

Clinical Guideline: proton pump inhibitors and alternatives to subcutaneous ranitidine

- New hyponatraemia is not associated with ongoing PPI therapy
- Hyponatraemia with a PPI is most likely to be associated with omeprazole
- Lansoprazole is rarely associated with hyponatraemia¹

There are ongoing supply problems with ranitidine in all formulations. This looks likely to continue.

Indications for a PPI

- Acid dyspepsia
- Peptic ulceration
- Prevention and treatment of NSAID-related ulceration
- Eradication of H. pylori

Corticosteroids alone do not significantly increase the risk of peptic ulceration outside the intensive care setting. However, when prescribed with an NSAID they increase the risk 15 fold.

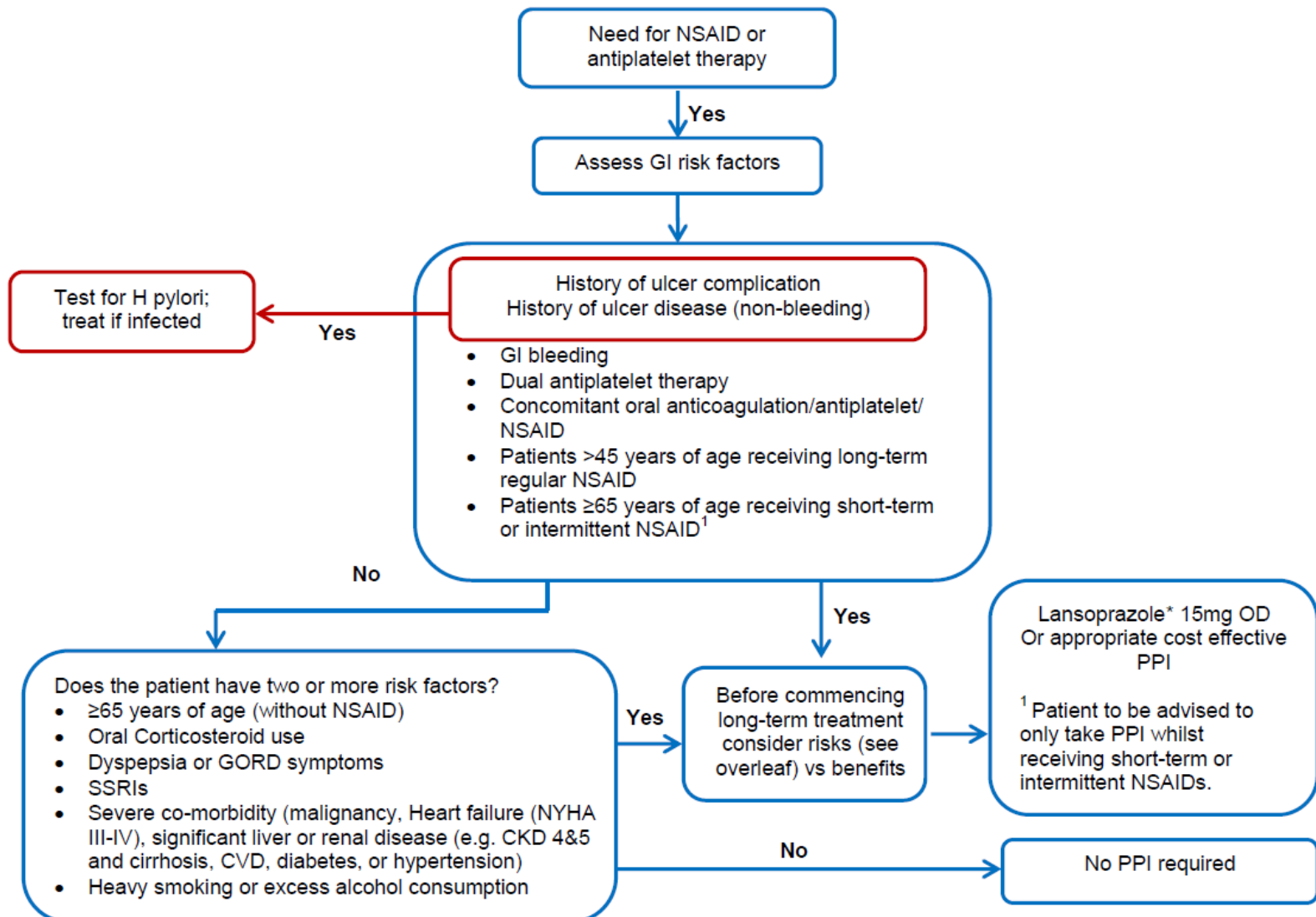
Adverse effects of a PPI

Long term use of PPIs has been linked to serious adverse effects such as:

