Implications of Long-term Proton Pump Inhibitor Use: Promoting Step-Down Therapy for Management of Gastro-esophageal Reflux Disease in the Outpatient Setting

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Implications of Long-term Proton Pump Inhibitor Use: Promoting Step-Down Therapy for Management of Gastroesophageal Reflux Disease in the Outpatient Setting

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Preceptor: Dr. Robin Pritham
EMMC Family Medicine Clinic, Dec 2014-Jan 2015
Long-term PPI Use & Step-Down Therapy

- GERD – most common GI disease, 20% Western population, transient LES relaxation
- Classic signs - heartburn, regurgitation
- Lower quality of life than angina, CHF, DM
- ABIM Foundation “Choosing Wisely” initiative for titrating PPI use to lowest effective dose
- Empiric 4-8 week PPI or H2RA therapy
- PPI top 5 most prescribed medications in North America
Public Health Implications

- PPIs account for 4.7% hip fractures
- Increased susceptibility to community acquired pneumonia (CAP) and health-care acquired pneumonia (HCAP)
- *Clostridium difficile* colitis
- Malabsorption of magnesium, iron, vitamin B12
- Hypergastrinemia rebound acidity
- Drug-drug and antiplatelet interactions
Bangor Community Perspectives

- **Per interview with [Name Withheld], PharmD Associate Professor of Pharmacy Practice, School of Pharmacy at Husson University, Bangor, ME:**
  - PPI continuation after hospitalization due to PCP reluctance to discontinue medications prescribed by gastrointestinal specialists
  - “Exceedingly rare to see a de-escalation of PPI therapy as it is rarely observed”
  - Confounding variables of adverse effects seen in observational studies

- **Per interview with [Name Withheld], MD, Family Medicine Resident:**
  - 3 months PPI or H2RA response prior to step-down attempt

- **Per interview with S.G. 53 year old male patient presenting for follow up on GERD:**
  - Well controlled symptoms, never offered step-down
Intervention/Methodology

- Chart review of the EMMC Family Medicine Center Centricity Outpatient Electronic Medical Records
- Search criteria: Active patients + active PPI use on medication list + date of last office visit on or after 7/1/2014
- 527 patients met criteria
- Reviewed 50 patient charts
Results

- 28% of patients demonstrated improved GERD/acid reflux symptoms during the most recent office visit – missed opportunities for step-down as only 1 patient received intervention.
- 70% of patients were not asked about their GERD/acid reflux symptoms over the course of the last 3 office visits.
- 14% patients did not have an appropriate indication for PPI use on problem list.
- 28% patients had any history of step-down.
Effectiveness vs. Limitations

- Small sample size, n=50 of 527 eligible patients
- Acute office visits
- GERD assessment without documentation in assessment & problem of office visit note
- Patient non-adherence to PPI or inappropriate dosing prior to meals
Future Directions

- Role of computerized clinical decision support prompt in pharmacy-dispensing software to promote PPI step-down
- Efficacy of antisecretory therapies and optimal use of medications in specific settings
- Role of diagnostic testing including endoscopy, esophageal manometry, ambulatory pH monitoring in evaluation of patients with GERD
- Management approaches to atypical GERD patients including patients with reflux chest pain and extraesophageal reflux syndromes such as asthma, laryngitis, cough
- Potential adverse effects warranting work up with bone density studies, calcium supplementation
See attached paper for full list of references
Long-term use of PPIs may increase the risk of hip fractures, pneumonia, vitamin B12 deficiency, and cause drug-drug interactions.

Immediate discontinuation of PPIs can cause the stomach to produce more acid and worsen heartburn symptoms.

Ask your physician if you are on the lowest effective dose or if you are eligible for step-down to reduce your PPI dose or transition to a H2 receptor antagonist.

Long term PPI indications – severe esophagitis, strictures, Barrett’s esophagus, Zollinger Ellison syndrome, use of medications that increase peptic ulcer risk.
Patient Information Lifestyle Modifications

- Weight loss
- Elevate head of bed 4-8 inches
- Avoid acidic, spicy, high fat foods
- Avoid alcohol, caffeine, chocolate, onions, garlic, peppermint,
- Avoid lying flat 2-3 hours after eating
- Avoid tight clothing around waist
- Reduce/quit smoking
- Moderation of alcohol use