A STUDY OF CUT THROAT INJURIES, ITS CAUSES, MANAGEMENT AND COMPLICATION
Durgesh Gajendra, Neha Gangeshri, Ajit Daharwal

ABSTRACT: Cut throat injuries are very common presentation with very high morbidity and mortality. Mostly adult males of productive age group are affected. We selected 40 cases of cut throat injury retrospectively in Pt. J.N.M. medical college Raipur and studied its pattern, management and complication etc. Among total patients 80% were males and 20% were females, mean age group was 20-40yrs. Zone 2 was affected in maximum cases. Repair was done under general anestheisia after teacheostomy in maximum patients. Permanent tracheostomy, dysphagia, change in voice and pharyngocutaneous fistula are most common complication.

KEYWORDS: Cut throat injury, Treacheostomy, Pharyngocutaneous fistula, Homicide, Suicide.

INTRODUCTION: Neck injuries presenting to emergency units are not very uncommon in our scenario. As neck is an important organ containing major and important structures like larynx, trachea, pharynx, major vessels and vertebrae, its injury results in life threatening consequences. Neck trauma can be blunt involving muscles, larynx, bones or nerves. It is caused by strangulation, road traffic accidents, blow over neck in sports or industrial injuries. While cut throat injury can be explained as an open incised or lacerated wound caused by any sharp object.

It can be superficial or deep enough to expose larynx or phrynx. Such kind of injuries is usually caused by road traffic accidents, homicide, suicide or animal bites. Irrespective of cause cut throat injuries present as a challenge because it needs active and accurate assessment with multidisciplinary approach involving anaesthetist, ENtist, surgeon (Neuro or Vascular) immediately and psychiatrist, neurologist and therapist later on. Even after active management, such injuries end up with profound morbidity, prolong hospitalization, poor quality of life and above all death of the patients.

Morbidity or complications of cut throat injuries include permanent tracheostomy, loss of voice, and change in voice, dysphagia, trachea-cutaneous or pharyngocutaneous fistula, scar, laryngeal stenosis and at last a morbid life without any productivity further leading to depression. Death in such cases may be because of respiratory obstruction or excessive blood loss.

The present study gives an overall review of cut throat injury including aetiology, patterns, involved age group, management, complications and psychosocial analysis, which will help further in managing and preventing such incidences.

AIMS AND OBJECTIVES:
1. To study the extent of injury including causes, types and age –sex wise distribution.
2. To assess the management, outcomes and complications related to such injuries.
3. To analyze the psychosocial aspect.
MATERIAL AND METHODS: A retrospective study was conducted in Pt. J.N.M. Medical college and associated hospital for the period of 3 years from January 2011 to January 2014. Data collected regarding information of type of injury, level of injury causing factors, management, complications and prognosis of the patients.

Roon and Christerpens divided neck into 3 zones and injuries were categorized according to it, making the study and management simpler.

- Zone I - From clavicle to cricoid.
- Zone II - From cricoid to mandible.
- Zone III - From mandible to skull base.

Total 40 patients were included in the study. As the patient arrived in emergency room quick assessment of level and depth of injury done. The first and foremost action is taken to secure the airway by intubation or tracheostomy followed by stabilization of vitals.

Then wound repair is done in layers with or without general anaesthesia as required. Followed by nasogastric tube insertion, antibiotic coverage, psychiatric consultation and counseling with monitoring. Data collected, tabulated, summarized and concluded.

RESULTS:

1. Total 40 cases of cut throat were included in which 32 (80%) were males and 8 (20%) were females with male: female = 4:1.
2. Young adults are affected more as 32 (80%) cases belong to 20-40 age group and 4 cases from 10-20 and > 40 age groups each (20%).
3. Homicide was the major cause of injury having 20 cases with 50% incidences followed by suicide 37.5% (15), accident and animal bite 5 cases with 12.5% incidence.
4. In homicidal type, personal conflict accounted 85% (17 cases) followed by political conflicts 10% (2 cases) and robbery etc. 5% (One case only).
5. In suicidal type personal cause or depression was the major factor accounting 60% (9) cases followed by poor socioeconomic conditions and drug abuse 27% (4 Cases) and 13.3% (2 Cases) respectively.
6. In accidental type, road traffic accidents accounted 60% while animal bite caused 40% injuries.
7. Among 40 cases, 36 cases (90%) were involving zone II followed by 2 Cases (5%) involved in Zone I and Zone III each.
8. Management:
   - Among 38 cases 75% needed tracheostomy and repair with or without GA.
   - Only 25% repaired under local anaesthesia without tracheostomy.
9. Complications:
   - 45% patients discharged with tracheostomy tube.
   - 30% were discharged without any complications and morbidity.
   - 12.5% had wound infection.
   - 2 patients died because of excessive blood loss.
   - Pharyngocutaneous fistula and pleural effusion developed in one case each.
DISCUSSION: Cut throat injuries are very common presentation but there are very few documentats available in India. Thus exact incidence cannot be made out. Although a gross idea regarding nature, pattern and complications can be made in reference with previous studies.

