### GERD/Heartburn Guideline*

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Treatment</th>
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</thead>
<tbody>
<tr>
<td>▪ Empiric trial of therapy (including lifestyle modification) for patients with symptoms consistent with GERD</td>
<td>▪ Lifestyle modifications</td>
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<tr>
<td>▪ Further diagnostic testing should be considered if the patient does not respond to therapy, when there are symptoms suggesting complicated disease and when patients have a sufficient duration of symptoms to put them at risk for Barrett’s esophagus.</td>
<td>▪ Education of the patient about factors that may precipitate reflux</td>
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<tr>
<td>▪ Endoscopy – technique of choice to identify suspected Barrett’s esophagus and diagnose complications of GERD.</td>
<td>▪ Patient Directed Therapy</td>
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<td>▪ Ambulatory Reflux Monitoring – helps to confirm gastroesophageal reflux in patients with persistent symptoms (both typical and atypical) without evidence of mucosal damage, especially when a trial of acid suppression has failed.</td>
<td>▪ OTC H2 blockers and Antacids</td>
</tr>
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<td>▪ Esophageal Manometry – may be used to ensure accurate placement of ambulatory monitoring probes and may be helpful prior to anti-reflux surgery.</td>
<td>▪ OTC proton pump inhibitors may be used up to 14 days, unless directed by a physician</td>
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<td>▪ Acid Suppression</td>
<td>▪ Mainstay therapy for GERD</td>
</tr>
<tr>
<td>▪ Promotility agents</td>
<td>▪ Rx strength H2 blockers – for treatment of mild/moderate GERD</td>
</tr>
<tr>
<td>▪反流性胃運動障害</td>
<td>▪ Proton Pump Inhibitors – eliminate symptoms and heal esophagitis more frequently and more rapidly than other agents.</td>
</tr>
<tr>
<td>▪ Maintenance Therapy</td>
<td>▪ Anti-reflux surgery</td>
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<tr>
<td>▪ Continuous therapy to control symptoms and prevent complications is appropriate.</td>
<td>▪ Controversy remains over the long-term effectiveness of surgical intervention versus chronic medical therapy.</td>
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<tr>
<td>▪ Endoscopic Therapy</td>
<td>▪ Use is mainly limited to clinical trials</td>
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<tr>
<td>▪ Refractory GERD</td>
<td>▪ Consider increasing dose of PPI to twice daily dosing</td>
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<tr>
<td>▪ If symptoms are refractory to medical treatment the diagnosis should be reconsidered and confirmed.</td>
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See supporting document for more details.
Clinical Considerations – GERD/Heartburn*

**DIAGNOSIS**

**Empirical Therapy**
- For patients with symptoms consistent with GERD it is appropriate to offer empiric therapy.
- For patients who respond to empiric therapy it is reasonable to assume a diagnosis of GERD.
- Further diagnostic testing (listed below) should be considered if the patient has:
  - no responsive to therapy
  - symptoms present suggesting complicated disease (dysphagia, odynophagia, bleeding, weight loss, or anemia)
  - duration of symptoms sufficient to put them at risk for Barrett’s esophagus.

**Endoscopy**
- Although a normal endoscopy does not exclude GERD, it is the technique of choice to identify suspected Barrett’s esophagus and to diagnose complications of GERD.
- A biopsy must be added to confirm the presence of Barrett’s epithelium and to evaluate for dysplasia.

**Ambulatory Reflux Monitoring**
- For patients with persistent symptoms of GERD, without mucosal damage, ambulatory reflux monitoring can confirm the presence of GERD. This is especially true in patients who have failed acid suppression.
- This is considered the best approach to studying the actual amount of reflux occurring in a patient.
- There may also be benefit to ambulatory pH testing while on reflux, in patients with refractory symptoms.

