AP Advance Video Laryngoscope Shows Promise

The device was noninferior to the GlideScope Ranger and Macintosh laryngoscopes in this manikin study.

The AP Advance (APA) is a new video laryngoscope with interchangeable blades: a standard Macintosh blade and a unique difficult airways blade. In a noninferiority study, investigators, one of whom is funded by the manufacturer of the device, compared the APA to the GlideScope Ranger (GSR) video laryngoscope for difficult intubation and to the Macintosh laryngoscope for routine intubation.

Intubations were performed on a simulator manikin by 90 medical professionals with three levels of intubation experience: little or none, >10 Macintosh intubations, or >10 Macintosh and >10 GlideScope intubations. Each operator used each of the three laryngoscopes in random order, first on a simulated normal airway and then on a simulated difficult airway (tongue swelling).

In the normal airway, intubation success rates for all 90 operators combined were similar with the APA, GSR, and Macintosh laryngoscopes (99%, 94%, and 97%, respectively), and median intubation times were similar (22, 31, and 23 seconds, respectively). In the difficult airway, median intubation time was significantly faster with the APA (20 seconds) than with the Macintosh and GSR laryngoscopes (38 and 59 seconds); the APA was the fastest device for operators with each of the three levels of experience. Difficult airway intubation failed (defined as unrecognized esophageal intubation, abandoned procedure, duration >120 seconds, or required >3 attempts) in 0% of APA attempts versus 37% and 33% of Macintosh and GSR attempts, respectively. In the difficult airway, operators achieved Cormack-Lehane grade I or II views in 99% of APA and 94% of GSR intubations versus 37% of Macintosh intubations.

Comment: The AP Advance seems to be another promising video laryngoscope for both routine and anticipated difficult airway intubations.

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Dr. Walls has provided testimony in a patent infringement suit in Scotland on behalf of Verathon, Inc., manufacturer of the GlideScope video laryngoscope.

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