

## Initial management of dyspepsia in primary care:

an evidence-based approach

### INTRODUCTION

The word dyspepsia derives its origin from the Greek word *dyspeptos*, which means 'bad digestion'. The term is used to describe symptoms thought to be referable to the upper gastrointestinal (GI) tract. Which symptoms to include in the definition of dyspepsia is controversial, but upper abdominal pain or discomfort, bloating, fullness, early satiety, heartburn, and regurgitation may be considered part of the symptom complex. Potential aetiologies range from the benign (such as functional dyspepsia, where there is no structural cause found to explain the symptoms) to the life-threatening (gastro-oesophageal cancer). Other common underlying organic causes of dyspepsia include peptic ulcer disease and gastro-oesophageal reflux disease. Dyspepsia represents a considerable burden to the health service, and therefore optimal management of the condition in primary care is essential. This article aims to provide the reader with an update on evidence that supports current guidelines for the initial management of dyspepsia in primary care.

### EPIDEMIOLOGY OF DYSPEPSIA

Dyspepsia is extremely common in the community, with a prevalence in excess of 30%.<sup>1</sup> Up to 40% of sufferers will consult a primary care physician as a result.<sup>2</sup> The condition is often chronic, with a relapsing and remitting natural history. In a community-based longitudinal follow-up study almost 20% of people without dyspepsia at baseline had developed dyspepsia by 10 years, giving an incidence of dyspepsia of around 2% per year, while among those with symptoms at baseline, 40% had persistent symptoms at 10 years, meaning that dyspepsia resolved at a rate of approximately 6% per year.<sup>3</sup> Reassuringly, and despite its chronicity, the condition does not appear to be associated with a reduction in survival in the community.<sup>4</sup> Costs of managing dyspepsia are considerable, estimated at £500 million

per year in the UK in 2002,<sup>5</sup> although this is likely to be lower at the time of writing due to a reduction in the costs of medications used to treat the condition.

### ENDOSCOPIC FINDINGS IN DYSPEPSIA

GPs are usually dealing with uninvestigated dyspepsia, and without access to upper gastrointestinal endoscopy (UGIE) the aetiology is unknown. This may be problematic for both GP and patient, as there is uncertainty about the underlying diagnosis, an inability to explain the cause of the symptoms, and a fear of a missed diagnosis of upper GI malignancy. However, a recent meta-analysis of population-based studies performing UGIE in individuals with and without dyspepsia demonstrated that organic pathology was detected in only 20% of people with dyspepsia, with upper GI cancer occurring in 0.25%.<sup>6</sup> The remainder had no structural cause for their symptoms, and were therefore likely to be suffering from functional dyspepsia. In fact, the only organic finding encountered significantly more frequently among individuals with dyspepsia, compared with those without, was peptic ulcer (odds ratio 2.07; 95% confidence interval [CI] = 1.52 to 2.82).

### MANAGING DYSPEPSIA IN PRIMARY CARE

#### Management of dyspepsia with alarm symptoms

The National Institute for Health and Care Excellence (NICE) guidelines, published in 2004, state that routine UGIE for patients with dyspepsia without alarm symptoms is unnecessary, although in those aged >55 years it can be considered if symptoms persist despite treatment.<sup>7</sup> However, those with alarm symptoms (see Box 1) at any age should be referred urgently for UGIE in order to exclude upper GI malignancy. Although the sensitivity and specificity of alarm symptoms in predicting gastro-oesophageal cancer is close to 70%,<sup>8</sup> as most patients with alarm symptoms will not have upper GI cancer,

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## Box 1. Alarm features in dyspepsia suggestive of upper gastrointestinal malignancy

- Dysphagia
- Odynophagia
- Haematemesis or melaena
- Persistent vomiting
- Unintentional weight loss
- Iron deficiency anaemia
- Family history of gastric cancer
- Palpable upper abdominal mass

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the positive predictive value is poor. Patients who do not fulfil these fast-track criteria are said to have uncomplicated dyspepsia and can be managed in primary care in the first instance.

