



## **Incidence of sedation-related complications with propofol use during advanced endoscopic procedures.**

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**BACKGROUND AND AIMS:** Propofol is an effective sedative in advanced endoscopy. However, the incidence of sedation-related complications is unclear. We sought to define the frequency of sedation-related adverse events, particularly the rate of airway modifications (AMs), with propofol use during advanced endoscopy. We also evaluated for independent predictors of AMs. **METHODS:** Patients undergoing sedation with propofol for advanced endoscopic procedures, including ERCP, EUS and small bowel enteroscopy (SBE), were prospectively studied. Sedative dosing was determined by a certified registered nurse anesthetist with a goal of achieving deep sedation. Sedation-related complications included AMs, hypoxemia (SaO<sub>2</sub> < 90%), hypotension requiring vasopressors, and early procedure termination. AMs were defined as chin lift, modified face mask ventilation and nasal airway. We performed a regression analysis to compare characteristics of patients requiring AMs (AM+) with those who did not (AM-). **RESULTS:** 799 patients were enrolled over seven months. Procedures included EUS (423), ERCP (336), and SBE (40). 87.2% of patients demonstrated no response to endoscopic intubation. Hypoxemia occurred in 12.8%, hypotension in 0.5% and premature termination in 0.6% of the patients. No patients required bag-mask ventilation or endotracheal intubation. 154 AMs were performed in 115 (14.4%) patients, including chin lift (12.1%), modified face mask ventilation (3.6%) and nasal airway (3.5%). Body mass index (BMI), male sex and American Society of Anesthesiologists (ASA) class = 3 were independent predictors of AMs. **CONCLUSION:** Propofol can be used safely for advanced endoscopic procedures when administered by a trained professional. Independent predictors of AMs included male sex, ASA class = 3 and increased BMI.

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