Direct Laryngoscope Blades: Disposable vs. Reusable

In this large study, single-use metal blades outperformed their reusable counterparts.

Single-use laryngoscope blades are appealing because they do not require cleaning and they minimize potential for patient cross-contamination. However, in previous studies, plastic disposable blades have performed poorly compared to reusable metal blades (JW Emerg Med Oct 12 2007 and JW Emerg Med Feb 14 2006). To evaluate performance of a single-use metal laryngoscope blade, investigators block-randomized 1072 adult patients undergoing rapid sequence intubation at four French hospitals to direct laryngoscopy with either a single-use metal Macintosh blade (575 patients) or a conventional reusable Macintosh laryngoscope blade (497 patients). Intubations were performed by anesthesiologists, anesthesiology residents, or nurse anesthetists.

Intubation was not successful on the first attempt significantly more often with the reusable blade than with the single-use blade (5.4% vs. 2.8%). Poor Cormack-Lehane glottic views (grade III or IV) were significantly more common with the reusable blade than with the single-use blade (10% vs. 6%). Preintubation difficult airway characteristics and complication rates did not differ between the groups. No differences in performance of the two blades were observed among the various groups of intubators. The reusable blades provided significantly higher mean light intensity than the single-use blades, but a significantly greater proportion of reusable blades than single-use blades provided low illuminance (<40 lux). Most users surveyed rated the two blades as being equivalent.

Comment: Unlike previous studies of disposable plastic laryngoscope blades, this study demonstrated that the single-use metal blades outperformed their reusable counterparts. As direct laryngoscopy becomes less common, single-use blades might be simpler and cheaper to use than reusable blades. The results of this study and earlier studies argue strongly for the use of single-use metal blades rather than single-use plastic blades.

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