Deprescribing Guide: Proton Pump Inhibitors

INTRODUCTION

Gastrointestinal symptoms are one of the most common problems that healthcare providers address when providing end-of-life care. Proton pump inhibitors (PPIs) are commonly used to treat gastroesophageal reflux disease (GERD) symptoms including heartburn, regurgitation, and epigastric pain. Many patients are admitted to hospice services already using acid reflux medications. While potentially useful in palliative care settings where further investigation of underlying disease may not be appropriate, these agents have significant side effects and carry an increased risk of complications that should be considered when reevaluating medication regimens, medication appropriateness, and deprescribing.

Pharmacist Corner Objectives

1.) Review the common therapeutic uses of PPIs
2.) Describe potential side effects and adverse effects associated with prolonged use
3.) Outline non-pharmacological management and deprescribing considerations

BACKGROUND

Medication	Therapeutic Uses	Uses in Palliative Care
dexlansoprazole (Dexilant®) esomeprazole (Nexium®) lansoprazole (Prevacid®) omeprazole (Prilosec®) pantoprazole (Protonix®) rabeprazole (Aciphex®)	▪ Reflux esophagitis ▪ GERD ▪ Benign gastric ulcer ▪ Erosive esophagitis ▪ Active duodenal ulcer ▪ Stress ulcer ▪ NSAID-induced ulcer ▪ Pathologic hypersecretory conditions ▪ Eradication of *Helicobacter pylori* in conjunction with antimicrobials	▪ Chemotherapy-induced GERD ▪ Gastrointestinal obstruction ▪ Metastatic esophageal and gastric carcinoma

In 2015, the American Geriatrics Society released updates to the Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. According to the publication, proton-pump inhibitors should generally be avoided for long-term use in older adults, especially if they are not high-risk patients. In many cases, these agents are initiated during hospitalization with time-limited intent, but patients end up taking them indefinitely without a reevaluation of continued need. The recommendations are as follows:

- Avoid long-term use of PPIs unless benefits outweigh risks
- Avoid treatment duration longer than 8 weeks, unless benefits outweigh risks
- Consider deprescribing, especially when there is no clear indication for continued use
- Consider alternative treatments such as lifestyle modifications or intermittent use of antacids when appropriate

COMMON ADVERSE EFFECTS	
Gastrointestinal	Chronic hypochlorhydria, constipation, abdominal pain, nausea, vomiting, diarrhea, hepatitis, *C. difficile* and other infectious diarrhea, abnormal LFTs, taste disturbances, pancreatitis
Respiratory	Increased respiratory tract infections including pneumonia, bronchospasm
Rheumatologic	Arthralgia, myalgia, bone fractures
Nervous System	Fatigue, dizziness, confusion, depression, visual disturbances, drowsiness, insomnia, headache, vertigo, delirium
Dermatologic	SJS, hypersensitivity, rash, urticaria, pruritus, photosensitivity
Electrolyte Disturbances	Hyponatremia, hypomagnesemia, hypocalcemia, hypokalemia, vitamin B12 deficiency
Metabolic	Hepatic failure, renal failure, hypothyroidism, electrolyte disturbances
Other	Peripheral edema, blood dyscrasia, gynecomastia, thrombocytopenia

For certain patients, symptoms may be relieved through non-pharmacologic measures. These may include:

- Maintain upright position during meals and for 60 minutes after eating
- Avoid eating within 2 hours of bedtime
- Avoid tight-fitting clothing around the abdomen

- Elevate the head of the bed
- Avoid caffeine, alcohol, mint, carbonated beverages, citrus, tomato products

PATIENT & CAREGIVER DISCUSSION POINTS

- Acknowledge that having concerns about medication changes, especially stopping medications, is a common response
- The decision to modify or stop acid reflux medications should be individualized
- Provide reassurance that all medication changes are made in consideration of evaluation of risk versus benefit with patient safety as a priority
- Ask the patient and family questions to engage them in the shared decision-making process
- Explain that as we age or as diseases progress, certain medications that were once helpful can become harmful
- Explain that the hospice team's role is to enhance comfort and quality of life while minimizing adverse events
- Remind the patient and family that the hospice team will regularly reassess the patient's condition and medications

HOW TO DEPRESCRIBE

Once the decision has been made to discontinue GERD medications, they may be stopped by slow taper over 2-4 weeks to avoid rebound hyperacidity. This may be accomplished by decreasing the dose or increasing the interval between doses. If a family or patient is hesitant to discontinue, consider a trial discontinuation for a limited period and offer to re-evaluate once that trial is completed. Remind the patient and family that the care team will continue to provide the highest level of care which is focused on patient comfort and symptom management.

CLINICAL PEARLS

1. Look to identify a compelling and current indication for use, such as prevention and treatment of steroid or NSAID-induced ulcers, when evaluating continued necessity.

2. There is potential for drug interactions with PPI use, especially in the setting of polypharmacy among palliative care patients.

3. Withdrawal of PPIs is typically followed by normalization of electrolytes.

4. PPIs increase the risk of respiratory tract infections which may result in the need for antibiotics. Since many physicians prescribe PPIs as a gastroprotective drug during antibiotic therapy, this creates a vicious cycle.

5. Consider initiating a prokinetic agent such as metoclopramide which may increase lower esophageal sphincter pressure and improve gastric emptying.

SUMMARY

While PPIs remain necessary for specific indications, these agents are commonly indicated for short-term use and concern about overuse has been growing. Systematic reviews have identified that PPIs can be safely discontinued in many patients, especially when there is no clear ongoing indication. Deprescribing PPIs should always take into consideration patient preferences, comorbid conditions, goals of care, and individual risk factors.

REFERENCES

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