Airtraq Outperforms Macintosh Laryngoscope in Obese Patients

The Airtraq provided better glottic views, faster intubation, and greater first-attempt success.

The Airtraq has consistently outperformed the Macintosh direct laryngoscope for intubation, but does the advantage pertain also to obese patients? Researchers in Brazil randomized 132 patients (ages 18–60) undergoing bariatric surgery (body-mass index ≥35 kg/m²) to intubation in the ramped position with the Macintosh or Airtraq laryngoscope. Operators each had more than 5 years of experience with conventional laryngoscopy and had performed 50 or more Airtraq intubations. Patients with previous difficult intubation were excluded.

The Airtraq had significantly higher first-attempt intubation success (100% vs. 84%) and shorter mean intubation time (14 vs. 37 seconds) than the Macintosh laryngoscope. Glottic view was significantly better in the Airtraq group, with 100% versus 89% having a Cormack-Lehane grade 1 or 2 view. No intubation-facilitating maneuvers (BURP or bougie assistance) were required in the Airtraq group, compared with 11% in the Macintosh group. There were two intubation failures (intubation not accomplished within 120 seconds) in the Macintosh group. One of these patients had trismus and received bag-mask ventilation until spontaneous respiration recovery. The other had a Cormack-Lehane grade 4 glottic view with the Macintosh laryngoscope; with the Airtraq laryngoscope, this patient had a grade 1 view and was successfully intubated within 30 seconds.

Comment: In this population of obese patients optimally positioned for direct laryngoscopy, the Airtraq substantially outperformed the Macintosh laryngoscope. Given the option, clinicians should choose the Airtraq over direct laryngoscopy for intubating obese patients, and, considering previous studies, for nonobese patients as well.

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

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