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Real-life practice data on colon capsule endoscopy

We need them fast!

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We read with interest the report on colon capsule endoscopy (CCE) in clinical practice: lessons from a national 5-year observational prospective cohort, by Benech et al. on behalf of the ONECC Study Group [1]. Real-life practice reports with long-term prospective follow-up, out of the scope of clinical trials, help establish a multifaceted evidence base and improve confidence in new approaches and modalities. Pending interim results of a big population-based Danish trial on CCE in colorectal cancer (CRC) screening [2], this study lays out some of the main reasons that prevent CCE from being the primary diagnostic test for the large bowel in cancer screening [3]. Interestingly, in a small, real-life, single-center cohort, using the same laxative-booster combination, we showed that even in younger patients (median age 56 years), CCE could achieve complete colonic examination in only 75% of cases [4].

In a recent meta-analysis, we demonstrated that low completeness and adequate cleanliness rates (ACRs) torment CCE irrespective of the clinical setting (observational vs randomized clinical trials) [5]. In the same meta-analysis, we established that although polyethylene glycol (PEG) laxative and sodium phosphate (NaP) booster were the most used, they were not associated with higher completion rates or ACRs. In a recent systematic review [6], the use of CCE appeared to be a safe and effective tool for detecting CRC and polyps in a CRC screening setting. Accuracy was comparable to colonoscopy and superior to computed colonography (CTC), making CCE a good alternative to colonoscopy in CRC screening programs, although completion rates require improvement. It is important to note that no significant complication related to CCE was reported in this paper, despite a selected population with many significant comorbidities.

Benech et al. provide a practical patient management algorithm, according to colon capsule endoscopy (CCE) results obtained from the ONECC cohort. This is on par with other published proposals [7] and the realistic medicine guidance suggested by the ScotCap clinical leads collaboration [8]. CCE studies are time-consuming to read and interpret, and human errors are bound to happen [9,10]. The application of artificial intelligence (AI) to CCE with deep learning convolutional neural network algorithms [11] could lead to automated polyp identification and/or characterization with improved sensitivity and reduced time demands by highlighting images with abnormalities for physician review. However, AI will only detect lesions that are already visible; therefore, future research should focus on improving bowel preparation to improve the cleanliness and completeness rate for CCE to the recommended minimum level of 90% for optical colonoscopy [12].

Competing interests

Dr. Koulaouzidis is co-founder of AJM Med-i-caps; co-director of iCERV Ltd; has received consultancy fees from Jinshan Ltd, received travel support from Jinshan Ltd, Aquilant, and DrFalkPharma; has received research support in the form of a grant from ESGE/ Given Imaging Ltd and in the form of material from IntroMedic/SynMed; and has received honoraria from DrFalkPharmaUK, Fer- ing, and Jinshan. He is a member of the advisory board for DrFalkPharma UK, Tillots, and ANKON.

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CORRECTION

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In the above-mentioned article the authors' names and affiliations were corrected. They are as follows:

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