

# Spiral Enteroscopy Using The Discovery Small Bowel Device And Vista System: Technique, Feasibility And Preliminary Results

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## Abstract

**INTRODUCTION:** Indications for small bowel enteroscopy are increasing but small bowel enteroscopy is challenging and all present push and pull techniques have significant limitations. The Endo-Ease Discovery SB device (Spirus Medical Stoughton, MA), a novel spiral-shaped over-tube FDA approved for small bowel enteroscopy and Vista System (Spirus Medical Stoughton, MA), a spiral over-tube created for anal enteroscopy may allow for simple and quick intubation of the ileum comparable to current methods.

**AIMS & METHODS:** To assess the feasibility of this new enteroscopic method both from oral and anal route. Between December 2008 and May 2009, 9 enteroscopies using rotational devices (7 oral approaches using Endo-Ease Discovery SB device and 2 anal approaches, using the Spirus Medical Vista Retrograde over-tube) were performed under general anesthesia on 9 patients. Informed consent was obtained from all patients. The Olympus SIF-160 200 cm enteroscope was used along with the Discovery SB and the Vista over-tubes. Starting insertion route (anal or oral) of SBE was chosen according to the estimated location of the suspected lesions based on the clinical presentation and on the findings, when available, of previous investigations such as CE performed in all patients. All procedures were performed under general anesthesia and oro-tracheal intubation and X-ray control. Data was collected prospectively. Patient demographics, indication depth and time to maximal insertion, total procedure time, and findings were recorded. Any trauma was documented during scope withdrawal and scored 0-5 (0= no trauma, 1= edema/erythema, 2=superficial hematoma/erosion, 3 superficial laceration, 4= deep laceration, 5=perforation). Indications were acute recurrent or chronic gastrointestinal bleeding (N= 6, 5 oral, 1 anal), suspected Crohn's disease (N= 1, anal), suspected malabsorption (N= 1, oral), polyposis syndromes (N= 1, oral, Familial Adenomatous Polyposis).

**RESULTS:** There were no technical failures. Nine procedures were successfully performed in 9 patients (7 oral, 2 anal, 3 M/ 6 F, mean age= 49.2, range 23-80). Total procedure time was 40.4+/- 6 min. Mean depth achieved was 180+/- 34 cm beyond the ligament of Treitz (oral procedures) and 30 cm. beyond the ileo-cecal valve (anal procedures). No lesions were found in 4 patients; GIST were present in 2 patients, ulcers in 1 case, inflammation in 1 case, polyps in 1 case. Biopsies were performed on the polyp, on the ulcers and on the inflamed area (3 patients); endoscopic tattoo to simplify surgical laparoscopic procedure was performed in the 2 patients with GISTs. The large polyp in the patient with FAP was biopsied and tattooed. No complications occurred. Trauma score less 2 was recorded in pylorus and ligament of Treitz in 2 patients (oral procedures).

**CONCLUSION:** According to our preliminary experience, Spirus system seems to be safe and useful in the diagnosis of several small bowel diseases.