Video Laryngoscopy vs. Direct Laryngoscopy in the Intensive Care Unit

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A multicenter trial showed similar first-pass intubation rates but more complications with video laryngoscopy.

As video laryngoscope (VL) use has increased in the operating room, it also has become more common in the intensive care unit (ICU). Intubations in the ICU generally are higher risk, with patients commonly hypoxemic and often at high risk for aspiration. Despite a perception that VL could make ICU intubations safer, small studies have suggested that VL engenders longer procedure times and higher mortality.

French investigators randomized 371 ICU patients who required urgent intubation to either video or direct laryngoscopy (DL). The process for intubation was standardized for preoxygenation and medications. Most intubations (84%) were done by nonexperts (residents). First-pass intubation rates overall were similar for VL and DL (68% and 70%); first-pass rates were much higher for experts than for nonexperts (92% vs. 65%), regardless of which form of laryngoscopy was used. Time to intubation was equivalent between VL and DL patient groups, but life-threatening complications, such as cardiac arrest or severe hypoxemia, were significantly more common in VL patients (9.5% vs. 2.8%).

Comment: Visualizing the glottis with VL is reassuring, but it does not guarantee successful intubation. This study tells us that we should not abandon DL in favor of VL in the critical care setting. However, having both DL and VL available in ICUs is worthwhile: Although a first attempt might be best done with DL, VL is a valuable tool for a difficult airway.

Citation(s):

O’Gara B et al. Video laryngoscopy in the intensive care unit: Seeing is believing, but that does not mean it’s true. JAMA 2017 Feb 7; 317:479. (http://dx.doi.org/10.1001/jama.2016.21036)

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