Review: prompt endoscopy is not a cost effective strategy for initial management of dyspepsia


In patients with dyspepsia, how cost effective is initial management with prompt endoscopy compared with a test and treat approach for inducing resolution of symptoms?

METHODS

Data sources: a randomised controlled trial (RCT) register established by the Dyspepsia Trials Collaborators’ Group supplemented by searches of the Cochrane database of RCTs and Medline (all up to December 2003).

Study selection and assessment: RCTs that compared a prompt endoscopy strategy with a test and treat approach for the initial management of dyspepsia in adults in primary care or on an on referral to secondary care, and reported relevant outcomes.

Outcomes: total dyspepsia symptom score, presence of dyspepsia, cost (in 2003 US dollars), and incremental net benefit at 12 months.

MAIN RESULTS

5 RCTs (n = 1924) (mean age 41 years, 50% men) met the selection criteria. Effects of the intervention on dyspepsia symptoms were pooled using meta-analysis of individual patient data. The groups did not differ for total dyspepsia symptom scores (table). However, fewer persons in the endoscopy group than in the test and treat group still had symptoms of dyspepsia at 12 months (table). Mean total cost per patient was greater in the endoscopy group than in the test and treat group (table). At a willingness to pay of $1000 per patient who is free of dyspepsia symptoms, the incremental net benefit was lower in the endoscopy group than in the test and treat group. Prompt endoscopy became cost effective only when the willingness to pay per patient who is symptom free was increased to $180 000.

CONCLUSION

In patients with dyspepsia, initial management with prompt endoscopy is slightly more effective but not cost effective compared with a test and treat approach for inducing resolution of symptoms.

Abstract and commentary also appear in ACP Journal Club.

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Initial management with prompt endoscopy v test and treat in patients with dyspepsia at 12 months*

<table>
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<tr>
<th>Outcomes</th>
<th>Standardised mean difference (95% CI)</th>
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<tr>
<td>Total dyspepsia symptom scores</td>
<td>-0.11 (-0.28 to 0.07)</td>
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<tr>
<td>Presence of symptoms</td>
<td>-0.03 (-0.1 to 0.04)</td>
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<tr>
<td>Additional cost/patient of prompt endoscopy (2003 US dollars)</td>
<td>389 (276 to 502)§</td>
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*RRR and CI defined in glossary.
†Significant difference favours prompt endoscopy.
‡Significant differences favour test and treat.

Commentary

The management of dyspepsia remains controversial although the most recent US guidelines continue to recommend H pylori test and treat over prompt endoscopy in patients without alarm features. Ford et al provide the first individual patient data meta-analysis of 5 management trials (2 of which remain unpublished in full). Using individual patient data removed the issue of heterogeneity that confounds the interpretation of many meta-analyses. The results robustly support a test and treat strategy in terms of cost effectiveness, even though the cost for endoscopy used in the model was low ($450). It seems that fewer endoscopies in the test and treat group and increased proton pump inhibitor consumption in the prompt endoscopy group may drive the cost differences. While willingness to pay for becoming free of dyspepsia is arguably an artificial construct, in terms of combining data this represents a clinically interpretable end point.

It is notable that the rate of symptom resolution was significantly greater in the endoscopy group than in the test and treat group, although the difference was small and arguably not clinically relevant. However, it is unclear why endoscopy should have any additional benefit. A weakness is that US cost data were applied, but none of the studies were done in the US.

The H pylori test and treat strategy was equally good in those with predominant epigastric pain or heartburn, suggesting that distinguishing management of dyspepsia from gastroesophageal reflux disease may be somewhat artificial. While this analysis cannot capture other dimensions of prompt endoscopy that may be of value, including reassurance to patient and physician, overall, test and treat should remain the standard of care for management of uninvestigated dyspepsia.

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