How Are Prehospital King Laryngeal Tubes Managed in the ED?

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Most patients who arrived with a King LT-D in place underwent surgical tracheostomy for definitive airway placement.

King laryngeal tubes are commonly used prehospital rescue devices but do not provide a definitive airway. There is little information about how these tools are exchanged for endotracheal tubes once patients reach the emergency department (ED). Investigators at a tertiary care academic medical center reviewed records of all ED patients who arrived with a King laryngeal tube LT-D placed by prehospital providers from 2007 to 2012. The exchange method was based on provider preference.

Of 52 adult patients who arrived with King LT-Ds, 4 died before the tube could be removed. Among the remaining 48 patients, the most common indications for airway management were cardiac arrest (58%) and polytrauma (19%). The most common method for definitive airway placement was planned tracheostomy (29%), followed by airway exchange catheter (23%) and video and direct laryngoscopy (21% each). Before a laryngoscope was used, the King LT-D was deflated and removed. Trauma patients were more likely than medical patients to undergo tracheostomy. Adverse events associated with use of the King LT-D occurred in 27% of patients, most commonly upper airway edema from tongue engorgement.

Comment: King LT-Ds are typically placed when attempts at prehospital intubation fail, and all will eventually need to be exchanged for an endotracheal tube. Although this study can't tell us the best method for exchange, it indicates that emergency physicians should expect to encounter airway trauma and swelling. If a King LT-D is removed in the ED, video laryngoscopy should be performed with a double setup (cricothyrotomy kit open and at the bedside with the patient's anterior neck prepped).

Citation(s):