### Management of uncomplicated dyspepsia

The initial management of uncomplicated dyspepsia in the community should consist of either non-invasive testing for *Helicobacter pylori*, so-called 'test and treat', with proton pump inhibitor (PPI)-based triple therapy for those testing positive (PPI and two antibiotics) and 4 weeks of PPI for those testing negative, or empirical PPI for all patients. The evidence that underpins these recommendations is based on meta-analyses of high-quality randomised controlled trials (RCTs). In an individual patient data meta-analysis that included five RCTs comparing prompt UGIE with 'test and treat' there was a small, but statistically significant, improvement in symptoms with prompt UGIE, but this approach cost £159 more per patient managed with prompt UGIE,<sup>9</sup> meaning that prompt UGIE cost £3800 for each extra dyspepsia patient cured, compared with 'test and treat'. As costs in the prompt UGIE arms of the trials were largely driven by the cost of UGIE itself, as this increases it is likely to lead to further increases in the cost per patient cured. As a result, and taken together with the fact that upper GI cancer is extremely rare among individuals with dyspepsia, universal investigation with UGIE is neither desirable nor affordable.

Another individual patient data meta-analysis identified three RCTs that have compared 'test and treat' with empirical PPI. Their efficacy, in terms of effect on symptoms, was almost identical, with a relative risk of symptoms persisting with 'test and treat' versus PPI of 0.99 [95% CI = 0.95 to 1.03], but a non-significant trend towards a reduction in costs with 'test and treat' (£29 per patient; 95% CI = –£11 to £68).<sup>10</sup> Which to choose as a first-line management strategy may be influenced by the local population prevalence of *H. pylori*, with some guidelines advocating that if the prevalence is thought to be >10% 'test and treat' should be preferred.<sup>11</sup> However, NICE recommend that either of these approaches can be tried first, with the other offered if symptoms persist or relapse.<sup>7</sup>

### Other general measures for the GP to consider

Other measures include lifestyle advice, such as healthy eating, weight reduction,

exercise, smoking cessation, and avoidance of known precipitants of symptoms such as coffee, alcohol, chocolate, or fatty foods, although there is no evidence from RCTs to support such interventions. GPs should also review prescribed medications for possible causes of dyspepsia, such as non-steroidal anti-inflammatory drugs, corticosteroids, bisphosphonates, theophyllines, nitrates, selective serotonin reuptake inhibitors, or calcium antagonists. Finally, it is important to consider other possible diagnoses in patients who fail to respond to the above strategies, and thus an abdominal ultrasound and blood tests may be required to exclude hepatobiliary causes or coeliac disease, which may present with upper abdominal pain and bloating, symptoms that can mimic dyspepsia.<sup>12</sup> If symptoms persist, and no other cause is found, it is likely that the underlying aetiology is functional dyspepsia, but in this situation it would be reasonable to exclude organic pathology by referring the patient for consideration of UGIE.

## CONCLUSION

Dyspepsia is common in the community. It represents a considerable burden to the health service, therefore correct initial management is important. Upper GI cancer is a rare cause of dyspepsia, and almost 80% of those with dyspepsia in the community will have no structural cause to explain their symptoms at UGIE. Prompt UGIE for everyone is not a cost-effective management strategy, and this should be reserved for those with alarm symptoms, and considered in those aged >55 years with persistent symptoms. Either 'test and treat' or empirical PPI should be used as first-line management strategies in primary care, and if symptoms persist the diagnosis should be reconsidered, but if there is no other potential cause uncovered the likely diagnosis is functional dyspepsia. Up-to-date economic data concerning the costs of dyspepsia to the health service are not available, and this issue needs to be addressed if healthcare providers are to make decisions on how best to manage the condition.

### Provenance

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