IMC DIDACTIC EBM CASE: Gastroesophageal Reflux

Mr. Hart Burns is a 45 year old man who presents to the IMC with complaints of "heartburn". Apparently he has suffered with retrosternal burning discomfort on and off for the last 5 years. It is usually worse after large meals and when he lies down for bed. Occasionally he will "burp" a bitter tasting fluid into his mouth. The symptoms started shortly after he "sprained" his knee and stopped exercising, subsequently gaining 30 pounds in weight. He has been self treating at home with Tums and over the counter famotidine as needed, but the symptoms have become more frequent, and sometimes the medications are of limited benefit. He denies any difficulty or pain with swallowing, nausea or vomiting, black or tarry stools, weight loss or fatigue. He denies any other chest pain or shortness of breath. His bowels are regular and he has no other abdominal pain. He denies fever, chills, headache, dizziness, sinus pain, sore throat, dysuria, hematuria, erectile dysfunction, weakness or numbness in arms or legs, skin rash or lesions, or polyuria or polydipsia. He states he was seen at ER three months ago with the retrosternal burning, they gave him an aspirin and did an exercise stress test, which he "passed". He was told to follow-up at the IMC, and that is why he presents today.

PMedHx: Hypertension, Left knee sprain

PSurgHx: None

Allergies: Penicillin (rash)

Medications: Enalapril 20 mg daily (gets at health department)

Family Hx: Mother and Father alive, both with hypertension; no family hx of cancer, IBD, or celiac disease

Social Hx: Former tobacco user, 1 ppd for 10 years, quit 10 years ago; occasionally drinks 1 to 2 beers on weekend when watching games; denies illicit; lives with wife in home, monogamous heterosexual; works as a landscaper / snow removal laborer, has no health insurance

Vitals: Temp 98.4 BP 126/84 Pulse 80 Resp 14 Ht 72 inch Wt 235# BMI 31.9

Gen: A&O x 3, NAD, nontoxic, obese

HEENT: PERRLA, EOMI, TM's pearly gray bilateral, turbinates pink and moist, oral mucosa moist, good dentition, posterior pharynx within normal limits

Neck: Supple, no JVD, no lymphadenopathy

Heart: RRR, no murmurs, gallops, or rubs

Lungs: BCTA, no wheeze, rhonchi or rale

Abdomen: Soft, + BS, NT/ND, no mass, hernia or organomegaly, no Murphy's sign, no flank tenderness to palpation

Rectal: normal sphincter tone, no mass, smooth prostate, hemoccult negative

Neuro: Grossly intact

Skin: No lesions or rashes

EPIC Review: ER visit 3 months ago, revealed normal CBC, CMP, troponin. Exercise stress test with 15 mets, no EKG changes at 90% predicted maximal heart rate "normal stress test" per report

Please utilize the ACP GERD 2012 best practice advice article to answer the following questions:

http://annals.org/article.aspx?articleid=1470281

- What is the most likely diagnosis for our patient?
- How many US adults report some symptoms of reflux disease? What percent report symptoms on a weekly or more frequent basis?
- What is the definition of gastroesophageal reflux disease? Is tissue injury necessary to fulfill disease criteria?
- What percent of patients with GERD have nonerosive disease? What percent of patients with chronic heartburn symptoms have Barrett esophagus? What is Barrett esophagus?
- Are GERD and Barrett esophagus associated with an increased risk for esophageal adenocarcinoma? What is the absolute risk for adenocarcinoma of the esophagus in the general population? Has it been increasing, decreasing or staying the same over the past 40 years?
- What is the cancer risk of Barrett esophagus with no dysplasia? With high grade dysplasia?

Mr Hart Burns requests a referral to gastroenterology for an upper endoscopy. Answer the following questions to see if you want to send him to GI now.

- True or False. GERD symptoms have a poor sensitivity and specificity as predictors of cancer risk.
- What percent of patients who develop adenocarcinoma of the esophagus have no heartburn? What is the yearly risk of esophageal adenocarcinoma among patients 50 years or older with heartburn?
- Is esophageal adenocarcinoma more common in men or women?
- True or False. The risk for esophageal adenocarcinoma in women with GERD is roughly equal to that of breast cancer in men.
- What percent of patients with nondysplastic Barrett esophagus followed for more than 5 years develop cancer?
- True or False. Direct evidence shows screening and surveillance endoscopy programs actually decrease death from adenocarcinoma of the esophagus.
- In most patients presenting with typical GERD symptoms, what treatment is warranted? Is endoscopy indicated in these patients?

You let Mr. Burns know that a referral to gastroenterology and endoscopy is not necessary at this time. You start him on pantoprazole 40 mg daily and tell him he can get a 1 month supply at Ritzman's pharmacy for $4. He returns for followup 4 weeks later, and states the heartburn symptoms are still not gone. Please answer the following questions to help Mr Burns.

- If once daily PPI therapy is unsuccessful in a patient with typical GERD symptoms, what is the next step?
- True or False. Any PPI (dexlansoprazole, esomeprazole, lansoprazole, omeprazole, pantoprazole, or rabeprazole) may be used because absolute differences in efficacy for symptom control and tissue healing are small.
- For most PPIs, what timing of dosing may provide optimal efficacy?

You increase Mr. Burns pantoprazole to 40 mg twice daily, he returns 8 weeks later and states he is continuing to have breakthrough burning pain retrosternally.

- Is GI referral and further investigation with an upper endoscopy now warranted?
- In patients with GERD, which alarm features merit investigation with upper endoscopy because of its yield of potentially clinically actionable findings, such as cancer of the esophagus or stomach, bleeding lesions in the foregut, or stenosis of the esophagus or pylorus?
- Which of the following groups of patients with GERD (and no alarm features or failure of PPI BID therapy) require routine screening upper endoscopy?
    - Women
    - Patients younger than 50
    - Men older than 50 with symptoms more than 5 years and nocturnal symptoms, hiatal hernia, elevated BMI, tobacco use, intra-abdominal distribution of fat

Mr. Burns is seen by GI specialist and has an upper endoscopy which reveals severe erosive esophagitis. Upon further query by the GI specialist, the patient admits he has not been using the pantoprazole because he read on the internet that use could be associated with osteopenia, and his grandfather died at age 96 after breaking his hip. The GI specialist counsels that patient on benefit-risk profile in his current situation and the patient agrees it is best to take the pantoprazole 40 mg twice daily.

- Should Mr. Burns have a follow-up upper endoscopy scheduled? If so, when and why?

Mr. Burns is compliant with the pantoprazole, and feels much better. Eight weeks later the GI specialist repeats the upper endoscopy. The endoscopy shows the esophagitis has healed, but the GI specialist sees a short segment of tissue consistent with Barrett's esophagus in the distal esophagus and takes several biopsies. Pathology findings are consistent with Barrett's esophagus with no dysplasia.

- When should his next upper endoscopy be scheduled?

- In patients with chronic GERD (symptoms > 5 years), if no Barrett's is found on an initial endoscopy (normal endoscopy), are further endoscopic screenings necessary?
- What are the risks of upper endoscopy? What are the costs?

Bonus Question (the answers for this are not in the attached guideline)

- What are lifestyle recommendations that should be made to patient's with GERD?

Case by Rex Wilford, Updated 6-2017