



INTRODUCTION

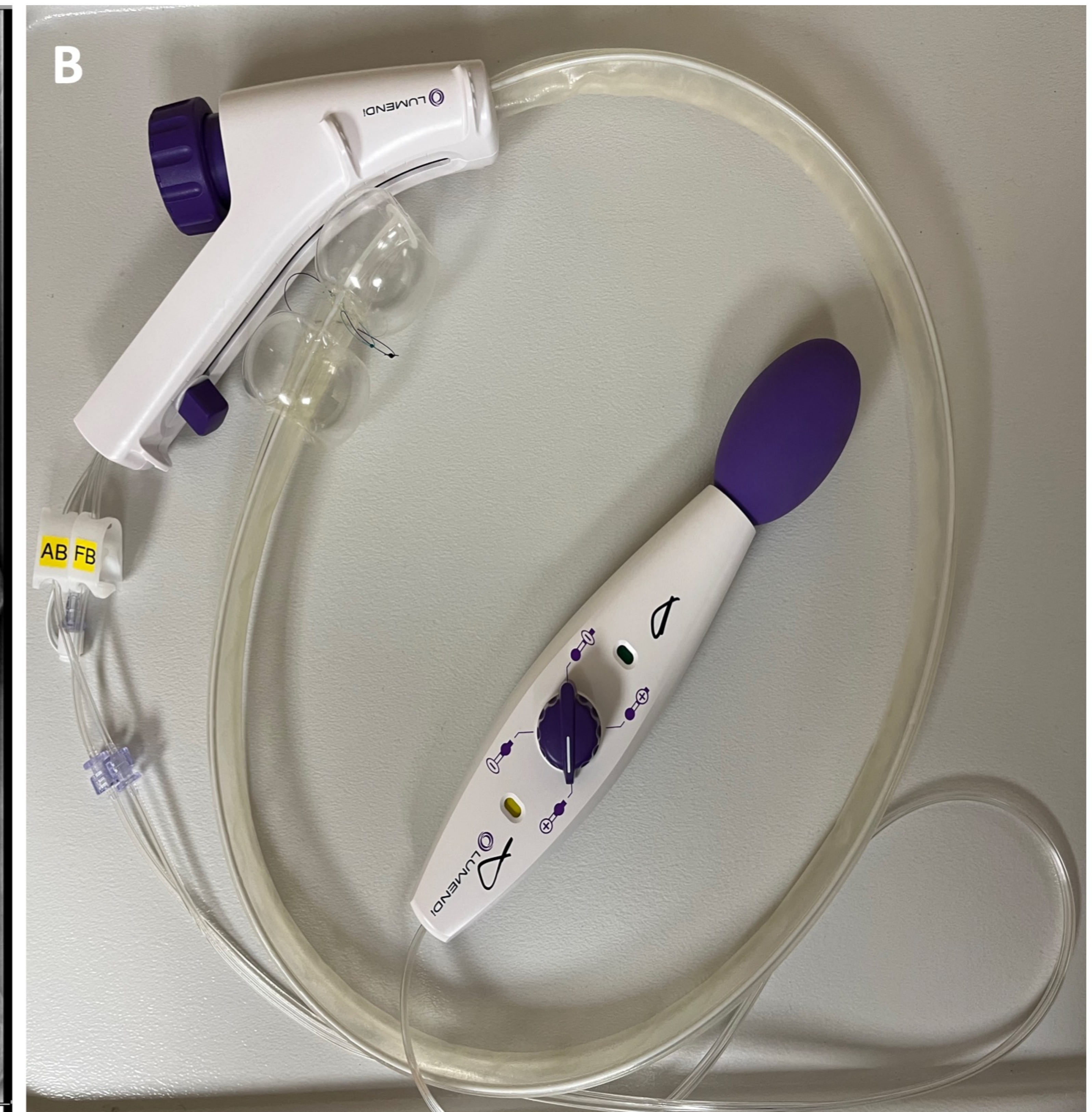
Small bowel evaluation is challenging due to its length and contractility. Several techniques have been developed including video capsule endoscopy, push enteroscopy, device-assisted enteroscopy, and intraoperative enteroscopy, all with limitations. We report the first case of retrograde enteroscopy utilizing the DiLumen device (Lumendi Ltd, Westport, CT) attached to a standard colonoscope.

CASE PRESENTATION

- A 39-year-old male with history of Meckel's diverticulectomy, presented with chronic intermittent abdominal pain accompanied by nausea and vomiting.
- CT abdomen/pelvis showed post-surgical changes from Meckel's diverticulectomy, mild thickening of ileum proximal to the anastomosis with inflammatory mesenteric changes suggestive for inflammatory bowel disease (IBD) without obvious strictures.
- EGD and Ileocolonoscopy were performed without endoscopic or pathologic evidence of IBD.
- A video capsule endoscopy was performed, but it was retained in the small bowel.
- Endoscopic capsule retrieval was attempted with retrograde balloon enteroscopy using a standard colonoscope, with the assistance of the DiLumen device. The anastomotic site was found at about 100cm proximal to the ICV with a tight stricture. A through-the-scope balloon dilation was performed up to 10 mm with adequate dilation effect. Unfortunately, the colonoscope was unable to pass the stricture. Biopsies of the stricture showed no evidence of IBD. Patient was referred to colorectal surgery for further management.

DISCUSSION

- Balloon assisted enteroscopy (BAE) requires expertise given the prolonged procedure time and technical aspects. Retrograde BAE is more challenging compared to the anterograde approach due to colonic navigation using an enteroscope.
- DiLumen is an endoscopic accessory sheath consisting of two balloons that can be manually inflated and deflated as needed. The balloons can facilitate endoscope navigation by shortening and straightening the colon similar to double BAE. A larger size colonoscope, rather than an enteroscope, can then be used to perform the procedure.
- In our case, with a colonoscope, an ileal anastomotic stricture was reached and dilation performed successfully.
- This opens the potential for retrograde deep ileal intubation, especially in those with a tortuous or redundant colon, where an enteroscope may have difficulty reaching that location.



Figures: A, Video capsule was retained in the small bowel proximal to the anastomosis. B, Dilumen device