

# Management of Gastroesophageal Reflux Disease: The Primary Care Strategy

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*Gastroesophageal reflux disease (GERD) is a common problem in the community and in general practice. General practitioners and family physicians need to understand patients' reasons for consultation and also be aware of alarm symptoms suggestive of serious disease. A primary care management strategy for GERD is proposed, in which the place of endoscopic and other investigations is defined, the role of lifestyle modification discussed, and recommendations for longer-term therapy and management are made.*

## INTRODUCTION

Most medical contacts take place in general practice and primary care, and most management decisions about gastroesophageal reflux disease (GERD) and reflux-like dyspepsia are taken in the community and in primary care physicians' offices. A primary care management strategy for GERD needs to pay attention to the epidemiological background, including the frequency and distribution of reflux-like symptoms in the community, to the distinctive characteristics of patients presenting in primary care for the first time with reflux symptoms, to the need to make timely, cost-effective diagnostic and

management decisions, avoiding unnecessary investigation and referral whenever possible, and to the challenge of providing long-term effective control of symptoms and esophageal damage that is both patient-centered and evidence-based.

## REFLUX SYMPTOMS IN THE COMMUNITY

Dyspeptic symptoms of all kinds are very common in the general population. In the United Kingdom the six-month prevalence of dyspepsia in the adult population is in the region of 40 percent [1], and comparable figures have been obtained from

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<sup>b</sup>Abbreviations: GERD, gastroesophageal reflux disease; PPI, proton pump inhibitors.

studies in North America, notably from Talley's group at the Mayo Clinic [2]. The most recent study, specifically measuring the prevalence of heartburn and reflux-like symptoms in the community [3], confirms a population prevalence in the region of 40 percent.

There is considerable overlap, demonstrated in the first two of these studies, between ulcer-like and reflux-like symptoms, with 56 percent of the British patients experiencing these symptoms on the same or on different occasions. Talley's group has also pointed out the considerable symptomatic overlap between upper and lower gastrointestinal symptoms in the community. The prevalence of symptoms tends to fall with increasing age, and symptom prevalence is approximately equal in the sexes.

Self-care is the rule for the management of dyspepsia and heartburn; only about 25 percent of these patients ever consult a general practitioner [1], so that the majority of people with upper abdominal complaints take care of them without entering formal medical care. Two studies documenting the natural history of dyspeptic symptoms suggest that non-consulting patients tend to continue not to consult over significant periods of time [4, 5].

## **PRESENTATION IN PRIMARY CARE**

What are the factors that turn people into patients? A detailed study of 66 consulting and 69 non-consulting patients with dyspepsia, identified from a community survey, provide some evidence about this [6]. There is certainly an increasing tendency to consult with advancing age, so that the majority of dyspeptic elderly patients identified in the community will have seen a doctor about their problems. Consultation is approximately equal between the sexes. Symptom frequency and symptom severity are poor predictors of the likelihood of consultation; there is a

weak effect related to the experience of recent threatening or disruptive life events, but the main factors accounting for the variance between consulting and non-consulting have more to do with patients' beliefs and concerns. Almost 75 percent of patients consulting with dyspepsia are worried that their symptoms may represent something serious or potentially fatal, up to 50 percent have concerns about cancer, either a general worry about having cancer or a specific anxiety about gastrointestinal cancer, and approaching 75 percent, particularly those with reflux-like symptoms, have concerns about heart disease.

This means that patients present in primary care not only with diffusely-formed symptom complexes, but also with considerable and often inappropriate anxieties about the significance of their symptoms. Many will have already tried over-the-counter medication and may be impelled to consult more by a desire to obtain symptom relief than a need for reassurance. A substantial number of patients will, however, be harboring concerns about potential serious causes of their symptoms, and addressing these clearly forms an important part of initial management in primary care.

