

Procedure Outcomes Comparing Two Physician Operators to Physician-GI Technologist Operators during Antegrade Over-tube Assisted Enteroscopy Using the Spiral Tip Over-tube

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Abstract

Purpose: Over-tube assisted enteroscopy has improved our diagnostic and therapeutic capabilities for diseases of the small bowel. The double balloon, and spiral tip over-tubes necessitate two operators, usually physicians, unlike the single balloon enteroscope that can be handled by a single operator. This taxes physician time and productivity. We report on our experience using a GI technician as the second operator.

Methods: The small bowel endoscopy database was searched for all antegrade over-tube assisted enteroscopies (OAE) using the spiral tip over-tube from April 2008 to June 2009. Indications for the procedure, procedure time, and complications as well as if a physician or GI technician participated in the procedure were recorded. All OAE were performed using an Olympus SIF Q180 enteroscope preloaded with the 48F Discovery SB over-tube (Spirus Medical, Stoughton, MA), which were advanced in the usual manner. We compared procedure times and complications to determine if there was a difference whether a physician or GI technician participated as the second operator during the procedure.

Results: Forty nine antegrade OAE were evaluated; 26 females, average age 59 (23 to 91). Indications were obscure-occult GIB 12 (24%), obscure-overt GIB 9 (18%), abnormal capsule endoscopy 7 (14%), abnormal imaging 5 (10%), anastomotic stricture 5 (10%), suspected IBD 3 (6%), abdominal pain 2 (4%), FAP 1, SB fistula 1, celiac disease 1, SBO 1, hepatojejunostomy stricture 1. Sedation was with MAC in 40 (82%), and general anesthesia in 9 (18%). 37 OAE were performed with 2 physician operators and 12 with a physician-GI technician team. The ileum was reached in 32 (65%), jejunum in 16 (33%), and duodenum in 1 (2%). The desired section of small bowel was reached in 47 (96%) of patients. The two failed patients had RYGBP and previous SB resection, and both were done with two physician operators. One had a successful procedure with the single balloon over-tube. Mean procedure time was 53.6 min, 56.6 min for two physician operators vs. 44.4 min for physician-GI technician operators ($p>0.05$). Over-tube trauma was reported in 16 patients, 6 involving a GI technician, including 6 EG junction, 1 gastric, 4 duodenal, 3 ligament of Treitz and 1 jejunal mucosal tears. There was a jejunal perforation (two physician operators). There was no increased risk of OAE trauma using a GI technician ($p>0.05$).

Conclusion: GI technicians appear to be a safe and effective alternative to using a second physician operator for OAE using the spiral tip over-tube. Adequate time to procedure competency by the primary physician operator before a GI technician can participate in lieu of a second physician operator needs to be studied.