

Gastroenterologist-Guided, Nurse-Administered Conscious Sedation is Safe and Effective for Spiral Enteroscopy

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Abstract

Purpose: Spiral enteroscopy is increasingly used to provide endoscopic exploration of the deep small bowel. Monitored anesthesia care (MAC) has been the preferred method of sedation for balloon and spiral deep small bowel enteroscopy. We hypothesized that due to the reported shorter procedure times, gastroenterologist-guided, nurse-administered moderate sedation will allow for safe and effective spiral enteroscopy in patients with significant medical co-morbidities. This study aims to evaluate clinical safety and efficacy of conscious sedation for spiral enteroscopy by prospectively tabulating: total procedure time, total procedure time minus therapy time, insertion depth beyond the ligament of Treitz, procedure completion, positive findings, therapy performed, and complications.

Methods: This is a prospective study of consecutive patients who underwent spiral enteroscopy as clinically indicated. All patients signed research informed consent. Sedation choice was left to the endoscopist's discretion. Moderate sedation was achieved with midazolam in combination with meperidine or fentanyl.

Results: Between February 2008 and May 2009, a total of 57 patients [27 female, 30 male, mean age 65 ± 15 (21-89) years] underwent spiral enteroscopy at the University of Florida. Patient mean ASA score was 2.5, with 30 patients (53%) as ASA class 3. Spiral enteroscopy was performed with moderate sedation in 47 cases (83%) and with MAC in 10 cases (17%). Of the moderate sedation patients, the procedure was successfully completed in 42 cases (89%) and was not completed in 5 cases (11%). The mean dose of midazolam was 9.3 ± 2.6 (3-17) mg, meperidine 190.5 ± 63.2 (25-300) mg, and fentanyl 227.6 ± 88.2 (100-425) mcg. Positive findings at the time of enteroscopy were noted in 23 cases (48.9%). Therapeutic interventions were performed in 21 cases (44.7%). Mean depth of insertion beyond the ligament of Treitz was 220 ± 93 (5-320) cm. Mean total procedure time was 40 ± 17 (3-92) min. Mean procedure time minus therapy time was 35 ± 13 (3-75) min. Five mild complications occurred (post procedure abdominal pain, 2 mucosal tears, and 2 episodes of bradycardia). All complications resolved without intervention.

Conclusion: Gastroenterologist-guided, nurse-administered moderate sedation allows for safe and successful spiral enteroscopy in the majority of patients. The depth of small bowel insertion and procedure time compares favorably with prior balloon and spiral enteroscopy studies, where MAC was used.