

## Management of gastro-oesophageal reflux disease in general practice

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BMJ 2001;322:344-7

### Introduction

Gastro-oesophageal reflux disease is a potentially serious condition that can greatly reduce patients' quality of life and carries a risk of oesophagitis and complications.<sup>1</sup> It is a common condition and a considerable burden on healthcare resources. Most patients are managed in general practice, and effective management of the disease remains a challenge. Guidelines produced in Europe,<sup>2,3</sup> the United States,<sup>4</sup> and Canada<sup>5</sup> do not give consistent recommendations.

### Methods

An international multidisciplinary workshop was held in Genval, Belgium, in 1999 to evaluate the literature on gastro-oesophageal reflux disease, including numerous reviews,<sup>6-8</sup> in the light of clinical experience.<sup>9</sup> Participants voted on their level of support and the strength of the evidence for a series of statements relevant to the management of the disease. In this article we summarise the conclusions of the Genval workshop and present an overview of the latest thinking on the management of gastro-oesophageal reflux disease relevant to general practice. We also reviewed relevant articles published since the workshop, which we identified by a search of the electronic databases Medline and Embase from 1997 to March 2000, using the search term gastro-oesophageal reflux in combination with various key words for drug therapy, surgery, cost effectiveness, and quality of life.

### Definition of gastro-oesophageal reflux

Gastro-oesophageal reflux disease should be diagnosed in all patients who are at risk of physical complications from gastro-oesophageal reflux or whose wellbeing is appreciably impaired because of symptoms related to reflux.<sup>7,9</sup> Most patients do not have endoscopically visible lesions, and symptoms are the main consideration. Heartburn is the predominant symptom of gastro-oesophageal reflux disease, and patients' quality of life is impaired in proportion to the frequency and severity of heartburn,<sup>9</sup> irrespective of the presence or severity of oesophagitis. The impact of symptoms on quality of life is similar to that of symptoms of other disorders such as ischaemic heart disease.<sup>10</sup> A recent large study using the SF-36 questionnaire showed the negative effect of gastro-

### Summary points

Careful analysis of symptoms and history is key to diagnosis of gastro-oesophageal reflux disease

Diagnosis based on symptoms can be aided by a trial of treatment

Clear endoscopic abnormalities are found in less than half of patients

Treatment should start with the most effective therapy—a proton pump inhibitor

Most patients will require long term management, for which the guiding principle is to reduce to the least costly treatment that is effective in controlling symptoms

Antireflux surgery may be as effective as long term proton pump inhibitors but is less predictable

oesophageal reflux disease on quality of life, notably on measures of pain, mental health, and social function.<sup>11</sup> Symptoms are mainly due to the oesophageal mucosa being exposed to acid and pepsin, and some patients may have a more sensitive mucosa than others.

### How reliable is diagnosis based on symptoms and what can be done to aid it?

Although gastro-oesophageal reflux disease is still commonly misdiagnosed as dyspepsia, the two problems are distinct and require different management. The Rome II working group defined dyspepsia as pain or discomfort centred in the upper abdomen.<sup>12</sup> This definition excludes heartburn, the primary symptom of gastro-oesophageal reflux disease. Careful analysis of the patient's symptoms and history is pivotal in the diagnosis and subsequent management of gastro-oesophageal reflux disease. Recognition of alarm symptoms (see box on endoscopy) is important in determining the need for referral.

Diagnosis of gastro-oesophageal reflux disease is usually based on the occurrence of heartburn on two or more days a week, although less frequent symptoms do not preclude disease.<sup>9,13</sup> A standard against which to compare heartburn is still lacking for patients without oesophagitis.<sup>7,9</sup> Nevertheless, when heartburn is carefully defined, it is unlikely to be due to anything other than gastro-oesophageal reflux disease; indirect evidence and clinical experience show that three quarters of patients in whom heartburn is the main or sole symptom have gastro-oesophageal reflux disease.<sup>9</sup> When inquiring about patients' symptoms it is important to give a definition of heartburn. For example, the description of heartburn as "a burning feeling rising from the stomach or lower chest up towards the neck" has been found to identify more patients with gastro-oesophageal reflux disease than use of the word itself.<sup>9,14</sup> Diagnosis may be improved by the use of a structured diagnostic questionnaire or by a trial of treatment, as described below.

