Cricoid Pressure During Intubation of Trauma Patients: Helpful or Harmful?

Release of cricoid pressure improved the laryngoscopic view in 11 of 22 patients.

The purported value of cricoid pressure during intubation is to protect the pulmonary tree from aspiration of vomitus. However, recent evidence suggests that cricoid pressure impairs laryngoscopic view, reduces bag-valve-mask ventilation efficiency, and does not prevent aspiration (Ann Emerg Med 2007; 50:653). In a prospective observational study, researchers compared the effect on laryngoscopic view of three laryngeal maneuvers (release of cricoid pressure, BURP [backwards, upwards, rightward pressure], and laryngeal manipulation under direct vision) in 400 adult trauma patients who were intubated with cricoid pressure in a London air–ground emergency medical services system during a 16-month period. Airways were managed by attending or senior residents in emergency medicine, critical care, or anesthesia. Removal of the laryngoscope, additional preoxygenation, and repeat laryngoscopy was defined as an additional attempt.

Overall, 87.5% of patients were intubated on the first attempt, and 98.8% were intubated within two attempts. Four patients required three attempts, and one patient required rescue cricothyroidotomy. The laryngoscopic view was improved by at least one Cormack-Lehane grade with release of cricoid pressure in 11 of 22 patients (50%), with laryngeal manipulation in 15 of 25 patients (60%), and with the BURP maneuver in 9 of 14 patients (64%). No maneuver made the view worse. Release of cricoid pressure was followed by vomiting in two patients (9%), both of whom had prolonged bag-valve-mask ventilation; neither patient developed aspiration pneumonia.

Comment: Cricoid pressure during intubation is considered necessary by many emergency medicine societies. These findings place this recommendation under scrutiny, just as the widely promulgated need for in-line cervical stabilization has recently been challenged (JW Emerg Med Aug 14 2009). Until a randomized, prospective trial demonstrates benefit from cricoid pressure, practitioners performing emergency trauma (and nontrauma) intubations should consider cricoid pressure an optional maneuver and be aware that it might lower the chance for successful intubation.

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