First-Pass Intubation Success Associated with Video Laryngoscopy and RSI

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First-pass success increased concurrently with an increase in use of video laryngoscopy and rapid sequence intubation over a 6-year period in Japan.

Emergency endotracheal intubation is considered by many the cornerstone of emergency medicine procedural knowledge. Increased first-pass intubation success is associated with decreased rates of uncommon serious complications.

To examine changes in intubation practice and outcomes, researchers analyzed prospectively collected data for nearly 11,000 emergency intubations (96% capture rate) in the Japanese Emergency Airway Network (a consortium of academic and community emergency departments across Japan) from 2010 to 2016.

Over the 6-year study period, use of rapid sequence intubation (RSI; defined as nearly simultaneous administration of a paralytic and a sedative agent) as the initial intubation method increased from 28% to 53%, and use of video laryngoscopy as the initial technique increased from 2% to 40%. Concurrently, first-pass success increased significantly from 68% to 74%. The adverse event rate was 14% overall and did not change significantly over the study period.

Comment: While this observational study can only show correlation, I don't think the association between increased use of RSI and video laryngoscopy and improved first-pass intubation success is a coincidence. Unless a patient is crashing or has markers of high risk from paralysis, RSI and video laryngoscopy should be the default for emergency intubation.

Citation(s):

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