



The role of endoscopy in dyspepsia

This is one of a series of statements discussing the utilization of gastrointestinal endoscopy in common clinical situations. The Standards of Practice Committee of the American Society for Gastrointestinal Endoscopy prepared this text. In preparing this guideline, a MEDLINE literature search was performed, and additional references were obtained from the bibliographies of the identified articles and from recommendations of expert consultants. When little or no data exist from well-designed prospective trials, emphasis is given to results from large series and reports from recognized experts.

Guidelines for appropriate utilization of endoscopy are based on a critical review of the available data and expert consensus. Further controlled clinical studies are needed to clarify aspects of this statement, and revision may be necessary as new data appear. Clinical consideration may justify a course of action at variance to these recommendations.

INTRODUCTION

This statement defines the role of upper endoscopy in the diagnostic evaluation and management of patients with dyspepsia.

Dyspepsia is defined as a constellation of symptoms that include upper abdominal pain or discomfort, which is intermittent or constant and may be associated with additional symptoms of nausea and vomiting.¹ Although these symptoms may be associated with a wide range of specific clinical diagnoses (peptic ulcer disease [PUD], gastric cancer, and gastroesophageal reflux [GERD], among others), often no organic cause can be found (functional dyspepsia).² High-risk patients (as defined below) present with additional signs and symptoms, so-called "alarm symptoms," suggestive of more significant organic causes. In the absence of such "alarm symptoms," provisional diagnoses based on history and physical examination alone are often inaccurate, leading to inappropriate management plans and/or a delay in establishing the correct diagnosis.² Endoscopic examination of the upper GI tract remains the "gold standard" for establishing (or excluding) PUD and other specific organic diseases or upper gastrointestinal (UGI) pathologies. Endoscopy is the procedure of choice for the diagnostic evaluation of the UGI tract because of its ease, reliability, diagnostic superiority, and the abil-

ity it gives the endoscopist to perform biopsies and/or therapeutic interventions. This is especially true for patients presenting with dyspepsia and patients who are at high risk based on the presence of additional symptoms, physical signs, or both. These high-risk patients include the following:

1. Patients over 50 years old with new-onset dyspepsia
2. Those with dyspepsia associated with dysphasia and/or weight loss
3. Those with evidence of gastrointestinal bleeding (occult blood, anemia, hematemesis, and/or hematochezia/melena)
4. Those who have not responded to an appropriate trial of empiric therapy
5. Those patients using NSAIDs or other ulcerogenic agents
6. Those with signs or symptoms of UGI tract obstruction (e.g., early satiety, vomiting)
7. Those whose ethnic and/or racial background is associated with increased risk for UGI malignancies or other significant disease states

In the absence of these high-risk signs and symptoms, alternative nonendoscopic strategies for initial management of patients with dyspeptic symptoms have been advocated by some.^{1,3-15} However, based on marginal (if any) medical benefit, long-term cost-effectiveness has not been established. These strategies include (1) empiric therapy with acid suppression or prokinetic agents, or (2) an empiric *Helicobacter pylori* "testing and treating" strategy. Based on current evidence, no single strategy, including early endoscopy, has been demonstrated to be more medically effective than any other. There is uncertainty about the rates of clinical improvement (effectiveness) with nonendoscopic management (empiric treatment). It is equally unclear how many patients will ultimately need/undergo endoscopy to evaluate empiric treatment failures or relapse. Because these rates have a large impact on economic and patient quality-of-life outcomes, there remains uncertainty in their net benefit.^{1,12-14}

Whether *Helicobacter pylori* plays a causative role in dyspepsia (and nonulcer dyspepsia) remains controversial.^{1,3-12,14,16-19} Many patients with new-onset dyspepsia as an isolated symptom (epigastric

