Gastrointestinal Tract Problems II

Hemorrhoids

Hemorrhoids (also known as piles): are abnormally dilated, swollen, bulging of hemorrhoidal vessels and the overlying skin in the anorectal region.

Etiology

The cause of hemorrhoid is probably multifactorial with **anatomical** (degeneration of elastic tissue), **physiological** (increased anal canal pressure), and **mechanical** (straining at defecation) processes implicated. In addition hemorrhoid is often exacerbated by inadequate dietary fiber or fluid intake. **Pregnancy** is believed to **precipitate** hemorrhoids in **susceptible women.**

Types of hemorrhoids

Superior to the anal sphincter there is an area known as the dentate line. Hemorrhoids above the dentate line are classified as **internal**, while hemorrhoids below the dentate line are classified as **external**. The term **mixed hemorrhoids** is used when internal and external hemorrhoids coexist.

Internal haemorrhoids are graded according to severity: **grade I**, do not prolapse out of the anal canal; **grade II**, prolapse on defecation but reduce spontaneously; **grade III**, require manual reduction; and **grade IV**, cannot be reduced.

Patient Assessment (Specific questions to ask)

Duration and previous history

It would be useful to establish whether the patient has a previous history of haemorrhoids and if the doctor has been seen about the problem. Patient with symptoms that have been constantly present for **more than 3 weeks** required referral for further investigations.

Pain

Pain is not always present. Pain associated with hemorrhoids tend to occurs on defecation and at other time for example when sitting. It is usually described as a dull ache. **Sharp** or **stabbing pain** at the **time of defecation** can suggest an **anal fissure** and required referral.

Itching

The most troublesome symptom for many patients is itching and irritation of the perianal area rather than pain.

Bleeding

1-**Bright blood** does not normally have a viciou significance, but patients experiencing this for the **first time** should be referred.

2-**Blood mixed** in the stools, giving them a tarry red or black appearance. This indicates bleeding within the gastrointestinal system and must be investigated.

3-**Large volumes of blood** not associated with defecation; this may indicate carcinoma and must be investigated (patient with hemorrhoids does not usually bleed at time other than defecation).

Constipation

Constipation is a common causatory or exacerbatory factor in hemorrhoids. In addition if piles are painful, patient try to avoid defecation which makes the constipation worse.

Associated symptoms

Symptoms of hemorrhoids are usually local (pain, itching…). Other symptoms such as abdominal pain, **vomiting**, loss of appetite, **tenesmus** (desire to defecate when there is no stool), **seepage** (involuntary passage of fecal material) required referral.

Medication

You need to know:
1- Products already used to treat hemorrhoids.
2- Drug-induced constipation which exacerbate the condition.

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

Treatment timescale

If symptoms have not improved after 1 week, patients should see their Doctor

Management

A- Non-pharmacological advices:

1. Increase the amount of fiber and fluid in the diet.
2. Avoid lifting heavy object.
3. Avoid delaying the urge to defecate.
4. Avoid prolonged sitting in the toilet to reduce straining and pressure on the hemorrhoids vessels.
5. Wash the perianal area with warm water after each bowel movement. In addition many patients find that warm bath soothes their discomfort.

B-pharmacological therapy:

1-The OTC products for hemorrhoids include the followings (alone or in combined products):

Type	Example(s)	Purpose (and mechanism)
Anesthetics	Lidocaine, benzocaine	Reduce pain and itching
Astringents	Bismuth, zinc	Precipitate the surface protein producing coat over hemorrhoids to reduce itching, irritation,..
Anti-inflammatory	Hydrocortisone (the only OTC)	Reduce inflammation and swelling to relief Pain and itching.
Protectants	Zinc oxide, AL-hydroxide, calamine, shark liver oil	Form a barrier on skin to prevent irritation, itching, and loss of moisture.

Antiseptics	resorcinol	Antiseptic.
Counter-irritants	menthol	Give tingling sensation to overcome pain and itching.
Vasoconstrictor	Phenylphrine, ephedrine…	Reduce swelling to relief pain and itching.

2-Laxatives

The short-term use of a laxative to relieve constipation might be considered. A stimulant laxative (e.g. *senna*) could be supplied for 1 or 2 days to help deal with the immediate problem while dietary fiber and fluids are being increased. For patients who cannot or choose not to adapt their diet, bulk laxatives may be used long term.

