

Primary Care Update

January 26 & 27, 2017

Gastroesophageal Reflux Disease: Managing the Burn

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Objectives

- **Definition and presentation of GERD**
- **Diagnosis**
- **Treatment**
- **Refractory GERD**
- **Discuss adverse effects of PPI therapy**
- **Long term complications of GERD**

Question #1

A 44-year-old man presents to the office complaining of classic heartburn several times per week, often at night, along with rare post-prandial and nighttime regurgitation present for the last 6 months. He has been treated empirically with a proton pump inhibitor (omeprazole 20 mg) once daily. Careful questioning reveals he takes the medication each morning when he wakes up around 7 a.m. He does not eat any breakfast (only coffee) until at least noon each day. What is the first step in your approach?

- a. Perform upper endoscopy.**
- b. Have a discussion regarding his PPI dosing.**
- c. Perform reflux monitoring.**
- d. Refer him for surgery for refractory GERD.**

Question #2

The patient in the previous question follows your instructions, starts eating breakfast, and takes omeprazole 20 mg before breakfast and dinner for 6 weeks. He improves by 85%, but is still having some heartburn and little relief of his regurgitation. What should you do next?

- a. Switch his PPI to one more potent.**
- b. Refer directly to surgery.**
- c. Plan to perform a transoral endoscopic fundoplication.**
- d. Perform EGD followed by reflux monitoring if EGD is not helpful.**

Question #3

A 70-year-old woman with chronic GERD has been using proton pump inhibitors for 10 years with symptomatic relief. She comes to your office with concern about risk factors associated with chronic PPI usage. The patient's past medical history is notable for obesity, diabetes mellitus, osteoporosis, recent myocardial infarction with stent placement, and pernicious anemia. Her current medications include lansoprazole, alendronate, clopidogrel, and monthly vitamin B12 injections. The patient is unable to stop PPI therapy for more than 2 days due to recurrence of GERD symptoms. Her prior endoscopic examinations demonstrated LA grade C esophagitis with healing after an 8 week course of PPI therapy. What conditions associated with long-term PPI usage pose the greatest risk for this patient?

- a. Community-acquired pneumonia**
- b. Vitamin B₁₂ deficiency**
- c. Osteoporosis**
- d. Recurrent myocardial infarction**
- e. Clostridium difficile infection**

Define GERD

- **Symptoms**
- **End organ effects**
- **Complications arising from reflux of gastric contents into the esophagus or beyond**
- **Prevalence 10 – 20 % of the Western world with a lower prevalence in Asia**
- **Clinically troublesome in 6 %**

Establishing a Diagnosis

- **Presumptive diagnosis- PPI trial**
 - **Reflux, regurgitation**
- **Upper endoscopy-Alarm symptoms**
- **Barium radiograph**
- **Routine biopsies not required**
- **Screening for H. Pylori**
- **Additional testing – PH/Manometry**

GERD Management

- **Weight loss**
- **Head of bed elevation, no meals with 2-3hrs**
- **Elimination of trigger foods**

Lifestyle Modifications

Table 3. Efficacy of lifestyle interventions for GERD

Lifestyle intervention	Effect of intervention on GERD parameters	Sources of data	Recommendation
Weight loss (46,47,48)	Improvement of GERD symptoms and esophageal pH	Case-Control	Strong recommendation for patients with BMI>25 or patients with recent weight gain
Head of bed elevation (50-52)	Improved esophageal pH and symptoms	Randomized Controlled Trial	Head of bed elevation with foam wedge or blocks in patients with nocturnal GERD
Avoidance of late evening meals (180, 181)	Improved nocturnal gastric acidity but not symptoms	Case-Control	Avoid eating meals with high fat content within 2-3 h of reclining
Tobacco and alcohol cessation (182-184)	No change in symptoms or esophageal pH	Case-Control	Not recommended to improve GERD symptoms
Cessation of chocolate, caffeine, spicy foods, citrus, carbonated beverages	No studies performed	No evidence	Not routinely recommended for GERD patients. Selective elimination could be considered if patients note correlation with GERD symptoms and improvement with elimination

BMI, body mass index; GERD, gastroesophageal reflux disease.