Dyspepsia

Alarm Symptoms/Risk Factors

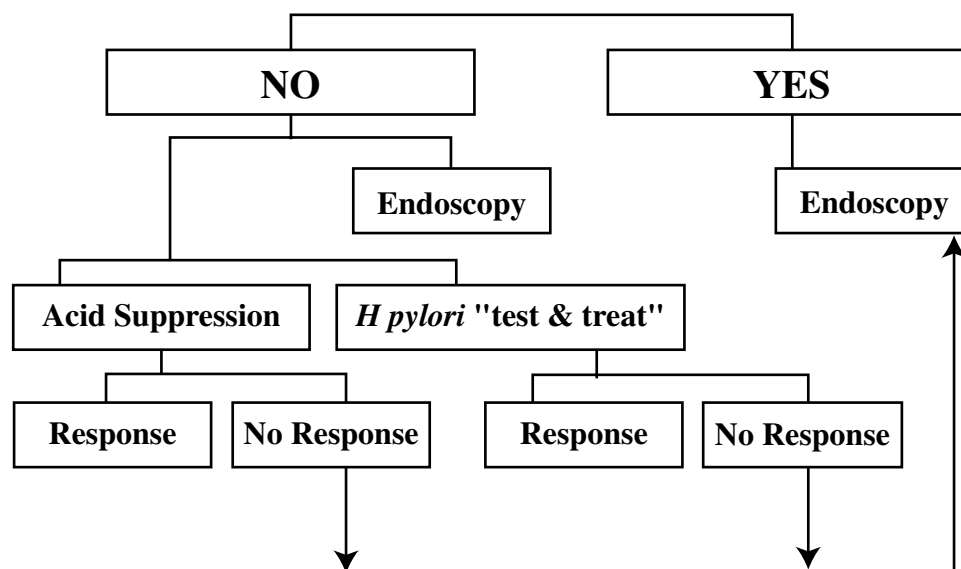


Figure 1. Alarm symptoms and risk factors for dyspepsia.

pain/discomfort without weight loss, evidence of gross or occult bleeding, obstruction, perforation, or associated multisystem disease) may be treated empirically for *H pylori* based on a positive test result for *H pylori*. This is more commonly accepted for younger individuals (e.g., <45-50 years old).^{3,12} However, for patients >50 years old or any patients with the risk factors listed above, endoscopy should be the first-line approach. It is important to recognize that these guidelines for *H pylori* "test and treat" must remain fluid and that certain populations are at higher risk for *H pylori*-associated PUD and/or gastric cancer.^{1,20} As such, patients at higher risk of PUD or UGI malignancies based on ethnic, racial, or socioeconomic status may prompt an endoscopy as a first-line intervention to confirm/exclude the diagnosis and to institute definitive and directed therapies.

In the absence of high-risk factors, empiric therapy may include either a "test and treat" strategy for *Helicobacter pylori* or alternatively an empiric trial of acid-suppressive agents and/or prokinetic agents for 4 to 8 weeks.^{1,8,15} Offending agents (e.g., NSAIDs, other ulcerogenic medications, cigarettes, and alcohol) should also be withdrawn. Implied in either empiric strategy is that a diagnostic endoscopy will be performed if there is a failure to alleviate symptoms because a definitive diagnosis has not yet been established in these subjects with persistent or recurrent symptoms (Fig 1). Endoscopy is indicated for those patients who have no response to

empiric acid suppression, those in whom symptoms progress during therapy, and those in whom symptoms recur after therapy is completed.

Whether endoscopy is used as an initial strategy or is performed after failure of empiric therapy, it remains controversial whether *H pylori* testing should be obtained. If biopsy specimens are obtained and are positive, *H pylori* should be treated. However, it is unclear whether *H pylori* treatment will result in symptomatic improvement of these patients with nonulcer dyspepsia.¹⁶⁻¹⁹

UGI barium studies are not recommended in the evaluation of high-risk or low-risk patients with dyspepsia. Endoscopy is superior to UGI barium studies in light of its greater sensitivity/specificity and because biopsy specimens can be obtained or endoscopic therapy can be delivered if required.^{21,22} Most abnormal or equivocal findings on barium studies require upper endoscopic evaluation. Patients at high risk with negative barium UGI examinations may still benefit from endoscopy.^{23,24}

Gastric ulcers visualized on endoscopy should be adequately biopsied to exclude malignancy because gross endoscopic appearance of gastric ulcers is not sufficient to exclude malignancy.^{18,19}

If a UGI series shows a discrete crater in the duodenum as the only lesion, endoscopy is not usually indicated. However, if the clinical response to proper medical therapy is not prompt and sustained, endoscopy can help establish or exclude other possible conditions.

Biopsy of a duodenal ulcer is not routinely indicated, and endoscopy has no role in the usual follow-up of uncomplicated duodenal ulcer.

SUMMARY

The controversy regarding the medical, economic, and quality-of-life risks and benefits comparing early (initial) endoscopy versus empiric medical management for patients presenting with dyspeptic symptoms continues despite multiple studies. Unfortunately the effectiveness of any single strategy has not yet been reproducibly proven in a randomized prospective, blinded clinical trial.

Endoscopy remains the "gold standard" because of its diagnostic superiority and improved patient satisfaction in excluding organic lesions as a cause of the presenting symptoms.

As seen in Figure 1, a suggested algorithm is presented:

- Patients with alarm symptoms should undergo prompt endoscopy.
- In the absence of alarm symptoms, endoscopy or medical management may be considered.
- In the absence of risk factors, the superiority of initial medical management versus endoscopy has not been established.
- Regardless of which medical management approach is taken, the lack of response or the recurrence of symptoms warrants endoscopic evaluation.

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