TAYSIDE PRESCRIBER
Issue 162 – May 2020

Appropriate and Safe Review of NHS Tayside Patients prescribed Ranitidine

The Scottish Government have issued a Medicine Supply Alert Notice (MSAN) stating that there is a more significant supply problem with oral ranitidine preparations until further notice. This includes ranitidine tablets, effervescent tablets and oral solution. Although it is acknowledged that many healthcare professionals have undertaken a review of rantidine prescriptions due to recent shortages, all remaining stock is expected to be exhausted with no date of resolution. Subsequent MSANs have noted supply problems with alternative H2 receptor antagonists (cimetidine, famotidine and nizatidine). It is recommended that patients are not automatically switched to an alternative H2 receptor antagonist. IV ranitidine shortage is being looked at separately by secondary care.

All healthcare professionals in primary and secondary care who prescribe or supply oral ranitidine should consider the following advice to manage affected patients.

Licensed use for Gastrointestinal Conditions

- Identify any remaining patients prescribed ranitidine tablets, effervescent tablets and oral solution. Review to establish if ongoing treatment is still indicated and required. If used for symptomatic relief of dyspepsia or GORD, consider trial without treatment where possible or managing symptoms with an antacid or alginate. Provide dietary and lifestyle advice.
- If ongoing treatment is still indicated and required, then consider switching to a proton pump inhibitor. Omeprazole and lansoprazole are formulary 1st line choice in adults. See appendix 1 for further information on dosing guidance for proton pump inhibitors.
- Patients should not automatically be switched to an alternative H_2-receptor antagonist as there are ongoing supply problems with these products and they should be reserved for patients who cannot tolerate proton pump inhibitors. See appendix 1 for further information on dosing guidance for H_2-receptor antagonist.

Information is summarised in a decision tree – please refer to Appendix 2.

Dietary and Lifestyle advice – dyspepsia and GORD

Consider providing patients with the following lifestyle and dietary advice to help manage symptoms of dyspepsia and GORD[1]:

Do	Don't
✓ Eat smaller, more frequent meals	✗ Do not have food or drink that triggers symptoms (can include coffee, alcohol, chocolate, spicy foods)
✓ Raise head of the bed	✗ Do not eat within 3 or 4 hours before bed
✓ Try to lose weight if overweight	✗ Do not wear clothes that are tight around the waist
✓ Reduce stress and anxiety	✗ Do not smoke

Refer patients to NHS Inform site for useful overview of GORD including available treatment options.

Use in Specialist Conditions

Dermatology - contact Dermatology for advice if prescribed for urticaria (off label).

Renal - PPIs should not be prescribed in patients who have biopsy confirmed acute interstitial nephritis as a result of PPI treatment.

Where causation is not clearly evident, cautious restarting of PPI with monitoring of renal function would be supported. Contact the renal team if further advice is required.

Proton Pump Inhibitors

If a patient has been prescribed proton pump inhibitor therapy previously and stopped due to hypomagnesaemia or hyponatraemia review dose previously prescribed and consider restarting at the lowest effective dose.

PPIs may reduce the effect of clopidogrel, please see UKMi Q & A for further information. Low dose lansoprazole up to 30 mg daily would appear to be a suitable choice in patients on clopidogrel. Of note other CYP2C19 inhibiting medicines may also reduce the effect of clopidogrel e.g. cimetidine.

Appendix 1 – Alternative formulations

Table 1: Proton Pump inhibitors indications and recommended dosing guidance in adults[2,3,4]

