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Intubation vs. Supraglottic Airway for Out-of-Hospital Cardiac Arrest

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Endotracheal intubation had a small but consistent benefit across several outcomes in this systematic review of observational studies.

While quality advanced life support can certainly be critical for patients with out-of-hospital cardiac arrest, there is no robust evidence that early intubation improves outcomes, and many prehospital providers have moved to the use of supraglottic devices that are technically easier to place. These authors conducted a systematic review comparing outcomes for these two airway management methods.

A robust search strategy identified 10 observational studies that included approximately 35,000 patients with out-of-hospital cardiac arrest who received endotracheal intubation and 41,000 who received a supraglottic device. Intubated patients had significantly higher odds of return of spontaneous circulation (odds ratio, 1.28), survival to hospital admission (OR, 1.34) and neurologically intact survival (OR, 1.33).

Comment: These effect sizes are small and, as the authors note, observational studies cannot adjust for potential confounders, such as the skill of the intubator of the possibility that some patients with failed intubation attempts were included in the supraglottic group and almost by definition had a longer and more complicated out-of-hospital time.

For cardiac arrest patients, intubation should take a distant back seat to quality cardiopulmonary resuscitation and early defibrillation when indicated; any adequate ventilation, including bag-valve-mask ventilation, is initially sufficient. This study suggests that there is equipoise for a controlled trial of intubation versus supraglottic devices. Until then, transport should not be delayed to attempt intubation.

Citation(s):
Benoit JL et al. Endotracheal intubation versus supraglottic airway placement in out-of-hospital cardiac arrest: A meta-analysis. *Resuscitation* 2015 May 22; [e-pub]. (http://dx.doi.org/10.1016/j.resuscitation.2015.05.007)