Prehospital Advanced Airway Management by Anesthesiologists

R. Eleanor Anderson, MD, Ron M. Walls, MD, FRCPC, FAAEM.

Intubation success by anesthesiologists in this Danish prehospital study was comparable to that in previous emergency department studies.

Controversy persists regarding prehospital airway management, with positions ranging from abandoning intubation to staffing emergency medical services with highly trained providers. To assess the success of prehospital advanced airway management by anesthesiologists, researchers designed an Utstein-style prospective descriptive study of eight critical care teams in Denmark, each including an experienced anesthesiologist.

Among 636 intubation attempts over 21 months, the overall success rate was 99.7%, and the incidence of difficult intubation (defined as requiring more than 1 pass) was 22.4%. Intubation was successful on the first pass in 86% of rapid-sequence intubations (RSIs) versus 78% of all intubations. The incidence of complications following first-pass success in RSI was 11%. When two attempts were required, the complication rate increased to 40%. The most common complications in RSI were hypotension (7%) and hypoxia (5%).

Comment: It is not practical to staff prehospital teams with specialist physicians for the sole purpose of airway management, given the relatively infrequent need for intubation. These results, though, mirror those from U.K. and U.S. emergency department–based studies, in terms of both success rates and the rise in complications when intubation requires multiple attempts. The interesting and as yet unanswered question is whether there is any evidence supporting prehospital intubation over rapid transport plus use of a simpler technique, such as a supraglottic airway or even bag-mask ventilation.

Citation(s):


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