### When should patients be referred for endoscopy?

Less than half of patients with gastro-oesophageal reflux disease have diagnostic endoscopic abnormalities, and endoscopy therefore has a limited role in diagnosis. Endoscopy is, however, useful in some patients for clarification of diagnosis, assessing severity of disease, recognition of the complications of oesophagitis, and for defining best treatment strategies (box). No consensus exists on its precise role or on when it is best performed.<sup>15,16</sup> The use of endoscopy will depend on local cost, accessibility, and timing relative to treatment. Most patients should be managed empirically, at least initially.

The questions of whether to look for Barrett's oesophagus, and what to do when it is found, are controversial and difficult.<sup>17</sup> Affected patients have an increased risk of oesophageal adenocarcinoma, but views on surveillance vary widely. If patients are known to have Barrett's oesophagus, surveillance endoscopy is probably advisable. General practitioners should be guided by the opinion of a gastroenterologist.<sup>17</sup> More information is available in the current practice guidelines.<sup>18</sup>

The results of endoscopy need to be reported in a standardised, defined language that is explicit and unambiguous. The report should explain the implications of the findings for patient care and, in particular,

#### Indications for early endoscopy

Alarm symptoms (including dysphagia, weight loss, bleeding, abdominal mass)  
 Diagnostic problems such as atypical symptoms  
 Symptoms refractory to initial treatment  
 Preoperative assessment  
 Provision of reassurance when verbal reassurance is inadequate

#### Endoscopy may also be appropriate:

For patients who have had frequent, troublesome symptoms for a long time  
 To tailor drug treatment  
 To detect and manage Barrett's oesophagus

#### Hierarchy of efficacy for drug treatments (most effective first)<sup>9</sup>

High dose proton pump inhibitors  
 Standard dose proton pump inhibitors  
 Half dose proton pump inhibitors  
 Standard dose H<sub>2</sub>-receptor antagonists  
 Antacids

be sceptical about the diagnostic validity of minimal endoscopic changes (erythema, oedema, friability). We recommend the Los Angeles classification for endoscopic assessment and reporting of oesophagitis.<sup>9, 19,20</sup> In addition, the possible effects of treatment should be borne in mind when interpreting the results of endoscopy. Repeat endoscopy is rarely justified in patients without severe oesophagitis. Monitoring of oesophageal pH should be reserved for patients in whom the diagnosis is in doubt after endoscopy and a trial of acid suppressing drugs.

### Effectiveness of different drugs

The hierarchy of efficacy of therapies in gastro-oesophageal reflux disease (box) has been well established in randomised clinical trials,<sup>9</sup> although data on half dose proton pump inhibitors relate to its use in long term intermittent therapy rather than initial therapy.<sup>9,21,22</sup> The relative effectiveness is unaffected by the presence of endoscopic oesophagitis or whether treatment is short or long term. Long term safety and tolerability have been extensively documented for H<sub>2</sub> receptor antagonists and proton pump inhibitors.<sup>23</sup>

Cisapride has similar effectiveness to standard dose H<sub>2</sub> receptor antagonists but is inferior to standard dose omeprazole.<sup>24</sup> When combined with an H<sub>2</sub> receptor antagonist, it is more effective than either treatment alone,<sup>25</sup> but the risks of cardiac side effects with cisapride now exclude it from routine use in reflux disease.

### Strategies for initial treatment

Explanation of the symptoms and reassurance of the patient (for example, addressing concerns about cancer and heart disease) are an important part of initial treatment. General practitioners should also consider lifestyle measures and self treatment, such as antacids, which the patient may already be using. Some lifestyle measures provide limited benefit in gastro-oesophageal reflux disease. Avoidance of specific foods and drinks that exacerbate symptoms may help, although it does not usually result in healing of the oesophagitis.<sup>9</sup> Although stopping smoking and losing weight are of benefit to the patient's general health, they have little or no effect on gastro-oesophageal reflux disease.

