



**ORIGINAL RESEARCH PAPER**

**ENT**

**CUT NECK INJURIES - CAUSES, MANAGEMENT AND OUTCOME AT A TERTIARY CARE HOSPITAL IN NORTH EAST REGION**

**KEY WORDS:**

**Dr. Fakrul Islam Mozumder**

3rd Year Post Graduate Trainee

**Dr. Musuka G Narzary**

Senior Resident

**Dr. Abhinandan Bhattacharjee**

Associate Professor

**Dr. Pamela Choudhury**

Registrar

**Dr. Saleha Sultana Choudhury**

Senior Resident, Department Of Otorhinolaryngology Silchar Medical College & Hospital

**INTRODUCTION**

Neck being relatively unprotected anatomic region is a common site of injury that are potentially dangerous and require immediate management. There have some open or incised or incised looking injury in the neck inflicted by sharp elements such as razor, knife or broken bottle piece or glass which may be superficial or penetrating in nature, may be described by the term "cut throat" injuries.

Injury to the neck are divided into 3 anatomic zone according to Roon and Christensen's classification. Zone-1 injuries occur at the thoracic outlet, which extends from the level of cricoid cartilage to the clavicle. Zone-2 is superior to zone-1 injuries occur in the area between the cricoid and the angle of mandible. Injuries here are the easiest to evaluate. Zone-3 injuries are between angle of mandible and base of the skull. Although zone-1 and 3 are protected by bone and the vital structures in zone-2 are not protected by bone, so the risk of injury is different in 3 zones.

The cause could be homicidal, suicidal or accidental. The location of the injury gives a clue of which structures may be involved. Tracheostomy should be performed when airway obstruction exists or there is suspected chance of aspiration into tracheobronchial tree.

The aim of the treatment is not only to saving a life but restoring airway, voice and swallowing. All patients who attempted suicides should have a psychiatric consultation.

**MATERIALS AND METHODS**

- **STUDY DESIGN:** Prospective study.
- **STUDY SAMPLE:** Patients attending Emergency department and admitted in the Department of Otorhinolaryngology.
- **STUDY AREA:** Silchar Medical College and Hospital, Department of Otorhinolaryngology.
- **STUDY PERIOD:** 1 year (January 2021-January 2022).
- **SAMPLE SIZE:** All patient with cut neck injury will be recruited into the study.

**METHOD OF COLLECTION OF DATA**

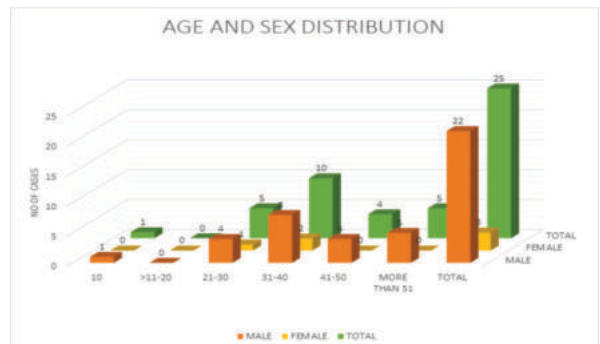
- Informed consent of the patients was taken.
- Detailed history and clinical examination were recorded as per the proforma.
- All patients were enquired with a detailed history followed by a complete thorough examination.
- Relevant investigations like Routine Blood, Serology,

Radiological investigations like CT Neck, X-ray soft tissue Neck (AP/Lateral), USG Neck and Chest X-ray (PA view) was carried out to arrive at an appropriate diagnosis.

