



# GASTRO-OESOPHAGEAL REFLUX DISEASE (GORD)

## Top tips for MURs

- Check that the patient understands why medication has been prescribed
- Counsel patient on best time to take medication:
  - Antacids and alginates after food, not immediately prior to lying down as there is a risk of disrupting the alginate layer
  - H2 receptor agonists at night (once daily dosing) and breakfast and night (twice daily dosing)
  - Proton pump inhibitors (PPIs) in the morning before food
  - Domperidone / metoclopramide should be taken 30-60 minutes before food
- Counsel patients taking antacids that they may impair absorption of other drugs and should preferably not be taken at the same time
- Counsel patients on long-term management of symptoms and of the need to take the lowest effective dose of treatment or 'as-required' use
- Check if patient is taking any prescribed or OTC medications which could cause / exacerbate GORD e.g. NSAID, glucosamine, calcium antagonists, antidepressants, beta2 agonist bronchodilators, bisphosphonates, iron, opioids and refer to prescriber if appropriate
- Advise patients taking PPIs, who are also at risk of osteoporosis (women over age of 50, post menopausal, low body weight, smoker, family history) that they should maintain an adequate intake of calcium and vitamin D
- Counsel patient on signs and symptoms of complications that need referral (see red flags overleaf) and common side effects (see overleaf)
- Report any relevant adverse drug reactions to the Yellow Card Scheme

## Pathophysiology of GORD

Gastro-oesophageal reflux disease occurs when the amount of gastric juice that refluxes into the oesophagus exceeds the normal limit, causing symptoms such as heartburn, waterbrash and acid regurgitation<sup>1</sup>. GORD is sometimes associated with difficulty swallowing (dysphagia), oesophageal inflammation (oesophagitis), stricture formation and there is an association with asthma<sup>2</sup>. Acid reflux is caused by a combination of mechanisms, the most important of which is weakness of the lower oesophageal sphincter allowing stomach acid to pass back up into the oesophagus. The majority of individuals presenting with symptoms attributed to GORD have no associated disorders or other known precipitants, but pregnancy, a recent increase in weight and the administration of certain medicines can cause GORD<sup>1</sup>.

## Lifestyle issues

- Counsel patient on reducing alcohol intake to within safe limits (up to 14 units a week, spread evenly over 3 more days, with several alcohol free days)
- Counsel patient on healthy eating, exercise & weight loss (if BMI > 25kg/m<sup>2</sup>) reduce saturated fat and salt intake, increase oily fish intake, complete 30 minutes of aerobic exercise three to five times a week, reduce caffeine intake to no more than 5 cups a day and recommend 5 portions of fruit and vegetable a day
- Advise patients who smoke of benefits of smoking cessation and refer to Stop Smoking Wales or Pharmacy Stop Smoking services if willing to stop
- Advise patient to avoid food related potential triggers like excess alcohol, carbonated drinks, high fat or spicy food, coffee, chocolate, peppermint or tomato
- Advise patient to raise the head of the bed by 10-20cm and avoid sleeping on a full stomach (ensure they eat meals at least three hours before lying down or going to bed)
- Make the patient aware that stress can worsen GORD symptoms

## How do drugs used to treat GORD work?

Antacids & alginates	Alginate-containing antacids can form a 'raft' that floats on the surface of the stomach contents to reduce reflux and protect the oesophageal mucosa. Antacids work by neutralising the acid in your stomach.
Proton pump inhibitors (PPIs)	Inhibits gastric acid secretion by blocking the hydrogen-potassium adenosine triphosphatase enzyme system (the proton pump) of the gastric parietal cell. The proton pump is the final stage in gastric acid secretion, so inhibition results in a reduction of gastric acid secretion.
H2-receptor antagonists	Suppresses the normal secretion of acid by parietal cells by blockade of the histamine H <sub>2</sub> -receptor (which normally stimulates acid secretion) causing a reduction in production of hydrogen ions which results in decreased production of gastric acid.
Prokinetics (metoclopramide, domperidone)	Dopamine antagonist associated with improved gastro-oesophageal sphincter function and accelerated gastric emptying. Long term use should be avoided to minimise adverse effects. Metoclopramide should not be used in young adults under 20 years <sup>3</sup> . Domperidone use should be limited to 1 week <sup>4</sup>



### Red flags that need referral

- Signs of gastro-intestinal bleeding - haematemesis (blood in vomit) or melaena (the passage of black tarry stools)
- Progressive swallowing difficulty / pain on swallowing
- Unintended weight loss
- Persistent vomiting
- Age 55 or over with recent onset, unexplained and persistent dyspepsia
- Iron deficiency anaemia

### What are the common side effects to look out for?

Common side effects	Recommendation
Gastro-intestinal disturbance, including nausea, vomiting, abdominal pain, flatulence, diarrhoea (common with magnesium containing antacids), constipation (common with aluminium containing antacids & PPI)	Refer to prescriber if symptoms not tolerated.
Extrapyramidal effects including Parkinson-like symptoms (most commonly seen with prokinetics)	Refer to prescriber.
Dry mouth, urinary retention (most commonly seen with prokinetics)	Refer to prescriber, short term treatment recommended.
Darkened colour of stools (most commonly seen with antacids containing bismuth)	Advise patient that stool colour may change to black/dark grey after commencing bismuth /antacids. Normally this is nothing to worry about (See red flags section 'signs of gastrointestinal bleeding')
Gynaecomastia (most commonly seen with cimetidine & domperidone)	Refer to prescriber.

### Potential serious drug interactions?

Drugs used to treat GORD can interact with some other medicines - **See BNF Appendix1: Interactions for more details**

- Omeprazole and esomeprazole interact with clopidogrel - reduced antiplatelet effect of clopidogrel
- Antacids, proton pump inhibitors and H2-receptor antagonists interact with ulipristal - possible reduction of contraceptive effect
- Proton pump inhibitors and H2-receptor antagonists interact with anticoagulants (enhanced anticoagulant effect), antivirals and cytotoxics
- Metoclopramide interacts with ciclosporin – increased plasma concentration of ciclosporin
- Domperidone interacts with erythromycin, ketoconazole and certain antimalarials - increased risk of ventricular arrhythmias
- Cimetidine interacts with a wide range of other medications including alpha-blockers, anti-arrhythmics, antiepileptics, anticoagulants, antifungals, antimalarials, antivirals, ciclosporin, clopidogrel, cytotoxics, theophylline

### Where can you find more information?

- BNF 72 sub-section 1.1 dyspepsia and gastro-oesophageal reflux disease
- Dyspepsia – an evidence based approach; distance learning pack found on the WCPPE website (<http://www.wcppe.org.uk>)
- NICE guidance can be found on NICE website CG184 Gastro-oesophageal reflux and dyspepsia in adults: investigation and management of dyspepsia, symptoms suggestive of gastrooesophageal reflux disease, or both (<http://www.nice.org.uk>)
- Clinical Knowledge Summary dyspepsia can be found on CKS website (<http://www.cks.nice.org.uk>)

### References

1. Dyspepsia – an evidence based approach, NICPLD, 2007
2. BNF sub-section 1.1 Dyspepsia and gastro-oesophageal reflux disease
3. Clinical Knowledge Summary dyspepsia can be found on CKS website (<http://www.cks.nice.org.uk>.)
4. Gov/UK Domperidone: Risks of cardiac side effects MHRA, 2014

