

The Airway Carnival: Lightwand Intubation

Description:

Lighted stylettes rely upon transillumination of the anterior neck tissues to demonstrate laryngeal placement. A well-circumscribed glow indicates tracheal intubation, whereas a diffuse glow is seen with esophageal placement.

Indications:

- Endotracheal intubation
- Patients with limited mouth opening, reduced neck movement
- Difficult or failed intubation
- Bloodied airway

Contraindications:

- Pharyngeal masses
- Anatomic abnormality of upper airway

Advantages:

- Less stimulating than direct laryngoscopy
- Does not require visualization of the larynx
- Allows nasal intubation
- Portable and inexpensive

Disadvantages:

- Blind technique, which may cause trauma/burns to tissue
- Difficult to view in dark-skinned patient or scarred tissue
- May require a darkened environment

Special Features:

- May use to check ETT position
- Use flexible Trachlight™ stylette with LMA Fastrach™

Tips for Success:

- Maintain proper head position, stay in midline
- Perform "jaw-lift" to elevate epiglottis
- Practice, practice, practice!

Currently available devices include:

- Trachlight™ (Laerdal)
- Vital Light™ (Vital Signs)
- Trachlite™ (Rusch)
- Surch-Lite™ (Aaron Medical Industries, Inc.)

References:

1. Stewart RD, Larosse A, Kaplan RM, et al. "Correct Positioning of an Endotracheal Tube Using a Flexible Lighted Stylette." Crit Care Med 18:97, 1990.
2. Hung OR, Pytka S, Murphy MF. "Clinical Trial of a New Lightwand to Intubate the Trachea." Anesthesiology 1995.
3. Davis L, Cook-Sather S, Schreiner MS. "Lighted Stylette Intubation: A Review." Anesth Analg 90:745, 2000.
4. University of Florida College of Medicine, Department of Anesthesiology web site: www.anest.ufl.edu