GlideScope Outperforms C-MAC D-Blade for Trainee Intubations of Predicted Difficult Airways

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In patients with predicted difficult airways intubated in the operating room, the GlideScope had a higher first-attempt intubation success rate than the C-MAC D-Blade.

Video laryngoscopy (VL) improves intubation success in patients with predicted difficult airways primarily by ensuring glottic visualization. While VL with acute-angled devices has been compared to direct laryngoscopy, there is little information about the clinical equipoise between different hypercurved blades in this setting.

In a noninferiority trial, investigators in three academic hospitals randomized 1100 adult patients undergoing general anesthesia who had markers of intubation difficulty (Mallampati class III or IV, reduced mouth opening, or large neck circumference) to VL with either a GlideScope or C-MAC D-blade. The study was funded by the maker of the C-MAC. Patients with unstable cervical spine fractures or history of previous failed airways were excluded. Intubators were anesthesia attendings, residents, or students, who all had standard didactic VL training and at least 6 months of anesthesia experience. Patients were fully pre-oxygenated and relaxed with succinylcholine after induction of anesthesia.

Despite more Cormack-Lehane grade I glottic views with the C-MAC (88%, vs. 72% with the GlideScope), first-attempt success was higher with the GlideScope (96.2%, vs. 93.4% with the C-MAC), and based on predefined confidence limits, the C-MAC was deemed not noninferior. Subgroup analyses by provider type showed attending anesthesiologists had similar success with the two devices. Rates of adverse events were similar in the C-MAC and GlideScope groups.

Comment: Let’s not split hairs. Both devices had very high first-attempt success rates that are much better than what would be expected with direct laryngoscopy in this patient population. All airway managers should pick a VL system and use it often.

Citation(s):
(http://journals.lww.com/anesthesia-analgesia/Abstract/publishahead/First_Attempt_Intubation_Success_of_Video.98166.aspx)

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