

Capsule endoscopy was superior to push enteroscopy for identifying sources of obscure gastrointestinal bleeding

de Leusse A, Vahedi K, Edery J, et al. Capsule endoscopy or push enteroscopy for first-line exploration of obscure gastrointestinal bleeding? *Gastroenterology*. 2007;132:855-62.

Clinical impact ratings: Gastroenterology ★★★★★☆☆

QUESTION

In patients referred for obscure gastrointestinal bleeding, does capsule endoscopy (CE) have a higher diagnostic yield than push enteroscopy (PE) when used first?

METHODS

Design: Randomized controlled trial.

Allocation: Concealed.*

Blinding: Unblinded.*

Follow-up period: Median 12 months.

Setting: 2 clinical centers in Paris, France.

Patients: 89 patients who had overt bleeding within the previous 6 months or chronic (> 3 mo) iron-deficiency anemia (hemoglobin < 10 g/dL [6.2 mmol/L]) without obvious vaginal or rectal bleeding and had previous negative findings (including upper gastrointestinal endoscopy, colonoscopy, and small-bowel barium series or computed tomography enteroclysis).

Intervention: CE, and if negative, PE ($n = 47$); or PE, and if negative, CE ($n = 42$). 40 patients actually received CE first, and 38 patients received PE first (mean age 54 y, 62% men).

Outcomes: Diagnostic yield.

Patient follow-up: 80% completed 12-month follow-up.

MAIN RESULTS

A definitive source of bleeding was identified in more patients in the CE group than in the PE group (Table). Fewer lesions were missed by CE than by PE (Table). CE missed no lesions in the small bowel, whereas all missed lesions with PE were located in the small bowel. Patients who started with CE were less likely to require the second test than were patients who started with PE. Groups did not differ for rate of clinical remission at 1 year.

CONCLUSION

In patients referred for obscure gastrointestinal bleeding, first-line use of capsule endoscopy identified a definite bleeding source in more patients and missed fewer lesions than did first-line use of push enteroscopy.

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*See Glossary.

Capsule endoscopy vs push enteroscopy for first-line exploration of obscure gastrointestinal bleeding†

Outcomes at 12 months	Type of lesion	Capsule endoscopy	Push enteroscopy	RBI (95% CI)	NNT (CI)
Definite bleeding source identified	All	50%	24%	11% (14 to 310)	4 (3 to 21)
	Small-bowel	43%	11%	304% (61 to 977)	4 (2 to 8)
	Gastric	7.5%	11%	29% (-169 to 81)	Not significant
	Colonic	0%	2.6%	100% (-258 to 100)	Not significant
RRR (CI)					
Missed lesions	All	7.5%	26%	72% (13 to 91)	6 (3 to 43)
RBI (CI)					
Clinical remission at 1 year		70%	58%	20% (-14 to 73)	Not significant

†Abbreviations defined in Glossary. RRR, NNT, and CI calculated from data in article.

COMMENTARY

The study by de Leusse and colleagues is among the latest studies showing that CE is more accurate than other methods (PE, small-bowel radiography, and computed tomographic or standard angiography) at finding the source of bleeding in patients with obscure gastrointestinal bleeding. Although I have no problem accepting this conclusion, I believe that several issues should be considered before providers accept the primary role of CE in such patients. First, CE is time-consuming, expensive, and in some studies has been associated with "retained capsules" in a substantial number of patients. Second, all but 1 study (1) so far have failed to use a gold-standard comparator. Third, in many of the studies to date, lesions found by CE should have been found by careful standard upper and lower endoscopy. Fourth, most studies have not properly examined the clinical utility of finding a source of blood loss. In patients with occult obscure bleeding, no one has compared use of CE with use of small-bowel enteroclysis to rule out a small-bowel tumor and then simply placing the patient on iron supplementation.

In my view, only patients who then do not maintain an adequate blood count should undergo CE. Finally, CE is only a diagnostic test and cannot provide therapy. Double-balloon enteroscopy (2) provides a means of both diagnosing a bleeding lesion and treating it, if appropriate. CE is clearly a valuable technique to find obscure bleeding lesions; we just need to determine when it should be used.

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References

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