

Successful Airtraq® use for emergency off-centre glottic intubation in a patient with post-dialysis neck haematoma

Sir,

Video and optical laryngoscopes are increasingly being used in difficult airway management. Airtraq® (Prodol Meditec Ltd., Guangdong, China) has been successfully used for difficult airway in elective settings.^[1] It has good success rates for intubation and decreased intubation times in manikin-based studies in emergency settings.^[2] We present emergency difficult airway management using Airtraq® in a patient with post-dialysis neck haematoma, in whom traditional intubation with Macintosh laryngoscope and bougie was unsuccessful.

We received a call from the dialysis room for urgent intubation in a 45-year-old female patient who had an increasing neck haematoma immediately post-dialysis. There was history of right carotid artery puncture in an unsuccessful attempt for internal jugular vein cannulation, managed with pressure compression over artery for 10 min. She underwent haemodialysis with heparin which led to post-dialysis neck haematoma formation. On arrival, the patient could be mask ventilated with manual resuscitator bag. Two attempts at intubation with Macintosh laryngoscope and bougie were unsuccessful. On laryngoscopy, her glottis was off centre with complete shift of trachea to the left. Meanwhile, the patient suffered cardiac arrest but was immediately revived with a bolus dose of adrenaline. Emergency intubation was then successfully performed with the aid of Airtraq® by a senior anaesthesiologist with 7.5 mm endotracheal tube [Figure 1].

Emergency intubations have always been associated with higher rate of complications leading to significant morbidity and mortality.^[1] In our case, it was complicated by inadequate positioning, remote location, general environment of high stress and progressive increase in the size of haematoma. Extensive neck haematoma is an emergency which can exponentially deteriorate to loss of airway. There can be shift of trachea, limited neck movements and increased stiffness in the submandibular region, making oral intubation difficult and cricothyrotomy or tracheostomy impossible.



Figure 1: Neck haematoma

The Difficult Airway Society 2015 guidelines for the management of unanticipated difficult intubation in adults has included the use of videolaryngoscopes as part of Plan A and recommends that all anaesthetists should be skilled in their use and should have immediate access to it.^[3]

Airtraq® is an indirect optical laryngoscope. The design of its blade conforms well to the oropharyngeal airway, thus enabling intubation without oral, pharyngeal and laryngeal axes alignment, facilitating intubation in neutral head position. Excellent glottic exposure is obtained due to the design of optical lenses and anti-fogging mechanism. Turkstra reported 66% less cervical spine motion during laryngoscopy with Airtraq® as compared to Macintosh laryngoscope.^[4] Intubation with Airtraq® in six patients with off-centre glottis with the assistance of LMA™ endotracheal tube in non-emergency settings is reported.^[5] A success rate of 68% (19/28) with Airtraq® in pre-hospital intubations performed by anaesthetists and nurse anaesthetists is reported in a retrospective study.^[2] Hirabayashi *et al.* in their meta-analysis found Airtraq® to provide significant advantage over Macintosh laryngoscopy in difficult tracheal intubations.^[6] Some of the limitations with its use are that it is disposable and costly, requires adequate mouth opening and may cause trauma. However, in the hands of a trained anaesthesiologist, Airtraq® can be an invaluable adjunct for managing emergency difficult intubations.

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Conflicts of interest

There are no conflicts of interest.

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