How to use OTC products

1-Ointments and creams can be used for internal and external hemorrhoids while suppositories are used for internal hemorrhoids. However both are used twice daily (morning and evening) and after each bowel movement.

2-Many people prefer suppositories, but these products are often not effective because they tend to slip into the rectum and melt, thus bypass the anal canal where the medication is needed. In general Ointments and creams are preferred over suppositories.

3-When used intrarectally, the ointment may be inserted using an applicator or finger but the applicator is preferred because it can reach an area where the finger cannot reach. The applicator should be lubricated by the ointment before insertion.

4-Products that contain hydrocortisone are restricted to those aged **above 18 years** and for no longer than of 7 days of continuous treatment.

Heartburn

Gastro-esophageal reflux disease (GERD), also known as reflux esophagitis, and commonly called heartburn. Symptoms of heartburn are caused when there is reflux of gastric contents, particularly acid, into the esophagus, which irritate the mucosal surface. Patients will often describe the symptoms of heartburn – typically a burning discomfort/pain felt in the stomach, passing upwards behind the breastbone (retrosternally). Unlike the stomach lining, the esophageal mucosa has no protection against gastric acid and readily irritated by acid.

Patient assessment with GERD

Age

The symptoms of reflux and oesophagitis occur more commonly in patients aged over 55 years. Heartburn is not a condition normally experienced in childhood, although symptoms can occur in young adults and particularly in pregnant women. Children with symptoms of heartburn should therefore be referred to their doctor.

Symptoms

A burning discomfort is experienced in the upper part of the stomach in the midline (epigastrium) and the burning feeling tends to move upwards behind the breastbone (retrosternally). The pain may be felt only in the lower retrosternal area or on occasion right up to the throat, causing an acid taste in the mouth.

Precipitating or aggravating factors

A-Bending or lying down.
B-Overweight.
C-After large meal.
D-Pregnancy (mechanical and hormonal influence).
E-It can be aggravated or even caused by belching.

Severe and location of pain

Sometimes the pain can come on suddenly and severely and even radiate to the back and arms. In this situation differentiation of symptoms is difficult as the pain can mimic a heart attack and urgent medical referral is essential. Sometimes patients who have been admitted to hospital apparently suffering a heart attack are found to have oesophagitis instead.

Difficulty in swallowing and regurgitation

The sensation that food sticks as it is swallowed or it does not seem to pass directly into the stomach (dysphagia) is an indication for immediate referral (It may be due to obstruction of the esophagus for e.g. by tumor). Regurgitation can be associated with difficulty in swallowing. It occurs when recently eaten food sticks in the esophagus and is regurgitated without passing into the stomach. This is due to a mechanical blockage in the esophagus and required referral

Pregnancy

It has been estimated that as many as half of all pregnant women suffer from heartburn. The symptoms are caused by an increase in intra-abdominal pressure and incompetence of the lower oesophageal sphincter. It is thought that hormonal influences, particularly progesterone, are important in the lowering of sphincter pressure. Heartburn often begins in mid-to-late pregnancy, but may occur at any stage. The problem may sometimes be associated with stress.

Medication

To know:
1-What had been tried to treat the condition (failed medication required referral).
2-The use of some drugs may cause GERD and may also lead to an increase in existing GERD symptoms and signs. The mechanisms by which drugs cause reflux include a reduction in lower esophageal sphincter pressure (LESP) (anticholinergics, tricyclic antidepressants) and delayed gastric emptying (calcium channel blockers); drugs may also directly cause GERD by causing damage or inflammation in the esophageal (NSAID).

When to refer

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

Treatment timescale

If symptoms have not responded to treatment after 1 week the patient should see a doctor.

Non-pharmacological advices:

1. Eat **small and frequent meals** (to avoid distending the stomach)
2. Avoid lying down within 3 hours of a meal
3. **Wear loose fitting clothing** (Tight, constricting clothing, especially waistbands and belts, can be an aggravating factor and should be avoided
4. **Avoid smoking** and foods that exacerbate symptoms of GERD. If alcohol or caffeine consumption is a contributing factor individuals should be advised to limit or discontinue use effect by making the esophageal sphincter less competent by reducing its pressure and therefore contribute to symptoms.
5. **Weight reduction s**hould be advised.