## **DIAGNOSIS AND EARLY MANAGEMENT**

The task of the generalist is to marginalize danger, while that of the specialist is to marginalize uncertainty. In other words, the first task of a general practitioner or family physician, confronted with a patient with ill-defined symptoms, is to make a timely determination of whether these symptoms represent a potentially serious problem for which urgent intervention is required. It is important to remember that only a minority of patients presenting in primary care will have serious disease; while upper gastrointestinal problems account for 4 to 5 percent of the work of a general practitioner

**Table 1. Diagnosis and early management.**

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- Alarm symptoms are important; in the presence of alarm symptoms, including new symptoms in patients aged over 45, investigation should be undertaken without delay.
  - Predominant presenting symptoms need to be considered carefully, and the predominant symptom used to guide clinical diagnosis.
  - Patients' concerns about the meaning of symptoms and the impact of symptoms on their quality of life may be just as important as the macroscopic severity of oesophagitis.
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in the United Kingdom [7], new cases of duodenal ulcer disease account for less than 5 percent of patients with persistent dyspeptic symptoms and a GP is likely to see a new case of upper gastrointestinal cancer only twice in every three years.

Accordingly, primary care physicians need to adopt a system of triage, in order to separate the majority of patients with self-limiting conditions which can be treated without urgency, from the minority with potentially serious disease. In order to do this, a number of tactics are employed.

First, the concept of "alarm symptoms" is well accepted; patients with new dyspeptic or reflux symptoms coming on over the age of 45 years, those with pain or difficulty in swallowing, weight loss, early satiety, evidence of anemia or other systemic illness, should all be regarded as having potentially serious diseases such as esophageal stricture, ulcer, or cancer and investigated, by referral or investigation as appropriate, as swiftly as possible. Indeed, the presence of alarm symptoms mandates speedy and definitive diagnosis.

Second, the predominant presenting symptoms need to be considered carefully, and consideration given to the possibility of making an accurate clinical diagnosis. This is problematic in upper gastrointestinal conditions, and although the positive and negative predictive values of reflux symptoms for a final diagnosis of gastroesophageal reflux disease are rather better than those for duodenal ulcer disease, they are still relatively poor. For example, even when heartburn and acid regurgitation

clearly dominate the patients' presenting complaints, these symptoms possess high specificity (89 percent and 95 percent respectively), but much lower sensitivity (38 percent and 6 percent) for a final diagnosis of GERD. In one study, [8] one-third of the patients reported such inconclusive symptomatology at history taking that no preliminary diagnosis about the presence or absence of GERD could be made. In the remaining patients a clinical diagnosis based on a detailed history taken by an experienced gastroenterologist had a sensitivity of 78 percent and a specificity of 60 percent. Given the relatively low sensitivity and specificity of endoscopy for a definitive final diagnosis of GERD, this raises considerable problems in making an accurate clinical diagnosis.

There has been some optimism that the administration of a short course of effective doses of anti-secretory medication might offer an accurate diagnostic test for the presence of GERD, or at least of acid-related upper abdominal symptoms. There is some evidence that this is a realistic objective. For example, Schindlbeck and colleagues reported a study of an "omeprazole test" in which omeprazole 40 mg twice daily was administered to patients with symptoms suggestive of GERD. When a 75 percent reduction in symptom severity was defined as positive, this test had a sensitivity of 83.3 percent (compared with a much lower sensitivity of only 27 percent when a dosage of 40 mg daily was employed). They concluded that the diagnosis of gastroesophageal reflux

disease can, in practice, be ruled out if symptoms do not improve with a limited course of high-dose proton pump inhibition [9].

Third, the effect of the patients' symptoms, irrespective of their likely pathogenesis, needs to be considered. If patients are finding that their symptoms significantly impair activities of daily living or if they have anxieties about the possibilities of serious disease, investigation may be planned earlier. There is evidence from a number of studies that consultation and prescription rates fall following a negative upper GI endoscopy in patients with upper abdominal complaints, and the effect of appropriate investigation should not be underestimated. However, physicians also have a responsibility to deal directly with patients concerns; a sympathetically-taken history, followed by an appropriate and

careful physical examination, may do much to assure patients both that they are being listened to and that their fears may be ungrounded.

