Clinical Guidance for Colon Capsule Endoscopy Services

HSE Acute Operations Endoscopy Programme

Version 1. February 2023

1. About this document

This document has been developed by the HSE Acute Operations Endoscopy Programme, with expert input from its National Capsule Clinical Advisory Group. The purpose of this document is to offer clinical guidance to new and existing colon capsule endoscopy (CCE) services.

The content of the guidance document and is not meant to replace clinical judgment or specialist consultation, but rather strengthen clinical management of patients undergoing CCE.

This guidance is applicable for capsule endoscopy procedures taking place in public hospitals.

This document is also available in Word format on request.

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2. Background to colon capsule endoscopy

Colonoscopy is considered the gold standard for examining the colon and detecting significant colonic pathology. CCE is a minimally invasive and safe method of visualising the colon and represents an alternative to standard colonoscopy.

Two systematic reviews and meta-analysis, one published in 2016 and one in 2021, have shown that the second-generation capsule has high sensitivity and specificity in the detection of advanced colonic lesions - polyps >10mm diameter and colorectal cancer.[1,2] The European Society of Gastrointestinal Endoscopy (ESGE) has recommended CCE as a safe alternative to colonoscopy in average risk individuals.[3] The ESGE and European Society of Gastrointestinal and Abdominal Radiology (ESGAR) have recently issued guidelines on imaging alternatives to standard colonoscopy.[4] The guidelines advise that CCE may be considered in patients with non-alarm symptoms and that CCE may be considered if colonoscopy is incomplete, preferably the same or the next day. The capsule endoscopy service in Tallaght University Hospital, led by Professor Deirdre McNamara has shown that CCE is a safe and effective alternative to colonoscopy in symptomatic average risk patients with or without the addition of biomarker screening.[5]

CCE is associated with a very low risk of adverse events, primarily capsule retention (<1%), patient discomfort (<1%) and incomplete examination in up to 20%.[6] A recent study by Ismail *et al* reported that CCE has a high satisfaction rating and a higher patient reported comfort rating than standard colonoscopy.[7]

3. Patient selection

CCE should be performed safely with the aim of achieving a high quality, complete colonic examination. Clinical triage and appropriate patient selection is key to ensuring a high quality CCE service. Good bowel preparation is vital to ensuring high quality CCE as, unlike colonoscopy, irrigation and suctioning are not possible during the procedure.

1.1 Appropriate indications for CCE

CCE should be considered in the following situations:

- Non-urgent symptomatic patients i.e. patients with the clinical prioritisation of 'routine'. As part of the consent process it is important to inform such patients that they may require a subsequent colonoscopy based on the CCE findings.
- Patients who have undergone an incomplete colonoscopy, ideally on the same day. It is vital to mark the point of insertion of the colonoscope during the incomplete colonoscopy with either a clip or tattoo.
- Patients who would be suitable to undergo a standard colonoscopy but have declined to do so. As part of the consent process, it is important to inform such patients that they may require a subsequent colonoscopy based on the CCE findings.
- CCE is an appropriate alternative to colonoscopy in high-risk patients i.e. patients with the clinical prioritisation of 'urgent', as a means of avoiding diagnostic delay where access times for colonoscopy do not meet expected standards
- CCE is an appropriate alternative for polyp surveillance when access to surveillance colonoscopy is prolonged.

1.2 Contraindications

CCE is not recommended in the situation where a standard colonoscopy is either contraindicated or not possible. CCE is contraindicated in the following clinical settings:

- Dysphagia
- Oesophageal stricture
- Pyloric stenosis
- Gastric band
- Risk of small bowel or colonic obstruction
    - Crohn's disease
    - Small bowel strictures
    - Small bowel or colonic anastomosis
    - Ileo-anal anastomosis
    - Abdomino-pelvic radiation
- Pregnancy
- Contraindication to any booster medication

In setting of regular daily NSAIDs use, consider a patency capsule trial before CCE.

1.3 Predictors of poor quality CCE examination

- Inability to comply with instructions
- Opiates, TCAs
- Chronic constipation
- Diabetes
- Cirrhosis
- Cognitive impairment
- CVA

2 Bowel preparation

It is recommended that all patients receive dietary instructions to facilitate bowel preparation for 48 hours before their study, in common with all colonoscopy procedures.

The following bowel preparation and booster protocol is recommended:[8]

- Two days prior to attending for CCE - four x 12 mg Senna tablets
- 19.00 evening before CCE - Moviprep (A&B)® with 1000ml water
- 07.00 morning of CCE - Moviprep (A&B)® with 1000ml water
- In the event of delayed gastric emptying, recorded as presence of capsule in the stomach 30 min post ingestion, give 10mg of metoclopramide IV if no contraindications. If this is unsuccessful give 250mg erythromycin IV.
- Booster regimen:
    - Booster 1 - Moviprep (A&B)® with 750 mL of water and 15 mL of castor oil on reaching the small bowel
    - Booster 2 - Moviprep (A&B)® with 250 mL of water 3 hr later
- Bisacodyl suppository (Dulcolax®) 10 mg after 8 hours, if the capsule was not excreted.

3 Incomplete studies

Incomplete CCE studies need a clinical review +/- imaging to determine whether the capsule has been retained and, if so, why. Patients who undergo an incomplete CCE study should have a clearly documented follow up plan. A repeat CCE can be considered where the bowel preparation was inadequate, or the imaging was inadequate, but the capsule transit was satisfactory.

4 Discharge and safety netting

Patients who have a negative CCE result can be considered for discharge to the referring source, where appropriate. In most cases, this will be discharge to primary care. Both the patient and their GP should be given clear information about what to do if they develop new symptoms or if their existing symptoms worsen. Some patients may require further clinical follow up (safety netting) either with their GP or in an outpatient clinic.

5 References

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