Clarus Video System Is Faster Than Airway Scope for Intubation of Patients with Cervical Collars

The two devices have very different designs though, so choice is a matter of operator preference.

Both the Clarus Video System (CVS), an adaptation of the Shikani Optical Stylet (JW Emerg Med Jun 29 2007 and Sep 28 2007), and the Pentax Airway Scope (AWS), a video laryngoscope, show promise for intubation of patients requiring cervical spine immobilization. The CVS incorporates a fiber-optic stylet over which an endotracheal tube is mounted, an integrated video chip, and a monitor; it is used without a laryngoscope. Researchers in South Korea randomized 140 patients undergoing elective surgery to intubation with the CVS or AWS by one of two experienced operators (>50 intubations with each device). To simulate difficult airways, patients' necks were immobilized in semirigid Philadelphia cervical collars.

Patient demographics and difficult airway markers were similar between groups. Intubation was significantly faster with the CVS than with the AWS (mean time, 18.9 vs. 30.4 seconds) and required significantly fewer optimization maneuvers (no maneuver in 55 vs. 36 patients; 1 maneuver in 10 vs. 30 patients). Number of attempts, overall success rate (94.3% and 95.7%), peri-intubation vital signs, and frequency of complications were similar in the CVS and AWS groups.

Comment: Both the Clarus Video System and the Pentax Airway Scope allow intubation without opening or removing a cervical spine immobilization collar. This study indicates that the CVS permits marginally faster intubation and fewer intubation maneuvers. Both devices have advantages over direct laryngoscopy.

— Cheryl Lynn Horton, MD, and Ron M. Walls, MD, FRCPC, FAAEM

Published in Journal Watch Emergency Medicine August 5, 2011

Citation(s):


- Medline abstract (Free)