Title: "Navigating the Airways: A Critical Case of Penetrating Neck Injury"

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**Introduction**

Early detection of hard and soft signs in penetrating neck injuries is vital to identify vascular or airway compromise. Approximately 20% of laryngo-tracheal trauma cases result in mortality

**Case**

We present a case of a male patient who sustained laceration wounds to Zone I and Zone II of the neck following a motor-vehicle accident. Upon arrival, the patient exhibited hoarseness of voice, neck pain, and shortness of breath. Clinical examination revealed two laceration wounds over Zone I and Zone II, with the Zone II wound showing a hard sign of bubbling, indicating a laryngo-tracheal injury. Extensive subcutaneous emphysema was noted on the left side of the neck, extending to the face. Despite being hemodynamically stable, the patient showed signs of hypoxia. A referral to ENT for a bedside flexible nasopharyngeal scope revealed a hematoma over the posterolateral pharyngeal wall at the level of the epiglottis and an edematous, immobile left vocal cord. The patient was then taken to the operating theater (OT) for an emergency tracheostomy. A Computer Tomography (CT) scan of the thorax and neck confirmed subcutaneous emphysema complicated by pneumomediastinum and laryngeal cartilage fractures. Subsequently, the patient was referred to Plastics for reconstructive laryngeal surgery.

**Discussion**

The Western Trauma Association provides specific guidelines for managing penetrating neck injuries. Various intubation methods, such as rapid sequence induction (RSI) via orotracheal intubation, awake intubation, or fiber-optic intubation, may be considered. In difficult cases where intubation and ventilation are not possible, a surgical airway is the last resort. Challenges include the risk of inserting the endotracheal tube into a false lumen caused by anatomical distortion or worsening subcutaneous emphysema due to the use of bag-mask ventilation (BMV) or laryngeal mask airway (LMA). Hence, choosing the least complicated method on a case-by-case basis is crucial.

**Conclusion**

Managing an airway in penetrating neck injuries is not a one-size-fits-all approach. The strategy depends on multiple factors, including the type and extent of the injury, available tools, and the operator's experience, to minimize complications and ensure patient safety.

**Keywords:** Penetrating neck injury, airway management, laryngo-tracheal trauma.

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