C-MAC Outperforms McGrath for Anticipated Difficult Intubation

For patients with modified Mallampati scores >2, intubation with the C-MAC video laryngoscope was easier, faster, and more successful.

Few studies have directly compared video laryngoscopes, particularly in patients with difficult airways. Researchers in Australia randomized 130 adult elective surgery patients with modified Mallampati scores of 3 or 4 to intubation with either the C-MAC or McGrath video laryngoscope. Operators had 10 or more years of anesthesia experience and had performed 10 or more intubations with each device.

Baseline characteristics and vital signs before and after intubation were similar between groups. The C-MAC laryngoscope had a shorter median intubation time than the McGrath laryngoscope (50 seconds vs. 67 seconds) and a higher first-attempt intubation success rate (89% vs. 69%), despite fewer Cormack-Lehane grade 1 laryngoscopic views (77% vs. 92%). Operators rated the C-MAC as easier to use than the McGrath (median scores of 9 vs. 6 on a 10-point scale, with 10 being easy). The single patient with C-MAC intubation failure (>3 intubation attempts) was successfully intubated with a McGrath video laryngoscope. The five patients with failed McGrath intubation all had grade 1 views with the McGrath video laryngoscope; all were successfully intubated with a Macintosh laryngoscope, with three requiring a bougie.

Comment: The McGrath video laryngoscope's sharply angulated blade, like that of the Glidescope, produces excellent glottic views, but tube insertion can be challenging. The C-MAC video laryngoscope basically consists of a standard Macintosh blade with a distal video chip, so tube insertion is often easier than with the McGrath. Both devices performed well in these difficult airways, but the C-MAC video laryngoscope was more successful and easier to use. Nonetheless, whichever video device one chooses will be clearly superior to direct laryngoscopy; the role of the direct laryngoscope in modern emergency airway management is limited and the device should be considered a second- or third-line instrument.

— Cheryl Lynn Horton, MD, and Ron M. Walls, MD, FRCPC, FAAEM

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