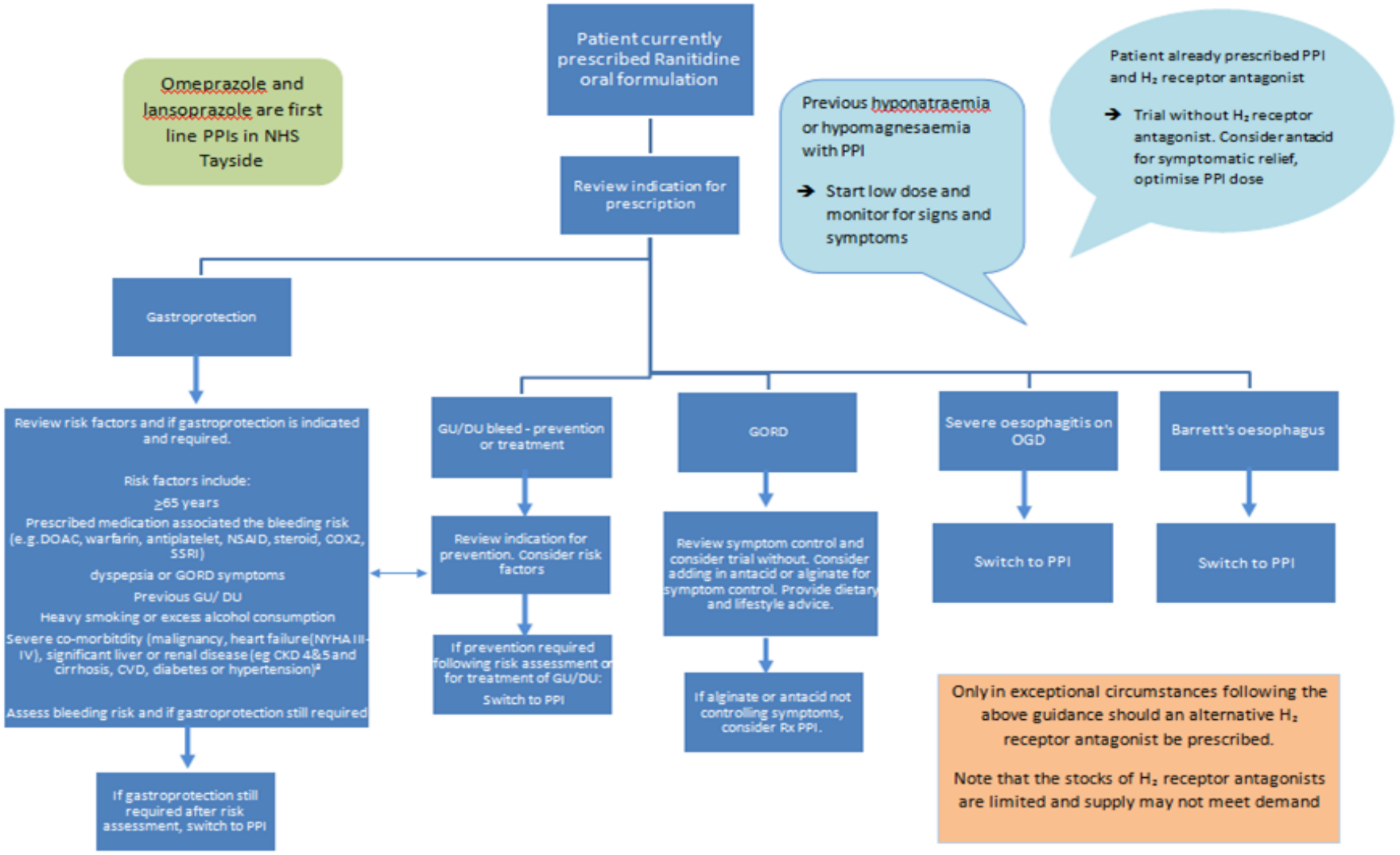
		Dosing guidance for indication				
Proton Pump inhibitor: Drug name	Formulation	GU/DU treatment	GU/ DU prophylaxis	GORD	NSAID associated GU/ DU treatment/ prophylaxis	Additional information
Omeprazole	Capsules and dispersible tablets: 10mg, 20mg and 40mg.	20 – 40mg OD	DU: 10-40mg OD GU: 20-40mg OD	20mg – 40mg OD (treatment) 10mg – 40mg OD (long term management after healed reflux oesophagitis) 10-20mg OD (symptomatic GORD)	20mg OD (prevention and treatment)	*Omeprazole capsules are more cost effective than tablets* *Not to be prescribed with clopidogrel due to risk of reducing its antiplatelet efficacy.* Losec MUPS® is not licensed for use via enteral feeding tubes, however there is extensive experience of using via this route in practice.
Lansoprazole	Capsules and dispersible tablets: 15mg and 30mg	30mg OD	UL (15-30mg OD)	30mg OD (treatment) 15mg-30mg (prevention) 15-30mg OD (symptomatic GORD)	30mg OD (treatment) 15-30mg (prevention)	Orodispersible tablets are licensed for administration via nasogastric (NG) tubes.
Esomeprazole	Capsules: 20mg and 40mg. Granules: 10mg	UL (20-40mg OD)		40mg OD (treatment) 20mg OD (prevention and symptomatic treatment)		Esomeprazole capsules are more cost effective than tablets. *Not to be prescribed with clopidogrel due to risk of reducing its antiplatelet efficacy.* Only on the NHS Tayside formulary for severe oesophagitis, Zollinger-Ellison Syndrome, Barrett's oesophagus Granules are licensed for administration via NG or gastric tubes.

