

# Are Paralytic Agents Needed for Emergency Intubation?

The use of rapid sequence intubation (RSI) with neuromuscular blocking agents (NMBAs) has been touted widely for endotracheal intubation (ETI) in the ED and in the field. This German trial evaluated the success of ETI in the field by physicians without the aid of NMBAs from 1993 to 1997. Physicians used midazolam (10 mg to 30 mg) and fentanyl (0.25 mg to 0.5 mg) for induction. Cricothyrotomy was reserved for inaccessible airways with inability to maintain oxygen saturation above 90%.

All advanced airway management was undertaken by a surgery resident (>PGY3) with at least six months training in critical care. Of 383 patients, 373 were successfully intubated. In 79% of patients, indications were GCS less than 9, respiratory distress, or airway obstruction. Repeated attempts were necessary in 12.5%; two patients had unrecognized esophageal intubation. Six required cricothyrotomies due to the nature of their injuries and two after failed ETI attempts. Only one of these eight survived.

**Comment:** The contentions by these authors that their success, complication, and cricothyrotomy rates are comparable to those for emergent ED RSI with NMBAs must be viewed in context. This report was a "prospective review" per the authors. The methodology does not verify the accuracy of the data, the number of, or what constituted, failed attempts is not defined, and the study was observational in nature. There is no conceivable advantage to the use of these full induction doses of midazolam and fentanyl without NMBA. The patients will be entirely compromised and unable to protect their airways without the full relaxation for intubation that NMBA provides. Unfortunately, a randomized trial of induction alone versus rapid sequence intubation will never be done given the widespread acceptance of RSI in the ED. However, properly designed studies in anesthesia have clearly demonstrated the superiority of NMBA over induction agents alone.

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## CITATION(S):

Gerich TG et al. Prehospital airway management in the acutely injured patient: The role of surgical cricothyrotomy revisited. *J Trauma* 1998 Aug 45 312-314.