

Adverse events rate is low when propofol is administered by trained professional

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Propofol is safe for advanced endoscopic procedures with a low rate of sedation-related adverse events when administered by a trained professional, according to a new study in *Clinical Gastroenterology and Hepatology*, the official journal of the American Gastroenterological Association (AGA) Institute.

"This is the first paper to report the frequency of airway modifications (AMs) associated with propofol use in endoscopy. We believe that the need to perform AMs highlights the importance of a trained professional, such as a nurse anesthetist, who is solely responsible for maintenance of sedation and patient monitoring while using propofol," said Sreenivasa S. Jonnalagadda, MD, of the Washington University School of Medicine and lead author of the study. "Perhaps the highest-risk patients should be managed by nurse anesthetists trained in advanced airway interventions, whereas lower-risk patients can be safely managed by professionals with less intensive airway training."

Doctors prospectively studied patients undergoing sedation with propofol for advanced endoscopic procedures, including endoscopic retrograde cholangiopancreatography, endoscopic ultrasound and small bowel enteroscopy; a total of 799 patients were enrolled over seven months. Sedative dosing was determined by a certified registered nurse anesthetist with a goal of achieving deep sedation. Sedation-related complications included 154 AMs performed in 115 patients, such as 97 chin lifts, 29 modified face mask ventilations and 28 nasal airways. Additional complications included hypoxemia (deficient [oxygenation](#) of

the blood, 12.8 percent); hypotension requiring vaso-pressors (abnormally [low blood pressure](#), 0.5 percent); and early procedure termination (0.6 percent); these rates are comparable to other published data.

Elevated BMI, male sex and American Society of Anesthesiologist class greater than or equal to three were found to be independent predictors of patients who would be at the highest risk for needing AMs.

"Future studies are likely to identify additional clinical predictors, which may impact the choice of sedatives and level of airway training required to safely administer propofol," added Dr. Jonnalagadda. "While propofol is undoubtedly an attractive sedative for endoscopic procedures, there continues to be debate regarding its safe use by non-anesthesiologists. Newer technologies such as computer-assisted personalized sedation are likely to standardize the use of propofol by non-anesthesiologists in endoscopy."

Propofol is an effective sedative in advanced [endoscopy](#). However, the incidence of sedation-related complications is unclear. Initially approved for the induction and maintenance of anesthesia, propofol has become an increasingly popular sedative for endoscopic procedures due to its rapid onset of action (30 to 45 seconds) and short duration of effect.

The AGA Institute believes that the administration of propofol by non-anesthesiologists is safe and that proper training and patient selection are crucial, as outlined in the "[Position Statement: Non-Anesthesiologist Administration of Propofol for GI Endoscopy](#)" issued by the four major gastroenterology and hepatology societies and published in the December 2009 issue of *Gastroenterology*.

Provided by American Gastroenterological Association

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