Heartburn and gastro-oesophageal reflux disease

Introduction

Heartburn occurs when acid from the stomach reflexes 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.

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.

“Heartburn occurs when acid from the stomach reflexes back up the oesophagus.”
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).

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 (H₂RA), such as ranitidine or cimetidine, is recommended when the symptoms persist, or for more troublesome symptoms. H₂RAs are more effective than antacids in suppressing acid secretion, but have a slower onset of action. However, H₂RAs have a much longer duration of action, i.e. up to 10 hours.

Over-the-counter (OTC) H₂RAs 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 H₂RA treatment.

Proton-pump inhibitors

Proton-pump inhibitors (PPIs), such as omeprazole and lansoprazole, are more effective than the H₂RAs 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 H₂RA, 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.

Bibliography