Furthermore, a narrative evidence summary for each section provides important details for the data supporting the statements.

Our goal is to showcase a document that offers best practice recommendations for clinicians caring for patients with GERD.

These guidelines are established to support clinical practice and suggest preferable approaches to a typical patient with a particular medical problem based on the currently available published literature. When exercising clinical judgment, particularly when treatments pose significant risks, health care providers should incorporate this guideline in addition to patient-specific medical comorbidities, health status, and preferences to arrive at a patient-centered care approach.

DIAGNOSIS OF GERD

The below recommendations for the diagnosis of GERD are also illustrated in Figure 1.

Recommendations

1. For patients with classic GERD symptoms of heartburn and regurgitation who have no alarm symptoms, we recommend an 8-week trial of empiric PPIs once daily before a meal (strong recommendation, moderate level of evidence).
2. We recommend attempting to discontinue the PPIs in patients whose classic GERD symptoms respond to an 8-week empiric trial of PPIs (conditional recommendation, low level of evidence).
3. We recommend diagnostic endoscopy, ideally after PPIs are stopped for 2–4 weeks, in patients whose classic GERD symptoms do not respond adequately to an 8-week empiric trial of PPIs or whose symptoms return when PPIs are discontinued (strong recommendation, low level of evidence).
4. In patients who have chest pain without heartburn and who have had adequate evaluation to exclude heart disease, objective testing for GERD (endoscopy and/or reflux monitoring) is recommended (conditional recommendation, low level of evidence).
5. We do not recommend the use of a barium swallow solely as a diagnostic test for GERD (conditional recommendation, low level of evidence).
6. We recommend endoscopy as the first test for evaluation of patients presenting with dysphagia or other alarm symptoms (weight loss and GI bleeding) and for patients with multiple risk factors for Barrett's esophagus (strong recommendation, low level of evidence).
7. In patients for whom the diagnosis of GERD is suspected but not clear, and endoscopy shows no objective evidence of GERD, we recommend reflux monitoring be performed off therapy to establish the diagnosis (strong recommendation, low level of evidence).
8. We recommend against performing reflux monitoring off therapy solely as a diagnostic test for GERD in patients known to have endoscopic evidence of Los Angeles (LA) grade C or D reflux esophagitis or in patients with long-segment Barrett's esophagus (strong recommendation, low level of evidence).

Key concept

1. We do not recommend high-resolution manometry (HRM) solely as a diagnostic test for GERD.

Defining GERD

A single unifying definition of GERD is difficult. In preparing this guideline, we have blended the multiple definitions in the literature to create the following: GERD is the condition in which the reflux of gastric contents into the esophagus results in symptoms and/or complications. GERD is objectively defined by the presence of characteristic mucosal injury seen at endoscopy and/or abnormal esophageal acid exposure demonstrated on a reflux monitoring study.

Pathophysiology of GERD

The pathophysiology of GERD includes a poorly functioning esophagogastric junction; the antireflux barrier composed of the LES and crural diaphragm, coupled with impaired esophageal clearance and alterations in esophageal mucosal integrity. Reflux esophagitis develops when refluxed gastric juice triggers the release of cytokines and chemokines that attract inflammatory cells and that also might contribute to symptoms. Other contributors to GERD symptoms may include decreased salivary production, delayed gastric emptying, and esophageal hypersensitivity. As such, GERD can no longer be approached as a single disease, but one with multiple phenotypic presentations and different diagnostic considerations.

Symptoms

Typical symptoms of GERD include heartburn and regurgitation. Heartburn is the most common GERD symptom and is described as substernal burning sensation rising from the epigastrium up toward the neck. Regurgitation is the effortless return of gastric contents upward toward the mouth, often accompanied by an acid or bitter taste. Although both heartburn and regurgitation are major symptoms of GERD, the genesis of these symptoms is not the same, and the diagnostic and management approaches vary depending on which symptom predominates. Chest pain, indistinguishable from cardiac pain, may present in conjunction with heartburn and regurgitation or as the only GERD symptom. The symptoms of GERD are nonspecific and may overlap or be confused with those of other disorders such as rumination, achalasia, eosinophilic esophagitis (EoE), reflux hypersensitivity, functional disease, cardiac or pulmonary disease, and paraesophageal hernia.

Extraesophageal manifestations of GERD can include laryngeal and pulmonary symptoms such as hoarseness, throat clearing, and chronic cough and conditions such as laryngitis, pharyngitis, and pulmonary fibrosis. It also has been proposed that GERD might exacerbate asthma. These extraesophageal manifestations are challenging for patients and physicians because, although they may result from GERD, they may also be due to a host of other causes. Even in patients with established GERD, it can be difficult to establish that GERD is the cause of these extraesophageal problems.

There is no gold standard for the diagnosis of GERD. Thus, the diagnosis is based on a combination of symptom presentation, endoscopic evaluation of esophageal mucosa, reflux monitoring, and response to therapeutic intervention. Heartburn and regurgitation remain the most sensitive and specific symptoms for GERD, although not as reliable as one might believe. A well-performed but older systematic review found a variable sensitivity of heartburn and regurgitation for erosive esophagitis (EE) (30%–76%), with the specificity ranging from 62 to 96% (6). Most consensus statements and guidelines advocate a trial of therapy with a PPI as a diagnostic "test" in patients with the typical symptoms of heartburn and regurgitation, with the underlying assumption that a PPI response establishes the diagnosis of GERD. Although this a practical and efficient approach, it is