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Background

- During traditional colonoscopy, abdominal pain is caused by distention of the colon with carbon dioxide (CO₂) or air and stretching of the colonic wall and mesentery while advancing the colonoscope to the cecum.
- A recently developed proprietary visualization balloon, (Vizballoon™), was created to advance a colonoscope without gas insufflations, eliminating colon distention and creation of colonic loops, and allowing to reach the cecum faster than during traditional colonoscopy.

AIM of the Study

To evaluate feasibility of sedation-less colonoscopy using Vizballoon™

METHODS

- We performed sedation-less colonoscopies using Vizballoon™ without any CO₂ or air insufflation.
- Vizballoon™ was inserted through the biopsy channel of adult colonoscope (CF 190, Olympus, Tokyo, Japan) and filled with 5 ml of water.
- The colonoscope was inserted into the rectum and advanced until the cecum was identified by either the appendicular orifice or the ileo-cecal valve.
- Once the cecum was entered, the balloon was collapsed and removed.
- Then CO₂ was insufflated to visualize the colonic lumen during withdrawal of the colonoscope.

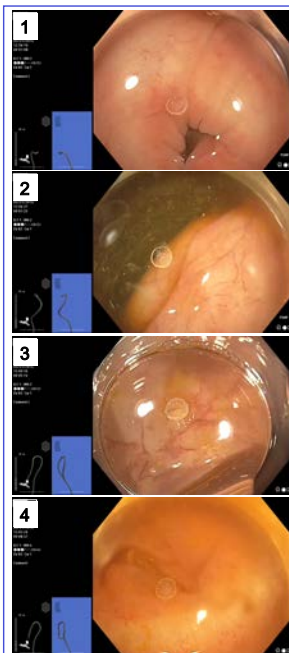


Figure 1: Colonoscope with a Vizballoon™ is introduced into sigmoid colon

Figure 2: Colonoscope with a Vizballoon™ has reached splenic flexure

Figure 3: Colonoscope with a Vizballoon™ is advanced into cecum

Figure 4: Colonoscope with a Vizballoon™ is inserted into ileo-cecal valve

RESULTS

- Sedation-less colonoscopy with assistance of the Vizballoon™ was performed in 3 patients.
- Advancement of the colonoscope with Vizballoon™ was technically easy.
- None of the patients required any external pressure or position change to reach the cecum.
- All patients reported only mild discomfort (pain assessment scale less than 4) during colonoscope advancement, which was easily eliminated by pulling back the colonoscope, and shortening the colon.
- On withdrawal of the colonoscope, CO₂ insufflation was used to maintain adequate visualization of the colonic lumen and did not cause any abdominal discomfort.
- None of the study patient reported abdominal pain after completion of the colonoscopy.
- All study patients expressed a desire to repeat Vizballoon™ - assisted, sedation-less colonoscopy in the future.

CONCLUSIONS

Sedation-less colonoscopy with assistance of the visualization balloon is fast, technically easy, and could become a future standard for screening colonoscopy.

DISCLOSURE

- Dr. Kantsevov holds equity in Apollo Endosurgery Inc, Austin, TX.
- None of the authors have any conflict of interests to report.