Cases from GI Clinic: GERD, Abnormal Liver Tests, and Diarrhea

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Disclosure of Financial Relationships

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Objectives

Discuss cases, controversies, and updates in:

1) GERD
2) Abnormal liver enzymes
3) Chronic diarrhea
GERD Case #1

52 y.o. female with a chronic cough

Near daily

“Lump” in throat followed by cough

Sometimes post prandial

Does not awaken from sleep
GERD Case #1

Non-smoker

Mild heartburn controlled with 20 mg omeprazole 4-5 days per week

Normal CXR and ECG

Direct laryngoscopy shows mild pharyngeal edema

Normal methacholine challenge
Is this GERD: Laryngopharyngeal Reflux (LPR)?
Extra-Esophageal GERD Symptoms

Esophageal Syndromes
- Symptomatic Syndromes
  - Typical Reflux Syndrome
  - Reflux Chest Pain Syndrome
- Syndromes with Esophageal Injury
  - Reflux Esophagitis
  - Reflux Stricture
  - Barrett's Esophagus
  - Adenocarcinoma

Extraesophageal Syndromes
- Sinusitis
- Pharyngitis
- Laryngitis
- Dental Erosions
- Reflux Cough
- Reflux Asthma
- Pulmonary Fibrosis

Hom C. Drugs 2013;73:1281-1295
GERD Case #1: Extra-esophageal

LPR no longer exists as an ICD-10 diagnosis
Usually multifactorial
Generally comes with typical GERD symptoms
No good way to measure LPR
Direct laryngoscopy is a poor marker
May be ‘reflex’ rather than ‘reflux’

Madanick RD. Gastroenterol Clin N Am 2014;43:105-120
Diagnostic Algorithms of Extraesophageal Reflux Disease

Chronic Cough
- Rule out asthma/postnasal drip/other etiologies

Asthma
- Aggressive Therapy including Inhaled/Oral Steroids

Laryngitis
- Clinical suspicion with no warning symptoms or signs

Empiric PPI Therapy 2 months

(-) Symptom improvement
- Further evaluation to rule out reflux definitively (pH or impedance monitoring)

(+) Symptom improvement
- Taper PPI dose to once daily then to minimum dose required for acid suppression

GERD #2

38 y.o. male with chronic GERD symptoms
Diagnosed 6 years ago
Obese at diagnosis, but lost weight
Reads New York Times and Washington Post
Wants to discuss need for ongoing PPI
Who needs long term PPI?

What are the risks?
Who Needs Long Term PPI?

Barrett’s esophagus
- ~70% reduction in HGD and cancer

History of complicated PUD

NSAIDS plus another risk factor*

History of erosive esophagitis or stricture

*Anticoagulant, ASA, steroid, age > 60

Shaheen NJ. Am J Gastroenterol 2015.
What are Risks of Long-Term PPI

Clear:
- Fractures
- Enteric infections
- Hypomagnesemia

Unclear:
- Renal disease
- MI

Less Clear:
- Vitamin and mineral malabsorption

GERD Case #3

55 y.o. female

Mild intermittent heartburn
No dysphagia, weight loss, anemia
Well controlled on low dose PPI

Does she need Barrett’s screening?
Barrett’s Screening: The Old

Utility of screening is unclear

Risk factors may help to guide screening

Wang KK. AM J Gastroenterol 2008;103:788-797.
Barrett’s Screening: The New

Screening for MEN with:

Longstanding (>5 years) and/or frequent heartburn AND 2 of the following:

- White race
- Tobacco use
- Age >50
- Family history of BE or cancer
- Central obesity

May CONSIDER for women

Why are Women Excluded?

What’s new:  
No role for screening women w/o alarm sx  
Look for additive risk factors  
Unsedated transnasal endoscopy  

What’s not (but still important):  
One time screening  
No role for population screening
Abnormal Liver Associated Enzymes
Case #4: Abnormal LAE

47 y.o female, routine health maintenance
Brings labs from recent insurance physical
ALT: 50 (ULN 40)
AST: 55 (ULN 40)
Normal AP and T. bili
Otherwise normal CBC, hepatic panel
Always normal in the past
Case #4: Abnormal LAE

Exam:
BMI: 29, No stigmata of chronic liver dz

PMHx:
Hypertension, hyperlipidemia

SocHx:
Non-smoker, occasional alcohol use

Meds:
Simvistatin, lisinopril
WHAT NOW?
When to Investigate Elevated LAE

Persistent (> 3 months) OR Significant (>5x ULN)

Associated with synthetic dysfunction
- Increased bilirubin
- Elevated INR

Associated with signs of cirrhosis
- Low platelets (<150 / mm$^3$)
- Low albumin
Case #4: Continued

Returns to clinic in 4 months
No significant change in labs
Feels clinically well