(UL – unlicensed)

Table 2: H2 receptor antagonists: indications and recommended dosing guidance in adults[2,3,5,6,7]

		Dosing guidance for indication				
H_2 receptor antagonist: Drug name	Formulation	GU/DU treatment	GU/ DU prophylaxis	GORD	NSAID associated GU/ DU treatment/ prophylaxis	Additional information
Nizatidine	Capsules: 150mg, 300mg	150mg BD or 300mg OD	150mg OD	150mg – 300mg BD	150mg BD or 300mg OD (treatment)	In once daily dosing regimens, dose should be taken at night Not suitable to be used via enteral feeding tubes, as whilst the drug dissolves in water, excipients do not. See SPC or Renal Drug Database for dosing in renal impairment
Famotidine	Tablets: 20mg, 40mg	40mg OD	DU 20mg OD	UL	UL	In once daily dosing regimens, dose should be taken at night. Can be crushed and mixed with water for administration via enteral feeding tubes. Maximum dose: 20mg at night in patients with creatinine clearance < 30mL/min.
Cimetidine	Tablets: 200mg, 400mg, 800mg. Liquid 200mg/5mL	400mg BD or 800mg ON (up to 400mg QDS)	400mg ON up to BD	400mg QDS	UL	No data for crushing tablets. *•Caution as CYP P450 inhibitor – care with prescribing due to drug interactions, consult SPC, examples include warfarin, theophylline and phenytoin* Enteral feeds should be stopped 1 hour before and after cimetidine liquid is administered. See Renal Drug Database for dosing in renal impairment

Appendix 2: Prescribing decision aid for patients currently prescribed ranitidine for gastrointestinal conditions



References

1. NHS. *Heartburn and acid reflux.* https://www.nhs.uk/conditions/heartburn-and-acid-reflux/ (Accessed April 2020)
2. SCOTTISH GOVERNMENT, 2019. *Medicine Supply Alert Notice. Ranitidine: All formulations.* Available from: https://www.sehd.scot.nhs.uk/publications/MSAN(2019)22update.pdf (Accessed April 2020).
3. BRITISH NATIONAL FORMULARY (BNF), 2019. Available from https://bnf.nice.org.uk/ (Accessed April 2020)
4. Accord-UK. *Omeprazole 20mg Gastro-resistant Capsules.* Available from: https://www.medicines.org.uk/emc/product/5944/smpc (Accessed April 2020)
5. Accord Healthcare Limited. *Cimetidine 400mg Tablets BP.* Available from: https://www.medicines.org.uk/emc/product/6027/smpc (Accessed April 2020)
6. The NEWT Guidelines. Available from: http://www.newtguidelines.com/ (Accessed May 2020)
7. Summary of Product Characteristics (SPC) - Famotidine 20mg film coated tablets. Generics UK Ltd t/a Mylan. Accessed via www.mhra.go.v.uk - April 2020
8. DERBYSHIRE JOINT AREA PRESCRIBING COMMITEE. *Proton pump inhibitors. Advisory guidance on when to initiate a PPI with a NSAID (or antiplatelet) for gastro-protection.* Available from: http://www.derbyshiremedicinesmanagement.nhs.uk/assets/Clinical_Guidelines/Formulary_by_BNF_chapter_prescribing_guidelines/BNF_chapter_1/PPI_Guidance.pdf (Accessed April 2020)

Author/s: Seona Stalker, Specialist Clinical Pharmacist, Gastroenterology & Hepatology with input from Carol Telfer, Renal Pharmacist; Suzanne Waterston, advanced clinical pharmacist, Dermatology and Dr Scott Jamieson, GP, Kirriemuir Medical Practice

Editor: Karen Harkness, Principal Pharmacist, Clinical Effectiveness

Do you wish to write a Tayside Prescriber?
Do you already have a suitable topic for a Tayside Prescriber?

For further information contact: Carol Walkinshaw, Business Manager, Pharmacy Service, Kings Cross
Tel: Direct Dial (01382) 835149 | Internal Extension 71317 | E-mail carol.walkinshaw@nhs.net