

A Rare Case Report on the Role of Anaesthetist in Management of Homicidal Cut Throat Injury

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ABSTRACT

Homicidal cut-throat injuries are potentially life threatening because of the many vital structures that course through this area. Management of homicidal cut-throat injuries requires a multi-disciplinary approach. The role of an anesthesiologist in instituting an airway using an endotracheal intubation or tracheostomy before wound exploration and repair of transected tissues, is challenging, as, such injuries are most of the time associated with distortion of the normal anatomy of the airway. Anaesthesiologist is pivotal in securing a definitive airway in such cases thereby facilitating the wound exploration and surgical repair. We present a patient who was the victim of a homicidal cut-throat injury.

Keywords: Anesthesiologist, Airway, Endotracheal Intubation, Management, Homicidal Cut Throat Injury, Tracheostomy.

INTRODUCTION

Cut-throat injuries (CTIs) are unit outlined as incised injuries or those resembling incised injuries within the neck inflicted by sharp objects. This might result from accident, homicide, or suicide. CTIs are unit probably life-threatening owing to the numerous important structures during this space. Homicidal cut-throat injuries are unit incised injuries or those simulating incised injuries within the neck inflicted by sharp objects. These patients would like emergency and multispecialty care, multidisciplinary approach is remitted to manage such cases.¹ Analysis and management are unit sophisticated because of a dense concentration of significant, vascular, aero-digestive, and neurovascular system structures. Bubbling of air through the neck wound indicates a perforation of speech organ or trachea. The presence of retropharyngeal air seen within the lateral read of the X-ray neck indicates a perforation of either the throat or musculature. LeMay during a study of twenty five cases of the penetrating wound of the neck within the warfare found the presence of retropharyngeal air, an honest indication of perforation of either the throat or musculature, which can even be demonstrated in barium swallow. However, a negative result doesn't rule out the chance of a perforation.²


The common causes of CTIs during this a part of the globe are unit suicide makes an attempt. Family issues, psychiatric health problem, state, and impoverishment could also be the triggering

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factors in suicide makes an attempt. The motives for killing might embrace land-related disputes, sex-related crimes, familial dissonance, etc. Exposed hypopharynx and or speech organ, hemorrhage, shock, and physiological condition from aspirated blood are unit the common causes of death following a CTI. It's legendary that applicable measures will save lives within the majority of cases.³ Prevention of these complications depends on immediate revivification by securing the airway by tracheotomy or intubation. The worth of tracheotomy within the management of CTI has been highlighted within the literature.^{4,5} Prompt management of external hemorrhage, blood replacement, and prompt intervention or operative treatment ought to be performed once indicated. All patients World Health Organization have tried suicide ought to endure a psychiatric analysis. This is often as a result of the act of suicide may be a sign of underlying mental state and there could also be a prospect of a second try. Victims of homicidal CTIs would like psychological support to beat the trauma to their psyche, which can stay long when the neck wounds have well.⁶

A common site of tracheal transection is the junction of the cricoid with the trachea, because the connective tissue in this area is weak.⁷ The anaesthesiologist is pivotal in securing a definitive airway in such cases thereby facilitating the wound exploration and surgical repair.

CASE REPORT

A fifty four year old male conferred to our emergency department (ED) with a large open wound area approx 10 cm wide in front of the neck at the level of thyrohyoid membrane. He conferred with cough, dyspnoea, aphonia, shortness of breath and tachypnea. He had a pulse of 100/min vital sign of 94/60mmHg vital sign of 30/min saturation of 85-87%. He had coarse respiratory organ crepitations and metabolic process distress even in upright position. The patient was breathing through the retracted distal tracheal end which was identified by gush of expiratory air coming out of it.

Under antiseptic precautions, when securing a 20-gauge blood vessel (i.v.) tubing over the correct higher limb, the patient was given gas inhalation at 6 L/min over exposed glottic gap. The patient was premedicated with glycopyrrolate 0.2 mg i.v., Midazolam 2 mg i.v., and fentanyl 100mcg i.v.; cartilaginous tube intubation was finished an internal diameter of 5.5 cuffed endotracheal tube under vision through the external wound. Within the unit of time high risk consent was taken. Within the operation theatre, ECG, NIBP and pulse-oximeter were connected. The surgical repair of the posterior a part of the transected trachea was carried in initial stage.

