Guide to diagnosis and management of GORD

Careful symptom assessment is of the utmost importance in diagnosis and management of GORD, writes Yvonne Finn

GASTRO-OESOPHAGEAL REFLUX is the regurgitation of acidic gastric fluid into the oesophagus. A certain amount of this reflux occurs normally and may be regarded as a physiological event. When this occurs with increased frequency and is accompanied by heartburn, acid regurgitation and/or mucosal injury, gastro-oesophageal reflux disease (GORD) is said to be present.

This descriptive concept of GORD reflects the absence of agreement on a definition and diagnostic criteria for GORD. Broadly speaking, GORD has been divided into two types:

- Erosive reflux disease (ERD)
- Non-erosive reflux disease (NERD).

ERD is said to be present in those patients who have reflux symptoms and oesophagitis confirmed on endoscopy. NERD is applied to patients with typical reflux symptoms and normal endoscopy. However, it is argued whether the term NERD applies only to patients with reflux symptoms, normal endoscopies and abnormal acid exposure (assessed by 24-hour pH monitoring) or if patients with normal acid exposure are also included in NERD.

The latter may be confused with patients with functional heartburn, where reflux symptoms are not thought to correlate with acid exposure. These patients are less likely to respond to acid suppression, and this distinction from GORD is important as these conditions have different treatments. In practice, an unknown proportion of patients have reflux symptoms and normal endoscopies, and without further investigations are labelled as having GORD without oesophagitis.

In view of these diagnostic difficulties and the likelihood of a heterogenous array of disorders under the umbrella of GORD, review and interpretation of data on GORD needs to be taken with the proverbial ‘pinch of salt’.

Epidemiological studies report GORD as a common disorder affecting 10%-20% of the adult population of industrialised countries. It is also estimated that up to 5% of a GP workload involves patients with reflux symptoms.

GORD may be thought of as a spectrum disease, whereby a patient’s disease may progress over time from NERD to ERD with or without complications.

Diagnosis

There is no diagnostic gold standard for GORD. Depending on diagnostic cut-off criteria, up to 50%, and in some studies even a higher percentage of patients, are reported to have normal endoscopies.

Hence, careful symptom assessment is of the utmost importance in diagnosis and management of GORD. Heartburn and/or acid reflux, which are worse after meals and are posture-related, are the main pointers to a diagnosis of GORD. Patients should be asked to describe their symptoms to avoid misunderstandings in the use of the terms heartburn and acid regurgitation.

Heartburn is a retrosternal burning sensation that radiates upward toward the neck, is worse after meals, is worse when supine, and is relieved with antacids.

Acid regurgitation has as a symptom a sour- or bitter-tasting fluid in the throat. Some patients complain of waterbrash, which is an increase in salivation thought to be stimulated by the presence of acid in the oesophagus. Symptom severity varies between patients and in the course of the disease in any one patient. It is important to note that there is no correlation between endoscopic findings and symptom severity. Indeed some patients may have severe erosive oesophagitis on endoscopy and be asymptomatic.

A differential diagnosis for GORD includes functional heartburn as previously mentioned and less common disorders of the oesophagus such as motility disorders, infective oesophagitis and eosinophilic oesophagitis. Other gastrointestinal disorders which may mimic GORD are peptic ulcer disease and functional dyspepsia. Careful history taking and examination is the key to the correct diagnosis.

Complications

Anaemia, stricture formation, Barrett’s oesophagus and adenocarcinoma of the oesophagus are complications of GORD. Risk factors for adenocarcinoma of the oesophagus are GORD, Barrett’s oesophagus, male sex, white ethnicity, advanced age and obesity. The risk in patients with GORD increases over time; however, the absolute risk is low and endoscopic screening of all patients with GORD is not justified at present.

Suspected Barrett’s oesophagus on endoscopy followed by biopsy confirmed intestinal metaplasia, is a premalignant condition. The diagnosis of Barrett’s oesophagus is complicated by the fact that there are different diagnostic criteria among endoscopists and pathologists. Furthermore, once diagnosed there is much debate on the management of Barrett’s oesophagus, as up to 1% of patients having endoscopies for any indication have Barrett’s oesophagus. Follow-up endoscopies with repeat biopsies is advised at the present time.

Management

Desirable goals of management are to provide complete or at least sufficient control of symptoms, with the expectation of healing oesophagitis if present, and to treat or preferably prevent complications.
Lifestyle changes
Avoidance of specific foods and drink that exacerbate symptoms may help. Elevation of the head of the bed is of proven benefit but is not always acceptable. Obesity is a risk factor for oesophagitis and obese patients are frequently advised to lose weight although no trial has shown weight loss to improve reflux. Discontinuation or moderation of smoking and alcohol consumption often improves symptoms. Discontinuation of medications that might produce and/or exacerbate GORD, including NSAIDs, also produces symptomatic relief.

