



Title	Clinical Impact of Capsule Endoscopy in Obscure Gastrointestinal Bleeding. Systematic Review
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Aim

To analyze the current state of knowledge for assessing the diagnostic effectiveness and impact of capsule endoscopy on management and clinical outcomes of patients with obscure gastrointestinal bleeding. To analyze the clinical utility of capsule endoscopy if used as a first-line investigation tool, and to identify the subgroup of patients that could most benefit from capsule evaluation.

Conclusions and results

Capsule endoscopy (CE) shows a significantly greater diagnostic yield than other conventional procedures in diagnosing small bowel disease. The results suggest that CE might be superior to double balloon enteroscopy, but these studies obtained quality punctuations lower than 50%. Detection rates appear to be higher in patients with visible bleeding and in patients with more severe disease and longer symptomatology. The diagnostic yields seem to depend on the criteria used to classify subjects and present higher values when insignificant or suspicious lesions are included as positive results than when only relevant lesions are considered.

The real effectiveness of CE is unclear. The results on sensitivity, specificity, and positive and negative predictive values are heterogeneous (sensitivity, specificity, positive predictive value and negative predictive values ranged from 69%-100%, 48%-100%, 62%-100% and 78%-100%, respectively) and are based mainly on arbitrary classifications. The impact of CE on patient management and clinical outcomes is unknown. The results are heterogeneous and discrepant in some cases. The relevance of some of the lesions diagnosed has been questioned. Given the information available, it is not clear if CE should be used as a first-line diagnostic tool.

Recommendations

Consensus is needed on what constitutes a relevant and non-relevant lesion. It is difficult to assess the method and compare results since there are no clear and homogeneous criteria across studies.

Methods

The following databases were searched in the systematic review: MEDLINE (PubMed), EMBASE (SilverPlatter), ISI Current Contents and ISI WEB OF Knowledge, Cochrane Library Plus, NHS Centre for Reviews and Dissemination, IBECs (*Índice Bibliográfico Español en Ciencias de la Salud*) and IME (*Índice Médico Español*) from Dec 2005 to Nov 2006, and updated weekly until May 2007. The search included grey literature and a manual search of reference lists. Two independent investigators reviewed and selected the articles using predefined selection criteria. The information was synthesized in evidence tables and the quality of the original studies assessed, using two scales to evaluate: a) quality of original studies that assess effectiveness of CE versus other diagnostic methods and b) quality of studies that assess the impact of CE on patient management and clinical outcomes.

Further research/reviews required

Further randomized clinical trials are needed to determine the role of CE in the diagnostic algorithm and assess the value of CE versus other diagnostic techniques in terms of changes in clinical management and resolution of bleeding.