Section: ENT

Original Research Article

A CUT-THROAT EXPERIENCE

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ABSTRACT

Background: Cut-throat injuries are neck wounds caused by sharp objects, such as razors, knives, shattered bottles, or glass. These injuries can be superficial or penetrating, and they can result from accidental events, deliberate acts of killing, or self-inflicted acts of ending one's own life. Aim: The aim is to examine cases of neck injuries that appear in casualty department, and to comprehend the suitable and prompt treatment for various scenarios, with the goal of lowering the death and morbidity rates.

Materials and Methods: A prospective study of 34 neck lacerations from February 2023 to February 2024, irrespective of age or gender, was conducted at a tertiary care center. The study excluded mild neck injuries and minimal neck damage with substantial trauma.

Results: Out of the total of 34 cases, 24 were males and 10 were females, with ages ranging from 11 to 64 years (mean age 30.93±13.49). The majority of casualties consisted of 20 young individuals, ranging in age from 22 to 33 years. Of these, 26 were from rural communities and 25 belonged to the low socioeconomic level. The most prevalent cause was homicide. Out of the total number of victims, only four individuals attempted self-inflicted cuts with the intention of suicide, with females being more numerous. The primary causal elements for the homicidal cutthroat injuries were political turmoil and the land dispute. A total of 25 individuals sustained injuries at the cervical level of zone-II. A total of 17 individuals sustained injuries to their larynx. Emergency tracheostomy is required for 19 individuals, while 15 instances necessitate blood transfusion due to hemorrhage. The majority of patients had a hospital stay of less than two weeks. As a result of this injury, four individuals succumbed to hemorrhagic shock, aspiration pneumonitis, and septicemia.

Conclusion: Each neck injury case in the Emergency Room requires a customized treatment strategy, influenced by factors like the patient's condition, injury severity, affected structures, surgeon's experience, skilled staff, anesthetist, and suitable equipment.

Keywords: Cutthroat injuries; Suicidal behavior; Road traffic accidents; Homicidal injuries; Developing countries; Emergency care.

INTRODUCTION

Cut-throat injuries are neck wounds caused by sharp objects, such as razors, knives, shattered bottles, or glass. These injuries can be superficial or penetrating, and they can result from accidental events, deliberate acts of killing, or self-inflicted acts of ending one's own life. In contemporary society, lacerations to the throat and resulting fatalities are common, with a significant proportion experiencing lasting disability.[1-3]

Three anatomical zones categorize neck injuries: Zone I, Zone II, and Zone III.[2-4] Homicide is the leading cause of cutthroat injuries (CTI), with factors such as political strife, land disputes, dacoity, sex crimes, and familial discord contributing to the occurrence.[4] Self-inflicted throat incisions are rare, with only a limited number documented in forensic literature.[5-7] Injuries to the larynx and trachea can cause significant vascular injuries, leading to hemorrhage, shock, and hypoxia.[8] The most common cause of mortality after a cutthroat injury is the exposure of the hypopharynx or larynx exposure,

resulting from hemorrhage, shock, and hypoxia caused by aspirated blood.[9]

Preventing complications involves promptly resuscitating the patient, controlling external bleeding, providing blood transfusions, protecting the head and neck, making an accurate diagnosis, and promptly intervening or performing surgical treatment when necessary.[10] Perform tracheostomy or endotracheal intubation to maintain an open airway and protect the tracheo-bronchial tree from aspiration if an airway blockage occurs.[5,7]

Injuries pose a significant public health issue, particularly for young individuals, who are the most economically productive segment of the population. Trauma is responsible for 10% of all disability-adjusted life years lost worldwide, with projections indicating an increase to 20% by 2020.[10] Hence, the aim of the present study was to examine cases of neck injuries that appear in casualty department, and to comprehend the suitable and prompt treatment for various scenarios, with the goal of lowering the death and morbidity rates.

MATERIALS AND METHODS

Prospective study of cutthroat injury presenting in casualty of tertiary care center, conducted from February 2023 to September 2023. A total of 34 cases of lacerations to the neck were included in the study, regardless of age or gender. These individuals were admitted to the ward due to throat injuries. Patients with mild neck injuries that did not require admission, as well as patients with minimal neck damage but substantial trauma in other sections of the body, were not included in the study. The study population was obtained by purposive sampling among patients admitted to this hospital who met the inclusion criteria. The data pertaining to the study population were gathered and organized in a well-structured questionnaire, taking into careful consideration the ethical implications. The patient's data is strictly protected. The data were classified based on the patient's demographic characteristics, the cause of the injury, the specific location of the neck injury, the type and severity of tissue damage, the presentation upon admission, the time elapsed from the incident to hospital attendance, the duration of hospital stay, the type of specialized intervention provided, records of mortality, significant morbidity, and the final outcome. The socioeconomic status is determined based on the average monthly income.

Statistical analysis: The collected data were processed and examined using conventional statistical techniques, and subsequently displayed in the accompanying figures and tables.

RESULTS

Out of the total of 34 cases, 24 were males and 10 were females, with ages ranging from 11 to 64 years (mean age 30.93±13.49). Most casualties consisted of 20 young individuals, ranging in age from 22 to 33 years. Of these, 26 were from rural communities and 25 belonged to the low socioeconomic level. The most prevalent cause was homicide. Out of the total number of victims, only four individuals attempted self-inflicted cuts with the intention of suicide, with females being more numerous. The primary causal elements for the homicidal CTI were political turmoil and the land dispute. A total of 25 individuals sustained injuries at the cervical level of zone-II. A total of 17 individuals sustained injuries to their larynx. Emergency tracheostomy was required for 19 individuals, while 15 instances necessitate blood transfusion due to hemorrhage. The majority of patients had a hospital stay of less than two weeks. As a result of this injury, four individuals succumbed to hemorrhagic shock, aspiration pneumonitis, and septicemia.

