Airtraq Outperforms the Macintosh Laryngoscope

In a meta-analysis, the Airtraq performed better on every measure, particularly for novice intubators.

To compare the performance of the Airtraq, a single-use laryngoscope (JW Emerg Med Nov 3 2006), with performance of the Macintosh laryngoscope, researchers conducted a meta-analysis of 12 randomized controlled studies in which the two devices were evaluated in a total of 1061 patients.

Studies of normal and abnormal airways were evenly distributed; intubation was performed by experienced laryngoscopists in nine studies and by novices in three. Compared with the Macintosh laryngoscope, the Airtraq was associated with higher first-attempt intubation success rates by novice intubators (relative risk, 1.25), shorter intubation times (by an average of 23 seconds) in patients with difficult airways (patients with obesity, predicted difficult airways, cervical immobilization), shorter intubation times for both experienced and novice intubators (by averages of 14 and 16 seconds, respectively), and fewer esophageal intubations (RR, 0.12).

Comment: The Macintosh did not outperform its inexpensive, disposable competitor on any measure. Intubation times were faster with the Airtraq for both experienced and novice intubators, and the 23 seconds saved in patients with difficult airways likely is clinically significant. The lower incidence of esophageal intubation also is clinically significant. Intubators, especially novices, should consider the Airtraq as a "mainstream" intubating device and question their reliance on outdated devices, such as the Macintosh blade.

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

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