

Cut Throat Injuries: A Challenge for Airway and Anaesthetic Management - Case report of Three Cases

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Abstract: *This case report discusses three instances of severe cut throat injuries presenting significant challenges for airway and anesthetic management. The cases involved one suicidal injury, one homicidal injury, and one accidental injury in a glass factory. Each case required prompt intervention to secure the airway, manage hemodynamic stability, and perform surgical repairs. Postoperative care included elective ventilation and psychological counseling, emphasizing the need for a multidisciplinary approach in managing such complex injuries. Tracheotomy was done to one adult male patient and for the other two patients' endotracheal tube (ETT) was introduced into the trachea through the wound. Blood, fluids transfused, induced with propofol and maintained with Isoflurane, oxygen and vecuronium. Closure of the oesophagus and tracheal wounds was performed. Shifted to ICU for elective ventilation. Discussion and Conclusion: Securing the airway should be the first priority if unstable or with oedema, may have to undergo cricothyroidotomy or urgent tracheotomy. Hemodynamic stabilisation to treat the Blood loss. Surgical repair is also a priority and to end without complications. Avoiding hypoxia and aspiration; maintaining adequate intravascular status and avoiding hemodynamic collapse; adequate ICU care, post operative counselling is necessary. These patients belonged to lower socioeconomic strata and with a lot of psycho - social problems which require proper counselling and follow up to avoid further similar injuries. Injuries to neck vary in aetiology, pattern and may pose initial management challenges in the casualty and for the anaesthesiologists in securing the airway and may be fatal if timely intervention is delayed. Injuries may be intentional or accidental, may be penetrating or non penetrating blunt trauma involving the soft tissues, cartilage, bones and neurovascular bundles or in combinations. Wound may be superficial or deep and the causes may be accidental (road traffic, industrial, domestic); suicidal or homicidal using different objects.*

Keywords: Cut Throat injuries, Anesthetic challenges, Emergency surgery, Airway management, Injury to larynx

1. Introduction

Patients may present with airway compromise, aspiration, acute blood loss and hypoxemia due to injury to airway and major vessels; which may be accidental, suicidal or homicidal.

2. Case Report

Evaluation and management is complicated due to dense concentration of vital, vascular, aero digestive, and nervous system

structures. A good team consisting of anaesthesiologist and surgeons (vascular, ENT) is required to prevent catastrophic airway, vascular, or neurologic sequelae. Injury to major vessels (e. g., the carotid or jugular vessels) may be fatal.

All these cases presented as anterior neck injuries (cut throat emergencies), admitted through the accident and emergency unit where preliminary assessment and basic resuscitative measures were carried out including tetanus prophylaxis. Thereafter with informed consent, patients were taken to the operating theatre where the neck injuries were explored and repaired accordingly.

One male aged 32 and suicidal in nature, had injury with a sharp instrument to the neck, bleeding profusely, semiconscious, Heart rate of 110 per minute (min) and blood pressure (B. P) of 80 millimetre (mm) of mercury (Hg) systolic.

As larynx was exposed and patient was in impending shock an endotracheal tube was pushed in to the wound, checked and position confirmed and was rushed to the theatre with

Intravenous line and fluids being pushed enroute, induced with Inj Propofol and Vecuronium was used for muscle relaxation, fentanyl for analgesia, inj Pantoprazole 40 mg, maintained with Oxygen, nitrous oxide and Isoflurane. Intraoperatively A size 8 Endotracheal tube was inserted into the trachea and repair of trachea and oesophagus was done along with the surrounding tissues. Monitoring with Non invasive blood pressure (NIBP), saturation, Heart rate, Electro cardio graphy, End tidal Carbon dioxide, temperature and urine output; adequate blood and fluids were given. Inj ondansetron 4mg to prevent nausea and shifted to ICU for elective ventilation and care. Postoperative period was uneventful and psychiatric counselling was done.

One adult homicidal patient was a female aged 36 years, injury by husband with sharp instruments and cuts to hands, conscious and stable hemodynamically, so tracheotomy was done under local infiltration and Endotracheal tube was pushed in to the wound in to trachea as she was unconscious and later managed in the similar way as above with no postoperative complications. The injury was limited to trachea and repair was done.

The aged 39 years male was brought unconscious after an accident at glass factory, with heart rate of 110 / min and respiratory rate of 22/min with systolic BP of 90 millimeters of mercury. IV was secured and IV fluid was started. Tracheostomy was done in the casualty below the level of the cricoid cartilage due to the nature of the wound and was rushed to the operating room and 100% oxygen with isoflurane was started. Maintained with Oxygen, nitrous oxide and Isoflurane, atracurium for muscle relaxation and Fentanyl for analgesia. Tracheotomy was performed above the level of the cricoid cartilage post repair and circuit was

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fixed to the tracheotomy tube and anaesthesia continued for the surgical closure of the wound (trachea), blood loss was replaced. Basic monitoring and temperature care was taken with room warming and warm fluids.

The male was not reversed and shifted for management in ICU. Recovered without any neurological sequel. All the patients had minimal aspiration of blood, were ventilated electively for 72 hours, Nasogastric tube (NGT) was passed intraoperatively, postoperatively nil by mouth for 7 days, commenced on NGT feeding after 24 hours. Liquid milk was given orally around the tube on the 9th post operative day and if no evidence of leakage through the operation site for 24 hours, patients were extubated and commenced on graded fluid and semisolid diet for another week. Psychiatric treatment was carried.

3. Conclusion

Securing the airway is paramount in managing severe cut throat injuries, followed by hemodynamic stabilization and surgical repair. These cases demonstrate the necessity of a multidisciplinary approach involving anesthesiologists, surgeons, and psychological support to ensure optimal recovery and prevent future incidents.

4. Significance

This case report underscores the significance of early and effective airway management, hemodynamic stabilization, and surgical intervention in improving outcomes for patients with severe cut throat injuries. It also highlights the psychosocial aspects that need attention during recovery

Patient 39 years old with complete trasection of trachea.

Tracheostomy done in the casualty below level of cricoid cartilage.

Circuit attached to the tracheostomy tube and ventilation started while inducing agents and muscle relaxation was given.

39- year male, Post repair of trachea





32year suicidal male Post Repair

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