

Profile of suicidal cut throat injury in a tertiary care hospital

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Abstract: Suicide is one of the leading cause of death. Though suicidal cut throat is uncommon but it is still encountered in emergency practice of an otorhinolaryngologist. A prospective study of 10 cases from January 2014 to Jan. 2018 was done in Regional Institute Medical Sciences, imphal. All patients were males in the age group of 21 to 30 years. All the patients had one or more history of substance abuse while 7 patients had history of psychiatric consultation. All of them presented with hesitation cut injury over the neck. One patient underwent emergency tracheostomy, and no death was observed.

Keywords: suicide, cut throat.

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I. Introduction:

Suicide is one of the three leading causes of death among the persons in the age group of 15 and 34 years throughout the world.¹ According to the WHO, almost one million people commit suicide and 20 times more people attempt suicide every year. A global mortality rate is 16 per 100,000.² The incidence and pattern of suicide differs from one geographic region to another because of the important role played by religious, cultural, and social values.³ poisoning is the most commonly used methods for committing suicide in India followed by hanging, burns, jumping from height, drowning, firearm injuries, stab injuries etc.⁴ Sharp weapon cut throat injuries are the least frequent suicidal method.^{5,6} Tentative cut marks are common in suicidal deaths.⁷

II. Method :

A prospective study of 10 cases admitted in Regional Institute of Medical Sciences, Imphal, ENT ward with cut throat injury was done from January 2014 to January 2018. Various profiles like age, sex, year, psychiatric illness, substance abuse, morbidity, complications and/or mortality were studied

III. Results

Table 1. Yearwise distribution of suicidal cut throat injuries (n= 10).

Highest number of patient was admitted on year 2017.

Year	Number of cases
2014	2
2015	1
2016	2
2017	4
2018	1
Total	10

Table 2. Age-wise distribution of suicidal cut throat injuries (n=10).

Most common age group is 21-30 years with youngest being 19 years and oldest being 44 years.

Age	Number of cases
1-10	0
11-20	1
21-30	4
31-40	3
41-50	1
Total	10

Table 3. Psychiatric and drug abuse history of suicidal cut throat patients.

Parameter	Number of patients
Psychiatric history	7
Substance abuse with intravenous drug use	8
Substance abuse without intravenous drug use	2

All of the patient had one or the other form of substance abuse history with 8 being intravenous drug users ,and 2 were alcohol and other substance abuser without intravenous drug use. 7 patients had history of depression and previous psychiatric consultation.

Out of ten patients, 2 were found to have chronic hepatitis B infection with the deranged liver function test .

Out of ten patients, one was subjected to emergency tracheostomy as he had cut through the trachea (pic.2). Rest of the patients had cut injury of platysma or strap. muscle deep (pic.1). All the patients had varying numbers of hesitation cut injury in anterior aspect of neck(pic.1).

IV. Discussion:

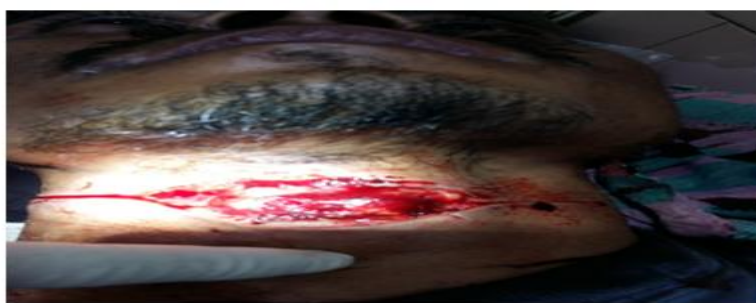
Typical suicidal cut throat incision is oblique, starting on the upper part of the left side of neck, below the angle of jaw and terminating on the right side in the right handed person. Depth of the incision is more at the commencement while it becomes shallower as it crosses the throat, giving an indication regarding the direction of the slit and the handedness of the victim.⁹ Agnihotri¹² stated that usually suicidal wounds are incised while homicidal wounds are usually chopped and stab wounds. Cut throat extending up to the vertebrae is suggestive of homicidal injury while its absence is indicative of suicidal injury.^{8,11}

Suicidal incised neck wounds are classically numerous, being characterised by a number of cuts at the superior end of the wound known as tentative cuts/hesitation marks. Their presence suggests self-infliction, indicating repeated attempted cuts being stopped because of pain or hesitancy before finally cutting through the skin.^{10,13-15} In these victims, hesitant superficial and parallel marks are commonly present on other accessible parts of the body – sometimes it is possible to observe scarring of the wrists from previous suicide attempts. An additional aspect of self-inflicted injury is that cut or stab wounds are usually found on sites that are easily reachable, not covered by clothing or on sites uncovered after the clothing are pulled out. The absence of defensive wounds is also an important feature in sustaining the suicide hypothesis. Tailing of wound can be found in suicidal cut throat injuries. Suicidal note can be found at the scene of crime. The clothing did not show any kind of damage which is commonly observed in homicidal fatalities.¹⁶

Roon and Christensen¹⁷ have classified the site of cervical trauma into zone 1, 2 and 3.

1. Zone I injuries occur at the thoracic inlet. This zone extends from the level of the cricoid cartilage to the clavicles.
2. Zone II injuries are those occurring in the region between the cricoid cartilage and the angle of the mandible. Injuries in this zone are the easiest to expose and evaluate.
3. Zone III injuries occur between the angle of the mandible and the base of the skull.

According to Bailey¹⁸ it was proposed that in early 1990, early exploration of neck injuries with tracheostomy and antibiotics reduced the mortality rate to seven per cent. But nowadays in recent time according to Demetriades et al¹⁹ combination of clinical and selective investigations yielded a sensitivity of 100%. Accuracy of the diagnosis of oesophageal injury is very important in the management of these injuries. According to Weigelt JA et al, if there are suspected injuries it is better to go for combination of oesophagography and oesophagoscopy, because they are having a sensitivity of 100 per cent.²⁰ Anaesthesiologists play a very important role in the management process. Under local or general anaesthesia intubation must be tried, if not possible tracheostomy must be done to secure airway, that is the most important aspect. Following securing of airway, the patient should be put in the proper position with neck extension only if there is no cervical spine injury. Zone II injuries are usually easily managed. When there is zone I or three injury additional surgical exposures may be needed. As both of our patients had zone two injuries, additional exposure was not required. There were no major vessel injury hence vein grafting was also not necessary. If there is suspected vascular injury we have to be also prepared for saphenous vein harvesting²¹. In case of suicidal wounds proper counselling by psychiatrist plays a very important role. There are various aetiologies like schizophrenia, depression, bipolar disorder;



pic. 1: superficial cut throat with hesitation cut marks



pic. 2 : Deep cut throat injury exposing trachea.

V. Conclusion:

A multidisciplinary approach is required in the effective management of victims of the suicidal cut throat injuries. This requires the close collaboration of the Otorhinolaryngologist, the anaesthesiologist and the psychiatrist. Proper follow up is very much essential to save these patients from death. The commonest cause of death apart from exsanguination was asphyxia as a result of aspiration of blood in the respiratory passage. Zone II level of the neck is most commonly affected.

This is a preliminary study. Further elaborate studies are needed to identify the risk factors and psychological behaviours of the individuals to prevent the incidence of cut throat injury.

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Conflict of interest

The present study has no financial or personal relationship with any person or organization.

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