Prehospital Intubation: An Observational Study Shows Feasibility

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Although intubation success rates were high, patient outcomes are unknown.

To evaluate success rates for prehospital intubations, researchers in Australia reviewed 551 intubations for adults with presumed primary neurologic events causing coma (Glasgow Coma Scale scores ≤9) between 2008 and 2011. All patients received fentanyl, midazolam, and succinylcholine; patients aged 60 and older received half-dose sedation.

On paramedic arrival, seizure was noted in 16% of patients. The intubation success rate was 98%. Of 12 patients not intubated within 2 attempts, all had oxygen saturations above 88% on emergency department arrival. Four patients suffered peri-intubation cardiac arrests; three patients developed asystole, one of which was due to an esophageal intubation, and one patient developed ventricular fibrillation; all four patients regained pulses.

Comment: While the overall intubation success rate in this study was high, the four peri-intubation cardiac arrests should not be overlooked. This study only demonstrates that prehospital intubation is feasible, but it lacks data regarding patient outcomes. In the prehospital setting, intubation should not delay transport of critically ill patients to more-definitive care as long as patients can be successfully oxygenated using bag-mask ventilation or a supraglottic airway device.

Citation(s):