Airtraq Outperforms Other Devices for Face-to-Face Intubation

In a manikin study, the Airtraq laryngoscope was faster, more successful, and easier to use than the GlideScope or LMA Fastrach for face-to-face intubation.

No prior studies have compared performance of intubation devices in difficult prehospital scenarios, such as face-to-face intubation. Researchers in France compared intubation performance of the Airtraq laryngoscope, GlideScope, and laryngeal mask airway (LMA) Fastrach, in random order, in a simulated normal airway scenario and two simulated difficult airway scenarios: supine position with cervical collar and upright seated position with cervical collar (simulating face-to-face intubation). Intubations were performed by 30 senior emergency medicine physicians (median experience, 7 years) who received instruction and practiced with each device.

All three devices performed similarly in the normal airway and cervical spine immobilization scenarios. For face-to-face intubation, the Airtraq laryngoscope outperformed the GlideScope and LMA Fastrach with respect to time to intubation (14 vs. 27 and 29 seconds, respectively), intubation success rate at 1 minute (100% vs. 70% and 83%, respectively), and ease of use (scores of 11 vs. 33 and 22, respectively, on a 100-point visual analog scale, with 0 being "very simple"). In the face-to-face scenario, significantly better glottic views were obtained with the Airtraq laryngoscope than the GlideScope (94% vs. 81% of the glottis visible, respectively). No esophageal intubations occurred with the Airtraq laryngoscope or GlideScope.

Comment: The ideal intubation device for prehospital providers must be portable, easy to use, and adaptable to a variety of difficult scenarios, such as face-to-face intubation. In this manikin study, the Airtraq laryngoscope outperformed both a video laryngoscope and an intubating LMA for simulated face-to-face intubation. The Airtraq laryngoscope is disposable, easy to use, and inexpensive, making it a potentially valuable device for prehospital airway management.

— Cheryl Lynn Horton, MD, and Ron M. Walls, MD, FRCPC, FAAEM

Published in Journal Watch Emergency Medicine January 20, 2012

Citation(s):


- Original article (Subscription may be required)
- Medline abstract (Free)

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