Emergency Intubations for Trauma: One Center's Experience

Most patients were successfully intubated; few required cricothyrotomy.

Researchers analyzed records of patients who were intubated within 1 hour and within 24 hours after arrival during 10 years (1996–2006) at a major trauma center in Maryland. All patients were intubated under the supervision of a dedicated trauma anesthesiologist who followed an emergency airway algorithm.

Of 6088 patients who were intubated within 1 hour of arrival, 6008 (98.7%) were intubated orally, 59 (1.0%) were intubated nasotracheally, and 21 (0.3%) received surgical airways (17 cricothyrotomies and 4 tracheotomies). Data on number of intubation attempts, drugs used, methods used, and other intubation details could not be obtained with the medical record search methodology used in the study. The authors estimated that an additional 26,000 patients were intubated within 24 hours of arrival and that 10 required emergency surgical airways. Among the 31 patients who required emergency surgical airways, the mechanism of injury was most often blunt trauma, especially falls or motor vehicle collisions, followed by gunshot wounds to the chest, face, or neck, and then chemical blast.

Comment: Even though no comparison groups were included in this study, the authors attribute the low rate of surgical airways to the anesthesiologists' experience and use of the algorithm. This might be true, but the reason for the low rate is impossible to determine given the paucity of data available in this report and the lack of a mechanism for capturing the number of intubation attempts or complications. Similar success was recently reported in another trauma system in which emergency physicians manage the airways (JW Emerg Med Feb 13 2009). The take-home message seems to be that with high-quality airway managers and availability of new devices — such as video laryngoscopes and rescue devices — the cricothyrotomy rate will continue to fall, making skill acquisition and retention of this surgical technique a challenge.

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Published in Journal Watch Emergency Medicine September 11, 2009

Citation(s):


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