Initial Evaluation

- A clinical evaluation is recommended to identify the etiology of dyspeptic symptoms and determine appropriate management.

- Referral to endoscopy is recommended for patients presenting with “alarm symptoms” suggestive of a serious gastrointestinal disorder.

- Helicobacter pylori (H. pylori) serum antibody testing is recommended for patients with uncomplicated and NSAID-induced dyspepsia not associated with GERD or alarm symptoms.

Alarm symptoms include:
- recurrent vomiting
- unexplained weight loss
- dysphagia
- gastrointestinal bleeding and/or blood loss anemia
- jaundice
- palpable mass
- new onset of dyspeptic symptoms at age 55 or older

If there is a documented history of peptic ulcer disease by upper GI or endoscopy, but the patient does not present with alarm symptoms, then management for dyspepsia is appropriate (see Figure 1).

Lifestyle Modification and Withdrawal from NSAIDs and Aspirin

- Lifestyle modification is recommended for all patients with symptoms of dyspepsia.

- Withdrawal from NSAIDs and aspirin (if no history of heart disease and/or stroke) is recommended for all patients with symptoms of dyspepsia.

Dyspepsia is frequently caused by lifestyle factors or chronic use of NSAIDs and aspirin. Symptoms typically subside after lifestyle modification and, as needed, short-term pharmacotherapy. Lifestyle modifications include:

- Discontinuing nicotine; caffeine; alcohol; chocolate
- Losing weight
- Eating frequent smaller meals and a low-fat diet to avoid postprandial discomfort
- Eating at least 2 hours before bedtime
- Taking antacids after meals and at bedtime
- Avoiding tight belts or clothing

Pharmacotherapy

UNINVESTIGATED DYSEPSIA (see Figure 1)
(with or without history of ulcer)

- Initiation of treatment with high-dose H2-receptor antagonists at time of H. pylori testing is recommended.

- If H. pylori test results are positive, then treatment with antibiotics and a proton pump inhibitor is recommended.

- If H. pylori test results are negative and symptoms persist, then treatment with a proton pump inhibitor is recommended.

TREATMENT OF H. PYLORI

- The following 3-drug regimen is first-line therapy for eradication of H. pylori:
  - Amoxicillin 1 gm BID for 10 days, plus
  - Clarithromycin 500 mg BID for 10 days, plus
  - Omeprazole 20 mg BID for 10 days

Metronidazole 500 mg BID is recommended as an alternative if amoxicillin is not tolerated.

TREATMENT OF DYSEPTIC SYMPTOMS NOT ASSOCIATED WITH NSAID USE

- If symptoms persist after high-dose H2-receptor antagonist treatment, H. pylori treatment and lifestyle modification, treatment with a proton pump inhibitor, i.e., omeprazole (Prilosec©) 20 mg daily for 14 days, is recommended.

Discontinue use of H2-receptor antagonists prior to initiation of PPI treatment. Patients who present with dysmotility-like functional dyspepsia (nausea and bloating) may not benefit from PPI treatment.

- If symptoms recur after initial treatment, consider retreatment or other options on a case-by-case basis.

Functional dyspepsia is a chronic condition. Even though ideal pharmacological therapy should be short term (no more than one month) and symptom directed, retreatment may be indicated when symptoms recur at some interval after treatment has been discontinued. The use of prokinetics, antispasmodics, or tricyclic antidepressants; and/or referral to stress management, psychotherapy, or a support group, may also be appropriate for some patients. Unless alarm symptoms are present, endoscopy is highly unlikely to produce a positive finding for most patients whose symptoms continue after an adequate course of therapy.

*Stool testing for H. Pylori is currently being evaluated.
For periodic updates, please access the KPSC Clinical Practice Guidelines Intranet at http://cl.kp.org/plsc/scal/cpg/cpg/.
Figure 1: Management of Patients with Symptoms of Dyspepsia

Patient Presents With Symptoms of Dyspepsia that Do Not Respond to Lifestyle Modification

At least 3 months, with onset at least 6 months previously, of abdominal discomfort or pain. Typical presenting symptoms include:
- bothersome post-prandial fullness or early satiation, several times per week
- epigastric burning or pain of at least moderate severity, occurring intermittently on a weekly basis and not relieved by defecation or passage of flatus

"Alarm" symptoms present?

Symptoms suggestive of an ulcer or other serious gastrointestinal disorder:
- recurrent vomiting
- unexplained weight loss
- dysphagia
- gastrointestinal bleeding and/or blood loss anemia
- jaundice
- palpable mass
- new onset of dyspeptic symptoms at age 55 or older

NO

Refer for endoscopy*

YES

Refer to GERD guidelines (see Figure 3)

GERD symptoms present?

Characteristics of GERD symptoms:
- Heartburn (substernal burning) after ingestion of a large or spicy meal
- Heartburn is often accompanied by regurgitation, and aggravated by lying down or changing position
- Symptoms typically relieved with antacids

NO

Refer for ultrasound

YES

Geriatric guidelines

Prior documented ulcer?

NO

If no alarm symptoms, follow treatment for uninvestigated dyspepsia

YES

Consider other options on a case-by-case basis:
1) stress management
2) antidepressants
3) psychotherapy
4) antispasmodics
5) prokinetics

Uninvestigated Dyspepsia

Obtain H. pylori serum test

AND

Treat with high-dose H2 antagonist

• famotidine (Pepcid®) 40 mg BID
• ranitidine (Zantac®) 300 mg BID (2 weeks)

Positive H. pylori Test

Treat for H. pylori

• amoxicillin 1 gm BID for 10 days, plus
• clarithromycin (Biaxin®) 500 mg BID for 10 days, plus
• omeprazole 20 mg BID for 10 days

If amoxicillin is not tolerated, use metronidazole 500 mg BID

Negative H. pylori Test

Dyspepsia symptoms resolved?