**RESULTS AND OVSERVATION**

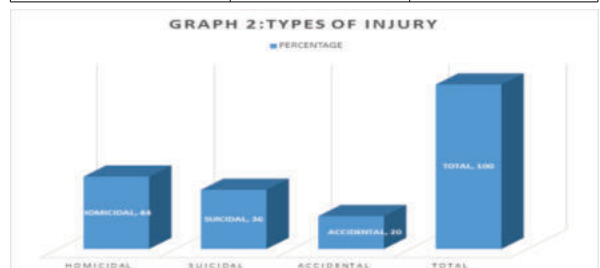
**Table 1: Age And Sex Distribution**

AGE IN YEARS	MALE		FEMALE		TOTAL	
	NO.	%	NO.	%	NO	%
10	1	4.5	0	0	1	4
11-20	0	0	0	0	0	0
21-30	4	18.18	1	33.33	5	20
31-40	8	36.36	2	66.66	10	40
41-50	4	18.18	0	0	4	16
≥51	5	22.72	0	0	5	20
TOTAL	22	100	3	100	25	100



**Table 2: Types Of Injury**

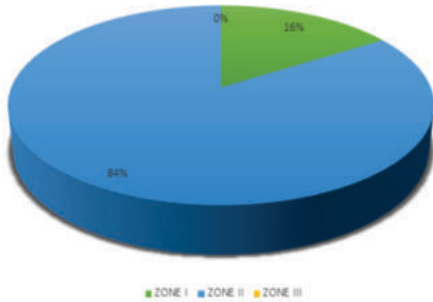
TYPES OF INJURY	NO..OF CASES (n=25)	PERCENTAGE
HOMICIDAL	11	44
SUICIDAL	9	36
ACCIDENTAL	5	20



**Table 3: Zone Of Injury**

ZONE OF INJURY	NO. OF CASES	PERCENTAGE
ZONE I	4	16
ZONE II	21	84
ZONE III	0	0

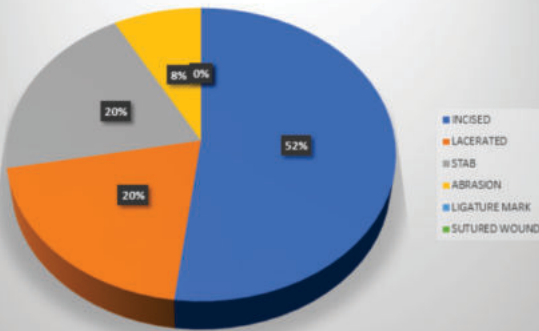
**GRAPH 3: ZONE OF INJURY**



**Table 4: Types Of Wound**

TYPES OF WOUND	NO. OF CASES	PERCENTAGE
INCISED	13	52
LACERATED	5	20
STAB	5	20
ABRASION	2	8
LIGATURE MARK	0	0
SUTURED WOUND	0	0

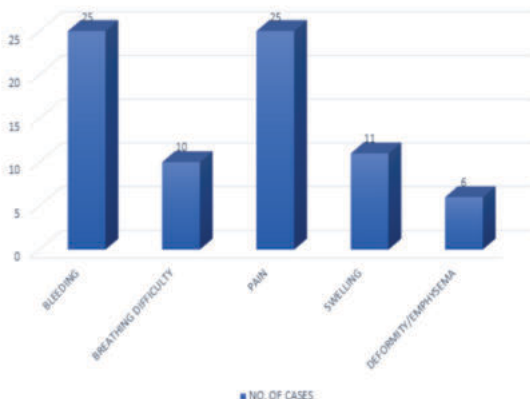
**GRAPH 4: TYPES OF WOUND**



**Table 5: Clinical Presentation**

FEATURES	NO. OF CASES	PERCENTAGE
BLEEDING	25	100
BREATHING DIFFICULTY	10	40
PAIN	25	100
SWELLING	11	44
DEFORMITY/ EMPHYSEMA	6	24

