CLINICAL PHARMACY IN COMMON GASTROINTESTINAL TRACT PROBLEMS

Dr. Riyadh Mustafa Al-Salih

MBChB MD FICMS (Med.)

Common Gastrointestinal Tract (GIT) Problems

- Heartburn
- Indigestion (Dyspepsia)
- Nausea & Vomiting
- Diarrhea
- Constipation
- Hemorrhoid

Heartburn

- Symptoms of heartburn are caused when there is reflux of gastric contents, particularly acid, into the oesophagus, which irritate the sensitive mucosal surface (oesophagitis).
- Patients will often describe the symptoms of heartburn; typically a burning discomfort/pain felt in the stomach passing upwards behind the breastbone (retrosternally).
- By careful questioning, the pharmacist can distinguish conditions that are potentially more serious.

What you need to know

- Age
  - Adult, child
- Symptoms & Associated factors
  - Heartburn
  - Severity of pain
  - Difficulty in swallowing
  - Regurgitation
  - Flatulence
- Pregnancy
- Precipitating factors
- Relieving factors
- Weight
- Smoking habit
- Eating habit
- Medication
  - Medicines tried already
  - Other medicines being taken

When to refer

- Failure to respond to antacids
- Pain radiating to arms
- Difficulty in swallowing
- Regurgitation
- Long duration
- Increasing severity
- Children

Management

- The symptoms of heartburn respond well to treatments that are available OTC, and there is also a role for the pharmacist to offer practical advice about measures to prevent recurrence of the problem.
- Pharmacists will use their professional judgement to decide whether to offer antacids/alginates, H2 antagonists or the proton pump inhibitor (PPI) e.g.omeprazole as first-line treatment.
- The decision will also take into account customer preference.

Antacids

- Antacids can be effective in controlling the symptoms of heartburn and reflux, more so in combination with an alginate.
- Choice of antacid can be made by the pharmacist using the same guidelines as in the section on indigestion.
- Preparations that are high in sodium should be avoided by anyone on a sodium-restricted diet (e.g. those with congestive heart failure or kidney or liver problems).

Alginates

- Alginates form a raft that sits on the surface of the stomach contents and prevents reflux.
- Some alginate-based products contain sodium bicarbonate, which, in addition to its antacid action, causes the release of carbon dioxide in the stomach, enabling the raft to float on top of the stomach contents.
- If a preparation low in sodium is required, the pharmacist can recommend one containing potassium bicarbonate instead.
- Alginate products with low sodium content are useful for the treatment of heartburn in patients on a restricted sodium diet.

H2 antagonists

- Cimetidine, famotidine and ranitidine have been deregulated from prescription-only control for the short-term treatment (up to 2 weeks) of dyspepsia, hyperacidity and heartburn.
- The 2-week treatment limit is intended to ensure that patients do not continuously self-medicate for long periods.
- Pharmacists and their staff can ask whether use has been continuous or intermittent when a repeat purchase request is made.
- The H2 antagonists have both a longer duration of action (up to 8–9 h) and a longer onset of action than antacids.

Proton pump inhibitors

- Omeprazole was recently deregulated to a P medicine for the relief of heartburn symptoms associated with reflux in adults.
- PPIs, including omeprazole, are generally accepted as being amongst the most effective medicines for the relief of heartburn.
- It may, however, take a day or so for them to start being fully effective. During this period a patient with ongoing symptoms may need to take a concomitant antacid.
- Omeprazole works by suppressing gastric acid secretion in the stomach.
- It inhibits the final stage of gastric hydrochloric acid production by blocking the hydrogen-potassium ATPase enzyme in the parietal cells of the stomach wall (also known as the proton pump).

Practical points

- Obesity
- Food
- Posture
- Clothing
- Other aggravating factors
  - Smoking, alcohol, caffeine and chocolate

Indigestion

- Indigestion (dyspepsia) is commonly presented in community pharmacies and is often self-diagnosed by patients, who use the term to include anything from pain in the chest and upper abdomen to lower abdominal symptoms.
- Many patients use the terms indigestion and heartburn interchangeably.
- The pharmacist must establish whether such a self-diagnosis is correct and exclude the possibility of serious disease.