YES

END

Symptoms Resolved?

NO

Treat with PPI**

• omeprazole 20 mg daily for 14 days (Discontinue H2 RA)

If dyspeptic symptoms continue, is patient taking an NSAID?

YES

Treat for NSAID-Induced Dyspepsia (see Figure 2)

NO

Consider retreatment with PPI

Consider other options on a case-by-case basis:
1) stress management
2) antidepressants
3) psychotherapy
4) antispasmodics
5) prokinetics

END

*Conditions for Which Diagnostic Endoscopy Is Generally Not Indicated:

NOTE: There are occasional exceptions in which an endoscopic examination may be done once to rule out organic disease, especially if symptoms are unresponsive to therapy.

- Distress which is chronic, nonprogressive, atypical for known organic disease, and considered functional in origin
- X-ray findings of: Asymptomatic or uncomplicated sliding hiatal hernia, uncomplicated duodenal bulb ulcer which has responded to therapy, or deformed duodenal bulb when symptoms are absent or respond adequately to ulcer therapy
- Distress which is chronic, nonprogressive, atypical for known organic disease, and considered functional in origin
- Uncomplicated heartburn responding to medical therapy
- Metastatic adenocarcinoma of unknown primary site when the results will not alter management
- Patients without current gastrointestinal symptoms about to undergo elective surgery for non-upper gastrointestinal disease

Source: American Society for Gastrointestinal Endoscopy
TREATMENT OF NSAID-INDUCED DYSPPEPTIC SYMPTOMS

- If *H. pylori* test results are positive, then treatment with antibiotics and a proton pump inhibitor is recommended (see Figure 1).

- If *H. pylori* test results are negative, then empiric management of NSAID-induced GI symptoms is recommended (see Figure 2).

In general, the following options should be considered for empiric management:

- Discontinue the NSAID.
- Discourage smoking, alcohol use, and concurrent aspirin (if no history of heart disease and/or stroke) or multiple NSAID use.
- Consider local therapies such as physical therapy, corticosteroid injections, or heat.

- Use acetaminophen or acetaminophen with codeine (short-term therapy) for analgesia, if anti-inflammatory effects are not needed. Acetaminophen with hydrocodone may be an option for patients intolerant of codeine. Maximum acetaminophen dose is 4 grams per day.
- Consider alternative anti-inflammatory agents (e.g., salicylate, nabumetone or etodolac).
- Use shorter half-life agents (e.g., ibuprofen) at the lowest effective dose. Note: NSAID/COX-2 inhibitors have not been shown to be more effective than NSAIDs.

While *H₂*-antagonists are effective at relieving the gastrointestinal discomfort associated with NSAID use, they do not protect against NSAID-induced gastric ulceration. For older patients with multiple comorbidities, physicians can consult the SCPMG NSAID GI Risk Strategizer and NSAID GI Risk SCORE Card. (Available at [http://pharmacy.kp.org/](http://pharmacy.kp.org/) by searching for “score card.”)
Figure 3: Management of Gastroesophageal Reflux Disease (GERD)

Differential Diagnosis – rule out:
Alarm Symptoms (refer for endoscopy)
- recurrent vomiting, unexplained weight loss, dysphagia, gastrointestinal bleeding, jaundice, palpable mass, blood loss anemia
Other Symptoms
- Asthma (refer to regional guidelines)
- Chronic cough (refer to regional guidelines)
- Sore throat

ALTERNATIVE THERAPIES
- For patients whose dyspeptic symptoms are not controlled by H2RAs or PPIs, and who have no alarm symptoms, the following alternative therapies are options:
  - Referral to stress management
  - Antidepressants and/or psychotherapy
  - Antispasmodics
  - Prokinetics

Gastroesophageal Reflux Disease
- For occasional heartburn (1-3 times a week), over-the-counter (OTC) H2-antagonists and/or antacids, with or without alginic acid, as needed, is recommended.
- For frequent heartburn (>3 times a week) or when OTC agents are ineffective, PPI therapy up to 8 weeks is recommended.

Because the long-term effects of PPI-induced achlorhydria remain unknown, patients should have a careful discussion with their physician about the benefits and risks of PPI therapy.

Note: Antibiotic therapy is not indicated because H. pylori infection is not associated with GERD.

GERD MAINTENANCE THERAPY
- For occasional heartburn, maintenance therapy is not generally indicated, because symptoms may never recur or intermittent use of antacids or OTC H2-antagonists may control symptoms.
- For frequent symptoms, maintenance therapy should be considered after the initial course of acute therapy.
- For severely symptomatic patients, maintenance therapy should begin after the initial course of acute therapy, because symptom recurrence in these patients is frequently associated with severe discomfort and decreased quality of life.

SURGERY
Advances in surgical techniques, such as laparoscopic Nissen fundoplication, may be an appropriate option for younger GERD patients. Advances in endoscopic treatment are currently being evaluated in clinical trials. Patients who are interested in discussing the option of surgery should be referred to Gastroenterology.

ENDOSCOPY
There is no evidence that screening endoscopy for Barrett’s esophagus improves health outcomes in patients with chronic GERD. Because of the relatively low incidence of adenocarcinoma of the esophagus in patients with GERD, endoscopy for Barrett’s esophagus should be limited to patients at highest risk (i.e., men greater than age 55 with chronic GERD symptoms for at least 5 years) who have not previously undergone endoscopy.