

# DYSPEPSIA AND HEARTBURN

## QUIZ FEEDBACK

*This article presents the results of the recent Dyspepsia and Heartburn quiz (BPJ 4). Commentary is provided by Professor Gil Barbezat (GB).*

**The participants responses were as follows:**

**1. Which one of the following is a red flag for serious pathology in dyspepsia presentation?**

3% Early satiety

8% Father got gastric cancer aged 61 years

**88% First presentation at aged 42 years in Maori**

1% Recurrence of symptoms 9 months after stopping treatment

0% Paracetamol use

**Q1. GB comments:** Eighty eight percent of GPs opted for ‘c’ as the most correct answer. Gastric cancers are relatively more common amongst Māori and Asian patients, and tend to occur at a younger age (often a decade earlier) than in the European based population. Importantly, if a Māori patient is part of a family linked with gastric cancer, the disease may present at a very young age (mean age in early 30s, youngest at 14 years of age).

Although early satiety can be a symptom of gastric outlet obstruction by ulceration or cancer, it is also common in functional dyspepsia, and has poor specificity as a sign of organic disease. This could well be related to delay in gastric emptying. The context in which it arises is important; for example, it is less relevant in a young otherwise well patient, but may be more significant as a new symptom in a 60-year-old.

Although family history may be very important in assessing the risk of gastric cancer, the age at which the family member (preferably first degree) had the cancer is most important. Those presenting at a young age, usually between 20s and 40s, are far more likely to have a transmissible genetic predisposition than those presenting over the age of 50, when genetic transmission of gastric cancer is rare.

Recurrence of dyspepsia after 9 months of stopping treatment is more the rule than the exception, both for functional dyspepsia and peptic ulcer (if *H. pylori* has not been eradicated successfully). Here again, the context of the presentation needs to be considered.

**2. When a patient presents with indigestion and they have no red flags or indications of alternative causes for their symptoms, which of the following features is the most important in determining management?**

1% Belching

1% Bloating

1% Early Satiety

1% Feeling of fullness

**97% Heartburn**

**Q2. GB comments:** Heartburn was correctly identified as the most significant differentiating upper gastrointestinal symptom by 97% of GPs. Its positive predictive value for gastro-oesophageal reflux disease (GORD) is about 80%.

The other symptoms are part of the “dyspepsia complex” and have poor differentiating value.

***If you have completed this quiz, please see the personalised feedback accompanying this journal***

**3. Which one of the following is an indication for *H. pylori* testing in dyspepsia?**

- 1% Awaiting oesophago-gastro-duodenoscopy
- 1% High alcohol intake
- 97% High local prevalence of *H. pylori***
- 0% NSAID use
- 0% Smoking

**Q3. GB comments:** A test-and-treat policy in the management of dyspepsia has only been validated for cost efficacy in populations who have a high prevalence of *H. pylori* infection (estimated in the NZ Guidelines as at least 30%). There is little point in doing the test in populations where infection is as low as 5%, as found in younger populations studied in the South Island; most will be negative, and the risk of false negatives or false positives in the method used, make the results virtually uninterpretable. If a patient is already scheduled for oesophago-gastro-duodenoscopy, testing for *H. pylori* can easily and usually be done as part of that procedure, rather than as a separate test. A point could be made for a prior test in special circumstance where the waiting time for endoscopy is inappropriately long.

**4. A person with low-risk undifferentiated dyspepsia without heartburn has been unsuccessfully self-medicating with antacids. Which one of the following is the most appropriate approach to management?**

- 1% Alginates
- 14% Lifestyle modification and step down therapy
- 81% Lifestyle modification and step up therapy**
- 1% Oesophago-gastro-duodenoscopy
- 3% Proton pump inhibitors

**Q4. GB comments:** Lifestyle modification and some form of medication were correctly chosen as the managements of choice. In this circumstance, the majority (81%) chose the step up regimen, rather than step down (14%). This is a rational choice, as undifferentiated dyspepsia does not have any one medication regimen vastly superior than any other; starting with simpler, cheaper medication and progressing on from there is favoured. This contrasts with heartburn, where proton pump inhibitors (PPIs) have a distinct therapeutic advantage over other medications, and are therefore favoured as initial treatment in the interests of proven efficacy.

Oesophago-gastro-duodenoscopy is not necessary in most patients with low risk undifferentiated dyspepsia where empiric treatment is fully justified. It should be reserved for those with danger signals, first presentation over the age of 50–55, or those with persistent, or incapacitating, severe symptoms. While PPIs are often effective in treating undifferentiated dyspepsia, they are much less effective in patients in whom heartburn has been excluded. Cheaper, simpler medications are worth using initially.

