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GlideScope VL Improves Success of Urgent Intubation by Critical Care Physicians

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In a randomized study, first-attempt intubation success was nearly twice as high with GlideScope video laryngoscopy compared with direct laryngoscopy in intensive care patients.

Use of video laryngoscopy (VL) results in improved glottic views, fewer intubation attempts, and higher intubation success in both operating room and emergency department (ED) patients. Less is known about performance characteristics of VL during urgent inpatient intubations performed in other settings. Critical care physicians are increasingly asked to manage airways in hospital settings outside the operating room and ED, and maximizing first-pass success is important since multi-attempt intubations are associated with higher rates of adverse peri-intubation events, including esophageal intubation and hypoxia.

Investigators randomized 117 intensive care unit patients requiring urgent intubation to a first attempt with either GlideScope VL or direct laryngoscopy (DL) performed by critical care fellows with prior training in both methods. Patients with predicted difficult airways or refractory hypoxia were excluded. Patients were sedated with propofol, but neuromuscular blockers were not used.

First-pass success (the primary outcome) was significantly higher with GlideScope VL than DL (74% vs. 40%). Rates of esophageal intubation (7% vs. 0%) and desaturation (8% vs. 4%) did not differ significantly between the DL and VL groups. All unsuccessful DL intubations were rescued with GlideScope VL, 82% on the first attempt.

Comment: In this cohort of patients without predictors of difficult intubation managed by critical care fellows, first-attempt intubation success was nearly twice as likely when the GlideScope was used. First-attempt success with DL was abysmally low and likely related to both operator inexperience and the suboptimal intubating conditions that come with a sedation-only pharmacologic approach; DL might not have performed as poorly if paralytics were used. Still, the results are striking, and this study further supports use of video laryngoscopy as the primary intubating method for emergency airway managers, regardless of the setting.

Citation(s):

Silverberg MJ et al. Comparison of video laryngoscopy versus direct laryngoscopy during urgent endotracheal intubation: A randomized controlled trial. *Crit Care Med* 2015 Mar; 43:636.

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