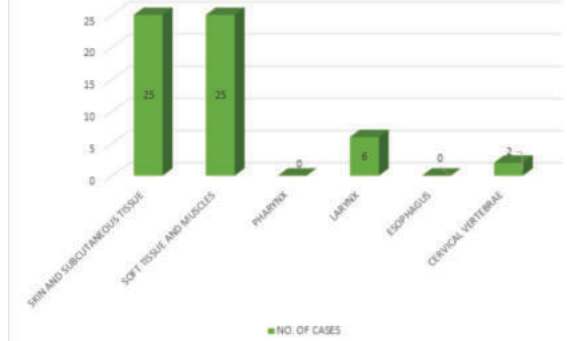
**GRAPH 5: CLINICAL PRESENTATION**



**Table 6: Depth Of Structural Involvement**

STRUCTURES	NO. OF CASES	PERCENTAGE
SKIN AND SUBCUTANEOUS TISSUE	25	100
SOFT TISSUE AND MUSCLES	25	100
PHARYNX	0	0
LARYNX	6	24
ESOPHAGUS	0	0
CERVICAL VERTEBRAE	2	8

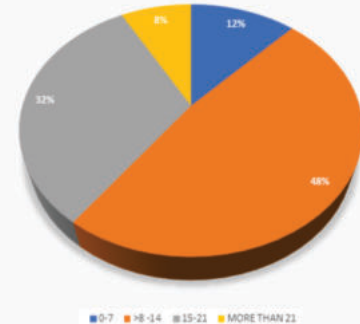
**GRAPH 6: DEPTH OF STRUCTURAL INVOLVEMENT**



**Table 7: Days Of Hospital Stay**

DAYS	NO. OF CASES	PERCENTAGE
0-7	3	12
8-14	12	48
15-21	8	32
≥21	2	8

**GRAPH 7: DAYS OF HOSPITAL STAY**



**DISCUSSION**

In our study, majority of the patients were males (22) in the 4<sup>th</sup> decade of their life (40%) which agrees with a similar study carried out by Debdul Chakravarty et al.

Most common type of injury was Homicidal (44%), and 9 cases (36%) were having suicidal cut throat injury which is in sharp contrast with the observation of Modi & Pandey. They observed that suicidal cut throat injuries are rare in India.

All the 9 cases of suicidal cut throat injuries were males in this study which was similar to the study done by Debdul Chakravarty et al.

During the study we received all the patients of cut neck injury in emergency having open wound with active bleeding. Some patients had breathing difficulty and few were in hypovolemic shock which was similar to the study done by Ontai LO and Ibekwe U.

The involvement of Zone-2 in cut neck injuries is common due to the fact that it is not protected by bony structures unlike zone-1 & 3 making it vulnerable to injury. Another

retrospective study done in 2014 by SA Panchappa et al. on 51 patients shows similar pattern of involvement.

Most of the patients had injury to skin, soft tissue and muscles of Neck .10 patients had Laryngeal injury and 3 patients had injury over cervical vertebrae with similar reporting by Japhet M Glyoma et al. in Tanzania in a case review of 98 patients.

Being a referral Hospital, most of the cases were referred from peripheral health centers. Delay in referral led to few patients being brought in hypovolemic shock and respiratory distress. Primary repair of the wound was done in 18 cases (72%). Tracheostomy required in 6 cases (24%) with closure of the primary wound. Zafarullah Beigh & Rauf Ahmed carried out a retrospective study on Management of cut throat injury on 26 patients with a similar result. Brachial plexus injury was repaired in one patient.

Up to 50% of the patients had a hospital stay of less than 2 weeks and discharged after stitch removal on 10<sup>th</sup> day. 30% patient needed hospitalisation for 2 weeks and 5 patients (20%) required hospital stay for a period of more than 3 weeks. We found similar results in study done by Dr. Sritama De & Dr. Mridul Kr. Sharma.

In our study almost all patient had no major post-operative complications. Few patients had post-operative Torticollis which were advised for physiotherapy. Two patients had wound site infection and were managed by regular Antiseptic Dressing and secondary closure. One patient was referred to higher centre for Neurosurgery consultation for brachial plexus injury with loss of sensation on left hand 3 weeks post operatively.

**CONCLUSION:**

Cut neck injuries mainly involves young and middle-aged population and mostly males. Early tracheostomy in selected cases secures the airway and also prevents aspiration. Early and prompt management in can significantly prevent mortality and morbidity.

**CASE PHOTOS**

