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Title **HTA Capsule Endoscopy**

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Reference Poelmans J, Hulstaert F, Huybrechts M, Ramaekers D. Capsule Endoscopie. January 2006. KCE reports 25 A. (D2006/10.273/01). www.kenniscentrum.fgov.be/documents/D20061027301.pdf

Aim

To evaluate the clinical efficacy and cost effectiveness of capsule endoscopy (CE) compared to other diagnostic modalities for different potential indications, eg, obscure gastrointestinal bleeding (OGIB), Crohn's disease (CD), intestinal polyposis, and Celiac disease.

Conclusions and results

Evidence of diagnostic accuracy is shown in diagnosing bleeding sources in patients with OGIB. The diagnostic yield of CE is generally higher compared to other diagnostic modalities, but patient selection bias is present in most studies. Limited data suggest that the yield of CE is highest in overt ongoing bleeding, intermediate in overt previous bleeding, and intermediate or low in occult bleeding. Capsule retention necessitating surgical or endoscopic removal occurred in 0.7% to 5.0% of the patients in a trial setting. CE failed to reach the cecum within the battery lifetime in 17% to 34% of the patients.

Studies in patients with suspected or established CD evaluated small and heterogeneous populations (CD and/or suspected CD, different previous investigations, different comparators, etc). Hence, the results cannot be generalized since it is unclear which patients would benefit from CE. Future studies should address potential fields of application and their significance. The problem of false positives should be resolved. A catalog with normal and pathological CE findings is essential. Capsule retention with CE is more likely in CD patients, even after a negative radiological evaluation. In such cases, unintended surgery may be required to remove the capsule. CE failed to reach the cecum within the battery lifetime in 17.5% of the patients. Hence, the terminal ileum, a critical segment for CD, was not visualized in these patients.

Recommendations

CE is recommended in patients with OGIB (when other previous investigations are negative). The most important risk in CE is capsule retention necessitating unintended surgical or endoscopic removal. Patients should be informed of this risk prior to CE. For reasons of volume and quality, CE in Belgium should be limited to a few centers only. The expected maximum budget for CE in Belgium for OGIB is estimated at 600 000 euros after 5 years.

The quantity and quality of evidence is insufficient to determine the relative diagnostic performance of CE compared with other conventional tests for diagnosing patients with CD, intestinal polyposis, and Celiac disease. No conclusions can be drawn as to whether CE is an effective alternative to other tests.

Methods

A systematic literature search on the clinical and cost effectiveness of CE is supplemented with information from experts. Levels of diagnostic accuracy were applied. Three external validators with international expertise on this issue validated the scientific report.

Further research/reviews required

Further research is warranted to determine the place of CE in managing OGIB and other potential indications, eg, CD, intestinal polyposis, and celiac disease.

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