A case series of Safe Extubation with Totaltrack® VLM (Video Laryngeal Mask) and literature review

E. Martinez-Hurtado 1, M. Sanchez-Merchante 2, J. Ripolles-Melchor 1, N. Aracil Escoda 1, R. Navarro Perez 1, A. Abad Gurumeta 1, AnesthesiaR airway Review Group (AiR Group)

1 Consultant Anaesthetist in Infanta Leonor University Hospital. Anesthesia and intensive care department. Madrid (Spain)

2 Consultant Anaesthetist in Alcorcon Foundation University Hospital. Anesthesia and intensive care department. Madrid (Spain)

Background

Extubation has an important role in optimal patient recovery after surgery, but, although elective, is often fraught with complications. TotalTrack® VLM (Video Laryngeal Mask) (TT VLM) (Medcom Flow, Spain) allows minimally interrupted ventilation during tracheal intubation and extubation under continuous video guidance.

Case Report

We report twenty (20) cases of TWO-PHASE extubation plannification with TT VLM in Supraglottic Device (SAD) mode (1). All patients were ASA 2-3, BMI>30, Arne test>11, with pre-existing airway concerns, such as difficult mask ventilation, history of difficult intubation, hypertension, ENT diseases, obstructive sleep apnoea (OSA), etc.

Our objective was a smooth eduction, without hemodynamic alterations, without respiratory difficulty, recovering spontaneous ventilation, and a safe transfer to the post-anesthetic recovery unit (PACU).

Discussion

Algorithms recommend an extubation strategy as a logical extension of the intubation process, preventing haemodynamic and cardiovascular reflex responses, presence of difficult airway at initial airway management, or delayed recovery after the surgical intervention.

In a non-systematic review regarding extubation management, using databases, Google Scholar and expert opinions, the incidence of extubation failure varies between 6 and 47%, with an overall increase in the duration of mechanical ventilation, increased mortality, a greater need for tracheostomy, and higher medical costs (2). In NAP4, serious complications during extubation following anesthesia occurred in 13% of cases and a 5% mortality was evidenced (3).

We used TT VLM as SAD to allow a viable and safety extubation strategy with continuous visualisation and uninterrupted ventilation, controlling gradual awakening, achieving to remove it once the patient is seen to be ventilating correctly.

Learning points

- Extubation is an elective procedure and must be a well-planned, controlled, gradual and "reversible" process, ensuring the minimum interruption in the administration of oxygen.

References

1. Hurtado EM, Merchante MS. Safe Extubation with Totaltrack® Video Laryngeal Mask. Acad. Anesthesiol. Int. 2016;1(1):3-5.
2. Metzner J. et al. Closed claims'analysis. Best Pract Res Clin Anaesthesiol 2011;25:263–76.
3. Cook TM. et al. Fourth National Audit Project. Major complications of airway management in the UK. Part 1: anaesthesia. Br J Anaesth. 2011 May;106(5):617-31.