Tracheobronchial Injury - A Challenge to Anesthesiologists: A Case Report

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Background

Tracheobronchial injury is uncommon but life-threatening, being estimated that only 0.5% of all patients with multiple injuries have tracheobronchial injury.¹

Tracheal stents can be inserted through a rigid bronchoscope.²

Performing **rigid bronchoscopy** requires deep sedation or general anesthesia, whereas maintaining oxygenation and ventilation requires use of ventilation strategies. **Jet ventilation** uses a high pressure gas source that is applied to an open airway in short bursts via a small-bore catheter.³

24h post-trauma sudden worsening with difficulty in ventilation with urgent need of placement of **tracheal prosthesis**.

By rigid bronchofibroscopy and under Total Endovenous Anesthesia, by TCI - propofol and remifentanil infusion and cisatracurium in bolus, a prosthesis was placed at fistula's level. **High frequency jet ventilation** with respiratory rate of 80-120 cpm, FiO₂ 1 and pressure between 2 and 2.5 bar was used. Hemodynamic stability was guaranteed with MAP - 70 mmHg and HR - 60-70 bpm. Continuous monitoring of O₂ saturation with 80-98% and EtCO₂ with 21-30 mmHg.

After an hour of procedure transferred, on invasive mechanical ventilation and right thoracic drainage maintained and functioning, to the ICU.

Extubated at 48h and discharged 2 months later, with the prosthesis already removed.

At 6 months after trauma, **well** and **without sequelae**.

Case Report

Female, 42 years old, ASA 2, victim of gunshot trauma with entry into the right scapular region and exit in the anterior cervical region, with right **hemopneumothorax**, **pulmonary contusion**, **pneumodiastinum**, extensive **subcutaneous emphysema** and **tracheal fistula** 5-6cm below the vocal chords - flexible bronchofibroscopy.

Discussion

Because it is a rare clinical situation and with little bibliography, we consider its presentation pertinent. The importance of a rapid and interdisciplinary approach is vital.

The approach of a patient with tracheal fistula is a challenge for the anesthesiologist due to the problems regarding the ventilation, as well as the urgency of the clinical situation.

References:

¹ Riyad, K., & Douglas, E. W. (2007). Traumatic injury to the trachea and bronchus *Thorac Surg Clin*, 17, 35-46

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