In our study we found 80% males and 20% female were affected. Rajesh Kumar Kundu.(1) in Dec -2013 found 68.4% males and 31.6% females, Japhet M Galiyoma.(2) in 2014 found 70.4% males and 29.8% females, Zafarullah Beigh et al.(3) in 2014 found 88% males and 22% females, Manilal Aich et al.(4) in 2011 found 70% males and 30% females affected by cut throat injuries. These all studies’ results are very similar to ours.

Rajesh Kumar Kundu.(1) shows 81.7% belongs to productive age group of 15-45 years, while Japhet M Galiyoma.(2) found 43.9% in the same age group, Zafarullah Beigh et al.(3) found 58%, Manilal Aich et al.(4) found 61% cases in 21-30 age group, Kalpana Sharma et al.(5) in 2013 found 82.35%, Shabbir Akhtar et al.(6) in 2008 found the mean age 32 years in such injuries. All resemble our result which is 80% incidence in the age group of 20-40 years.

In our study, homicidal cases were 50% and suicidal cases were 37.5% followed by accidental injuries (12.5%). Rajesh Kumar Kundu.(1) found suicidal cases 66.7% followed by homicidal and accidental 21.7% and 11.6% respectively. Japhet M Galiyoma.(2) found cases of homicide, suicide and accident as 55.1%, 34.7% and 10.2% respectively, Manilal Aich et al.(4) found homicidal cases 71.7%, suicidal 20% and 10% accidental cases.

In our study we found 90% cases in Zone II and 5% cases fell in Zone I and Zone III each. Rajesh Kumar Kundu.(1) also found maximum number of cases 73.3% in Zone II followed by Zone I (15%) and Zone III (11.6%). Japhet M Galiyoma.(2) also found the similar result of 65.3% injuries in Zone II. Kalpana Sharma et al.(5) found 77% cases in Zone II and 23% cases in Zone I.

Total 60% cases were repaired under general anaesthesia after performing treacheostomy, 15% cases repaired under local anaesthesia with treacheostomy and 25% cases were repaired under local anaesthesia without treacheostomy. Rajesh Kumar Kundu.(1) repaired 68% cases with treacheostomy under general anaesthesia, Zafarullah et al.(3) repaired 58% cases without treacheostomy and only 34% patients required treacheostomy. Manilal Aich et al.(4) repaired wound with treacheostomy under GA in 56.7%, while Bhattacharjee et al.(7) repaired 57% cases under GA with treacheostomy.

Two patients (5%) died in our study because of blood loss and aspirations, similar mortality (4.9%) was there in Rajesh Kumar Kunda’s study. Zafarullah Beigh et al.(3) found 8% death rate while Manilal Aich et al.(4) found 8.9% death rate. Bhattacharjee N et al.(7) found it 7.7%. All results are very similar to our study.

In our study 45% patients discharged with tracheostomy tube insitu, 30% patients were discharged without any complication or morbidity, 12.5% developed wound infection and pleural effusion (4.5%) and pharyngocutaneous fistula developed in 4.5% cases. Rajesh Kumar Kundu.(1) found infection (20%), permanent tracheostomy (10%), pharyngocutaneous fistula (3.3%) while rest discharges without morbidity. Japhet M Galiyoma.(2) faced 28.1% infection. 3.4% morbidities while 89% discharged without complications. Kalpana Sharma et al.(5) found 23.5% infection, 23.5% dysphagia, 17.0% scar and 47.5% patients needed psychiatric treatment.
CONCLUSION: As cut throat injury presents as critical situation, active multidisciplinary approach can prevent catastrophic outcomes but morbidity and complications are still high. Causes of such incidents are not obvious and deeply rooted in society itself. This includes unemployment, love affairs, political or personal conflicts, depression because of poor socio-economic conditions, untreated psychiatric diseases, decreasing moral values and drug abuse etc.

All these factors directly or indirectly increase the dissatisfaction and aggressiveness among population leading to such incidences. Multidirectional efforts should be made to identify social, personal, political and economic causes to stop or reduce such accidents.

Above all a very well equipped and multispecialty treatment centers will improve the quality of life of such patients.

![Sex wise distribution chart](image1)

![Age wise distribution chart](image2)
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