CORRESPONDENCE

A modified lightwand-guided approach for placement of a King Laryngeal TubeTM

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To the Editor,

The King Laryngeal TubeTM (King LT-D; King Systems, Noblesville, IN, USA) is a single-lumen supraglottic airway (SGA) device with multiple ventilation outlets, flanked by a proximal oropharyngeal and distal esophageal cuffs.^{1–3} Compared with other SGAs, the King LT-D offers a comparable proximal airway seal with the benefit of a distal cuff in the esophagus acting as a barrier to aspiration of gastric contents.² The King LT-D can be used for emergency and elective airway management.³

Insertion of the King LT-D, as described by the manufacturer, requires the clinician to advance it blindly into the oropharynx until the base of the connector is aligned with the teeth, inflate the cuffs, attach the circuit, and bag the patient whilst withdrawing the device until ventilation is free flowing. Many experienced anesthesiologists and trainees find this method to be technically difficult and correct positioning of the device for ventilation is not always assured.

Mahajan *et al.* suggested a lightwand-based solution for a similar SGA, the double-lumen VBM Medizintechnik LTS II® airway (VBM Medizintechnik GmbH, Sulz am Neckar, Germany). A lighted stylet is inserted into the suction channel of the LTS-II and correct placement of the LTS II is confirmed by observing a diffuse dim glow in the anterior neck at the level of the tracheal cartilage.⁴ Some concerns with this approach include: the risk of trauma to the airway if the lighted stylet accidentally protrudes from

the distal end of the LTS II during advancement; the diffuse dim glow can be obscured because light has to traverse the walls of the esophagus, trachea, and soft tissues of the neck; and, correct LTS II position cannot be assured because the anterior neck glow is an imprecise end point for correct supraglottic placement of the LTS II's ventilation outlets. Unfortunately, this method is unsuitable for standard King LT-Ds that do not have a suction channel.

We suggest a modification to the above approach, which was evaluated with the King LT-D. This method involves inserting the flexible lightwand (lighted intubation stylet 16", Bovie Medical Corporation, Clearwater, FL, USA) into the ventilation lumen of the King LT-D until its tip is at the ventilation outlet (Figure, panels A and B). The King LT-D is then advanced into the oropharynx until transillumination of a bright central focus is visualized at the level of the thyroid cartilage, with a uni- or bilateral smaller foci seen on either side caused by light passing through the lateral ventilation eyes (Figure, panel C), confirming precise supraglottic placement of the ventilation outlets.

Our modified method can easily be practiced as a solo clinician, eliminates tissue trauma risk from lightwand advancement through the suction channel, and reduces adjustment and manipulation of the device to confirm placement. Using this modified lightwand method we have performed more than 30 successful King LT-D placements over the last three months. We observed a clear midline and lateral glow in all cases and repositioning of the King LT-D was not required in any case. The LTS II airway was unavailable at our institution; we do, however, believe that the method would work equally as well on both King LT-D and LTS II SGAs. We encourage anesthesiologists who

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Figure The King Laryngeal Tube™ (King LT-D; King Systems, Noblesville, IN, USA) pre-insertion and during insertion. Panel A) King LT-D with lightwand inserted to stopping point at the main ventilation outlet. Panel B) Main ventilation outlets and additional symmetric bi-lateral eye outlets (left eye outlet visible in photo).

Panel C) The King LT-D's position is confirmed with transillumination in a patient at the level of the thyroid cartilage with one midline foci from the ventilation outlet and one lateral foci from one of the bilateral eye outlets

experience difficulty with King LT-D placement to consider our modified lightwand method.

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