Video vs. Direct Laryngoscopy in Patients with Cervical Spine Immobilization

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Better laryngoscopic views with video laryngoscopy do not equal intubation success.

Intubating a trauma patient with cervical spine immobilization can be difficult. Prior studies in this population have shown that video laryngoscopy improves laryngoscopic view and reduces intubation difficulty (NEJM JW Emerg Med Mar 14 2008). To compare laryngoscopy with the Macintosh direct laryngoscope to laryngoscopy with the McGrath Series 5 video laryngoscope in patients with cervical spine immobilization, researchers recruited 128 healthy adults undergoing elective surgery.

Each patient underwent laryngoscopy with one device, assigned randomly, followed by laryngoscopy and intubation with the other device; thus, each patient served as his or her own control. Manual in-line stabilization was provided by an experienced practitioner. Mean time to successful intubation, the main outcome, was shorter in the Macintosh group (50 vs. 83 seconds), despite higher intubation difficulty scores (mean, 2 vs. 0) and worse laryngoscopic views. There were no failed intubations in the Macintosh group and five in the McGrath group (8%), of which two were due to screen failure and three to inability to pass the tube.

Comment: The finding of improved laryngoscopic views with video laryngoscopy is consistent with multiple prior investigations; however, the finding of a higher intubation failure rate is not. The higher failure rate with video laryngoscopy may have been due to device or operator attributes. Nonetheless, video laryngoscopy remains the device of choice for emergency airway management.

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