Early management in primary care is currently controversial. There are two linked problems; one is an over-emphasis on pharmacological treatment for GERD and the other continuing uncertainty about the practicality and value of so-called "lifestyle modification" as a therapeutic modality. The literature relating to lifestyle changes (weight loss, dietary modification, smoking cessation, relaxation, exercise, etc.) is patchy and inconclusive. Although most reviews and guidelines relating to the management of GERD pay at least lip service to lifestyle modification, the number of carefully-controlled studies on the effects of lifestyle modification and the likely feasibility of effecting

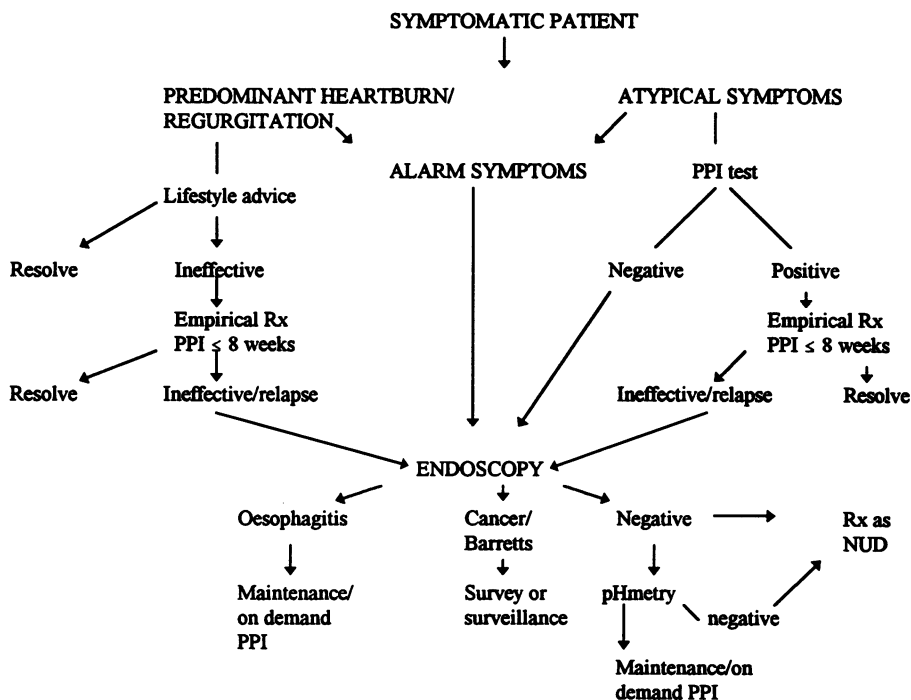


Figure 1. A primary care management strategy.

modification in primary care is very few. Dent [10] has emphasized that the relief afforded by modern anti-secretory drugs is seldom achieved by traditional non-drug measures. There is evidence too that physicians infrequently recommend lifestyle modifications in GERD; a recent survey from Virginia [11] reported that less than half of a sample of patients with GERD were given consistent and appropriate lifestyle advice. Older patients were even less likely to receive appropriate guidance, although lifestyle modifications were more consistently suggested for obese patients and heavy smokers. Given the high costs of anti-secretory drugs and of the endoscopic examination of patients with upper abdominal complaints, more research is clearly needed to determine the most cost-effective way of making an early and accurate diagnosis and to establish the precise place of lifestyle advice and modification in the early management of patients with GERD.

## **A PRIMARY CARE MANAGEMENT STRATEGY**

Despite these reservations and gaps in evidence, it is possible to provide some guidance on the management of GERD in primary care, and a primary care management strategy is outlined in the accompanying figure (Figure 1).

Patients with predominant heartburn and regurgitation, i.e., with typical symptoms and without alarm symptoms should initially be managed by careful explanation of the likely cause of their symptoms and lifestyle advice where appropriate. If this approach, together with over-the-counter or prescription antacids, results in symptom resolution, patients should be encouraged to self-manage and self-medicate in the future.

