

Exploring the success and challenges of remote capsule endoscopy as a gastrointestinal investigation

M Villa, E Seward, J Willsmore, N Angadi, M Corpus, M Sesay, I Parisi

GI Division, University College London Hospital

Introduction:

Remote capsule endoscopy (RCE) has allowed patients to perform the test in the comfort of their own home via virtual assistance by the capsule endoscopy team. It was introduced during the COVID-19 pandemic and has been consistently performed since then due to patients' preferences and accessibility. This study evaluates the feasibility, efficacy and challenges of this approach to date.

Methods:

Patients referred for RCE were sent an informational video demonstrating in detail the steps expected to occur on the day. Patients with a BMI of ≥ 40 , procedure-related anxiety, lack of resources for virtual assistance, and any medical history posing capsule aspiration risk were excluded. Eligible patients who chose to proceed underwent a pre-assessment call by a Capsule Nurse. If no issues were identified, the equipment would be dispatched to the patient a day before. On the procedure day, a video consultation occurred where the patient swallowed the capsule in front of the nursing staff, with the belt and recorder collected by a courier the following day. Data on outcomes of all RCEs, including success, completion, and complication rates, were recorded.

Results:

A total of 244 patients underwent RCE between April 2021 and December 2023, 155 (64%) were females, median age was 38 years. Diagnostic modalities included small bowel capsule (SB) in 113 (46%), colon (CCE) in 73 (30%), and Pan-enteric capsule (PCC) in 58 cases (24%).

The majority of SB and PCC capsules (156, 91%) were swallowed for IBD suspicion or re-assessment of established IBD, while all CCEs were performed on the colorectal cancer 2ww pathway.

Among the 244 patients, no on-site conversions were necessary, indicating that all patients successfully wore the belt and recorder independently and completed the procedure remotely via a video call.

Bowel preparation was good in SB 92.1%, CCE 90.4%, PCC 93.1%.

Complete procedures were noted in SB 96.5%, CCE 89%, PCC 82.8%.

Two patients (0.8%) were not able to swallow the capsule, needing a subsequent capsule deployment. Notably, they were not identified during pre-assessment as patients confirmed no dysphagia, but importantly they would have both been abandoned even if the procedure was re-attempted on site.

Minor issues such as slow internet access and equipment delivery delays did not compromise the procedural efficacy.

Conclusion:

On a large cohort of almost 250 RCEs no conversion to on-site procedure was needed, and good outcomes in terms of completion and bowel prep success were recorded.