

A novel, on-demand overtube can be used to administer targeted fluid lavage and improve segmental bowel preparation.

Potential to reduce the need to cancel or reschedule colonoscopies

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Improving Suboptimal Bowel Prep in a Hydraulically Sealed Endoluminal Compartment Using a Novel On-Demand Overtube Device: An In-Vivo Animal Experience

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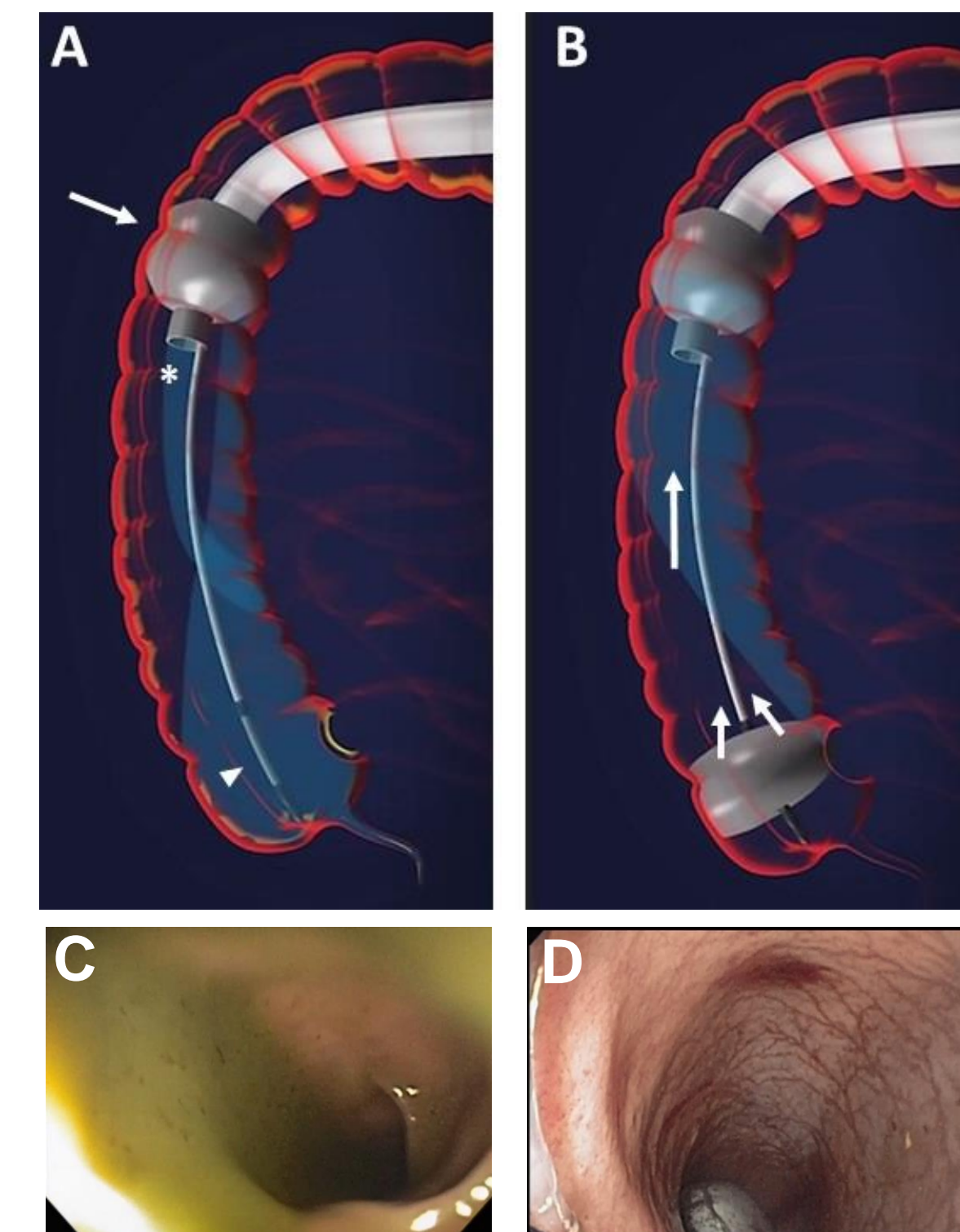
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INTRODUCTION

- Inadequate bowel preparation during colonoscopy results in increased cost and risk to the patient due to need for additional examinations, reduced diagnostic yield, and increased risk of subsequent colorectal cancer.
- A recently developed novel overtube (OT) device (IzoScope™, IzoMed Inc., Irvine, CA) can safely and efficiently seal a compartment of the colon and administer targeted fluid lavage (e.g., right colonic enema).
- The aim of this study was to describe the use of this device to address segmental suboptimal bowel preparation and improve visibility during colonoscopy.

METHODS

- Proof-of-concept study using a single domestic pig
- Right colon with poor bowel preparation (Fig C) intubated using a standard adult colonoscope
- Device deployed, consisting of a soft, flexible sheet that can be quickly wrapped around the colonoscope, creating on-demand OT without need for preloading or withdrawal.
- Balloon located over the end of the OT, behind the tip of the endoscope, inflated to create an anchor (Fig A, arrow). Second balloon extends to seal the end of the compartment (Fig B, arrowhead).
- Balloons used to create a sealed compartment in the right colon which maintained access for the OT after withdrawal of the colonoscope
- Fluid instilled through sealed compartment created by OT (Fig A, star), effectively performing a right colonic enema
- One liter of normal saline lavaged into the right colon, drained via gravity
- Catheter withdrawn to provide cleansing through a “squeegee”-like effect (Fig B, arrows)
- Bowel preparation markedly improved (Fig D)



CONCLUSION

- Novel, on-demand OT can be used during colonoscopy to optimize mucosal visualization in suboptimal bowel preparation
- Technology may potentially reduce the need to cancel or reschedule procedures when suboptimal preparation is encountered.
- Further studies in humans are needed

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