

Colon Capsule Endoscopy After Incomplete Colonoscopy: A Case Series

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Background

- Colonoscopy is the mainstay of colorectal cancer (CRC) screening in the United States, but is limited by incomplete exams in up to 13% of patients. This increases a patient's likelihood of developing interval CRC.
- A novel device, PillCam® COLON 2 Capsule Endoscopy System (PCC2), was recently cleared by the FDA for use after incomplete colonoscopy with adequate bowel preparation, which could assist patients with accessing adequate CRC screening.
- This is the first study assessing the use of PCC2 outside of the investigational setting in the United States.

Goals and Objectives

- Determine the utility of PCC2 after incomplete colonoscopy by assessing adverse events, diagnostic yield, change in management, and patient perspective.
- Provide practical information for private practitioners regarding the device's ability to improve access to complete CRC screening.

Methods

- Case series at a private practice gastroenterology clinic.
- Inclusion criteria: Patients with incomplete colonoscopy with adequate bowel preparation.
- The procedure ended when the capsule was excreted or when the battery was exhausted, whichever came first.
- Most patients were released home after PCC2 reached the small bowel; the data recorder was returned the subsequent day and the video was uploaded onto a designated workstation (RAPID8).
- The recorded capsule video was reviewed by one reader, with follow-up colonoscopy if the capsule was positive.
- Patients surveyed about the experience after the exam.

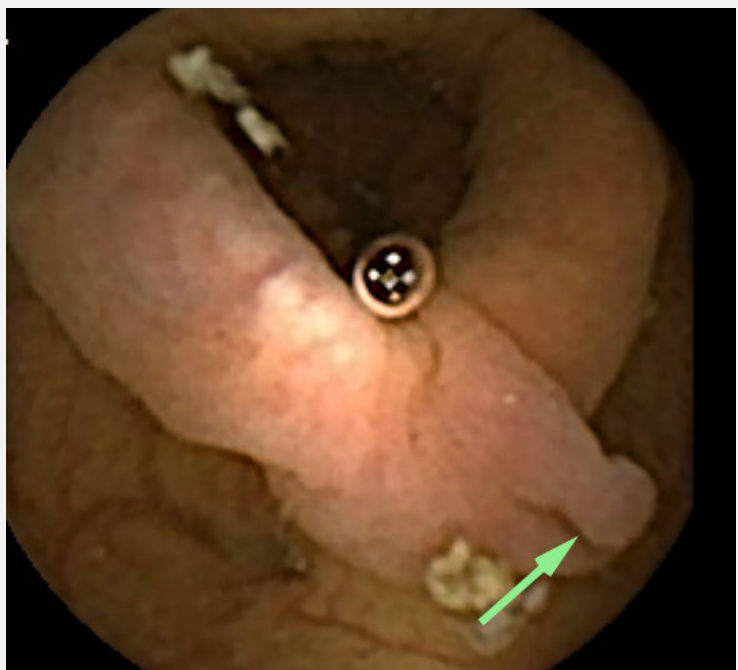
Bowel Preparation

Two Days Prior	Regimen
All Day	Drink ≥10 glasses of liquid
Bedtime	Four Senna tablets
Day Before PCC2	
Meals	Clear liquid diet
7:00pm – 9:00pm	2 liters sulfate-free PEG-ELS
PCC2 Procedure Day	
45-75 min before PPC2	2 liters sulfate-free PEG-ELS
+1 hr: prokinetic	Optional metoclopramide (required by 4/7 of patients)
SB detection: booster I	6 Oz SUPREP (required by 7/7 of patients [mandatory per protocol])
+3 hr: booster II	3 Oz SUPREP (required by 7/7 of patients)
+2 hr: suppository	10 mg bisacodyl (required by 3/7 of patients; 2/7 actually took it)
+2 hr: meal	Light meal (required by 2/7 of patients)

Patient	Gender	Age	PCC2 findings	Recommendations for patient following PCC2	Did PCC2 change patient management?	Other
1	M	69	Scattered diverticular disease/AVM	High fiber diet	No	
2	M	47	3mm TC sessile polyp/diverticular dz	Rpt colonoscopy for polyp removal	Yes	Status post rpt colon and polyp removal - tubular adenoma
3	F	83	5mm AC colon sessile polyp	Rpt colonoscopy for polyp removal vs. observation	Yes (Patient Refused)	Pt deferred repeat exam
4	M	69	Negative	Rpt exam in 5 years	No	
5	F	50	Negative	Rpt exam in 5 years	No	
6	F	78	11mm sessile TC polyp/incomplete CCE, however all mucosa visualized when combining OC and CCE	Rpt colonoscopy for polyp removal	Yes	Awaiting scheduling
7	F	52	3 mm AC sessile polyp	Rpt colonoscopy for polyp removal	Yes (Patient Refused)	Pt deferred repeat exam

Results

- Seven consecutive patients were enrolled after incomplete colonoscopy (mean age 64 years old, 57% female).
- Six of 7 patients (86%) were released home upon the capsule reaching the small bowel.
- PCC2 visualized the previously unseen colonic segment in 7/7 of patients (100%).
- PCC2 exam was complete for the entire colon in 86% (6/7).
- Average colonic transit time was 3.56 hours.
- Findings were identified in 5/7 patients (71%):
 - 1 diverticula, 1 non-bleeding angioectasia, and 4 sessile polyps (3-11 mm).
- A change in management as a result of the findings was suggested in 4/7 patients (57%).
 - Critical change recommended in 1/7 (14%).
- No adverse events.
- Six of 7 (86%) of patients were neutral to very positive regarding PCC2 and 6/7 (86%) reported being neutral to extremely likely regarding recommending it to family or friends.



Conclusions

- In the private practice setting, PCC2 is an effective tool for achieving colonic evaluation after incomplete colonoscopy.
- PCC2 changed management in a high proportion of patients, including one critical alteration.
- The technique was well tolerated by patients, who were generally satisfied with the exam and outcome.
- PCC2 has the potential to improve access to adequate CRC screening.

Disclosures

- Poster preparation support provided by Medtronic.
- Dr. Price is a full-time employee of Medtronic, the manufacturer of the PillCam® COLON 2 Capsule Endoscopy System (PCC2).