PO 25 - AWAKE FIBRE-OPTIC INTUBATION UNDER HIGH-FLOW NASAL OXYGEN

Henrique Guimarães[1], Sofia Baptista[2], Carlos Mexedo[1]

[1]Centro Hospitalar Universitário do Porto, [2]Hospital Beatriz Ângelo

Introduction: Awake fiber-optic intubation (FOI) is a recommended technique for anticipated difficult airway management. Normally, low flow oxygen-delivery devices are used during the procedure. However, high-flow nasal oxygen (HFNO) should be the technique of choice for administration of supplemental oxygen, since it reduces dead space, reduces inspiratory resistance, generates positive airway pressure, improves apneic oxygenation time, and is usually well tolerated. It is particularly beneficial in obese patients with reduced functional residual capacity, especially those having a history of obstructive sleep apnea. Here we report the successful management of a FOI under HFNO.

Case report: 69-yr-old man, scheduled for a suspension microlaryngoscopy and laryngeal biopsy because of an arytenoid lesion extending to the epiglottis. He had history of smoking, hypertension, dyslipidemia, type 2 diabetes, class 2 obesity, and severe obstructive sleep apnea. Preoperative evaluation was suggestive for difficult airway, because of the underlying diseases, a Mallampati score of 3, a thyromental distance of 3.5cm and reduced cervical spine range of motion.

We planned awake FOI. Baseline SpO2 was 92-93% in room air. HFNO at 45L/min was started and after 1-minute SpO2 was 100%. To reduce patient discomfort associated with fibroscopy and maintain spontaneous breathing, a continuous infusion of remifentanil was set at 0.15 mcg/kg/min. Two oropharyngeal puffs of lidocaine (10mg each) were applied. To topicalize the airway near the epiglottis, using an atomizer, 20 mg of lidocaine were administered via the patient's oral cavity, followed by gargling. A modified Guedel was placed orally to aid FOI. Fibroscopy showed an exophytic lesion of the left arytenoid, blocking the direct visualization of the epiglottis. After its identification, vocal cords were observed, showing a glottic stenosis. 20mg of lidocaine were administered locally. Passage through the vocal cords caused no discomfort to the patient. Lumen visualization and capnography curve confirmed correct tracheal placement. Intravenous propofol infusion was started and 40mg rocuronium were administered after loss of consciousness. Surgical procedure was performed as planned. After sugammadex administration and stopping infusions, the patient was breathing spontaneously with adequate volumes and end-tidal CO2. He was extubated and HNOF was restarted, being transferred to the post-anesthesia care unit. The perioperative period was uneventful.

Discussion/Learning points: Using HFNO and mild sedation, we performed an optimized FOI, with an optimally oxygenated patient, increasing our safety in case of hypoventilation, apnea, or loss

of the airway. There where no episodes of desaturation or hypercapnia. Patient reported a comfortable experience with this device. Considering the aforementioned advantages, this enlightens the clinical potential of HFNO use in anesthesiology daily practice.

Ref: BJA;115(4):629-32