

(9.1 vs. 12.7 and 23.5 minutes). Mean time to discharge was significantly longer in the pentobarbital group than in the chloral hydrate and propofol groups (80.3 vs. 61.2 and 53.9 minutes). Respiratory events (primarily desaturation, hypoventilation, or airway compromise) were significantly less common in the chloral hydrate group than in the pentobarbital and propofol groups (2.9% vs. 12.1% and 13.6%). Two of the 68 patients who received propofol required bag-mask ventilation. Arousal or movement during the scan occurred significantly more often with chloral hydrate than with pentobarbital or propofol (22.5% vs. 12.2% and 1.4%).

COMMENT:

The authors conclude that propofol sedation, when administered by a non-anesthesiologist, might not be as safe as oral chloral hydrate sedation, but their data do not support this. There was significant selection bias in this study — the propofol patients were sicker than other patients, with 11.8% having American Society of Anesthesiologists status >2, versus 1.5% of pentobarbital and 0% of chloral hydrate patients (50% of patients with ASA >2 had respiratory events); propofol patients underwent longer procedures than other patients; and the sedation protocol was chosen individually for each patient. The take-home message, though, is that clinicians giving deep sedation with IV propofol must be capable of managing airways and assisting or providing ventilation. If this level of care can't be continuously provided, anesthesiology should be consulted to perform the sedation in the emergency department or in the operating room. — **Ron M. Walls, MD, FRCPC, FACEP, FAAEM**

Dalal PG et al. Sedation and anesthesia protocols used for magnetic resonance imaging studies in infants: Provider and pharmacologic considerations. Anesth Analg 2006 Oct; 103:863-8.

The Macintosh Laryngoscope vs. the New Airtraq Device

The Airtraq is a new airway-management device that has a highly curved blade and optical components that transfer the view from the illuminated tip to a proximal viewfinder,

facilitating intubation without the need for alignment of the oral, pharyngeal, and tracheal axes. These authors compared the performance of the Airtraq device against that of the current gold standard, the Macintosh laryngoscope, in a randomized trial.

Sixty adults undergoing elective surgery in an operating suite were enrolled, after excluding patients who had anatomic features associated with difficult intubation. All intubations were performed by four anesthesiologists experienced in the use of both devices. The primary endpoints were the previously validated intubation difficulty score (see *JWEM* Feb 1998, p. 18, and *Anesthesiology* 1997; 87:1290) and the time to intubation.

All patients in the Airtraq group and all but one in the Macintosh group were intubated on the first attempt, but the mean intubation difficulty score was significantly lower in the Airtraq group (0.2 vs. 1.4, respectively, with 0 representing perfect intubation). Time to intubation did not differ between the groups. Anesthesiologists rated the Airtraq easier to use than the Macintosh laryngoscope (mean scores of 1.2 vs. 2.0 on a 0-10 visual analog scale). The authors conclude that in patients with normal airways, the Airtraq is easier to use and provides intubating conditions that are comparable or superior to those of the Macintosh laryngoscope.

COMMENT:

As this study was a small trial of elective surgery patients with normal airways who underwent intubation performed by experienced anesthesiologists, implications for emergency medicine practice are not clear. Direct laryngoscopy is unnecessarily difficult and traumatic for the upper airway, and its development predated modern optics. The time has come to retire the beloved metal laryngoscope — it has served its purpose, and many superior options are now available.

— **Aaron E. Bair, MD, FAAEM, FACEP**

Maharaj CH et al. A comparison of tracheal intubation using the Airtraq or the Macintosh laryngoscope in routine airway management: A randomised, controlled clinical trial. Anaesthesia 2006 Nov; 61:1093-9.

Improvement in Adherence to Guidelines for Acute Coronary Syndrome

The CRUSADE (Can Rapid Risk Stratification of Unstable Angina Patients Suppress Adverse Outcomes with Early Implementation of the ACC/AHA Guidelines) National Quality Improvement Initiative provides operational tools to participating institutions to promote adherence to evidence-based medicine in the treatment of patients with non-ST-segment-elevation acute coronary syndrome (NSTEMI/ACS). The tools include standardized order sets for admission and for discharge, dosing algorithms, and data collection tools. Hospitals receive quarterly feedback on performance.

These authors assessed trends in the use of guideline-recommended therapies for NSTEMI/ACS at 434 CRUSADE-participating U.S. hospitals from January 2002 through 2004 (the ACC/AHA guidelines were published in September 2002). Performance indicators were divided between acute care measures (use of aspirin, heparin, β -blockers, clopidogrel, and glycoprotein IIb/IIIa inhibitors within 24 hours) and discharge measures.

Performance improved significantly for all measures. Improvements in the use of the relatively older therapies were small because use of these medications was already high at the start of the study, but improvements in the use of the newer therapies (clopidogrel and GP IIb/IIIa inhibitors) were much greater. The proportion of patients who received 100% of recommended interventions improved from 16% to 33% overall and from 30% to 48% for acute care measures.

COMMENT:

These positive trends are an unusual but gratifying response to the guidelines. Still, a big gap exists between overall performance and ideal performance. The concept of "100% correct care" is on the road to being the new standard metric for adherence to evidence-based guidelines. Achieving 100% correct care will take an unprecedented concentration of resources and effort. Not achieving it will, in the near future, not be an option, unless one wants to be highly