

C-MAC Better Than Direct Laryngoscope for Predicted Difficult Airway Intubation

Glottic views were better and first-attempt intubation success rate was higher with the C-MAC.

In a randomized trial, researchers compared performance of the C-MAC video laryngoscope and a direct laryngoscope in 300 adult patients with at least one difficult airway predictor (history of difficult intubation, reduced cervical motion, Mallampati classification >2, or mouth opening <3 cm). Intubations were performed by anesthesia residents (>6 months experience), certified registered nurse anesthetists, and anesthesiologists, all of whom had received didactic training and the opportunity to use the C-MAC clinically for 3 months before the study. Patients with unstable cervical injuries, prior easy intubation, prior failed bag-mask ventilation, or need for emergent surgery were excluded. The trial was funded by the manufacturer of the C-MAC.

The first-attempt intubation success rate was higher with the C-MAC overall (93% vs. 84%), among residents (96% vs. 86%) and in patients with three difficult airway predictors (93% vs. 70%). Glottic views were better with the C-MAC (Cormack-Lehane grade ≤ 2 ; 93% vs. 81%), but mean intubation time was longer (46 vs. 33 seconds). Second-attempt intubation was successful with the same device in 5 of 11 patients in the C-MAC group and in 11 of 23 in the direct-laryngoscope group. The remaining patients were intubated with the other device, an alternate video laryngoscope, or a fiber-optic laryngoscope. Complication rates were similar in the two groups.

Comment: The C-MAC provided better glottic views and higher first-attempt intubation success rates than direct laryngoscopy. The 13-second time difference is unlikely to be of clinical significance. This study provides further evidence that video laryngoscopy is superior to direct laryngoscopy for difficult airway intubations.

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