March 14, 2014

Prehospital Airway Management in Adults: Is Intubation the Best Strategy?

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*In a retrospective registry review of adults with out-of-hospital cardiac arrest, outcomes were better with no advanced airway placement.*

Prehospital endotracheal intubation is performed for adult patients with out-of-hospital cardiac arrest in most U.S. emergency medical systems (EMS), but does it improve outcomes compared with bag-valve-mask (BVM) ventilation or placement of a supraglottic airway? To find out, researchers analyzed one year of data from the Cardiac Arrest Registry to Enhance Survival (CARES), which includes data from over 400 community EMS agencies and 10 state-based databanks across the U.S.

Of nearly 11,000 patients, 52% were intubated, 29% received supraglottic airways, and 18% were managed with BVM ventilation. Neurologically intact survival was higher in the BVM group (18.6%) than the supraglottic airway or intubation groups (5.4% and 5.2%, respectively). Compared with the supraglottic airway group, the intubation group achieved higher rates of sustained return of spontaneous circulation (odds ratio, 1.35) and hospital survival (OR, 1.41). However, patients in the BVM group had the highest hospital survival (OR, 2.96) and survival to discharge with good neurologic outcome (OR, 4.24).

**Comment:** These retrospective data should be interpreted with caution. For example, it’s possible that paramedics did not use advanced airways in patients they thought might have better outcomes (e.g., younger, bystander cardiopulmonary resuscitation). Nevertheless, this study, along with evidence from pediatric patients (NEJM Journal Watch Emerg Med Apr 1 2000), calls into question whether advanced airway practices are the best option in all emergency medical systems. We should continue to emphasize early defibrillation and ventilation, but not necessarily intubation.

**Citation(s):**

(http://dx.doi.org/10.1016/j.resuscitation.2014.02.007)

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