Pharmacological Treatment

1. Antacids

Antacids (AL salts, Mg salts, Ca-carbonate, Na-bicarbonate) can be effective in controlling the symptoms of heartburn and reflux, more so in combination with an alginate. Preparations that are high in sodium should be avoided by anyone on a sodium-restricted diet (e.g. those with heart failure or kidney or liver problems).

Practical points:

Best time for taking Antacids

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. Although antacids may be taken on when-needed basis.

Dosage form

Liquids and powders generally provide faster relief and have greater neutralizing capacity than tablets, as they are mixed very quickly with the stomach contents and their small particle size provides a large contact surface area for neutralizing activity. Advantages of tablets over liquids include ease of portability and administration. It might be appropriate for the patient to have both; the liquid could be taken before and after working hours, while the tablets could be taken during the day for convenience. Tablets should not be swallowed whole; they should be chewed to initiate disintegration or sucked to provide a relatively slow but sustained delivery of antacid to the stomach.

Interactions

Antacids can affect the absorption of a number of drugs (via chelation and adsorption). This interactions can usually be avoided when potentially interacting drugs are separated by at least 2 hours.

Side effects

A-AL-containing antacids tend to be constipating.

Mg-containing antacids tend to cause osmotic diarrhea and are useful in patients who are slightly constipated. Thus combination products of AL and Mg salts cause minimum bowel disturbances.

B-Antacids containing sod. Bicarbonate should be avoided in patients if sodium intake should be restricted (e.g. in patient with heart failure, hypertension,…..)and during pregnancy.

C-Calcium carbonate: It acts quickly, has a prolonged action and is a potent neutralizer of acid. It can cause acid

rebound and, if taken over long periods at high doses, can cause hypercalcaemia and so should not be recommended for long-term use.

2. Alginates

Alginates (Gaviscon) 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.

3. H2 antagonists (Cimetidine, Nizatidine, Famotidine and Ranitidine)

They can be used for the short-term treatment (max. 2 weeks) of dyspepsia, hyperacidity and heartburn in adults and children (over 16). The treatment limit is intended to ensure that patients do not continuously self-medicate for long periods. The H2 antagonists have a longer duration of action (up to 8–9 h) and a longer onset of action than do antacids. Where food is known to precipitate symptoms, the H2 antagonist should be taken an hour before food. H2 antagonists are also effective for prophylaxis of nocturnal heartburn. Headache, dizziness, diarrhea and skin rashes have been reported as adverse effects but they are not common.

4. Proton Pump Inhibitors PPIs (Omeprazole, Lansoprazole, Esomeprazole)

PPI the most effective medicines for the relief of heartburn, can be used for the relief of heartburn symptoms associated with reflux in adults (over 18) . They 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). During this period a patient with ongoing symptoms may need to take a concomitant antacid. If no relief is obtained within 2 weeks, the patient should be referred to the doctor.

Pregnancy & breastfeeding

- Antacids and Alginates can be given in pregnancy or breastfeeding.
- H2 antagonists PPIs should not be taken (as an OTC) during pregnancy or breastfeeding.

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. However, Heartburn should not be confused with dyspepsia. The discomfort of dyspepsia is variably described as a pain, distension, or feeling of fullness, but is generally not burning in nature

Patient assessment with indigestion

Age

Indigestion is rare in children, who should be referred to the doctor. Be cautious when dealing with first-time indigestion in patients aged 45 years or over and refer for a diagnosis.

Symptoms

The symptoms of typical indigestion include poorly localised upper abdominal (the area between the belly button and the breastbone) discomfort, which may be brought on by particular foods, excess food, alcohol or medication (e.g. *aspirin*).

Duration/ previous history

Indigestion that is persistent or recurrent should be referred to the doctor, after considering the information gained from questioning. Any patient with a previous history of the symptom which has not responded to treatment, or which has worsened, should be referred.

Diet

Fatty foods and alcohol can cause indigestion, aggravate ulcers and precipitate biliary colic.

Smoking habit

Smoking predisposes to, and may cause, indigestion and ulcers. Ulcers heal more slowly and relapse more often during treatment in smokers. The pharmacist is in a good position to offer advice on smoking cessation, perhaps with a recommendation to use nicotine replacement therapy.

