vessels, nerves and wind pipe, the neck constitutes one of the most vital structures of the body as any damage to this structure invites fatality as death is imminent.[4–6] There are many instances wherein cut throat injuries do exist with other type of injuries. Hence it is essential to find out the fatal injury and the reason behind those injuries, besides other factors associated with the pattern like the direction of injury, underlying damages, the level of neck affected, and the causes of death. All these are essential to give an insight into understanding the medico legal aspects of wounds in specific and the clinical management in general. Hence, the present autopsy study is an attempt to study cut throat injury in all its aspects.

2. Materials and methods

In the present prospective autopsy study a total of 74 cases were studied during the period between July 2009 and May 2012. All these cases are those referred to the Legal Medicine Unit, Kingston, Jamaica. Autopsy was carried out on the coroner's request sent through the police. A complete autopsy was conducted in all the cases with enbloc removal of organs sparing the neck. The neck was last to be dissected to facilitate the so called the blood less field dissection. The injury over the neck was dissected layer by layer. The vessels, nerves, larynx, trachea, cricoid, thyroid, hyoid, pharynx, and ribbon muscles of the neck were carefully dissected to study the wounds. All the demographic details, history provided by the police/coroner and injury details were entered in a standard proforma and analysed.

3. Results

Fig. 1 indicates the age and sex distribution. In the present study a total of 74 autopsy cases were studied. The males dominated with 71.62% (n = 53) of cases and the females with 28.38% (n = 21) of cases, the male to female ratio being 3.5:1. The common age group affected was the 3rd and 4th decades, with 33.78% and 35.14%, respectively.

Table 1 indicates the manner of death. 97.29% of the cut throat injuries were homicidal in nature, only 2.7% were suicidal in nature. No accidental injuries to the neck were reported.

Fig. 2 indicates the motivating factors contributing to cut throat injuries. Majority of the cut throat injuries were as a result of gang related violence, contributed to 39.19% (n = 29), followed closely due to relationship related (homosexual and heterosexual) contributing to 32.43% (n = 24). The least contributing factor is cut throat injury as a result of an inherent disease factor.

Fig. 3 indicates different causes of death. Major cause of death was exsanguinations' contributing to 49.95% (n = 34) of deaths followed by deaths as a result of asphyxia due to inhalation of blood, 36.49% (n = 27), and the least noted cause of death was due to air embolism specific to the jugular vein. In 13.51% of cases (n = 10) cut throat injury was secondary to other fatal injuries like gunshot wound, chops and stab wounds.

Fig. 4 indicates the places of occurrence. Majority of the incidents of cut throat injuries were reported from a field or farm contributing to 35.14% (n = 26), followed closely by cases reported from place of residence, home, 24.32% (n = 18). The least reported were from inside locked room – 2.70% (n = 2). In 5.41% of (n = 04) cases reported the body was found away from the unknown crime scene.

Table 2 indicates different types of injuries, associated with the cut throat injury. Chop wounds were the major type of injuries present on the other parts of the body (n = 46). Stab (n = 18), laceration (n = 12) and gunshot (n = 07) wounds were also found to be associated with cut throat injury in the descending order.

Table 3 indicates the socioeconomic group of the victims. The low socioeconomic class was the most affected contributing to 91.89% (n = 68) of cases, followed by high economic class contributing to 5.41% (n = 04). The middle income group was left untouched.

Table 4 indicates the wound description with particular reference to its margins, direction, zonal level of the neck involved and type of weapon. 75.68% (n = 56) of the cut throat injury were directed from left to right and only 24.32% (n = 18) were directed from right to left. Major portion of the injury involved zone II contributing to 66.21% (n = 49) of cases. Zone I was involved in 32.43% (n = 24) of cases and zone III was affected in 1.35% (n = 01) of cases. The commonest weapon of choice was machete, in 83.78% (n = 62) of cases, followed by meat cleaver, in 10.81% (n = 08) of cases. Axe was the least choice of weapon and was used only in 2.7% (n = 02) of cases.

Table 5 indicates the neck structures involved.

The skin, platysma and external jugular veins were involved in all the cases of cut throat injury. The cervical vertebrae were least affected and involved in 8.12% (n = 06) of cases. The larynx, trachea, carotid and internal jugular vessels were involved in 91.89% (n = 68) of cases. The sternocleidomastoid was involved in 56.76% (n = 42) of cases. The oesophagus and thyroid cartilage were involved in 18.92% (n = 14) and 10.81% (n = 08) of cases.

4. Discussion

In the present study 74 autopsy cases with cut throat injuries were studied irrespective of those directly or indirectly contributing to death. The males were the major sex group affected, contributing to 71.62% of cases, with a male to female ratio of 3.5:1, similar with the observations made by Buchade et al.[7] and Ozdemir et al.[8] The individuals belonging to the 3rd (33.78%) and 4th decades (35.14%) of life were most affected in the present study, similar with the observations made by Iseh and Obembe.[10] Aich et al.[9] in their study observed that 61.19% of the victims belonged to the 3rd decade, which is contrary to the observations made in the present study. In the present study, the majority of the cut throat injuries were homicidal in nature, contributing to 97.29% of cases and the least were due to self infliction, in 2.7% of cases. These observations are close to those made by Aich et al.,[9] wherein they recorded 71.64% of homicide cases. However, contrary observations were expressed by Onotai and Ibekwe,[11] Gilyoma