Medical Therapy

- **Traditional PPI's 30 -60 mins**
 - **Before meals,**
 - **Once a day,**
 - **Newer are more flexible**
- **Duration trial 2 weeks**
- **PPI's are more effective than H2ra and prokinetics**

Response to PPI

- **Partial Response**
 - **Adjust dose timing**
 - **Increase to BID**
 - **Maintenance- lowest dose**

- **No Response**
 - **Refer**

H2RA and Other Meds

- **H2RA**

- **Evidence to support use in nighttime symptoms**
- **Tachyphlaxis after several weeks**
- **Use in non erosive disease**

- **Baclofen**

- **After diagnostic evaluation**

- **Prokinetic**

- **Not used in the absence of gastroparesis**

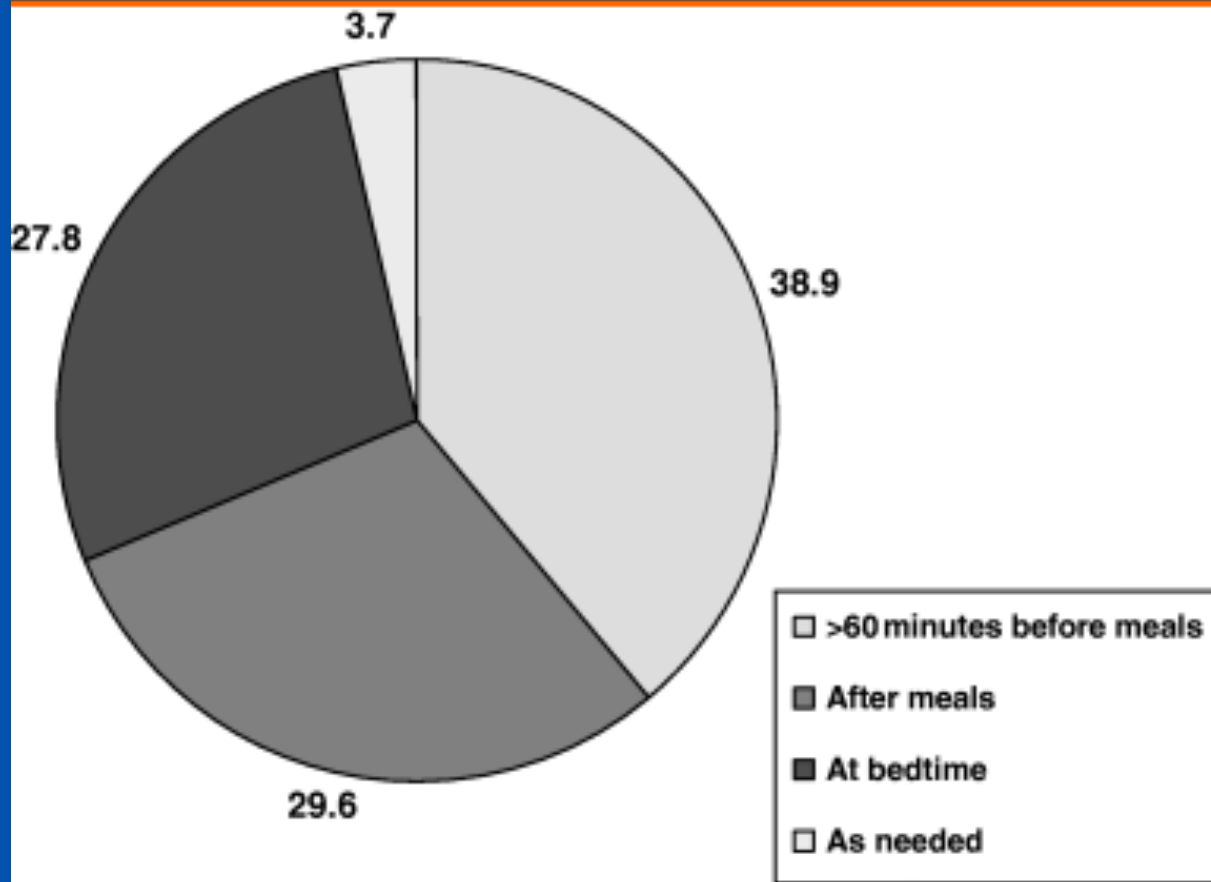
Why Do Symptoms Continue?

- **Uncontrolled**
 - **PPI optimized?**
- **Non acidic reflux**
- **Esophageal hypersensitivity**

