

Case Report: Anaesthetic Management of a Patient with Accidental Cut Throat Injury

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Abstract: *Cutthroat injuries are considered as fatal, as there are high chances of injury to vital structures of the neck. Patients may present with acute blood loss due to injury to major blood vessels, airway compromise and aspiration. Airway management is a very critical factor and needs the first priority. In most of the incidents early intervention could save the patients life. We report a case of accidental cut throat injury and its anaesthetic management.*

Keywords: Cut throat injury, Accidental, Airway

1. Introduction

Globally, cutthroat injuries account for approximately 5%-10% of all traumatic injuries with multiple structures being injured in 30% of patients. Neck injuries require emergency treatment. The site of the injury can predict risk and management. Open injuries in the neck by sharp objects such as knives, broken bottle pieces or glasses that may be superficial or penetrating are described as 'cut-throat injuries' (CTIs). Cut throat injuries may result from accident, homicide or suicide. Cut throat injuries are fatal because of the presence of vital structures surrounding this area. There may be severe hemorrhage from damaged vessels, air embolism and airway obstruction. Trauma to the neck present with unique airway problems in which mask ventilation and laryngoscopy may be difficult. Their initial management involves establishing an airway either via endotracheal tube or tracheostomy and then surgical repair of the transected tissue.

2. Case Report

A 55-year-old mentally retarded male patient was brought to the emergency with accidental cut throat injury due to fall on a hand woodcutting machine and sustained a 7cm horizontal laceration over thyroid cartilage with air blast from the site of the wound, external compression was applied to stop bleeding and air leakage.

Vitals at the time of presentation were pulse rate 100/min, blood pressure 126/70 mm of Hg and SPO₂ 98%.

Immediately iv access was secured with 18G cannula; blood sample was sent for grouping and cross-matching, Hb% estimation and serology. Crystalloids were started and the patient was shifted to operation theatre (OT) for emergency exploration and haemostasis. In the OT, the patient was monitored with ECG, Pulse oximeter, NIBP and EtCO₂. Premedicated with inj. Glycopyrrolate 0.2mg iv, inj. Ondansetron 4mg iv, inj. Midazolam 1mg iv, inj. Fentanyl 60mcg iv. Preoxygenation done with 100% oxygen. Inj. lignocaine 2% preservative-free 90mg iv given to prevent pressor response to intubation. Patient was induced with inj. Propofol 80mg iv and intubated with 8 mm ID endotracheal tube (ETT) without any muscle relaxant. Bilateral air entry was checked and ETT fixed at 23cms mark and connected to mechanical ventilator. General anaesthesia was maintained with O₂ (33%); N₂O (66%), sevoflurane and inj. Atracurium 25mg iv. Exploration was done by the surgeon. There was a deep cut at the level of thyroid cartilage with no major vessel injury. There was a 2 x 2 mm laceration found over the trachea just below the thyroid cartilage. A new tracheal stoma was created, the tracheostomy tube was passed into it and simultaneously endotracheal tube was withdrawn. Anaesthesia was continued via the tracheostomy tube. Lacerated tracheal wound closed and strap muscles were sutured. Both Intra and post-operative vitals were stable. At the end of the procedure patient regained spontaneous ventilation. After obtaining adequate muscle power and tidal volume, patient was reversed with inj. Neostigmine 2.5mg and inj. Glycopyrrolate 0.4mg. Recovery was good.



Patient was shifted to ICU. Post-operative care was given with intravenous fluids, nasogastric feeds and analgesics. Tracheostomy was closed on 7th postoperative day and was discharged from the hospital on 10th postoperative day.

3. Discussion and Conclusion

Cutthroat injuries pose a significant challenge because multiple vital structures are vulnerable to injuries in the confined unprotected area⁴ and hence they are considered as a rare form of trauma that is potentially devastating⁵. They cause profound morbidity due to prolonged hospitalization, high cost of health care, loss of productivity and reduced quality of life and may also lead to death.

Securing the airway should be the first priority if the patient is unstable or with airway oedema, should undergo cricothyroidotomy or urgent tracheostomy. Haemodynamic stabilisation should be done with iv fluids and blood if necessary. Early surgical repair is also a priority to prevent complications.

Avoiding hypoxia and aspiration, maintaining adequate intravascular volume, avoiding hemodynamic collapse and adequate ICU care is crucial in the management.

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