Medications
There are four classes of medications used in the treatment of GORD. These are antacids, coating agents containing alginic acid, H2 receptor antagonists and proton pump inhibitors.

- Antacids or coating agents can be used for patients with mild symptoms. Both antacids and alginic acid act within a few minutes and provide good symptomatic relief. Antacids increase the pH of the gastric contents and alginic acid creates a barrier to acid contact with the oesophageal mucosa. These agents, however, do not help heal oesophagitis
- H2 antagonists provide good symptomatic relief and help to heal mild oesophagitis. The results of randomised controlled double-blind trials demonstrate good symptomatic relief in 40%-50% of patients and healing of oesophagitis in up to 40% of patients. Recommended doses of H2 receptor antagonists in GORD are cimetidine 400mg four times daily for four to eight weeks, famotidine 20mg-40mg BD for six to 12 weeks, nizatidine 150mg-300mg BD for up to 12 weeks, and ranitidine 150mg BD or 300mg at night for up to eight weeks. In general, dosing schedules are more frequent in GORD than those used in peptic ulcer disease
- Proton pump inhibitors (PPIs) produce profound acid suppression and are superior to H2 antagonists in providing symptomatic relief and accelerating healing in oesophagitis. Numerous double-blind, placebo-controlled trials have demonstrated that with a four week course of a standard dose PPI there will be a complete symptomatic relief in greater than 80% and healing of oesophagitis in greater than 80% of patients. Recommended doses of PPIs in GORD are esomeprazole 40mg OD for four to eight weeks, lansoprazole 30mg daily for four to eight weeks, omeprazole 20mg OD for four to eight weeks, pantoprazole 20mg-40mg OD for four to eight weeks, rabeprazole 20mg OD for four to eight weeks. Higher doses may be necessary with severe oesophagitis and oesophagitis complicated by stricturing or anaemia.

Of note, infection with Helicobacter pylori enhances the efficacy of proton pump inhibitors.

Two approaches to the initial medical management of GORD
Treatment can be started with the most effective regimen and subsequently be stepped down, or treatment can be started with minimum intervention and be stepped up as required. Both regimens have their advantages and disadvantages, eg. costs, over/undertreatment, time to symptom relief.

- Patients with severe oesophagitis, with or without stricture or anaemia, usually require long-term high dose PPIs. Apart from this group, long-term options are intermittent courses of proton pump inhibitors, on-demand PPI treatment, or reduction of the dose of a PPI as maintenance therapy of GORD. The goal of long-term treatment of this disorder (which is required in most patients), is to step down to the treatment that is least costly but still effective in controlling symptoms
- GABA agonists (eg. baclofen), are currently being evaluated in GORD. Tonic contraction of the lower oesophageal sphincter is the principal factor preventing reflux. baclofen reduces the frequency of transient lower oesophageal sphincter relaxations, and may reduce the frequency of reflux events.

Surgical treatment
The goal of surgery is to create a barrier to reflux. Both open and laparoscopic fundoplication (Nissen fundoplication) are available. Success is operator-dependent and long-term outcomes compared with medical treatment are disappointing. Studies have found no difference in rates of complications in patients treated medically or surgically. Added to that, mortality from open and laparoscopic fundoplication has been estimated at 0.2%, which is in stark contrast to the safety of medical treatment of GORD.

More recently endoscopic procedures have been developed to treat GORD. These include gastric plication of gastric cardia folds with various sutting devices, focal thermal injury to the lower oesophageal sphincter and cardia using radio-frequency current and finally, injection of ethylene vinyl alcohol polymer with tantalum into the muscle layer of the oesophagus. There is a noticeable lack of sham controlled, double-blind trials evaluating these procedures, and their role in the treatment of GORD has yet to be determined.

Role of endoscopy
Endoscopy is always indicated if there are alarm symptoms (weight loss, dysphagia, bleeding). It is also advised in patients requiring continuous PPI treatment to control symptoms.

Whether or not a patient presenting with untreated GORD with no alarm symptoms should have an endoscopy is unclear. Follow-up endoscopy is advised in patients with histologically confirmed Barrett’s oesophagus. Additionally, endoscopic procedures have been developed to treat GORD as described above.

Role of Helicobacter pylori
In contrast to peptic ulcer disease, the association between H pylori and GORD is unclear. An inverse relationship is observed. Treating H pylori does not help reflux. Indeed the efficacy of PPI therapy is enhanced in the presence of H pylori.

Conclusion
Careful assessment of symptoms and severity of symptoms is most important in the diagnosis and continued management of GORD. Typical heartburn and acid regurgitation are highly suggestive of GORD. Atypical symptoms point to other disorders, especially functional dyspepsia. If symptoms are not assessed carefully, a wrong diagnosis can be made, and patients prescribed medications which may not be of benefit to them.

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