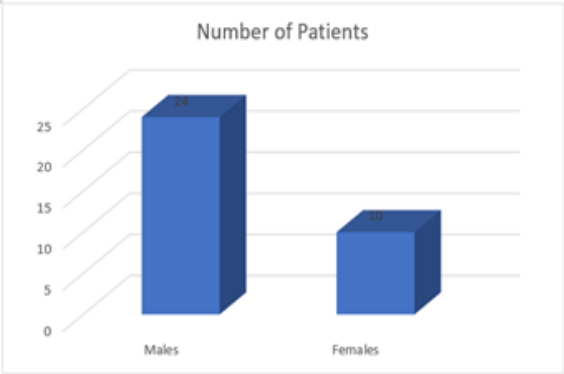

Figure 1: Gender distribution of the study population

Table 1: Demographic details and causes of the cutthroat individuals.

	Total	Male	Female	Rural	Urban	Zone I	Zone II	Zone III	Mortality
Homicide	24	20	4	22	3	1	20	1	1
Accident	6	3	3	2	4	3	3	1	1
Suicide	4	1	3	2	1	2	2	0	1
Total	34	24	10	26	15	6	25	2	3

DISCUSSION

Injuries and violence provide a significant global public health challenge. Although the negative effects of injuries are widely recognized, there has been a lack of focus on addressing injury as a public health issue, especially in developing countries. One explanation for this lack of action is the absence of dependable and accurate statistics on injuries, which prevents policy makers from fully understanding the extent of the problem. There are only a few reports of cutthroat injuries in the medical literature. Incidents of severe neck injuries and resulting fatalities are frequently observed in modern society. Medical literature has reports of cutthroat injuries that discuss the complications and care principles of such wounds, with a particular focus on the forensic implications.[10] The article focused on open neck injuries and emphasized the challenges associated with surgical airway issues. The studies,[2-8] identified issues pertaining to decision-making in the context of catastrophic neck injuries. A cutthroat injury cases dealing experience requiring hospitalization in the ENT department of MKCG Medical College, Berhampur, India were considered for this study. Most of the victims were male, accounting for 80% of the total. Additionally, 26 victims originated from rural areas, while 26 victims belonged to the lower socioeconomic level. Those were very comparable to the other series and reports. 11 to 64 years (mean age 30.93±13.49). Most casualties consisted of 20 young individuals, ranging in age from 22 to 33 years. This cohort was the most dynamic and engaged in our culture. The cause of cutthroat injuries can be categorized as follows: 24 victims were the result of homicidal injuries, 6 were accidental, and 4 victims were suicidal. The primary factors leading to homicides were political turmoil, land disputes, and familial unhappiness. Road traffic accidents were the primary causes of accidental cutthroat injuries, often resulting from broken glass or sharp protrusions from the deformed metal parts of automobiles. Two victims, one of whom was a toddler, had a history of falling onto sharp things, namely a Botti kitchen knife and the sharp edge of a tin fence. Approximately 10.45% of all CTI were identified as suicidal in nature and noted that suicidal throat wounds were uncommon in India.[11] In contrast, the majority of cases in western studies claimed that cutthroat was associated with suicidal behaviour.[12-14]

In our investigation, the number of female victims of suicidal CTI outnumbered the number of male victims. A separate study observed that self-inflicted wounds leading to suicide were more prevalent among males compared to females.[15] In our patriarchal culture, women are subjected to mental, social, and financial oppression, making them vulnerable to various forms of social and familial hardships. The biggest contributing factors include physical frailty, familial conflict, sexual violence, and abuses, which are exacerbated by the dowry system. Many individuals in our study experienced psychological disorders. Due to the severity of the CTI, most of the victims were promptly taken to the closest medical facilities for treatment. Most patients were promptly referred to the tertiary hospital for appropriate intervention within a 24-hour timeframe. The delayed presentation to the hospital was attributed to poor communication, insufficient first aid expertise, inadequate facilities, and a shortage of experienced personnel in peripheral centers. Only a small number were discovered to be effectively supervised outside. Several individuals were there with visible lacerations and ongoing hemorrhaging. There were six patients diagnosed with hypovolemic shock.

Neck zone-II was the most frequent site of cervical tracheal injury, as determined by anatomical position. The least prevalent location was Zone III. The vast majority of injuries occurring at Zone-I were caused intentionally with the intent to kill. The deep structures of the neck, including the larynx, hypopharynx, and trachea, were the most commonly affected organs. Out of the total number of victims, 5 individuals suffered from internal Jugular vein injury, while 2 victims experienced carotid artery injury, resulting in severe bleeding and a state of hypovolemia. Only 7 patients, accounting of the total, received treatment consisting solely of local wound toileting and repair. Others require the repair of internal organs, wounded structures, and blood arteries.

CONCLUSION

It is evident that each neck injury case encountered in the Emergency Room is unique. Therefore, the strategy to treating each case should be customized to ensure the provision of optimal healthcare. The outcome of the surgery is influenced by several factors, such as the patient's initial condition, the severity of the injury, the specific structures affected, the surgeon's level of experience, the presence of skilled staff and an anesthetist, and the availability of suitable surgical equipment.

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