Etomidate-Facilitated Intubation in the Prehospital Setting

Environmental conditions, limited resources, and safety concerns can lead to airway management challenges in the prehospital setting. Few emergency medical services organizations have implemented the emergency department gold standard of rapid sequence intubation. Some have used an induction agent alone ("facilitated" intubation). These authors compared success rates for facilitated intubation before and after introduction of an etomidate protocol in the central New York State EMS system.

All patients older than 10 years who needed airway control and were combative or had a gag reflex received a single, intravenous dose of 0.3 mg/kg of etomidate, up to a maximum dose of 20 mg. Of 409 intubations that were performed during the 6-month study period, paramedics deemed 343 (84%) successful. Etomidate was used to facilitate intubation in 24 cases, 19 (79%) of which were successful, and all but 1 were successful on the first attempt. No incidents of vomiting, broken teeth, or bleeding were reported. For comparison, the investigators reviewed charts from an 18-month control period when online medical authorization was required for paramedics to administer diazepam (in 2-mg doses every 2 minutes to a maximum of 10 mg) to facilitate intubation. Forty-three diazepam-facilitated intubations were attempted, and 10 (23%) were successful. The authors concluded that intubation success was 12.5 times more likely with etomidate than with diazepam.

Comment: This small study suffers from self-reporting bias and lack of a standardized definition of an intubation attempt. It remains unclear whether ventilation rather than intubation is safer for selected prehospital patients, particularly children, and for cases in which transport times to a controlled setting are short or the system lacks aggressive medical direction. The high failure rates of intubation with both methods provide little reassurance for those who question the value and safety of prehospital intubation.

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