Tu1017 Effectiveness, Safety and Efficiency of Computer-Assisted Propofol Sedation: A Comparative Study Against Midazolam and Fentanyl

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Background: Computer assisted propofol sedation (CAPS) has been recently approved by the FDA for moderate sedation of ASA class I and II patients undergoing routine upper endoscopy and colonoscopy. CAPS uses a continuous propofol infusion after a single premedication dose of fentanyl. As the first U.S. medical center to adopt CAPS technology for routine clinical use, we compared CAPS patients against a concurrent group sedated with midazolam and fentanyl (MF). Methods: Patients who underwent elective outpatient upper endoscopy and colonoscopy with CAPS over a 2 month period were compared against concurrent patients sedated with MF. All procedures were performed by 1 of 9 gastroenterologists certified in the use of the CAPS system, with the assistance of an identically trained nurse. Procedural success rates, polyp detection rates and recovery times were recorded. Patient satisfaction scores were reported in a separate abstract. Results: CAPS was utilized to sedate 244 patients (mean age 60.4 years; 52.5% female; 31.1% BMI, mean 27.8 kg/m2). Procedure success rates and polyp detection rates were high and comparable. Both CAPS and MF resulted in significantly shorter recovery times, although procedure times were similar. Procedural success rates and polyp detection rates were high and comparable. Both groups had few adverse events and no serious adverse events. In low-risk patients, CAPS appears to be a safe, effective and efficient means of providing moderate sedation for upper endoscopy and colonoscopy.

Tu1018 The Adenoma to Polyp Detection Rate Quotient Varies Among Different Patient Populations: Implications for the Quality Metrics of Colonoscopy

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Background: The adenoma detection rate (ADR) is the primary quality indicator for colonoscopy. The risk of interval colorectal cancer is inversely related to the endoscopist’s ADR. However, ADR calculation is a time-consuming process that requires a combination of endoscopic and histopathologic data collection. The adenoma to polyp detection rate quotient (APDRQ) has been used as a conversion factor to estimate ADR from polyp detection rate (PDR). However, it is unclear whether this conversion factor could be precisely calculated from a case-mix or may vary in colonoscopies with different indications. Aims: To create and compare conversion factors that can accurately estimate the ADR from the PDR in 2 different screening populations, average risk patients (AVR) and patients with a positive fecal immuno test (FIT-positive). Methods: This was a retrospective analysis of colonoscopies performed by 6 gastroenterologists in a single center from January 2004 to July 2015. First time colonoscopies on AVR and FIT-positive patients were included. ADR, PDR and APDRQ was calculated for each endoscopist. Average APDRQs for average risk patient population (AVR-APDRQ) and FIT-positive population (FIT-APDRQ) were used as conversion factors to estimate ADRs and FIT-ADRs of each endoscopist from the corresponding AVR-PDRs and FIT-PDRs. The main outcome measures were the strength of the relationship between the estimated ADRs and the actual ADRs, the correlation determined by Pearson’s correlation coefficient (r), and the average estimated-actual differences. Results: We included 5686 colonoscopies performed on AVR and 3962 colonoscopies performed on FIT-positive patients. The average AVR-APDRQ and the actual AVR-ADRs was 0.95 (95% CI, 0.70-1.00; p = 0.007) whereas the correlation between the estimated FIT-ADRs and the actual FIT-ADRs was 0.97 (95% CI, 0.85-1.00; p = 0.002). Conclusions: The application of a conversion factor to the PDR can accurately estimate the ADR. The accuracy is higher if the conversion factor is targeted on specific subgroups of patients and applied to expert endoscopists (≥ 5 years of experience, > 500 colonoscopies/year).