There are two approaches to the initial medical treatment of gastro-oesophageal reflux disease. Treatment can either start with the most effective regimen and subsequently be stepped down or start with the minimum intervention and be stepped up. There are arguments in favour of both approaches (box). The

**Advantages and disadvantages of step-down and step-up treatment**

| Regimen                                    | Advantages  | Disadvantages   |
|--|---|---|
| Step-down treatment (high initial therapy) | Rapid symptom relief<br>Efficient for doctor<br>Avoids overinvestigation and associated costs | Potential overtreatment<br>Higher initial drug cost   |
| Step-up therapy (minimum initial therapy)  | Avoids overtreatment<br>Lower initial drug cost   | Patient may continue with symptoms unnecessarily<br>Takes too long<br>Inefficient for doctor<br>May lead to overinvestigation<br>Uncertain end point (partial symptom relief) |

higher initial drug cost when beginning with the most effective regimen is likely to be offset by rapid symptom control, which is a substantial benefit to the patient and reduces the need for repeated consultation. We recommend starting with the most effective treatment,<sup>9</sup> which is currently standard dose of a proton pump inhibitor. This treatment is also the preferred choice for empirical therapy.

Although empirical therapy will test a provisional diagnosis, a formal therapeutic trial<sup>9</sup> in which a proton pump inhibitor is given in greater than standard dose for 1-2 weeks can also be used. This test has a sensitivity and specificity for gastro-oesophageal reflux disease comparable to that of monitoring oesophageal pH.

After the initial treatment, it is worth trying a period without treatment because some patients will not need further medical intervention, at least for several months.<sup>26</sup> Patients in whom symptoms immediately recur require longer term management.

Eradication of *Helicobacter pylori* does not heal oesophagitis or prevent relapse in patients with gastro-oesophageal reflux.<sup>9</sup> However, there is likely to be a complex interaction between acid secretion, eradication of *H pylori*, and exposure of the oesophagus to acid in certain patients.

### Strategies for long term management

Most patients with gastro-oesophageal reflux disease require long term management.<sup>27,28</sup> The guiding principle for long term management is to step down to the treatment that is least costly but still effective in controlling symptoms, following the hierarchy described above.<sup>9</sup> The rationale for this approach is minimisation of cost, although relative drug costs will vary across practice settings, and decreasing efficacy does not always mean decreasing cost. Finding the right level of management may take time in some patients.

Patients returning with a relapse after a trial without treatment should be restarted on the initial successful therapy and then have treatment stepped down as appropriate. For patients who require only intermittent short courses of antisecretory therapy, it may be more effective to give a proton pump inhibitor at full dose than to titrate treatment up from either half dose of proton pump inhibitor or standard dose of a H<sub>2</sub> receptor antagonist.<sup>26</sup>

A further component in optimising use of resources is the minimal use of endoscopy. The success of a step down in treatment can largely be determined by symptoms alone. If a patient's symptoms are successfully controlled, the general practitioner can be confident that oesophagitis will have healed in most cases,<sup>9</sup> and endoscopy is unnecessary. The comfort and convenience of patients are further reasons to minimise use of endoscopy.

The only patients in whom treatment should not be stepped down are those with severe oesophagitis (Los Angeles grades C and D). Treatment other than standard dose proton pump inhibitors is unlikely to prevent relapse of oesophagitis or strictures in these patients.<sup>9</sup> Endoscopy is not always necessary as it is safe to assume that oesophagitis is healing in patients whose symptoms are controlled. Patients with inadequate symptom control should be referred for endoscopy.

Antireflux surgery is an attractive option for some patients as it can eliminate the need for life long drug treatment. It should not be reserved for patients in whom drugs have failed. Open antireflux surgery and long term proton pump inhibitors have been shown to be equally effective over a follow up of five years.<sup>29</sup> Patients' preferences for medical or surgical treatment should be taken into account. Data on the safety of long term use of proton pump inhibitors suggest that this is safer option than antireflux surgery, which has a small but probably inevitable mortality of around 0.2% and appreciable morbidity. The laparoscopic approach, introduced 10 years ago, has superseded open antireflux surgery, but surgeons have to develop and maintain special skills to get consistently good results.<sup>30</sup>

We thank Tim Robinson for his contribution to an earlier draft of the paper.