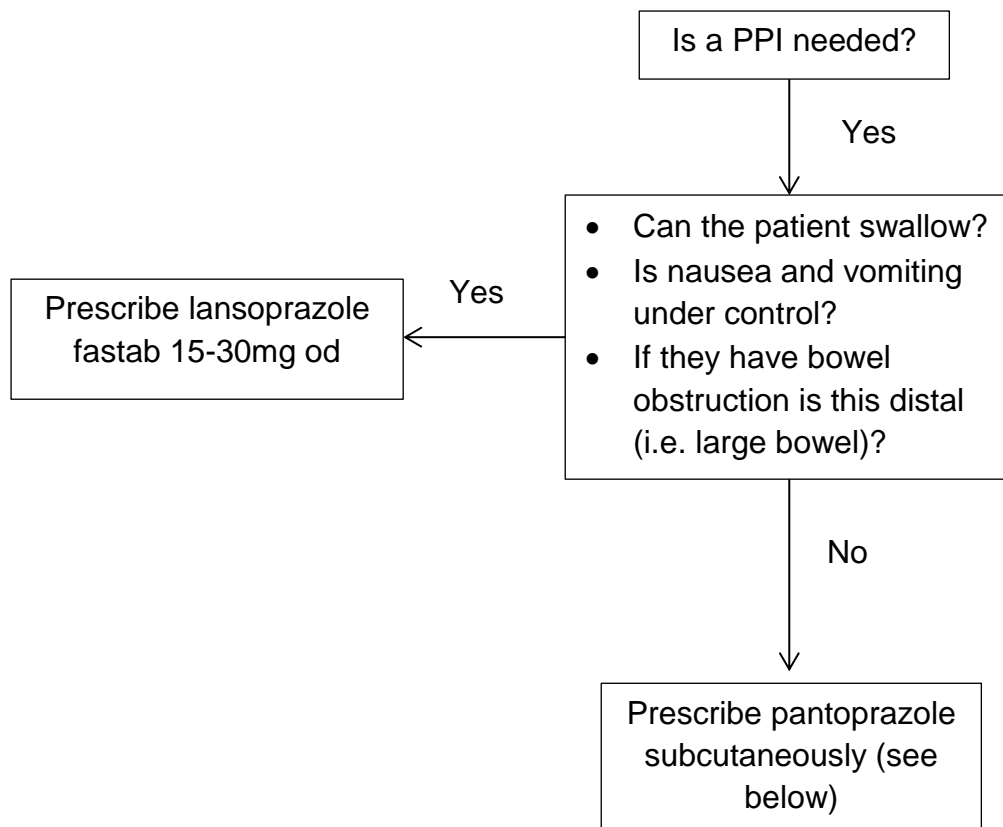
- Clostridium difficile infection
- Increased risk of bone fractures
- Increased mortality in older patients
- Acute interstitial nephritis
- Hypomagnesaemia
- Vitamin B12 deficiency
- Rebound acid hypersecretion syndrome
- Community acquired pneumonia²

When to prescribe a PPI as prophylaxis

- Prophylaxis with a PPI is not required in asymptomatic patients unless an NSAID is to be prescribed, in which case see the following algorithm³.
- A coxib alone gives better GI protection than a nonselective NSAID plus PPI⁴.
- Prescribe for the shortest time possible.



*To aid bioavailability of lansoprazole it should be taken at least 30 minutes before food. If this is difficult pantoprazole 20mg taken 1 hour before food is an alternative.



Subcutaneous pantoprazole⁴

- Pantoprazole injection is available in vials of 40mg
- Reconstitute with 10mL of 0.9% saline
- Administer via deep subcutaneous bolus over approximately two minutes once daily (suitable sites include lateral aspects of thighs, ensuring rotation of injection sites)

References

1. Associations of proton pump inhibitors and hospitalization due to hyponatremia: A population-based case-control study. Falhammer et al EurJInternMed 2019 Jan 59:65-69
2. Guidance for Safe and Effective use of Proton Pump Inhibitors (PPIs) Barnsley APC memo March 2018
3. Derbyshire Joint Advisory Committee: When to start a PPI . http://www.derbyshiremedicinesmanagement.nhs.uk/assets/Clinical_Guidelines/Formulary_by_BNF_chapter_prescribing_guidelines/BNF_chapter_1/PPI_Guidance.pdf
4. Subcutaneous pantoprazole in an elderly, palliative care patient. Michelon et al. BMJ Supportive & Palliative Care Aug 2019

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