

A Comparative Study of Etiology of Cut Injury Neck Amongst Tribals Presenting in Ent Department of A Tertiary Care Hospital of Jharkhand.

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Abstract

Introduction: Penetrating neck trauma involves trauma by a sharp object penetrating the skin and violating the platysma layer of the neck. These are both complex and challenging to manage. It is a common presentation in our hospital and their management requires a multidisciplinary approach.

Objective: To analyse the etiology of cut injury neck amongst the tribals presenting in Ear Nose and Throat (ENT) Department Rajendra Institute of Medical Sciences (RIMS), RANCHI during the period from October-2015 to December-2016.

Design of study: Retrospective study (Record based).

Materials and methods: Data for study were collected from the Medical Records Department, RIMS, Ranchi during the period October, 2015- December, 2016. Total sample size for this study was 45. **Statistical analysis:** Templates were generated in MS excel sheet and data analysis was done using SPSS software (version 20). **Result:** The study showed homicide 60% (n=27) being the most common cause of cut injury neck followed by suicide 26.7% (n=12) and accidents 11.1% (n=5).

Conclusion: A proper arrangement for the management of such cases in periphery is required as this will save many lives. Along with the above, attention towards the causes is also the need of the time.

Keywords: Cut injury neck, tribals, etiology.

I. Introduction

Worldwide, cut injuries of neck account for approximately 5% to 10% of all traumatic injuries with multiple structures being injured in 30% of patients. In developing countries the incidence is increasing at a fast rate partly because of increasing conflict over limited resources, poor socioeconomic status, poverty, unemployment, easy access to firearms, alcohol and substance misuse and increased crime rates¹⁻³. All injuries to the neck are potentially life threatening because of the many vital structures in this area. In case of cut throat wound there may be possibility of injury to the vital structures that may become rapidly fatal due to profuse haemorrhage from damaged major blood vessels, air embolism or airway obstruction. According to Roon and Christensen's classification², neck injuries are divided into three anatomical zones. Zone I injuries occur at the thoracic outlet, which extends from the level of the cricoid cartilage to the clavicles. Zone II injuries occur in the area between the cricoid and the angle of the mandible. Injuries here are the easiest to expose and evaluate. Zone III injuries are between the angle of the mandible and the base of the skull. Although zones I and III are protected by bones and the vital structures in the zone II are not protected by bone, so the risk of injury is different in three zones.

Injuries to the neck can be both complex and challenging to treat. The management of these injuries requires a multidisciplinary approach requiring the close association of the otolaryngologists, the vascular surgeons, the anesthetists and the psychiatrists⁷. Suicide is a known worldwide leading cause of death with psychiatric illnesses listed among the strongest predictors⁸. Other predictors listed are familial troubles and poverty⁹. Patients with attempted suicide should have a psychiatric consultation. This is because the act of suicide is a sign of underlying mental illness and there is a possibility of a second attempt. Ellis reported 25% of his patients as having made a second attempt at suicide. Victims of homicidal cut-throat need psychological support to overcome the trauma to their psyche, which may linger long after the neck wounds heal.

II. Materials And Methods

This retrospective study included 45 cases of cut injury neck presenting in ENT department RIMS, Ranchi during the period October, 2015- December, 2016. Patients with minor superficial neck injuries not requiring admission were excluded from this study. Templates were generated in MS excel sheet and data analysis was done using SPSS software (version 20).

III. Results

During the period from October 2015 to December 2016, from the 45 patients included in the study, homicide 60% (n=27) was the most common cause of cut injury neck followed by suicide 26.7% (n=12) and accidents 11.1% (n=5). **Table 1** depicts the etiology of the patients of cut injury neck.

Table 1. Categorization of cut injury neck on the basis of etiology.

Etiology	Frequency (N=45)	Percentage (%)
Homicidal	27	60
Suicidal	12	26.7
Accidental	6	13.3
Total	45	100

Family disputes (37%) were the most common cause amongst the homicidal cases while substance abuse (41.7%) was the most common one for the cases of suicide. Road traffic accidents accounted for 66.7% of the accidental cases while accidental falls were the cause in 33.3% cases. The individual classification of the etiologies has been shown in the **Table 2**, **Table 3** and **Table 4**.

Table 2. Categorization of Homicidal cases.

Categories	Frequency (n=27)	Percentage (%)
Family Disputes	10	37
Property Disputes	8	29.6
Theft	5	18.6
No Specific Cause Explained	4	14.8

Table 3. Categorization of Suicidal cases.

Categories	Frequency (n=12)	Percentage (%)
Substance Abuse	5	41.7
Family disputes	4	33.3
Major Psychiatric Illness	2	16.7
Significant Losses in Life	1	8.3

Table 4. Categorization of Accidental cases.

Categories	Frequency (n=6)	Percentage (%)
Road Traffic Accidents	4	66.7
Accidental Falls	2	33.3

IV. Discussion

In our study, we came up with the result that homicide 60% (n=27) was the most common cause of cut injury neck amongst the tribal population of Jharkhand, coming from the rural areas of the state, followed by suicidal cases 26.7% (n=12), rest being accidental 13.3% (n=6). In a similar study by Ozdemir, the cases were 80% homicidal and 20% suicidal. None of the cases were of accidental origin⁸. In a study by Aich et al. on hospitalized cut throat injury patients, 48 (71.64%) were due to homicidal injury, 12 (17.91%) were victims to accidental injury, and only 7 (10.44%) persons went for suicidal attempt⁹.

The homicides were due to family disputes (37%), property disputes (29.6%), for theft (18.6%), and in 14.8% cases no specific cause could be identified. Substance abuse (41.7%), family disputes (33.3%), major psychiatric illness (16.7%) and significant personal losses (8.3%) were the causes found for the suicidal cases. Amongst the accidental cases, road traffic accidents were most common (66.7%) while accidental falls lead to 33.3% of the same.

In a study, on patients who had cut throat injuries done in Tanzania, interpersonal conflict (24.4%) was the most common factor found for homicidal injuries while psychiatric illness (16.2%) and road traffic accidents (9.2%) were the most frequent ones for the suicidal attempts and accidental injuries, respectively¹⁰. In a similar study by Ozdemir, the most dominant reason turned out to be mental illness with a prevalence of 26.7%, injuries due to honor reasons were second in order with 20%, the other reasons being domestic violence (13%), economical reasons (13%), and gang fights (7%)⁸.

All the patients included in our study were tribals from the rural areas of Jharkhand and were of low socio-economic class. Most of the people involved in the cases were addicted to one or the other product and many cases were finally reported to have been concluded under the effect of those.

Our study also shows the large number of cases of cut injury neck being referred to the tertiary centre of Jharkhand from other primary and secondary levels. This points towards the situation of peripheral health system in Jharkhand, which has no proper facility for management of such cases which are quite frequent in the state.

V. Conclusion

According to the results of our study it is supposed that the early appropriate measures could save lives in vastmajority. Addressing the root causes of violence such as poverty, illiteracy, unemployment and substance abuse will reduce the incidence of cut throat injuries in our society. Providing the efficient emergency health care services for primary care and effective ambulance system for immediate transport of cut throat victims to hospital will decrease time delay in reaching the hospital. Stringent and appropriate measures by the government agencies for enforcement of law and order will reduce the burden of homicidal cut throat in near future⁹.

Acknowledgements

We express our heartfelt gratitude towards the staff of ENT Department, RIMS for their immense support in collection of data and management of the cases.

Financial support and sponsorship: Nil.

Conflicts of interest: None.

Ethical approval: The study was approved by Institutional Ethics Committee.

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