

Novel Method of Enteroscopy via Anal Approach Using The Endo-Ease Discovery™ SB Overtube

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Abstract

Background: Small bowel enteroscopy is challenging and all present methods have significant limitations. We describe a novel per anal method to advance the endoscope through the ileum into the small bowel using an overtube (Endo-Ease Discovery SB) which has a spiral raised element at the distal end. The rotational movement of the overtube pleats small bowel on the endoscope and helps advancement through the small bowel. Both the oral and the anal approaches can be used to intubate the small bowel and potentially visualize the entire small bowel. The results of the Discovery SB enteroscopy using the anal approach are presented below.

Methods: The Discovery SB overtube specifications are: length 130 cm, internal diameter 12.7 mm, external diameter 17.5 mm, helical thread height 5 mm. A collar on the proximal end locks the device on the insertion tube of the endoscope. After written informed consents were obtained, retrograde enteroscopy was attempted in 8 patients. The indication for the procedure was obscure gastrointestinal bleeding in all the patients. Intravenous Propofol, Fentanyl and Versed were used for sedation. The Discovery SB was placed over the pediatric colonoscope (PCF-140L). The distal end was positioned behind the colonoscope bending section and locked into place using the Discovery SB proximal collar. The Discovery SB and PCF-140L were advanced through the anus into the cecum. The ileocecal valve was then intubated. Once in the terminal ileum the Discovery SB was rotated to pleat small bowel on the Discovery SB. When the limits of the spiral advancement were reached added depth of insertion was reached by unlocking the Discovery SB and pushing the colonoscope through the overtube. Withdrawal of the endoscope was achieved by an anticlockwise rotation of the overtube, permitting controlled withdrawal and detailed examination. Depth of insertion was estimated by the endoscopist.

Results: The ileum was intubated in all 8 patients (4 men and 4 women). In two patients the spiral advancement of the endoscope in terminal ileum could not be achieved. The average length of the small bowel visualized was 113 cm (35 to 280 cm). The average procedure time was 39 minutes. All the patients tolerated the procedure well and there were no complications. A thorough visual examination of the lumen during withdrawal indicated no tissue trauma was caused by clockwise advancement or counterclockwise withdrawal.

Conclusion: Small bowel enteroscopy using rotational advancement of Endo-Ease overtube via the anal approach is safe and feasible.