



Definitive airway management in emergency department patients with a King laryngeal tubeTM in place: a simple and safe approach

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To the Editor,

We read with interest the article by Subramanian *et al.*¹ describing their experience with definitive airway management in 48 patients arriving at the emergency department (ED) with a King LT(S)-DTM laryngeal tube (KingLT) placed by pre-hospital personnel. We agree that there are potential complications associated with removing the KingLT in such patients. We were surprised, however, at the proportion of patients requiring surgical airway management [14 (29%) patients] and airway techniques [i.e., tube exchange catheter or flexible bronchoscopy, 14 (29%)] beyond direct (DL) or video (VL) laryngoscopy. We therefore offer a summary of our own experience with such patients and suggest a simple, non-surgical technique for exchanging the KingLT for an endotracheal tube (ETT).

Over a similar five-year period (2010-2015), a total of 454 patients arrived at our Level 1 trauma centre ED with a KingLT *in situ*. A survey of our faculty revealed that 453 (99.8%) patients had a definitive airway secured by emergency physicians with non-surgical techniques (Table). The most common definitive airway technique for patients with the KingLT in place was VL-guided endotracheal intubation without removing the device. We recently described this technique in detail,² and we summarize it here.

We believe that the simplest way to intubate with the KingLT (King Systems; Noblesville, IN, USA) *in situ* is to use VL and a bougie. During the first portion of the procedure, the KingLT balloons remain inflated, and ventilation through the device is ongoing. The first step is to place the VL blade anterior to the KingLT, advancing it along the tongue until the oropharyngeal balloon is well visualized (Figure A). The KingLT balloons are then deflated, allowing visualization of the glottic structures on the VL monitor. A bougie can then be advanced into the trachea followed by an ETT (Figure B-D). Unlike DL, VL consistently allows good visualization of the glottis with the KingLT *in situ*. Also, in rare cases of failed intubation, the KingLT remains in a functional position, and the balloons can be immediately re-inflated and ventilation resumed.

In summary, our experience is that conventional non-surgical techniques (most often VL) can be used to secure a definitive airway in nearly every patient arriving at the ED with a KingLT in place. We believe that the safest technique for managing such patients is to intubate endotracheally using VL and then place a bougie while the KingLT remains in position. This technique is simple, intuitive, and utilizes airway equipment that is readily available in most EDs and operating suites.

This letter is accompanied by a reply. Please see Can J Anesth 2016; 63: this issue.

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Figure Steps for endotracheal intubation with the KingLT *in situ*. First, the provider places the video laryngoscopy blade into the oropharynx anterior to the King laryngeal tube. The oropharyngeal balloon can be visualized while ventilation of the patient continues (A). The balloons are then deflated, and the glottic structures are visualized on the video screen (B). The provider then passes a bougie (C) followed by an endotracheal tube (D) into the trachea in standard fashion

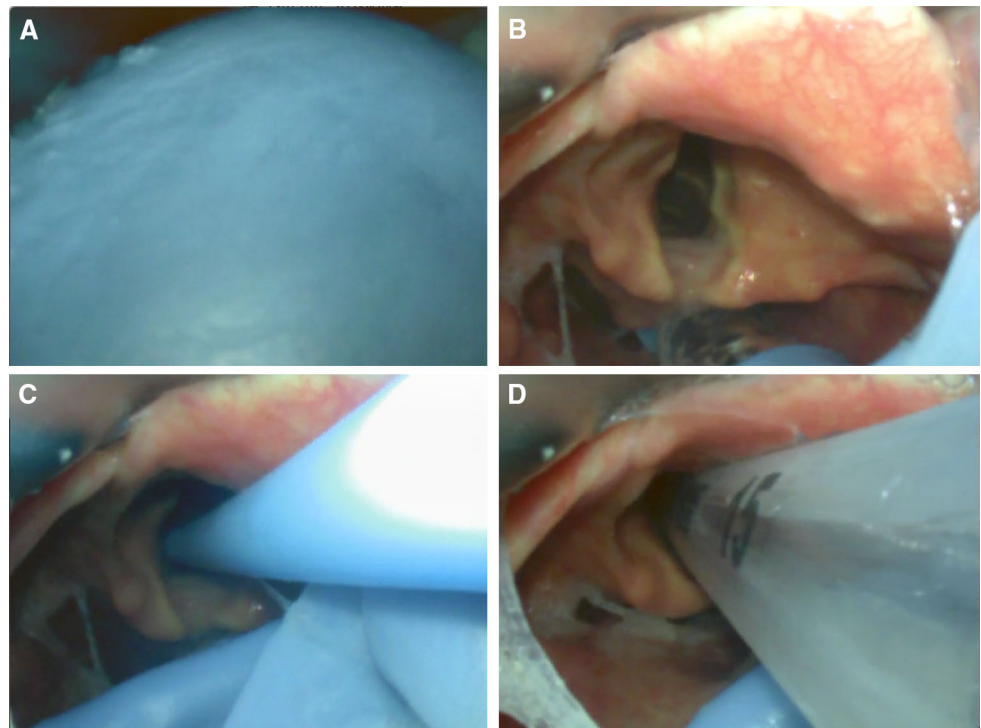


Table Definitive airway management of ED patients presenting with a KingLT *in situ*

Definitive Airway Technique	All cases, n (%)
VL with the KingLT <i>in situ</i>	219 (48.2%)
VL after removal of the KingLT	115 (25.3%)
DL after removal of the KingLT	113 (24.9%)
Airway exchange catheter placed through the KingLT	4 (0.9%)
Bougie placed through the KingLT	1 (0.2%)
FB intubation through the KingLT	1 (0.2%)
Surgical airway	1 (0.2%)
Total	454

DL = direct laryngoscopy; ED = emergency department; FB = flexible bronchoscopy; VL = video laryngoscopy

Conflicts of interest None declared.

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References

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2. Klein LR, Paetow GM, Kornas RL, Reardon RF. Technique for exchanging the King Laryngeal Tube for an endotracheal tube. *Acad Emerg Med* (in press).