**Esophageal Manometry**
- Used to confirm accurate placement of ambulatory monitoring probes.
- May be used to document effective esophageal peristalsis, when anti-reflux surgery is being considered.
- May be used in the diagnostic work-up of rare motility disorders.

**TREATMENT**

**Lifestyle modifications**
- Patients should be educated about factors that may precipitate reflux including: elevation of the head of the bed, decreased fat intake, cessation of smoking, and avoiding recumbency for 3 h postprandial.
- Patients should be cautioned that certain foods may precipitate reflux by lowering LES pressure. (chocolate, alcohol, peppermint, coffee and perhaps onions and garlic).
- Although the benefits have not been proven through evidence based medicine, it is assumed that the 20-30% placebo response rate seen in clinical trials is due to lifestyle modification.

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Patient Directed Therapy

- All OTC H2 blockers are clinically equivalent.
- The combination of antacids (Maalox, Mylanta) and alginic acid (Gaviscon) may provide better symptom relief than either medication on its own.
- Outcomes in two long-term trials suggest 20% improvement in symptoms when patients use OTC agents.
- OTC agents can be used prophylactically, prior to an activity that may potentially result in reflux symptoms.
- Patient should visit their physician before using OTC PPIs beyond 14-days because of the risk of Barrett’s esophagus or other upper gastrointestinal pathology.

Acid Suppression

H2 blockers

- Histamine2-receptor blockers are less effective than PPIs but may provide benefit in some patients with less severe GERD.

Proton Pump Inhibitors

- Acid suppression is the treatment of choice for GERD, with the proton pump inhibitors being the most effective in most patients.
- PPIs have been found to provide symptomatic relief of GERD in 83% of patients compared with 27% of placebo treated and 60% of H2 blocker treated, and esophagitis healing in 78% of patients compared with 24% of placebo treated and 50% of H2RA treated.
- All five PPIs (omeprazole/Prilosec, lansoprazole/Prevacid, rabeprazole/Aciphex, pantoprazole/Protonix, and esomeprazole/Nexium) demonstrate efficacy in controlling GERD symptoms and esophagitis healing.
- PPIs should be dosed prior to meals, based on specific instructions in package insert.
- Although PPIs are most commonly given prior to breakfast they may be taken prior to the evening meal to control night time acid.
- Higher than approved doses, given twice a day, are reasonable in patients under the following circumstances:
  - during a diagnostic trial for non-cardiac chest pain,
  - during empiric treatment trial for supraesophageal symptoms of GERD,
  - partial response to standard dose therapy,
  - patients experiencing breakthrough symptoms,
  - GERD patients with severe esophageal dysmotility,
  - patients with Barrett’s esophagus.
- Patients should have access to chronic PPI therapy if they have break through symptoms on less effective therapy.
- Physicians should taper PPI therapy for those patients without symptoms

Promotility agents:

- Although promotility agents are not indicated for monotherapy of GERD, they may be used as an adjunct to acid suppression in selected patient.
- The use of metoclopramide and bethanechol has decreased because of frequent Central Nervous System side effects.

Maintenance Therapy

- Continuous therapy may be needed to control symptoms and prevent complications.
- The type of maintenance therapy will vary. Some patients with mild symptoms may respond to antacids and lifestyle modifications.
- In patients with moderate/severe GERD, chronic PPI therapy may be needed to control symptoms. Lowering the dose of PPIs has not been shown to be effective in the treatment of GERD.
Anti-reflux surgery
- Antireflux surgery is an option for patients with chronic GERD, but should be performed by an experienced surgeon.

Endoscopic Therapy
- Endoscopic therapy; including radiofrequency application to the LES area, endoscopic sewing devices, and injection into the LES region can be used in patients with well documented GERD.
- The use of these techniques is mainly limited to clinical trials, but can be used outside of clinical trials in certain well-informed patients with PPI responsive GERD.

Refractory GERD
- Diagnosis should be reconsidered in a patient with typical or atypical symptoms of GERD, that don’t respond to therapy.