**5. A person with low-risk dyspepsia and heartburn has been unsuccessfully self-medicating with antacids. Which one of the following is the most appropriate approach to management?**

- 1% Alginates
- 55% Lifestyle modification and step down therapy**
- 11% Lifestyle modification and step up therapy
- 0% Oesophago-gastro-duodenoscopy
- 33% Proton pump inhibitors

**Q5. GB comments:** As indicated in question 4, where heartburn is present, PPIs have a very good chance of settling the patient's symptoms. Both answers 'b' and 'e' include PPIs; answer 'b' was chosen by more responders (55%), quite correctly, as lifestyle measures always need to be considered as part of a management package. Weight control (admittedly a difficult challenge for many) may allow patients to come off all medication as the most desired end result of a step down regimen, while some may well need to stay on treatment because of weight related reflux. Avoiding fatty foods, particularly at night, smoking cessation and alcohol moderation are also worth noting. PPIs (chosen by 33%) alone would almost certainly be effective, but could influence the ongoing course of treatment options as discussed above. A step down regimen should always be considered as a part of empiric treatment.

Lifestyle modification and step up therapy is an alternative preferred by 11% of responders. This is a valid option, but there are good data to show that use of PPIs result in more asymptomatic heartburn patients after 2 weeks than after 12 weeks with H<sub>2</sub> receptor antagonists. Ultimately, a very significant proportion of patients will need PPIs anyway, so they might as well be started on the most effective regimen as soon as possible. Patient satisfaction is significantly enhanced and the number of doctor consultations reduced. Having said that, it is vital that a step down process is followed so that patients are eventually taking the lowest dose of medication, if any, to control their symptoms. In patients not responding to empiric antacids, responders came to the reasonable conclusion that there was little benefit of trying alginates.

**6. Which one of the following medications is not associated with a contribution to dyspepsia symptoms?**

**81% Beta-blockers**

- 5% Calcium antagonists
- 3% Low-dose aspirin
- 7% Nitrates
- 0% NSAIDs

**Q6. GB comments:** The wording of the question is perhaps a bit misleading in using the words “not associated” with adverse effects. Eighty one percent of GPs correctly picked beta-blockers as the medication least associated with dyspepsia; although “gastrointestinal upsets” are listed amongst their adverse effects, they are not common. Low dose aspirin (usually about 80 mg per day) can certainly produce dyspepsia. Significant inhibition of gastric prostaglandin activity has been shown to occur with aspirin doses as low as 10 mg. Particular care is required in at risk patients taking low-dose aspirin as well as other drugs (e.g. anticoagulants, corticosteroids and NSAIDs, whether non-selective or COX-2 selective where the selectivity is virtually negated by the aspirin).

Nitrates may produce nausea, vomiting and dyspepsia, but gastrointestinal adverse effects are less common with the longer acting products.

Calcium antagonists are commonly associated with gastrointestinal symptoms, including dyspepsia.

**7. Which one of the following is LEAST likely to be associated with functional dyspepsia?**

- 9% Eating habits
- 71% Hyperacidity**
- 10% Reduced gastric motility
- 1% Smoking
- 8% Stress

**Q7. GB comments:** As suggested by the question, all the answers can be associated with functional dyspepsia. Most GPs (71%) thought that hyperacidity was the least likely association, and it is indeed correct that many studies have failed to show any link between dyspepsia and gastric acid secretion where peptic ulceration has been excluded.

Of the abnormalities of gastric function detected on investigation of patients with functional dyspepsia, dysmotility is amongst the most common. Slow gastric emptying is found in a significant proportion of patients, but by no means all.

Eating habits (as most of us will have experienced at some time) can certainly induce dyspepsia. Bolting food, poor chewing (often associated with poor dentition), and overindulgence may all produce dyspepsia.

Stress is a common cause of dyspepsia, effecting some people more than others. This has led to the common misconception of stress being responsible for peptic ulceration. Now that accurate methods have become available to exclude peptic ulceration (endoscopy), the vast majority of people with stress related dyspepsia do not have peptic ulcers.

**8. Which one of the following is not usually a recommended part of lifestyle modification in the management of dyspepsia?**

- 13% Identifying dietary triggers
- 0% Limiting alcohol intake
- 86% Raising the head of the bed**
- 0% Smoking cessation
- 1% Weight reduction

**Q8. GB comments:** Raising the head of the bed was correctly identified (by 86%) as a futile measure in the management of dyspepsia. Even in those with heartburn, analysis of the evidence for its efficacy is largely anecdotal or of very poor quality. Now that we have effective medication for reflux, appropriate prescribing is a much better alternative. Avoiding fatty meals in the evening, alcohol moderation and weight control are far more useful lifestyle changes. Having said that, a very small proportion of patients who have volume reflux (regurgitation of large volumes of non-acid fluid, especially during the night) may benefit from raising the head of the bed.

While identifying dietary triggers for dyspepsia may be notoriously difficult, some are worth considering in selected patients. These include lactose intolerance, which might result in gaseous discomfort, and even coeliac disease.

Besides vague intuition, there is no clear evidence that weight reduction benefits the treatment of dyspepsia. This contrasts with efficacy of this measure in the treatment of heartburn. However, in the many patients where weight reduction is indicated, it is likely to produce a number of health benefits, as opposed to raising the head of the bed which may well result in sleep disturbance without much benefit at all.