Heartburn and **gastro-oesophageal** reflux disease

Jacky van Schoor, MPharm
Amayeza Info Centre

Introduction

Heartburn occurs when acid from the stomach refluxes back up the oesophagus. It is described as a burning sensation, felt in the centre of the chest behind the breastbone, moving up toward the throat and neck. It is the most common symptom of gastro-oesophageal reflux disease (GORD), together with the regurgitation of stomach acid. GORD is defined on the basis of troublesome symptoms and/or physical damage resulting from gastro-oesophageal reflux, also called acid reflux.

Reflux is a normal process which occurs in healthy infants, children and adults. Most episodes are brief, and do not cause bothersome symptoms or complications. Nonetheless, bothersome reflux symptoms are common, and healthcare professionals see many people who present with the symptoms of acid reflux.

Heartburn or acid reflux becomes GORD when it causes bothersome symptoms or injury to the oesophagus.

In practice, the distinction between the symptom of heartburn and the diagnosis of the disease, GORD, usually relates to the frequency, duration and severity of the symptoms. People who experience heartburn at least 2-3 times a week may have GORD. Some patients experience severe daily symptoms, while others experience less frequent and milder symptoms. However, it is important to remember that the severity of symptoms does not always relate to the severity of GORD. For example, some patients have mild symptoms, but are subsequently found to have a more severe disease upon gastroscopy.

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Why does acid reflux occur?

While eating, food is carried from the mouth to the stomach through the oesophagus, a tube-like structure, also called the food pipe or gullet. The oesophagus is made up of tissue and muscle layers which expand and contract to propel food to the stomach through a series of wavelike movements, called peristalsis.

A band of muscle, called the lower oesophageal sphincter, is at the lower end of the oesophagus. After swallowing, this ring of muscle relaxes to allow food into the stomach, and then contracts to prevent the reflux of food and stomach acid back into the oesophagus. However, sometimes the muscle is weak or becomes relaxed because the stomach is full, allowing liquid in the stomach to wash back up into the oesophagus. This may happen occasionally in all individuals. Most episodes occur soon after meals and are short-lived.

People who have a hiatus hernia are more likely to develop acid reflux.

Table I: The symptoms of acid reflux

The symptoms of acid reflux include:
- Stomach pain
- The regurgitation of food and fluid
- An acid taste in the mouth
- Coughing
- A persistent sore throat or hoarseness
- A sense that there is a lump in the throat

When to seek help
The following symptoms may indicate a more serious problem, and patients should be referred to the doctor as soon as possible:

- When the symptoms are severe
- Difficulty or pain swallowing, i.e. a feeling that the food is stuck
- Unexplained weight loss
- Chest pain (This can also be a symptom of heart disease)
- Choking or waking up with a choking sensation
- Any unusual bleeding, e.g. vomiting blood or passing dark-coloured stools
- New-onset symptoms in adults aged > 45 years
- Age > 55 years
- The patient not responding to the recommended treatment or requiring repeated treatment courses

"... eating a large meal or one that is high in fat, and lying down after a meal, may predispose to the development of acid reflux"

Acid reflux symptoms

There are several less common symptoms of acid reflux besides the most common symptoms of acid reflux, i.e. heartburn (Table I).

Risk factors for acid reflux

Food and beverages, such as coffee, tea, fizzy drinks, mint, chocolate and citrus; the regular use of aspirin and nonsteroidal anti-inflammatory drugs (NSAIDs), stress and tobacco smoking are all well recognised triggers for acid reflux. In addition, eating a large meal or one that is high in fat, and lying down after a meal, may predispose to the development of acid reflux. Obesity and pregnancy are also contributing factors.

Acid reflux treatment

Most patients with the symptoms of acid reflux turn to non-prescription medicine to control the symptoms. Initial treatment for mild reflux includes lifestyle changes and using non-prescription medicines, such as antacids, alginates and histamine antagonists.

Lifestyle changes

Changes to diet and lifestyle have been recommended for many years. However, these recommendations may only be helpful in some, but not all people, with mild symptoms of acid reflux (Table II).

Table II: Lifestyle changes to implement to improve the symptoms of acid reflux

Weight loss	May help people who are overweight to reduce acid reflux
Raising the head of the bed	People with night-time heartburn may find that raising the head of the bed, which raises the head and shoulders higher than the stomach, may improve the symptoms by allowing gravity to prevent the acid from refluxing
Avoiding reflux-inducing food and beverages	• Excessive caffeine, alcohol, chocolate, peppermint and fatty foods may cause symptoms in some people • Many beverages also have a very acidic pH, and can worsen symptoms, e.g. colas, red wine and orange juice • Highly spiced or chilli-containing foods may cause irritation and worsen symptoms
Stopping smoking	Stopping smoking can reduce or eliminate the symptoms of mild reflux
Avoiding large and late meals	• It is advisable to eat 3-4 hours before going to bed • It is recommended that smaller meals are eaten to prevent the stomach from becoming over distended
Avoiding tight-fitting clothing	Tight-fitting clothing may increase pressure on the abdomen, forcing the stomach contents into the oesophagus

Antacids and alginates

Antacids work by reducing acidity in the stomach.They may be used to treat symptoms in patients who wish to self-medicate. Preparations include aluminium hydroxide, magnesium antacids and calcium antacids. These agents provide rapid symptom relief, and are useful in patients with mild, infrequent episodes of acid reflux. However, the duration of symptom relief from antacids is relatively short, i.e. approximately two hours.

Alginates, often provided in combination with antacids, create a protective barrier on top of the stomach contents, thereby limiting acid contact with the oesophagus. Antacid-alginates may be better than antacids alone in the control of mild and meal-induced symptoms, and have a longer duration of action.

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Histamine 2-receptor antagonists

A low-dose histamine 2-receptor antagonist (H_2RA), such as ranitidine or cimetidine, is recommended when the symptoms persist, or for more troublesome symptoms. H_2RAs are more effective than antacids in suppressing acid secretion, but have a slower onset of action. However, H_2RAs have a much longer duration of action, i.e. up to 10 hours.

Over-the-counter (OTC) H_2RAs are limited to a 14-day duration. The treatment limit is intended to ensure that patients do not continuously self-medicate for a prolonged period. The patient should consult his or her doctor if the symptoms persist after 14 days of OTC H_2RA treatment.

Proton-pump inhibitors

Proton-pump inhibitors (PPIs), such as omeprazole and lansoprazole, are more effective than the H_2RAs in reducing the production of stomach acid. They may be used on prescription in higher doses to treat moderate to severe symptoms of acid reflux and complications of GORD, or OTC in lower doses for mild acid reflux symptoms which have not responded to lifestyle modification and the medicines previously described. OTC PPIs are approved for the short-term relief of heartburn for a maximum duration of 14 days. It is important for the pharmacist's assistant to refer patients to the doctor before they use these medicines beyond the 14-day indication. The frequent relapse of symptoms, or failure to respond to treatment, are additional triggers for referral to the doctor.

Conclusion

The symptoms of acid reflux are common. Many patients with mild and infrequent symptoms may be managed with lifestyle changes and antacid or antacid-alginate therapy. A low-dose H_2RA, such as ranitidine or cimetidine, or a low-dose PPI, such as omeprazole or lansoprazole, is recommended for up to 14 days of treatment when the symptoms persist, or for more troublesome symptoms. Patients who do not respond to treatment and those with relapsing symptoms should be referred to the doctor for further evaluation.

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