What you need to know

- Age
  - Adult, child
- Symptoms
- Duration of symptoms
- Previous history
- Details of pain
  - Where is the pain?
  - What is its nature?
  - Is it associated with food?
  - Is the pain constant or colicky?
  - Are there any aggravating or relieving factors?
  - Does the pain move to anywhere else?
- Associated symptoms
  - Loss of appetite
  - Weight loss
  - Nausea/vomiting
  - Alteration in bowel habit
- Diet
  - Any recent change of diet?
- Alcohol consumption
- Smoking habit
- Medication
  - Medicines already tried
  - Other medicines being taken

Differential Diagnosis

- Non-Ulcer Dyspepsia
- Peptic Ulcer
- Gallstones
- Gastro-oesophageal reflux
- Irritable bowel syndrome (IBS)
- Atypical angina
- More serious disorders
  - Cancer of the stomach or pancreas
  - Bleeding Ulcer

When to refer

- Age over 45 if symptoms develop for first time
- Symptoms are persistent (longer than 5 days) or recurrent
- Pain is severe
- Blood in vomit or stools
- Pain worsens on effort
- Persistent vomiting
- Treatment has failed
- Adverse drug reaction is suspected
- Associated weight loss
- Children

Management

- Once the pharmacist has excluded serious disease, treatment of dyspepsia with antacids or an H_2 antagonist may be recommended and is likely to be effective.
- The preparation should be selected on the basis of the individual patient's symptoms. Smoking, alcohol and fatty meals can all aggravate symptoms, so the pharmacist can advise appropriately.

Antacids

- In general, liquids are more effective antacids than are solids; they are easier to take, work quicker and have a greater neutralising capacity.
- Their small particle size allows a large surface area to be in contact with the gastric contents.
- Some patients find tablets more convenient and these should be well chewed before swallowing for the best effect.
- Antacids are best taken about 1 h after a meal because the rate of gastric emptying has then slowed and the antacid will therefore remain in the stomach for longer.
- Taken at this time, antacids may act for up to 3 h compared with only 30 min–1 h if taken before meals.

Antacids

- Sodium bicarbonate
- Aluminium and magnesium salts (e.g. aluminium hydroxide, magnesium trisilicate)
- Calcium carbonate
- Dimeticone (dimethicone)

Nausea and vomiting

- Nausea and vomiting are symptoms that have many possible causes.
- From the pharmacist’s point of view, while there are treatments available to prevent nausea and vomiting, there is no effective OTC treatment once vomiting is established.
- Patients who are vomiting should be referred to the doctor, who will be able to prescribe an antiemetic if needed.
- The pharmacist can initiate rehydration therapy in the meantime.

Diarrhoea

- Community pharmacists may be asked by patients to treat existing diarrhoea, or to offer advice on what course of action to take should diarrhoea occur.
- Diarrhoea is defined as an increased frequency of bowel evacuation, with the passage of abnormally soft or watery faeces.
- The basis of treatment is electrolyte and fluid replacement; in addition, antidiarrhoeals are useful in adults and older children.

What you need to know

- Age
  - Infant, child, adult, elderly
- Duration
- Severity
- Symptoms, associated symptoms
  - Nausea/vomiting
  - Fever
  - Abdominal cramps
  - Flatulence
- Other family members affected?
- Previous history
- Recent travel abroad?
- Causative factors
- Medication
  - Medicines already tried
  - Other medicines being taken

When to refer

- Diarrhoea of greater than
  - 1 day's duration in children younger than 1 year;
  - 2 days in children under 3 years and elderly patients;
  - 3 days in older children and adults
- Association with severe vomiting and fever
- Recent travel abroad
- Suspected drug-induced reaction to prescribed medicine
- History of change in bowel habit
- Presence of blood or mucus in the stools

Some drugs that may cause diarrhoea

- Antacids: magnesium salts
- Antibiotics
- Antihypertensives:
  - guanethidine (common side-effect but rarely prescribed);
  - methyldopa;
  - beta-blockers (rare)
- Digoxin (toxic levels)
- Diuretics (furosemide)
- Iron preparations
- Laxatives
- Misoprostol
- Non-steroidal anti-inflammatory drugs (NSAIDs)
- Selective serotonin reuptake inhibitors (SSRIs)

