Comparing the Truview PCD, GlideScope, and Macintosh for Pediatric Intubation

The Truview PCD and GlideScope were not superior to the Macintosh laryngoscope for routine pediatric intubation.

To determine whether the Truview PCD (picture capture device) or GlideScope video laryngoscope is more effective than direct Macintosh laryngoscopy in children, researchers randomized 134 healthy elective surgery patients younger than 10 years to intubation with one of the three devices. The Truview PCD has a steel blade that incorporates a prism and lens system to provide an indirect view of the vocal cords, and an LCD screen for video monitoring. Intubators were three attending anesthesiologists who had performed more than 20 Truview PCD and GlideScope intubations. Patients with known or suspected difficult airways were excluded.

The study was stopped early because neither video device met the study criterion for being more effective than direct laryngoscopy: superior Cormack-Lehane glottic view and noninferior intubation time. Glottic views with the Truview were not superior and views with the GlideScope were significantly worse (by a median of 1 grade). Median intubation times were significantly longer with the Truview and GlideScope than with direct laryngoscopy (44 and 39 vs. 23 seconds). First-attempt intubation success rates and peri-intubation vital signs were similar between groups. There were no significant complications.

Comment: The Truview PCD and GlideScope video laryngoscopes were no more effective than direct laryngoscopy for these pediatric intubations. This finding differs from prior pediatric studies, which have demonstrated improved glottic views but slightly longer intubation times with the GlideScope and Truview PCD. The large number of poor views obtained with the GlideScope in this study is inexplicable, even to the authors. More studies are needed to determine which pediatric populations benefit from different video laryngoscopes, but in the meantime, operators should use the device with which they are most comfortable.

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