Now time to investigate!
Mildly Elevated AST and ALT: Tier 1

Meds, herbs, alcohol

**Hepatitis B and C** serologies
  (HBsAg, anti-HBs, anti- HBc, anti-HCV)

Screen for **hemochromatosis**
  iron indices, ferritin (Fe/TIBC >45%)

Evaluate for **fatty liver**

RUQ U/S
Mildly Elevated AST and ALT: Tier 2

Consider autoimmune disease

Especially in women, those with other AI
SPEP, ANA, Anti-smooth muscle ab

Obtain thyroid function tests

Consider celiac disease
Mildly Elevated AST and ALT: Tier 3

Consider Wilson’s if < 40
Consider alpha-1 antitrypsin deficiency
Consider adrenal insufficiency
Exclude muscle disorders
OR just refer to GI at this point!
Case #4

RUQ shows hyperechoic liver
Labs unrevealing/normal
Diagnosis: NAFLD/NASH
Continue statin
No FDA approved medical therapies
You recommend weight loss and coffee!

Chalasani N. Hepatology 2012; 55: 2005-2023
Shen H. Therap Adv Gastroenterol 2016;9:113-20
Chronic Diarrhea: Pearls for Practice
Diarrhea Epidemiology
Case #1: Chronic Diarrhea

48 y.o. female
Longstanding bloating, loose stools 3 times daily
Mild abdominal discomfort
Takes fexofenadine, simvastatin, synthroid
BFF recently diagnosed with celiac disease
Is this Celiac Disease?
Case #1

Eating normal diet
Normal total IgA
Negative anti-tissue transglutaminase testing
NOT celiac!

Not reassured by this, feels better off gluten

“Doesn’t that mean I have celiac”? 
What Does Response to GFD Mean?

70% placebo response to GFD in IBS
Gluten difficult to digest, increases stool volume
PPV of response to GFD for celiac only 36%

Cutting out gluten also eliminates much else

FODMAPS

Fermentable
Oligosaccharides
Disaccharides
Monosaccharides
And
Polyols
FODMAPS

Increase luminal osmolarity, bowel water
Fermented by bacteria
Alter intestinal permeability
Study of low FODMAP diet in IBS
Addition of gluten after symptom resolution did not affect outcome

Biesiekierski J. Gastroenterol 2013;145:320
Bohn L. Gastroenterol 2015;149(6):1399-1407
Could this be a wheat allergy?
<table>
<thead>
<tr>
<th></th>
<th>Celiac Disease</th>
<th>Non-Celiac Gluten Sensitivity</th>
<th>Wheat Allergy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>Genetic, autoimmune disorder; gluten ingestion triggers damage to small intestine</td>
<td>Intolerance to gluten or other wheat components without damage to small intestine</td>
<td>Immune response to one or more of the proteins found in wheat (can include gluten)</td>
</tr>
<tr>
<td><strong>Gastrointestinal symptoms</strong></td>
<td>Diarrhea, bloating, abdominal pain</td>
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<td>Nausea, vomiting, diarrhea, bloating, irritation of mouth or throat</td>
</tr>
<tr>
<td><strong>Extra-intestinal findings (e.g. anemia, bone loss)</strong></td>
<td>Weight loss, malnutrition, iron deficiency, dental caries, bone loss, skin issues, neurological disorders, liver dysfunction, joint pain, hair loss, fatigue</td>
<td>Brain fog, neurological disorders, joint pain, fatigue</td>
<td>Hives, rash, nasal congestion, eye irritation, difficulty breathing</td>
</tr>
<tr>
<td><strong>Positive antibody test</strong></td>
<td>Yes</td>
<td>Variable</td>
<td>No</td>
</tr>
<tr>
<td><strong>Abnormal intestinal biopsy</strong></td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td>Strict adherence to a gluten free lifestyle</td>
<td>Adherence to a wheat free/gluten free diet (level of adherence variable)</td>
<td>Strict adherence to a wheat free lifestyle</td>
</tr>
</tbody>
</table>

[http://gastro.ucla.edu/site.cfm?id=281](http://gastro.ucla.edu/site.cfm?id=281)
What’s the Harm of a GFD?

Availability
Possible nutritional deficiencies
Arsenic in rice

http://www.consumerreports.org/cro/magazine/2015/01/
WARNING:

There is no benefit (and potential harm) to eating a gluten free or low FODMAP diet if you are otherwise well.
Take Home Points

- Barrett’s screening should be tailored
- PPI are [mostly] safe, but be judicious in their use
- Mild increases in LAE may be followed initially
- HLA testing for celiac is first line in those on GFD
- Low FODMAP diet of some utility in IBS
- No role for gluten free/low FODMAP diet in the well
If I had an hour to solve a problem and my life depended on it, I would use the first 55 minutes determining the proper questions to ask.

Albert Einstein