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Case report

Cut Throat Injuries - A Challenge for Airway and Anaesthetic Management -Case Report of 5 Cases

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ABSTRACT

Introduction: Patients may present with airway compromise, aspiration, acute blood loss with hypoxemia because of injury to airway and major vessels; may be accidental, suicidal or homicidal. Case Report: We are reporting 5 cases which presented in casualty and for emergency surgeries.Of the 5 cases 2 were female, 2 males and one male child, adults in the age group of 20-40 years. 2 males had suicidal injuries and the rest were homicidal, had laceration to larynx, oesophagus with one bleeding profusely at the level of thyroid cartilage. Tracheotomy was done to one adult female patient and for the other 3 patients endo tracheal tube (ETT) was introduced in to trachea through the wound. Blood, fluids transfused, induced with inj Ketamine and maintained with Isoflurane + oxygen and Vecuronium. Closure of the oesophagus and tracheal wounds was done. Shifted to ICU for elective ventilation. The child was brought unconscious, IV line secured , Isolyte-p started , 4 sized plain ETT was pushed into the trachea through the wound and 100 % oxygen with sevoflurane started , maintained with Oxygen, nitrous oxide and Isoflurane, Atracurium and Fentanyl,blood loss replaced. Baby not reversed and shifted to ICU. 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.

1. Introduction

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.

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.

2.Case Report

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

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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.

Two adults were male aged 32 and 36 years, 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 for the first patient and Heart rate of 100/min and BP of 100 mm of Hg systolic for the second patient. As larynx was exposed and patient was in impending shock a 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 ketamine and vecuron was used for muscle relaxation, fentanyl for analgesia, inj Rantac 50 mg , maintained with Oxygen, nitrous oxide and Isoflurane. Intraoperatively tracheostomy and repair of trachea and oesophagus was done along with the surrounding tissues. Monitoring with Non invasiveblood pressure (NIBP), saturation, Heart rate, Electro cardio graphy ,End tidal Carbon dioxide, temperature and urine output; adequate blood and fluids were given. Inj ondansetron 5 mg to prevent nausea and shifted to ICU for elective ventilation and care. Postoperative period was uneventfull and psychiatric counselling was done.

Two adult homicidal patients were females aged 35 and 30 years, injury by husbands with sharp instruments and cuts to hands, conscious and stable hemodynamically, so tracheotomy was done under local infiltration for 30 year old and Endotracheal tube was pushed in to the wound in to trachea for 35 year old 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 child aged 3 years male was brought unconscious, with heart rate of 150 / min and respiratory rate of 40/min. IV was secured and Isolyte-p was started and 4 sized plain ETT was pushed in the wound in to the trachea and 100 % oxygen with sevoflurane was started (IPPV).Maintained with Oxygen, nitrous oxide and Isoflurane, Atracuronium for muscle relaxation and Fentanyl for analgesia. Tracheotomy was performed and paediatric circuit was 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 baby 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 , postoperatiely nil by mouth for 7days , commenced onNGT 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 out in known psychiatric cases before and after discharge. All were discharged within 10 days of operation once oral feeding was established with no evidence of pharyngo-cutaneous fistula. Complications that may be associated with neck injuries are, Respiratory obstruction ,airembolism, Profuse haemorrhage, aspiration pnuemonitis, Aphonia, dysphonia or hoarseness; Stenosis of the aerodigestive tract and Psychological trauma.

4. Conclusion

Securing the airway should be the first priority if unstable or with oedema, the patient 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.

For a better outcome , early access to airway, avoiding hypoxia and aspiration; maintaining adequate intravascular status and avoiding hemodynamic collapse; adequate ICU care ,post operative counselling is necessary in these patients.

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.

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