

Visualization Balloon Allows Successful Performance of Colonoscopy in Patients With Prior Documented Difficult Colon Anatomy: A Pilot Clinical Study

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Background

- Traditional colonoscopy with air or carbon dioxide (CO₂) insufflation can be difficult in patients with long, redundant and torturous colons.
- Insufflation of gas lengthens the colon and makes colonoscope navigation towards the cecum difficult and sometimes even impossible.
- A proprietary visualization balloon, (Vizballoon™) was recently introduced into clinical practice in the USA.
- Use of Vizballoon™ eliminates the need for air or CO₂ insufflation and facilitates advancement of the colonoscope through the colon.

AIM of the Study

To evaluate feasibility and effectiveness of non-insufflation Vizballoon™-assisted colonoscopy in patients with documented difficult colonic anatomy

METHODS

- We performed Vizballoon™-assisted colonoscopies in patients with documented previous difficult colonoscopies.
- Prior to the start of the procedure, Vizballoon™ was inserted through the biopsy channel of adult colonoscope (CF 190, Olympus, Tokyo, Japan) and filled with 5 ml of water.
- Then the colonoscope with Vizballoon™ was inserted into the rectum and advanced without any gas insufflation until the cecum was reached.
- At this point the water was aspirated from the balloon and the Vizballoon™ was removed.
- The CO₂ was insufflated to optimize visualization of the colonic lumen during withdrawal of the colonoscope.

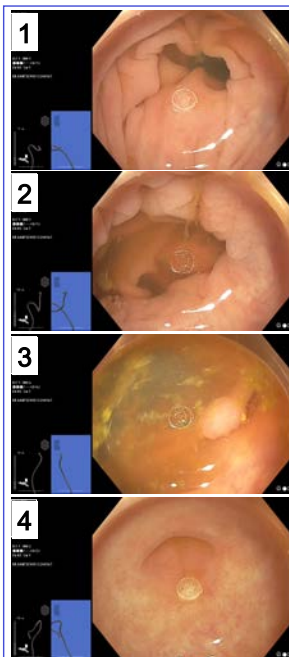


Figure 1: Colonoscope with a Vizballoon™ is inserted into sigmoid colon

Figure 2: Colonoscope with a Vizballoon™ is moving through torturous sigmoid colon

Figure 3: Polyp which was not reached and not visualized during previous unsuccessful colonoscopy

Figure 4: Colonoscope with a Vizballoon™ has reached appendicular orifice

RESULTS

- Vizballoon™-assisted colonoscopies were performed in 4 consecutive patients with known previous difficult colonoscopies, performed in the past with CO₂ insufflation.
- Previous colonoscopies in these patients required significant amount of external pressure and changes in patient position in order to reach the cecum.
- Technical difficulties during prior colonoscopies were caused by long, redundant colons (2 patients), and torturous colons with diverticuli and multiple fixed turns (2 patients).
- In all study patients the colonoscope with Vizballoon™ was easily advanced to the cecum (within 3.75-12 minutes) without any external pressure or change in patient position
- None of the study patients had any abdominal discomfort after colonoscopy.

CONCLUSIONS

- In patients with documented difficult colonic anatomy, use of the visualization balloon eliminates the need for gas insufflation during advancement to the cecum.
- Balloon assistance makes colonoscopy technically easier, faster, and increases the likelihood of successfully reaching the cecum without the application of external pressure or change in patient position.

DISCLOSURE

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