Management

- Oral rehydration therapy
  - Contents
  - Quantities
- Other therapy
  - Kaolin
  - Loperamide
  - Morphine, Codeine, Diphenoxylate

Constipation

- Constipation is a condition that is difficult to define and is often self-diagnosed by patients.
- Generally it is characterised by the passage of hard, dry stools less frequently than the person's normal pattern.
- It is important for the pharmacist to find out what the patient means by constipation, and to establish what (if any) change in bowel habit has occurred and over what period of time.

What you need to know

- Details of bowel habit
  - Frequency and nature of bowel actions now
  - When was the last bowel movement?
  - What is the usual bowel habit?
- When did the problem start?
- Is there a previous history?
- Associated symptoms
  - Abdominal pain/ discomfort/ bloating/ distension
  - Nausea and vomiting
  - Blood in the stool
- Diet
  - Any recent change in diet?
  - Is the usual diet rich in fibre?
- Medication
  - Present medication
  - Any recent change in medication
  - Previous use of laxatives

When to refer

- Change in bowel habit of 2 weeks or longer
- Presence of abdominal pain, vomiting, bloating
- Blood in stools
- Prescribed medication suspected of causing symptoms
- Failure of OTC medication

Drugs that may cause constipation

Drug group	Drug
Analgesics and opiates	Dihydrocodeine, codeine
Antacids	Aluminium salts
Anticholinergics	Hyoscine
Anticonvulsants	Phenytoin
Antidepressants	Tricyclics, SSRIs
Antihistamines	Chlorpheniramine, promethazine
Antihypertensives	Clonidine, methyldopa
Anti-Parkinson agents	Levodopa
Beta-blockers	Propranolol
Diuretics	Bendrofluazide
Antipsychotics	Chlorpromazine
Monoamine oxidase inhibitors	
Iron	
Laxative abuse	

Management

- Constipation that is not caused by serious pathology will usually respond to simple measures, which can be recommended by the pharmacist: increasing the amount of dietary fibre; maintaining fluid consumption; and taking regular exercise.
- In the short term, a laxative may be recommended to ease the immediate problem.

Management

- Stimulant laxatives (e.g. senna, bisacodyl)
- Bulk laxatives (e.g. ispaghula, methylcellulose, sterculia)
- Osmotic laxatives (e.g. lactulose, Epsom salts, Glauber’s salts)
- Lubricant laxatives (e.g. liquid paraffin)

Haemorrhoids

- Haemorrhoids (commonly known as piles) can produce symptoms of itching, burning, pain, swelling and discomfort in the perianal area and anal canal and rectal bleeding.
- Haemorrhoids are swollen veins, rather like varicose veins, which protrude into the anal canal (internal piles). They may swell so much that they hang down outside the anus (external piles).
- Haemorrhoids are often caused or exacerbated by inadequate dietary fibre or fluid intake.
- The pharmacist must, by careful questioning, differentiate between this minor condition and others that may be potentially more serious.

What you need to know

- Duration and previous history
- Symptoms
  - Itching, burning
  - Soreness
  - Swelling
  - Pain
  - Blood in stools
  - Constipation
- Bowel habit
- Pregnancy
- Other symptoms
- Abdominal pain/vomiting
- Weight loss
- Medication

When to refer

- Duration of longer than 3 weeks
- Presence of blood in the stools
- Change in bowel habit (persisting alteration from normal bowel habit)
- Suspected drug-induced constipation
- Associated abdominal pain/vomiting

Management

- Symptomatic treatment of haemorrhoids can provide relief from discomfort but, if present, the underlying cause of constipation must also be addressed.
- The pharmacist is in a good position to offer dietary advice, in addition to treatment, to prevent the recurrence of symptoms in the future.

Management

- Local anaesthetics (e.g. benzocaine, lidocaine (lignocaine))
- Skin protectors
- Topical steroids
- Astringents
- Antiseptics
- Counter-irritants (e.g. Menthol)
- Laxatives