If, however, lifestyle advice and simple measures are ineffective — and many patients consulting family physicians will already have tried some of these strategies — empirical therapy (i.e., before evidence

has been obtained at endoscopy) with a proton pump inhibitor (PPI) at standard dosage for up to eight weeks can be employed. If this results in resolution of symptoms, there is no need for further investigation at this stage, but if this approach is ineffective or symptoms relapse rapidly, endoscopy is indicated. The endoscopic findings require careful consideration. Microscopic esophagitis is likely to require either on-demand or maintenance therapy, generally with a PPI, although in some patients a “step down” approach to a less expensive form of therapy may be feasible. Clearly patients with cancer, or Barratt’s esophagus need to be referred for specialist management, involving surgery and/or regular endoscopic surveillance.

Patients with typical GERD symptoms, but in whom endoscopy is negative, represent a particular problem. As many as 40 percent of patients with significant GERD will have normal endoscopies, and so negative findings at initial endoscopy do not exclude the diagnosis of GERD. The role of pH monitoring, however, remains controversial. There are issues of access and cost for many primary care physicians, and also of interpretation. It is probably most appropriate to discuss individual cases with an experienced gastroenterologist before embarking on further investigations of this kind.

A further subgroup of patients with typical GERD symptoms can emerge, namely those with negative endoscopy and negative pH-metry. These are best treated as non-ulcer dyspepsia, using the range of drugs currently employed for this condition, including prokinetic agents.

Patients with atypical symptoms and without alarm symptoms can often be usefully investigated with a therapeutic trial of anti-secretory drug, preferably a PPI. Patients in whom a PPI test is negative, but in whom GERD is still a likely diagnosis, should be referred for endoscopy; those in whom the PPI test is positive can reasonably be treated with empirical anti-secretory therapy with a PPI for up to eight

weeks, and will then follow the same algorithmic pathway as patients in the "typical" category.

The role of *Helicobacter pylori* and the place of *Helicobacter* eradication in GERD remains controversial. It has been suggested that patients infected with *H. pylori* who take long-term PPIs are more likely to develop accelerated gastric atrophy, making prophylactic eradication of *H. pylori* in this group desirable. However, an alternative view is that because *Helicobacter* infection is so common, it is generally unlikely to lead to harm, making eradication unnecessary. Further information on this point is required before a definitive recommendation can be made.

## LONG-TERM MANAGEMENT

The overall aim of the long-term management of patients with GERD in primary care is to ensure that patients' symptoms are controlled as fully as possible, and that their risk of complications is minimized, and also that this is achieved in a cost-effective way. In order to achieve these goals, a number of questions remain to be answered before a primary care strategy for the long-term management of GERD can be agreed upon:

1. The relative merits and disadvantages of "step down" and "step up" approaches to acid suppression. In other words is it most appropriate to begin treatment with high-dose anti-secretory therapy and to reduce the dose to the lowest level compatible with suppression of symptoms, or is it more appropriate, as traditionally recommended, to begin with simple anti-acid medication and to increase the dose until control of symptoms is achieved? There is clinical and computer modeling evidence that the former approach is more likely to be cost-effective, although the findings of this

modeling exercise require confirmation in a clinical trial [12, 13].

2. Should the long-term management of GERD be exclusively symptom-led, or does endoscopy have a role in management? Given the mismatch between clinical symptoms and the endoscopic findings, it might be argued that the risk of complications (stricture formation, Barrett's esophagus, and cancer) could be reduced if patients with unhealed erosive lesions were identified and more appropriately treated.

3. The role of anti-reflux surgery, particularly techniques involving minimally invasive approaches, needs to be clarified. It is likely that many primary care physicians regard anti-reflux surgery as a procedure that should be reserved for those who fail to respond to drug therapy. However, there is accumulating evidence that anti-reflux surgery represents a clinically appropriate and cost-effective alternative to long-term antisecretory therapy [14].

In conclusion, while it is possible to sketch out a primary care strategy for the management of GERD, a number of data are still required to fill in the details. Well-conducted diagnostic and clinical trials, with robust health economics and health services components, are required to answer some of these outstanding questions

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