Pentax Airway Scope vs. Macintosh Direct Laryngoscope

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A meta-analysis showed superior laryngeal view with the Pentax AWS but no other differences in performance.

To compare performance of the Pentax Airway Scope (AWS) video laryngoscope and the Macintosh direct laryngoscope, researchers performed a meta-analysis of 17 randomized, controlled trials involving 1800 adults undergoing oral or nasal tracheal intubation. Each study was classified as involving patients with either anticipated difficult or normal airways, based on patient characteristics, including morbid obesity, cervical spine immobilization, history of obstructive sleep apnea, and predicted difficult intubation (thyromental distance <6 cm, Mallampati class 3–4); nine trials involved difficult airways.

Whereas the Pentax AWS offered a superior glottic view, there were no differences in other outcomes, including rate of successful first pass intubation, intubation time, and rate of oral or pharyngeal injury — irrespective of airway difficulty.

Comment: Although the Pentax AWS provided a superior laryngeal view compared to direct laryngoscopy, it did not outperform direct laryngoscopy by any other measure. One explanation for this is that experienced laryngoscopists performed intubations in all but one study, and they are more likely than novices to successfully intubate with direct laryngoscopy. In addition, many anticipated difficult airways prove to be easy, again negating some of the advantage of video laryngoscopy.

Citation(s):

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