Funding: AstraZeneca provided support during the preparation of this manuscript.

Competing interests: RJ has been sponsored to attend conferences and has received fees for speaking and consultancy from Wyeth, Glaxo Wellcome, and AstraZeneca. JD has received fees for doing clinical trials, speaking, organising educational activities from AstraZeneca, Lederle, and Janssen Pharmaceuticals. His basic science laboratory is involved in a collaborative research programme with AstraZeneca and receives partial funding for its work from this company. NJT has been a consultant for AstraZeneca, Janssen, and TAP and has research support from Lederle, Australia, and Pharmacia and Upjohn, Australia. PJK has been reimbursed by AstraZeneca, TAP, Janssen Pharmaceuticals, Wyeth-Ayerst Pharmaceuticals, and Merck Pharmaceuticals for lecturing and running educational programmes related to reflux disease.

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(Accepted 3 January 2001)

## *A memorable patient* Escape by water

Our trekking party in north eastern Nepal had ascended to the magical Thyangboche Monastery at 3800m. We continued our descent and return journey through the village of Namche Bazaar (3400m) in high spirits, after completion of our mission. Suddenly our thoughts were interrupted when an anxious Sherpa raced up behind me. He told me that a doctor was needed and rushed me breathlessly back up the hill. I wrongly assumed that all of our party were ahead of me and wondered if I was being taken to sort out a medical problem in the village.

I was shown into one of the lodge rooms at Namche that we had left earlier. One member of our party, an extremely fit 25 year old, was lying on the bed indisposed, with our trek leader bent over him, massaging his chest. He was pale and sweaty with distended neck veins and a rapid heartbeat. The palpitations had started suddenly an hour earlier. He was feeling faint, nauseous, and generally frightened by the unexpected situation.

His radial pulse was almost impalpable, but, taking his carotid pulse, I assumed this to be a supraventricular tachycardia. I felt almost useless without medical equipment or monitors in this high, isolated village. We tried some Valsalva manoeuvres, followed by carotid sinus massage, each with no effect. Searching the depths of my mind for inspiration, I suddenly remembered the diving reflex. I asked for a bowl of cold water and, without warning, plunged the patient's head into it. Much commotion followed trying to remove the patient's soaking wet sweater and drying his hair with a towel. It was difficult to ascertain the precise moment he returned to sinus rhythm, but it had certainly happened. The palpitations had disappeared and he was feeling much better. I too was

feeling much relieved as my next plan would probably have involved an ex-Russian army helicopter.

Meanwhile, the rest of the party had trekked on down the scenic Dudh Kosi valley with much speculation about the nature of the emergency and no means of establishing what was happening higher up. A helicopter flew up and down the valley. The day passed by and our party arrived at the new lodge, tired and breathless. Everyone was keen to hear the exciting story and relieved there were no serious problems.

It transpired that there had been a death at Everest Base Camp, presumably from acute mountain sickness. The helicopter sent to collect the body had crashed in the valley killing the accompanying trek leader and the pilot. This was the helicopter the rest of the group had spotted that day, now lying shattered on the rocks. Faced with this terrible reality we suddenly understood the potential dangers of our adventure and for once in my life I was extremely glad that we had not had to rely on emergency repatriation as our last treatment option.

Jenny Tye registrar in anaesthesia, Birmingham

We welcome articles of up to 600 words on topics such as *A memorable patient*, *A paper that changed my practice*, *My most unfortunate mistake*, or any other piece conveying instruction, pathos, or humour. If possible the article should be supplied on a disk. Permission is needed from the patient or a relative if an identifiable patient is referred to. We also welcome contributions for "Endpieces," consisting of quotations of up to 80 words (but most are considerably shorter) from any source, ancient or modern, which have appealed to the reader.