Refractory GERD Algorithm

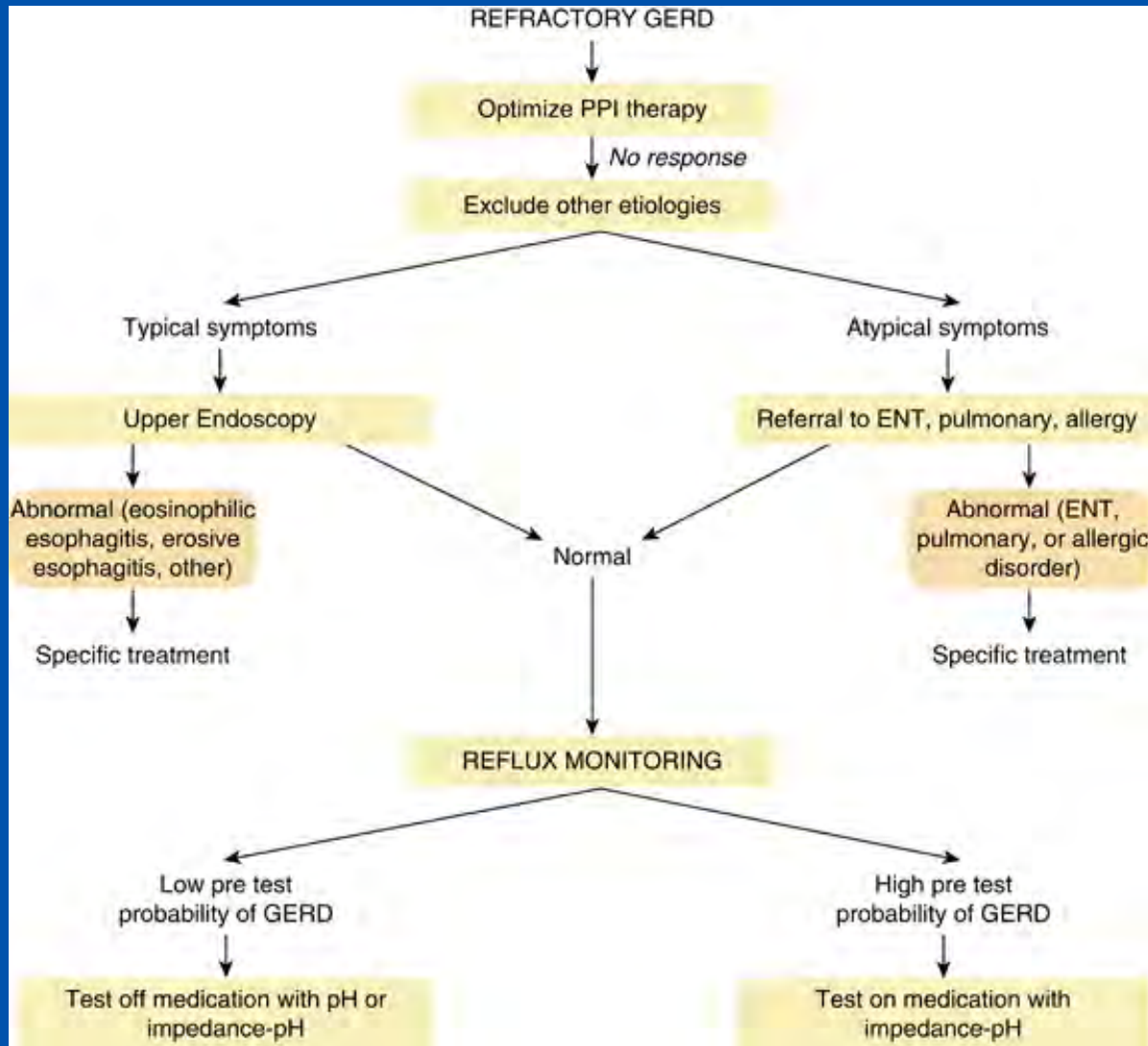
- **PH testing validates diagnosis**
- **PPI optimized**
- **No alternate diagnosis**

- **Options**
 - **Baclofen**
 - **Endoscopic therapy**
 - **Surgical therapy**



Source: Aliment Pharmacol Ther © 2006 Blackwell Publishing

Gunaratnam, N. T., Jessup, T. P., Inadomi, J., & Lascewski, D. P. (2006). *Sub-optimal proton pump inhibitor dosing is prevalent in patients with poorly controlled gastro-oesophageal reflux disease. Alimentary Pharmacology and Therapeutics, 23(10), 1473-1477. DOI: 10.1111/j.1365-2036.2006.02911.x*



Differential Non Responders

- **Rumination**
- **Motility (Achalasia)**
- **Eosinophilic esophagitis**
- **Gastroparesis**
- **Atypical CP/ Functional heartburn**

Surgical Therapy

- **Treatment option for long term therapy**
- **Not recommended in non responders**
- **PH study is mandatory**
- **Surgery as effective as medical therapy**
- **Obesity consider gastric bypass**

Guidelines on Adverse Effects of Long Term PPI Therapy

- **Osteoporosis**
- **Vit B12 , Iron (elderly institutionalized)**
- **Cardiovascular risk and stent occlusion**
- **Risk of infection e.g. C difficile**
- **Short term may increase risk of CAP**

Extraesophageal Manifestations

- **GERD may be cofactor**
 - **Cough, laryngitis, asthma**
- **Diagnosis of reflux laryngitis is not a laryngoscopic diagnosis**
- **PPI trial if reflux symptoms are also present otherwise PH monitoring**
- **Endoscopy**
- **No response to PPI = No surgery**