Details of pain/ associated symptoms

If the pharmacist can obtain a good description of the pain, then the decision whether to advise treatment or referral is much easier. A few medical conditions that may present as indigestion but which require referral are described below:

Ulcer

Ulcers may occur in the stomach (gastric ulcer) or in the first part of the small intestine (duodenal ulcer). Duodenal ulcers are more common and have different symptoms from gastric ulcers. Typically the pain of a duodenal ulcer is localised to the upper abdomen, slightly to the right of the midline. It is often possible to point to the site of pain with a single finger. The pain is dull and is most likely to occur when the stomach is empty, especially at night. It is relieved by food (although it may be aggravated by fatty foods) and antacids. The pain of a gastric ulcer is in the same area but less well localised. It is often aggravated by food and may be associated with nausea and vomiting. Appetite is usually reduced and the symptoms are persistent and severe.

Gallstones

Single or multiple stones can form in the gall bladder, which is situated beneath the liver. The gall bladder stores bile. It periodically contracts to squirt bile through a narrow tube (bile duct) into the duodenum to aid the digestion of food, especially fat. Stones can become temporarily stuck in the opening to the bile duct as the gall bladder contracts. This causes severe pain (biliary colic) in the upper abdomen below the right rib margin. Sometimes this pain can be confused with that of a duodenal ulcer. Biliary colic may be precipitated by a fatty meal.

Gastro-oesophageal reflux

The symptoms are typically described as heartburn arising in the upper abdomen passing upwards behind the breastbone. It is often precipitated by a large meal or by bending and lying down.

Irritable bowel syndrome

Irritable bowel syndrome (IBS) is a common in which symptoms are caused by colon spasm. Pain is often occur in the lower abdominal (below and to the right or left of the belly button) but it may be upper abdominal and thereforeconfused with indigestion. There is usually an alteration in bowel habit (alternating constipation and diarrhoea).

Atypical angina

Angina is usually experienced as a tight, painful constricting band across the middle of the chest. Atypical angina pain may be felt in the lower chest or upper abdomen. It is likely to be precipitated by exercise or exertion. If this occurs, referral is necessary.

Appendicitis

Starts centrally and radiates to right iliac fossa after some time.

More serious disorders

Persisting upper abdominal pain, especially when associated with anorexia and unexplained weight loss, may herald an underlying cancer of the stomach or pancreas. Ulcers sometimes start bleeding, which may present with blood in the vomit (haematemesis) or in the stool (melaena). In the latter the stool becomes tarry and black. Urgent referral is necessary.

Medication

Medicines already tried

Anyone who has tried one or more appropriate treatments without improvement or whose initial improvement in symptoms is not maintained should see the doctor.

Other medicines being taken

Gastrointestinal (GI) side-effects can be caused by many drugs, so it is important for the pharmacist to ascertain any medication that the patient is taking. NSAIDs have been implicated in the causation of ulcers and bleeding ulcers, and there are differences in toxicity related to increased doses and to the nature of individual drugs. Sometimes these drugs cause indigestion. Elderly patients are particularly prone to such problems and pharmacists should bear this in mind. Severe or prolonged indigestion in any patient taking an NSAID is an indication for referral.

When to refer

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

Treatment timescale

If symptoms have not improved within 5 days, the patient should see doctor.

Management

Once the pharmacist has excluded serious disease, treatment of dyspepsia with antacids or anH2 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: as in heartburn
H2 antagonists: as in heartburn

Dimeticone

Dimeticone (dimethicone) is sometimes added to antacid formulations for its defoaming properties. Theoretically, it reduces surface tension and allows easier elimination of gas from the gut by passing flatus or belching.

Domperidone

Domperidone 10 mg can be used for the treatment of postprandial stomach symptoms of excessive fullness, nausea, epigastric bloating and belching, occasionally accompanied by epigastric discomfort and heartburn. It increases the rate of gastric emptying and transit time in the small intestine, and also increases the strength of contraction of the oesophageal sphincter.

Note: Unfortunately in 2014 domperidone was reclassified back to prescription-only .(4)status over fears over its potential cardiac side effects.

References:

1. Symptoms in the Pharmacy 7th Edition, 2014.
2. Community Pharmacy a guide to managment of minor ailements 1st Edition, 2018.