

Helicobacter pylori testing and endoscopy was less cost-effective than usual management for patients with dyspepsia

Delaney BC, Wilson S, Roalfe A, et al. Randomised controlled trial of *Helicobacter pylori* testing and endoscopy for dyspepsia in primary care. *BMJ*. 2001 Apr 14;322:898-901.

QUESTION

In patients who had had dyspepsia for > 4 weeks, are testing and endoscopy as cost-effective as usual management for dyspepsia?

DESIGN

Cost-effectiveness analysis from a health service perspective of a randomized (allocation concealed*), unblinded,* controlled trial with 18-month follow-up.

SETTING

31 primary care centers in the United Kingdom.

PATIENTS

478 patients (mean age 37 y, 57% men) who had had dyspepsia (epigastric pain or heartburn with or without nausea and bloating) for > 4 weeks. Exclusion criteria included patients who had had endoscopy or a positive result on barium meal examination in the past 3 years or were unable to give informed consent. 99% of patients completed the trial.

INTERVENTION

Patients were allocated to testing (Helisal test) and endoscopy ($n = 285$) or usual management ($n = 193$). Endoscopies on patients with positive results on the Helisal test were done according to usual practice at open-access services at 6 local hospitals. Patients

with negative results received empirical acid-suppressing drugs. Patients in the control group received the usual-management strategy used by their general practitioner.

MAIN COST AND OUTCOME MEASURES

Change in symptoms (Birmingham dyspepsia symptom score) and quality of life (measured in terms of pain, emotion, and social function by questionnaire) at 18 months were the main outcome measures. Costs associated with managing dyspepsia included attendance at accident and emergency departments, barium meal examination, testing for *Campylobacter*-like organisms, endoscopy, and *H. pylori* testing. Costs were estimated in British pounds.

MAIN RESULTS

In both trial groups, a reduction in symptoms and an increase in quality of life were

seen. The groups did not differ in the magnitude of improvement (Table). Mean total costs per patient were U.K. £368 for testing and endoscopy and £253 for usual management.

CONCLUSION

In patients who had had dyspepsia for > 4 weeks, testing and endoscopy were less cost-effective than usual management for dyspepsia.

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*See Glossary.

Testing and endoscopy (study group) vs usual management (control group) for dyspepsia

| Outcomes at 18 mo | Mean change from baseline | | Difference in mean change from baseline (95% CI) |
|-------------------|---------------------------|---------------|--|
| | Study group | Control group | |
| Symptoms | 3.8 | 3.5 | 0.3 (-0.9 to 1.5) |
| Quality of life | | | |
| Pain | 16.9 | 14.3 | 2.5 (-3.5 to 8.6) |
| Social | 9.6 | 10.3 | 0.7 (-3.9 to 5.2) |
| Emotion | 5.4 | 7.2 | 1.8 (-2.8 to 6.4) |

COMMENTARY

Management of dyspepsia in primary care remains controversial. Prompt upper endoscopy remains the "gold standard," but it is costly and has limited availability. Some guidelines (e.g., the British Society of Gastroenterology) have recommended noninvasive testing for *H. pylori* followed by endoscopy in those with infection to identify peptic ulcer disease and appropriately target therapy. The trial by Delaney and colleagues indicates, contrary to expectation, that this approach is not as cost-effective as usual management.

Increased costs in the testing-and-endoscopy group were driven primarily by endoscopy; the rate of endoscopy in the usual-treatment group was about half that in the study group, with similar outcomes. The efficacy of testing and endoscopy may have been diluted by contamination with patients who had gastroesophageal reflux disease and with the use of an office whole-blood serologic *H. pylori* test, which is less accurate. Indeed, although more ulcers were detected in the testing-and-endoscopy group (7% vs 2%), the rate was lower than expected (20% to 60%).

Lassen and colleagues (1) reported that noninvasive *H. pylori* testing followed by eradication treatment had an outcome similar to prompt

endoscopy, although endoscopy had a slight advantage in terms of satisfaction. Other data suggest that "test and treat" has the advantage of cost savings compared with endoscopy and is well accepted (2). Hence, test and treat is currently widely recommended. However, in younger populations in whom the background prevalence of *H. pylori* and peptic ulcer is relatively low, a short empiric trial of acid-suppression therapy (e.g., using a proton-pump inhibitor) may be the most cost-effective management approach because serious disease will rarely be masked. Head-to-head management trials are currently in progress to test this hypothesis.

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References

- Lassen AT, Pedersen FM, Bytzer P, et al. Helicobacter pylori test-and-eradicate versus prompt endoscopy for the management of dyspeptic patients: a randomised trial. *Lancet*. 2000;356:455-60.
- Delaney B, Moayyedi T, Deeks J, et al. The management of dyspepsia: a systematic review. *Health Technol Assess*. 2000;4:1-189.