

The Spiral Enteroscopy Experience in 101 Consecutive Patients: Safety and Efficacy Using the Discovery[®] SB

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Abstract

Introduction: Spiral Enteroscopy (SE) is the use of a spiral on a rotating over-tube (Discovery SB) to pleat small bowel on the enteroscope and advance through the small bowel. Since the first procedure with the Discovery SB on a pediatric colonoscope in November 2005, 101 patients have undergone SE. The recent introduction of the Olympus 9.2mm and Fujinon 9.4mm 200cm enteroscopes with a 2.8 cm channel allowed the reduction in the diameter of the Discovery SB to 48F. Improvements in Discovery SB shaft characteristics and spiral performance have also been made.

Aims and Methods: To report the total SE experience from initial design to present. The Discovery SB over-tube is 118 cm with a 5 mm raised spiral 21 cm long on the distal end. The 57F version was used with the Olympus pediatric colonoscope and the new 48F version is used with the Fujinon 200cm 9.4mm and Olympus 200cm 9.2mm enteroscopes. 101 consecutive patients are presented. Obscure GI blood loss was the indication. All patients were outpatients. 15 patients received general anesthesia and 86 MAC with propofol, fentanyl and versed. By definition, mild mucosal trauma was limited to the mucosa and moderate mucosal trauma was limited to the submucosa. Depth of insertion was estimated by endoscopic criteria. Advancement through the small bowel was accomplished with SE pleating of small bowel and push through the Discovery SB over-tube.

Results: 52 males, 49 females, average age 45 years (19-78), average height 164cm, average weight 71.4kg. Three patients were unable to receive the procedure (1 esophageal stricture, 2 unable to intubate). The Discovery SB was used with a pediatric colonoscope (26 patients), Olympus enteroscope (25 patients) and Fujinon enteroscope (50 patients). Average depth of insertion past Ligament of Treitz (LOT) was 224cm (50-400cm), average time to maximum insertion 21.4 min., average total procedure time 32.1 min. Complications; 22 sore throats, mild mucosal damage 17 patients, moderate mucosal damage 5 patients, 3 intussusceptions all resolved during procedure. One patient was admitted after 24 hours with abdominal pain. Findings were 24 patients with avm's, 2 tumors, 4 strongyloides, 2 duodenal ulcers. Two patients with tumors had the distance past the LOT measured at surgery (280cm and 100cm) and compared to the endoscopically estimated distances (240cm and 75cm).

Conclusion: SE is a safe and effective method of visualizing the small bowel. The 48F Discovery SB with the new Fujinon and Olympus 200 cm enteroscopes is rapid and allows all usual therapies to be performed. It is preferred to the Discovery SB/ pediatric colon combination due to its decreased diameter and increased depth of insertion. Depth of insertion and procedure times compare favorably with published single and double balloon results. More studies will be needed.