Is therapy based on endoscopy results better than empiric therapy for dyspepsia?

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**Evidence-based Answer**

In the initial management of dyspepsia for patients without “alarm” symptoms (weight loss, recurrent vomiting, dysphagia, anemia, evidence of bleeding, onset of dyspepsia after age 45 years), therapy based on the results of early endoscopy was not better than empiric acid suppression (anti-secretory therapy) or a Helicobacter pylori “test and treat” strategy in reducing symptoms or improving quality of life (strength of recommendation [SOR]: A, based on a systematic review). Results from studies of patient satisfaction comparing early endoscopy with empiric medication therapy are conflicting (SOR: A, based on 2 randomized controlled trials [RCTs]).

Though formal cost analyses are not available, a strategy using “test and treat,” as opposed to early endoscopy, results in significantly fewer endoscopies, which when formally evaluated, may translate into a more cost-effective strategy of care (SOR: A, based on a systematic review). Long-term follow-up suggests that patients receiving “test and treat” therapy may require fewer antisecretory medication prescriptions compared with patients receiving early endoscopy (SOR: B, based on a single RCT).

**Clinical Commentary**

Test-and-treat for *H pylori* a reasonable first option

Guidelines for treating dyspepsia have to consider several factors: clinical outcomes, risk vs benefit to the patient, direct and indirect medical costs, and patient preference and satisfaction. This well-constructed review clearly demonstrates there is no significant difference in symptom control between early endoscopy and empiric acid suppression or testing and treating for *H pylori*. The evidence regarding 2 other outcomes—patient satisfaction and cost (especially if the indirect cost of sick days is considered)—is less clear.

In my experience, testing and treating for *H pylori* is a reasonable first option, which often avoids long courses of antisecretory therapy or costly endoscopy. I treat patients who are negative for *H pylori* with 8 weeks of acid suppression therapy, and refer those with persistent symptoms for endoscopy. I follow patients carefully and try to distinguish between symptoms of dyspepsia and reflux, which requires longer courses of acid suppression. For patients with alarm symptoms, I recommend early endoscopy.

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**Evidence summary**

Though individual studies have suggested that therapy based on endoscopy performed before any other study (early endoscopy) may be superior to empiric antisecretory therapy and as efficacious as a “test and treat” strategy in symptom relief, a Cochrane systematic review of 20 RCTs (11 in primary care settings) provides the best evidence on the role of early endoscopy.¹

A subgroup analysis of 5 RCTs, which compared early endoscopy with empiric antisecretory therapy (typically for 4 weeks), revealed that early endoscopy demonstrated a trend towards improvement in self-reported symptoms and in dyspepsia symptom relief scores, but the difference was not statistically significant (relative risk [RR]=0.89; 95% confidence interval [CI], 0.77–1.1). Because each study
used different symptom scores, the relative risk as calculated may under-represent the true benefit of early endoscopy when compared with empiric antisecretory therapy.

When patient satisfaction was evaluated, results were dependent on the location of care. In a primary care setting, patients undergoing early endoscopy were as satisfied as those receiving empiric antisecretory therapy. In a trial of 414 patients randomized after referral to specialty care, patients in the early endoscopy group were more satisfied with their medical care than those receiving empiric antisecretory therapy (RR=0.13; 95% CI, 0.06–0.29). Results from studies comparing the benefits of *H pylori* “test and treat” strategies to early endoscopy are conflicting. A subgroup analysis reported on 3 RCTs from both primary and secondary settings with 931 patients comparing *H pylori* “test and treat” to initial endoscopy. It found no significant difference in symptom reduction (RR=1.06; 95% CI, 0.98–1.26). A recent follow-up study of 1 of the trials included in the Cochrane systematic review reported on outcomes of a “test and treat” vs early endoscopy strategy at 6 years. There was no difference in days without symptoms demonstrated between the 2 groups (mean difference=0.05; 95% CI, −0.03 to 0.14 days). Self-reported symptom tracking and a poor response rate (62%) to patient questionnaires reduces the strength of this study’s conclusions.

Formal cost-effective analyses comparing the “test and treat” with early endoscopy strategy have not been done. A subgroup analysis of 4 trials from the Cochrane review (1 from primary care) demonstrated a significant reduction of the number of endoscopies among patients receiving “test and treat” care vs those receiving early endoscopy (RR=0.23; 95% CI, 0.12–0.44). In the long-term follow-up study, fewer antisecretory medication prescriptions were needed by those patients in the “test and treat” group (P=0.047). These figures are more robust; they were obtained from national registry data rather than personal recall and questionnaire submission.

**Recommendations from others**

Guidelines from the American Gastroenterological Association for the initial approach to young patients with dyspepsia without alarm symptoms is to first “test and treat” for those testing positive for *H pylori*, prescribe empiric antisecretory therapy for those testing negative, and proceed with endoscopy for recurrent or persistent dyspepsia at 4 to 8 weeks. The American Society for Gastrointestinal Endoscopy does not recommend any of initial endoscopy, empiric antisecretory therapy, or “test and treat” over another for the reduction of symptoms. The British Society of Gastroenterology recommends that initial management of dyspepsia consist of empiric acid suppression and *H pylori* testing. Persons testing positive for *H pylori* should undergo endoscopy. The Institute for Clinical Systems Improvement recommends nonurgent upper endoscopy for those aged 50 years and older with symptoms of uncomplicated dyspepsia. They recommend initial *H pylori* testing and treating those with positive results, and empiric proton pump inhibitor treatment for 4 weeks for those who are *H pylori*-negative.

**REFERENCES**