Laryngeal Tube Disposable: Results from the Field for Cardiac Arrest Patients

Cheryl Lynn Horton, MD

Paramedics successfully inserted most devices, but 20% of patients were inadequately ventilated.

The laryngeal tube disposable (LT-D) is an extraglottic airway device used as an alternative to endotracheal intubation or bag-valve-mask ventilation. To determine the operating characteristics of this device for patients with out-of-hospital cardiac arrest, researchers reviewed records from 2008 to 2012 from a German emergency medical service. All paramedics received regular training with the LT-D.

Of 130 device insertions, 83% were successful on the first attempt, and 10% required multiple attempts. Only 44% of devices were inserted within the manufacturers recommended time of 10 seconds; 88% were inserted within 20 seconds, and 94% within 30 seconds. Inadequate ventilation occurred in 20% of patients. Problems occurred in 22% of patients and included inadequate cuff pressure, vomiting, obesity, tongue swelling, laryngeal spasm, and inability to secure the device. Thirty-seven percent of patients had return of spontaneous circulation in the prehospital setting and 6% after hospital arrival.

Comment: While the laryngeal tube disposable has performed well in operative or simulated environments, this prehospital study of patients with a surprisingly high rate of return of spontaneous circulation demonstrates significant device limitations in the field. Like most extraglottic devices, the LT-D can be used either as a primary or rescue airway device. Emergency medical services should determine whether bag-valve-mask ventilation or any of a number of extraglottic devices is preferable for primary use in their systems.

Citation(s):


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