

bronchoscopy. The epiglottis was made to lift from the posterior pharyngeal wall simultaneously with jaw thrust, which revealed the vocal cord and completed the intubation. Oxygen saturation was maintained at 100%.
References

[1] Asai T, Kim HJ. High-flow nasal oxygenation for anesthetic management. *Korean J Anesthesiol.* 2019 Jun 5. <https://doi.org/10.4097/kja.19174>.

173

NOVEL TECHNIQUE FOR UNINTERRUPTED CONFIRMATION OF ENDOTRACHEAL TUBE POSITION FOR AWAKE FIBEROPTIC INTUBATION

Vishaka Kerner¹, Bhagya Gunetilleke², Prof Ranil Fernando³. ¹Post Graduate Institute of Medicine - Sri Lanka, Gampaha, Sri Lanka; ²Faculty of Medicine, University of Kelaniya, Sri Lanka; ³Faculty of Medicine, University of Kelaniya, Sri Lanka

Misplacement of an endotracheal tube in a patient with a difficult airway is catastrophic. Currently used techniques do not permit simultaneous bronchoscopic and capnographic confirmation of tube placement. We report a novel technique for seamless monitoring of the endotracheal tube position in the tracheobronchial tree during Awake Fibre Optic Intubation (AFOI). The simple modification described improves the safety profile of AFOI in several ways. The modification allows an overlap between the bronchoscopic viewing of the endotracheal tube in the trachea and the appearance of the typical wave on the capnograph. It only requires an endotracheal tube connected to a catheter mount. The bronchoscope is then introduced via the port on the catheter mount. The tube-catheter mount unit is secured to the scope (Figure 1). A ventilator circuit with attached capnograph adapter is connected to the catheter mount once the endotracheal tube is advanced into the trachea. Ventilation is then initiated. Appearance of the characteristic wave on capnograph confirms the correct position before the extraction of the bronchoscope.



Bronchoscope

Endotracheal Tube

Catheter mount

Figure 1 Catheter mount connected to the ETT in bronchoscopic port

Migration of the tube into the oesophagus is unnoticed until the bronchoscope is completely removed from the trachea in 5±10% of AFOIs^{1,2}. Displacement of endotracheal tube into the oesophagus despite the bronchoscope tip being positioned in the trachea has been described³. Resistance that is felt as the tube is advanced over the mid part of the scope looped into the oesophagus may be misinterpreted as the tube tip impinging on the arytenoid cartilages³. The tube slides into the oesophagus as the scope is extracted. This usually occurs before capnographic confirmation is possible³. The technique we propose will be useful since ventilation is initiated with the scope in-situ. Loss of the capnographic trace is evidence of misplacement of the tube, though the bronchoscope is within the trachea. We propose this should be the standard of care and should be included in the AFOI training protocols.

Reference

- [1] Hakala P, Randall T. *Anaesthesia* 1995; 50: 735±7
[2] Koga K, Asai T, Latto IP, Vaughan RS. *Anaesthesia* 1997; 52: 131±5
[3] Asai T, Shingu K. *Br J of Anaes.* 2004 Jun 1;92(6):870-81.

174

REMOVAL OF CRITICAL TRACHEOBRONCHIAL FOREIGN BODY BY

FLEXIBLE SCOPE, GASTROINTESTINAL BIOPSY FORCEPS AND TUBE EXCHANGE

Muhammad Shahid, Gabriel Beecham, Ivan Ivanovski, Anwar Ul Haq. ¹Wexford General Hospital, Wexford, Ireland

Foreign body aspiration can cause significant morbidity and mortality. Peak incidence in the United States is around 1-2 years of age, with 4,100 cases per year (resulting in 1.4 deaths per 100,000).¹ We present an unusual case of an elderly patient, critically ill from an impacted obstructing tracheobronchial food bolus, who was successfully salvaged using locally available resources.

A 74-year-old man with COPD, hypertension, and dementia secondary to Parkinson's disease presented by ambulance to a county general hospital. He had choked on food two hours prior, becoming dyspnoeic, cyanotic and unresponsive. His family delivered two cycles of CPR while awaiting assistance. On paramedic arrival, he had cardiac output but remained dyspnoeic with respiratory rate 22, SpO₂ 47% on room air (rising to 69% with oxygen by non-rebreather face mask), absent right breath sounds, left wheeze, and GCS 3. Direct laryngoscopy revealed no supraglottic obstruction.

Tracheal intubation was performed on arrival in hospital. High airway pressures were immediately noted with persistent hypoxaemia. The patient entered cardiorespiratory arrest twice in the subsequent hour, with ROSC after each episode following approximately five minutes of CPR. Chest radiography showed right lung collapse.

Suspecting aspiration, a flexible optical intubation scope was inserted, revealing a large bolus of meat fully obstructing the right main bronchus, overriding the carina and encroaching on the left main bronchus. Suction was ineffective. Since the patient was deemed too unstable to be safely transferred to another hospital with otorhinolaryngology or cardiothoracic services, the attending anaesthesiologist and surgeon attempted a combined technique. The surgeon passed a gastrointestinal endoscopy forceps through the scope's suction channel, and used this to grasp while the anaesthesiologist manipulated the scope. The bolus was too large to fit through the lumen, so the tube, scope, forceps, and food bolus were removed together. After re-intubation, the patient's peripheral saturations, chest movement and ventilatory pressures rapidly improved. He was transferred to ICU, and was extubated after 48 hours. He was discharged home three weeks later at his neurological and functional baseline.

Tracheobronchial foreign body obstruction is life-threatening. This case highlights the importance of a multidisciplinary approach with early senior involvement, especially where subspecialist services are not locally available.

The patient and next-of-kin gave written consent for publication of this report.

References

- [1] National Safety Council. Report on injuries in America 2008. Available from <http://www.nsc.org/lrs/injuriesinamerica08.aspx> (accessed 4 July 2019).

175

CLINICAL FEASIBILITY OF THE TRITUBE WITH EVA DEVICES IN VENTILATING PATIENTS WITH RESTRICTED AIRWAY DIAMETER.

Nabil Shallik^{1,2,3}, Ahmed Zaghwa¹, Marcus Lance^{1,2}, Yasser Hammad^{1,2}, Nissar Shaikh^{1,2}, Adel Ganaw¹. ¹Hamad Medical Corporation - HMC, Doha, Qatar; ²Weill Cornell Medical College Qatar, Doha, Qatar; ³Tanta Faculty of Medicine, Tanat, Egypt

Introduction:

The Tritube is a novel Ultra-then (Tritube®) with inner diameter of 2.4 mm and outer diameter of 4.4 mm that are used in patients with restricted airway diameter. It has some presumed superior benefits to optimize the surgical field in ENT surgery. The challenges in ventilation modalities exist as higher pressures is necessary to deliver a sufficient volume through that narrow diameter. Flow-controlled ventilation (FCV) by Evone®/ Ventrain® has been postulated as a solution.^{1, 2, 3}