

# Planned Airway Management, Key to Successful Peri - Operative Outcome: A Case Report of Accidental Ballistic Maxillofacial Trauma Posted in Emergency for Primary Repair

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**Abstract:** *Airway management of patients with maxillofacial trauma is complex and crucial because it can dictate a patient's survival as it involves the airway and breathing is compromise. We present a case report of 32 year old male of a burst ballistic injury with maxillofacial trauma managed in emergency OT.*

**Keywords:** Ballistic injury, maxillofacial trauma, difficult airway, tracheostomy

## 1. Introduction

According to the Advanced Trauma Life Support recommendations for managing patients with life threatening injuries, securing the airway is the first task of a primary caregiver. Gruen et al. Studied in 2594 trauma patients, 16% of inpatients death were caused by failure to intubate or failure to secure or protect the airway<sup>1</sup>. Airway management of patients with maxillofacial trauma is complex and crucial because it can dictate a patient's survival as it involves the airway and breathing is compromise<sup>2</sup>. Regarding mask ventilation, it is difficult in the patient with maxillofacial trauma because the oral cavity / oropharynx's anatomy could be disarranged by the trauma or blocked by bleeding<sup>2</sup>. In addition to these problems, several other factors may aggravate the scenario: the risk of aspiration, the potential C - spine injury, the patient may already be hypoxemic, could also be uncontrolled and combative.

## 2. Concerns

- Major cases have a heavy reliance on General anaesthesia.
- Anticipated Difficult bag and mask ventilation and Difficult intubation
- Associated injuries/. defects.
- High risk of aspiration, Bleeding and induced hypotension.
- Shared operative site between the anesthesiologist and the surgeon.

## 3. Case Report

32 year old male came to our emergency department after a burst ballistic shot was fired at a close range of <0.5 meter with trajectory below to above. Patient was in pain, not able to speak, dyspnea on lying down with agitation (RAS+2).

Patient had a shattered mandible with disruption of extrinsic muscles of tongue and Mylohyoid muscle with active bleeding from the site. Patient was having difficulty in breathing in supine position due to tongue fall. Finally, patient was planned for emergency OT with ENT consultation for primary repair of wound and definitive airway with tracheostomy tube as progressive edema may further obstruct the airway. The routine investigations and radiographic tests were performed to rule out any associated injuries.

After ruling out cervical spine injury, Pre Induction tracheostomy under local anesthesia in supine position with pulling out tongue with a suture was planned with backup for crash intubation along with emergency life support.

After explaining the whole procedure to patient and requirement of tracheostomy; anti-aspiration prophylaxis is given which include inj rantidine 150mg and inj metoclopramide 10 mg. In sitting position, tongue suture was taken to prevent it from falling down and obstruct the airway. Patient was preoxygenating with oxygen through nasal prongs and tracheostomy was done to secure the airway. Inj fentanyl 80mcg was given preoperatively for the pain relieve, after successful tracheostomy patient was induced with graded inj propofol and inj atracurium 30 mg. Patient was reversed successfully after deep cleaning and primary repair of the wound.



PRE - OP



INTRA - OP



POST - OP

#### 4. Discussion

Fibreoptic intubation under spontaneous ventilation remains the choice, in any anticipated difficult airway, considering that laryngoscopic intubation may be difficult and may possibly worsen any difficult airway scenario<sup>3</sup>. Airway evaluation of a patient with maxillofacial trauma should be done thoroughly and as quickly as possible because the patient's airway is compromised. Approach to the maxillofacial trauma patient's airway evaluation and preparation is the key to a successful anesthetic management.

#### 5. Conclusion

Securing airway in maxillofacial trauma is step wise approach and of high priority. Careful planning and Teamwork between surgeon and anesthetist in which each specialist contributes his/her expert knowledge is mandatory for better outcome.

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