CS#34

An Algorithm for Difficult Airway Management, Modified for Modern Optical Devices (Airtraq Laryngoscope; LMA CTrach™)

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Background: Because algorithms for difficult airway management, including the use of new optical tracheal intubation devices, require prospective evaluation in routine practice, **the authors prospectively assessed an algorithm for difficult airway management that included two new airway devices**.

Methods: After 6 months of instruction, training, and clinical testing, **15 senior anaesthesiologists were asked to use an established algorithm for difficult airway management** in anesthetized and paralyzed patients. Abdominal, gynecologic, and thyroid surgery patients were enrolled. Emergency, obstetric, and patients considered at risk of aspiration were excluded. If tracheal intubation using a Macintosh laryngoscope was impossible, the **Airtraq laryngoscope was recommended as a first step** and the *LMA CTrach™* as a second. A gum elastic bougie was advocated to facilitate tracheal access with the Macintosh and Airtraq laryngoscopes. If ventilation with a facemask was impossible, the *LMA Trach™* was to be used, followed, if necessary, by transtracheal oxygenation. Patient characteristics, adherence to the algorithm, efficacy, and early complications were recorded.

Results: Overall, **12,225 patients were included** during 2 yr. Intubation was achieved using the Macintosh laryngoscope in 98% cases. In the remainder of the cases (236), a gum elastic bougie was used with the Macintosh laryngoscope in 207 (84%). The Airtraq laryngoscope success rate was 97% (27 of 28). The *LMA CTrach™* allowed rescue ventilation.

Conclusions: Tracheal intubation can be achieved successfully in a large cohort of patients with a new management algorithm incorporating the use of gum elastic bougie, Airtraq, and *LMA CTrach™* devices. 1