Following this a standard laryngoscopy was applied and a contemporary orotracheal intubation was done, facilitating the passage of the endotracheal tube through the proximal flail a part of the trachea. The flexometallic endotracheal tube from the distal end was withdrawn and the orotracheal intubation carried out, endotracheal tube was guided and reinserted by the surgeon into the distal lumen of the trachea hence facilitating the surgical repair of the anterior and lateral walls thereby restoring the continuity.

The patient had adequate respiratory efforts and was reversed with neostigmine 3 mg i.v. and glycopyrrolate 0.4 mg i.v. Patient was shifted to the Intensive Care Unit (ICU) for observation and then shifted to general ward next day morning.

DISCUSSION

A multi-disciplinary approach is needed within the effective management of the affected patients. This needs the shut collaboration of the otolaryngologist, anaesthetist, and specialist. The anaesthetist secures uncompromised airway and makes certain the patient is breathing; the otolaryngologist assesses the injury and repairs the cut tissues with the aim of restoration of swallowing, phonation, and respiratory. The specialist provides adequate care and direction throughout and when the surgical procedure.⁸

Injuries to important structures together with major & minor vessels, nerves, thyroid and musculature remains the most reason for mortality (15-30%).⁹ The potential mechanism for arteria vessel thrifty during this patient would be the hyperextended neck at the time of injury, that should have drawn the arteria sheath backwards. Gonzalez et al, during a prospective unsighted study, showed that dynamic CT scan in penetrating neck injury may be a sensitive and economical modality in identification associated injuries.¹⁰ They, but finished that the bulk of those injuries don't need identification or surgical intervention. However, definitive airway management mustn't be delayed to a fault in absence of radiologic studies, since apparently stable airway will apace reach Associate in Nursing acute airway emergency. Therefore, the rationale why we have a tendency to failed to subject our patient

to radiography or any imaging procedure. Several patients with higher airway injuries may be with success managed victimization ancient techniques by establishing a precise airway through a comprehensible airway defect or endotracheal intromission or tracheotomy.¹¹

Our patient was dropped at the hospital inside four h of murderous cut-throat injury. These patient's area unit at Associate in Nursing hyperbolic risk of aspiration of blood that seeps out of the wound web site. Hence, securing the airway forms the primary priority. We have a tendency to thought of intubating the patient through the vocal cords exposed outside through the cut-throat injury with a smaller sized slapped catheter before a precise airway management by tracheotomy was done. A smaller sized slapped catheter was elect with intention to attenuate a potential vocal organ injury throughout awake intromission through the exposed cords. When intromission, the cuff was inflated to forestall aspiration and proper placement of the endotracheal tube was confirmed by checking bilateral air entry and capnography.

Moreover, these strategies additionally need technical competency and experience to be performed. Awake oral intromission using topical physiological state have in such cases been advocated.¹² Problems encountered throughout anesthesia area unit anatomical distortion of the neck and cartilaginous tube displacement creating laryngoscopy and intromission difficult; undesirable adverse effects of the induction; danger of vomit and aspiration. Inhalation induction is additionally tough, because of partial respiratory 'through the defect' and inadequate management of airway.¹³

To summarize, homicidal cut throat injuries area unit common in our society. The best manner is to ascertain a definitive airway via oral intromission in awake patient followed by placement of Associate in Nursing catheter through the transected distal portion of the trachea. Formal surgical repair isn't obligatory altogether cases, but during this patient the cartilaginous tube injury was repaired surgically. Our patient recovered fully, as seen within the review when 3 months.

CONCLUSION

The patients have cut throat injuries ought to be referred like a shot to hospital for early management of patients by a team of specialists will save the lifetime of the patient most of the time. All patients have tried suicide ought to endure a psychiatric analysis. Institution of a secure airway ought to be the primary priority. Timely intervention in securing airway prevents additional complications like aspiration of blood and hypoxemia.

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