deprescribing.org | Proton Pump Inhibitor (PPI) Deprescribing Algorithm

Why is patient taking a PPI? Indication still If unsure, find out if history of endoscopy, if ever hospitalized for bleeding ulcer or if taking because of chronic unknown? NSAID use in past, if ever had heartburn or dyspepsia Mild to moderate esophagitis or Peptic Ulcer Disease treated x 2-12 weeks (from NSAID; H. pylori) Barrett's esophagus • GERD treated x 4-8 weeks • Upper Gl symptoms without endoscopy; asymptomatic for 3 consecutive days Chronic NSAID users with bleeding risk (esophagitis healed, symptoms ICU stress ulcer prophylaxis treated beyond ICU admission Severe esophagitis controlled) • Uncomplicated *H. pylori* treated x 2 weeks and asymptomatic Documented history of bleeding GI ulcer Recommend Deprescribing Strong Recommendation (from Systematic Review and GRADE approach) Continue PPI (evidence suggests no increased risk in return of Decrease to lower dose symptoms compared to continuing higher dose), or Stop PPI or consult gastroenterologist if (daily until symptoms stop) (1/10 patients may considering deprescribing Stop and use on-demand have return of symptoms) Monitor at 4 and 12 weeks If non-verbal: If verbal: Heartburn • Loss of appetite • Weight loss Dyspepsia Regurgitation Epigastric pain Agitation Use non-drug approaches If symptoms relapse: Manage occasional symptoms • Avoid meals 2-3 hours before • Over-the-counter antacid, H2RA, PPI, alginate prn If symptoms persist x = 7 days and bedtime: elevate head of bed: (ie. Tums®, Rolaids®, Zantac®, Olex®, Gaviscon®) interfere with normal activity: address if need for weight loss and H2RA daily (weak recommendation – GRADE: 1/5 1) Test and treat for *H. pylori*

patients may have symptoms return)

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2) Consider return to previous dose



avoid dietary triggers



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PPI Availability

PPI	Standard dose (healing) (once daily)*	Low dose (maintenance) (once daily)
Omeprazole (Losec®) - Capsule	20 mg ⁺	10 mg ⁺
Esomeprazole (Nexium®) - Tablet	20 ^a or 40 ^b mg	20 mg
Lansoprazole (Prevacid®) - Capsule	30 mg ⁺	15 mg ⁺
Dexlansoprazole (Dexilant®) - Tablet	30 ^c or 60 ^d mg	30 mg
Pantoprazole (Tecta®, Pantoloc®) - Tablet	40 mg	20 mg
Rabeprazole (Pariet®) - Tablet	20 mg	10 mg

Legend

а	Non	-ero	sive	reflux	disease
а	IIOVI	-610	SIVE	Tellux	uisease

b Reflux esophagitis

c Symptomatic non-erosive gastroesophageal reflux disease

d Healing of erosive esophagitis

+ Can be sprinkled on food

* Standard dose PPI taken BID only indicated in treatment of peptic ulcer caused by *H. pylori*; PPI should generally be stopped once eradication therapy is complete unless risk factors warrant continuing PPI (see guideline for details)

Key

GERD = gastroesophageal reflux disease

disease SR = systematic review

NSAID = nonsteroidal anti-inflammatory drugs

GRADE = Grading of Recommendations Assessment, Development and Evaluation

H2RA = H2 receptor antagonist

Engaging patients and caregivers

Patients and/or caregivers may be more likely to engage if they understand the rationale for deprescribing (risks of continued PPI use; long-term therapy may not be necessary), and the deprescribing process

PPI side effects

- When an ongoing indication is unclear, the risk of side effects may outweigh the risk of benefit
- PPIs are associated with higher risk of fractures, C. difficile infections and diarrhea, community-acquired pneumonia, vitamin B12 deficiency and hypomagnesemia
- Common side effects include headache, nausea, diarrhea and rash

Tapering doses

- No evidence that one tapering approach is better than another
- Lowering the PPI dose (for example, from twice daily to once daily, or halving the dose, or taking every second day) OR stopping the PPI and using it on-demand are equally recommended strong options
- Choose what is most convenient and acceptable to the patient

On-demand definition

Daily intake of a PPI for a period sufficient to achieve resolution of the individual's reflux-related symptoms; following symptom resolution, the medication is discontinued until the individual's symptoms recur, at which point, medication is again taken daily until the symptoms resolve

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