

## EDITORIAL

# Endoscopy in GERD: Boondoggle, Diagnostic Test, or Risk Management Tool?

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The role of endoscopy in reflux disease is debated. Diagnostic certainty is attractive to patients and physicians, to affirm health and to ensure the absence of serious disease, but it is expensive and the majority of patients will have no endoscopic abnormalities. Empirical treatment with acid suppression in patients with symptoms of gastroesophageal reflux disease (GERD) is now widely practiced in primary care in many countries but in others, endoscopy is mandatory to receive approval from the payors for proton pump inhibitor therapy. In patients with dysphagia, endoscopy has a role in ruling out an obstructing lesion. A "once-in-a-lifetime" endoscopy has been proposed as a way to improve our ability to diagnose Barrett's esophagus, but cost-models suggest that this strategy is not cost-effective if current surveillance guidelines are followed after the diagnosis of Barrett's esophagus is made. The role of routine endoscopic examination in GERD is therefore questionable and needs better definition in carefully designed trials.

(Am J Gastroenterol 2008;103:276-278)

*If we can "boondoggle" ourselves out of this depression, that word is going to be enshrined in the hearts of the American people for years to come.*

FD Roosevelt

## INTRODUCTION

Gastroesophageal reflux disease (GERD) has been defined by a recent consensus group as a condition that develops when the reflux of stomach contents causes troublesome symptoms and/or complications (1). Ten to eighteen percent of U.S. and European adults report heartburn on a daily basis and 40% of the general population has symptoms at least once a month (2, 3). Endoscopic studies in large cohorts of patients with reflux symptoms in primary care have shown that the majority have no abnormalities at endoscopy (4-6). What are the possible benefits of endoscopy in a patient presenting with uncomplicated GERD symptoms? It may help define disease severity, determine if Barrett's esophagus is present, and identify other lesions in the upper gastrointestinal tract. In some countries, endoscopy is used as a technique to determine if patients qualify for proton pump inhibitor therapy. Patients with endoscopic evidence of reflux esophagitis are deemed eligible and patients with nonerosive disease are not. This irrational approach is based on outdated concepts that do not recognize that most patients presenting with heartburn have moderate-to-severe symptoms and that symptom severity correlates poorly with the severity of mucosal diseases (5, 7). Patients present with symptoms, and impairments in their quality of life are determined by symptoms and not by endo-

scopic findings. With the availability of potent acid inhibitors that have high healing rates in all grades of esophagitis, defining the severity of esophagitis may not be a very helpful exercise and a strategy of treating instead of testing in patients with uncomplicated GERD has been proposed (8, 9).

In this issue of the *Journal*, Giannini *et al.* report a randomized, controlled trial that compares a strategy of endoscopy and subsequent therapy determined by the findings with an empirical treatment strategy using a proton pump inhibitor in patients with reflux symptoms without alarm features such as dysphagia and bleeding (10). They demonstrate that empirical therapy costs less than an endoscopy-based strategy and results in similar clinical outcomes (symptom response and improvement in quality of life). The measured cost saving in this study is likely to be an underestimate, as other costs related to endoscopy were not measured. These include the expense of travel to the endoscopy center and the economic cost of the time lost from work for the patient and for the individual accompanying the patient.

## ONCE-IN-A-LIFETIME ENDOSCOPY IN GERD

The incidence of esophageal adenocarcinoma is growing in many developed countries. The highest incidence of esophageal adenocarcinoma is in Great Britain and Australia followed by the United States and Denmark (11). The largest increase in incidence in recent years has been in southern Europe with an estimated 30% increase in annual incidence. Chronic reflux disease is a major risk factor for esophageal adenocarcinoma and is strongly associated with chronic reflux disease, but screening for Barrett's esophagus or

adenocarcinoma is controversial and unlikely to be cost-effective (12, 13). It has been suggested that patients with chronic reflux disease should undergo a one-time endoscopy to determine if they have Barrett's esophagus (once-in-a-lifetime endoscopy).

We evaluated the cost-effectiveness of a strategy of screening patients with chronic reflux disease for Barrett's esophagus and then entering them in a surveillance program. Screening in a 50-yr-old white man with chronic reflux disease is cost-effective but only if subsequent surveillance is reserved for individuals with dysplasia at the initial evaluation (14). If the current strategy of performing endoscopy every 2–3 yr were adopted in patients with Barrett's esophagus identified in a once-in-a-lifetime endoscopy program, the costs would be large and would exceed the current thresholds for a cost-effective intervention in health care (\$50,000/life-year saved). Due to the lower rates of adenocarcinoma in women, a screening strategy of this kind is even more expensive in women.

#### **Diagnostic Certainty and Patient Anxiety**

Patients and doctors value diagnostic certainty, and so endoscopy may be helpful in helping physicians and patients feel secure about the diagnosis and the absence of other serious disorders. In the absence of alarm features, the likelihood of finding a serious disorder is small (15). Even when alarm features are present, serious disorders are rarely found (16). Relief of patient anxiety is another often-cited reason for performing endoscopy in this setting. Although the data are limited, some studies suggest that endoscopy decreases preoccupation with health and fear of illness and death in patients with severe anxiety, and that the effects persist for 6 months (17). In the United States, dyspepsia (with and without reflux symptoms) is the indication for endoscopy in a substantial number of patients. In a study of 99,558 patients undergoing endoscopy in routine clinical practice and captured in a national data repository, dyspepsia (with and without reflux symptoms) was the indication for 43% of upper endoscopies. Of these, one-third were younger than 50 yr of age and had no alarm symptoms, a group in whom few if any abnormalities are found at endoscopy.

The role of endoscopy in GERD is still based on outdated concepts in many countries. Denying certain categories of acid inhibitory agents to patients who are symptomatic but have normal endoscopic evaluations is illogical and is not supported by evidence. There is weak evidence that endoscopy relieves anxiety related to dyspeptic symptoms in a subgroup of patients. There is no clinical evidence for a once-in-a-lifetime endoscopy and cost-models do not suggest that this strategy will be cost-effective unless we develop better tools to identify patients with Barrett's esophagus who are at risk for the development of cancer. As cost constraints increase, the need to justify every endoscopic procedure will be felt by all endoscopists. The study by Gian-

nini *et al.* suggests that the role of upper endoscopy needs reappraisal.

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*Received September 15, 2007; accepted September 18, 2007.*

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**CONFLICT OF INTEREST**

**Guarantor of the article:** Nimish Vakil, M.D.

**Financial support:** Consultant for Astra-Zeneca, Orexo, Novartis, Shire, TAP, Proctor and Gamble, XenoPort, Ortho-MacNeil; Speaker's Bureau for Novartis, Takeda, Astra-Zeneca, TAP, XenoPort, AGI; Gravit/Research support from Astra-Zeneca, Novartis, Boston-Scientific, Medtronic, Altana; Stock shareholder of Orexo.

**Potential competing interests:** None.

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