ProPharmace

Responding to Symptoms Guide

Pre-Registration Training

Contents

1. Introduction

This Responding to Symptoms Guide provides an up-to-date and detailed summary of all the symptoms and conditions that you may encounter in pharmacy practice as well as the relevant treatment options and their examples, cautions, side-effects and counselling points that you may need to consider as a pharmacist. The information enclosed will be important in not only preparing for the registration assessment but will be useful in everyday practice as a pharmacist.

The ProPharmace Team

2. Gastro-intestinal System

Constipation

Symptoms:

Passage of hard, dry stools less frequently than the person's normal bowel movements (this can range from 2-3 times a day to 1-2 times a week, depending on the individual's own routine). This may be associated with symptoms of abdominal discomfort, bloating, and nausea.

Cautions and when to refer:

- Continuous use of stimulant laxatives can cause the contents of the gut to be expelled such that no bowel movement occurs for 1-2 days leading to the person wanting to take more laxative. Continuous overuse of stimulant laxatives can result in loss of muscular activity (damage to the nerve plexus) in the bowel wall so that bowel movement is restricted leading to a greater risk of constipation
- Use of laxatives can be abused by people who believe that they help to control weight e.g. by anorexic individuals
- Constipation accompanied by weight and appetite loss (may indicate carcinoma)
- Tarry, red, black or bloody stools also indicate an underlying condition e.g. haemorrhoids, gastric ulcer or gastric carcinoma
- Constipation with weight gain, lethargy, coarse hair or dry skin (suggests hypothyroidism)
- Certain drugs can cause constipation e.g. opioid analgesics, hyoscine, selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants, iron, chlorpheniramine, bendroflumethiazide, propranolol, aluminium-containing antacids, verapamil

Treatment:

- **First-line**: Manage any underlying secondary cause (e.g. stop any medication causing constipation if possible). Increase fruit and fibre intake, keep adequately hydrated, and perform regular exercise (recommend 30-60 mins of physical activity on five or more days of the week). Also, advise on useful toileting routines (e.g. don't "hold in" or rush their time in the loo to ensure complete defecation).
- **Second-line**: Use of bulk-forming laxatives (e.g. ispaghula, methylcellulose, sterculia) if the above doesn't resolve the problem (not recommended if

opioid-induced). These swell up in the gut to increase faecal mass so that peristalsis is stimulated. The laxative effect usually beings within 24 hours but can take 2-3 days to reach full effect.

- **Third-line**: Switch or add an osmotic laxative (e.g. macrogols, lactulose) if the stools are still hard, or it is difficult to defecate. They work by maintaining the volume of fluid in the bowel. It may take up to 2-3 days to work. OR add a stimulant laxative (e.g. senna, bisacodyl, sodium picosulfate, glycerol suppositories) if the stools are soft but it is still difficult to pass. These work by directly stimulating peristalsis through increasing release of water and electrolytes by the intestinal mucosa. This effect can be achieved within 6-12 hours (e.g. overnight) or even quicker if applied as a suppository (within an hour). Docusate sodium appears to have both stimulant and stool-softening properties.

Side-effects:

- Lactulose can cause flatulence, cramps and abdominal discomfort in about 20% of patients, particularly at the start of treatment
- If bulk laxatives are not taken with sufficient water there is a risk of oesophageal and intestinal obstruction

Commonly used OTC preparations:

Senokot, Dulcolax, Fybogel, Dulcoease, Lactulose, Normacol, Califig etc.

Counselling points:

It is important to have a healthy, balanced diet – plenty of whole grains, certain fruits, and vegetables, and to have a gradual increase in dietary fibre (it may take a few weeks to benefit). Having insufficient amounts of these could also lead to constipation.

Encourage patients to drink plenty of water as it helps to reduce constipation.

An estimated 1 in 3 pregnant women suffer from constipation. Raised progesterone levels during pregnancy mean that the gut muscles are more relaxed. Oral iron, often prescribed for pregnant women, may also contribute to the problem. Avoid stimulant laxatives during pregnancy, especially in the first trimester.

Senna is excreted via the kidney and may colour the urine a yellow-brown to red colour.

Diarrhoea

Symptoms:

Increased frequency of bowel evacuation, associated with abnormally soft or watery faeces. Abdominal cramps, flatulence, nausea and weakness may also occur.

Cautions and when to refer:

- Babies < 3 months refer immediately
- Children <1 year: Diarrhoea of Duration > 1 day
- People with diabetes: Diarrhoea of Duration > 1 day
- Children <3 years: Diarrhoea of Duration > 2 days
- Adults and Children: Diarrhoea of Duration > 3 days
- Nausea, vomiting and fever all increase the risk of dehydration
- Signs of dehydration: dry skin, sunken eyes, dry tongue, drowsiness, less urine
- If other people in close proximity to the patient are suffering from the same symptoms it suggests that the diarrhoea may be infective (bacterial or viral)
- Blood or mucus in the stools may indicate an underlying condition e.g. gastric ulcer or gastric carcinoma
- Alternating constipation and diarrhoea in elderly patients (may indicate faecal impaction)
- Longstanding change in bowel habit in patients >50 years with concurrent weight loss (can indicate colorectal cancer)
- Certain drugs can cause diarrhoea e.g. magnesium salts, antibiotics, digoxin, diuretics, iron, laxatives, Non-Steroidal Anti-Inflammatory Drugs (NSAIDs), SSRIs
- Regular purchase of morphine/codeine based products

Treatment:

- **First-line**: Oral Rehydration Therapy (ORT) is suitable for all ages. These are sachets of powder or already formulated liquids containing sodium (chloride and/or bicarbonate), glucose and potassium
- **Second-line**: Loperamide 2mg (not recommended in children under 12, pregnant or breast feeding women), best to use in conjunction with oral rehydration. Loperamide has a high affinity for opiate receptors in the gut wall, leading to reduced motility
- **Alternatives**:
  - Kaolin is a traditional remedy but the evidence to support its use is lacking. In theory kaolin absorbs water as well as adsorbs toxins and bacteria onto its surface and then removes them from the gut

- Attapulgite and bismuth salicylate are also adsorbents that act similar to kaolin
- Morphine (as with codeine) slows the action of the GI tract and has also been included in old antidiarrhoeal remedies for many years

Commonly used OTC preparations:

Dioralyte, Imodium, Pepto-Bismol

Counselling points:

Advise patients to take special care and check the instructions when reconstituting oral rehydration powders; fruit, fizzy, sugary drinks, and boiling water must not be used to reconstitute the powder, recommend boiled and cooled water. The solution can be kept for 24hrs if stored in a refrigerator.

Bismuth subsalicylate use can result in salicylate absorption. It should be avoided by individuals hypersensitive to aspirin.

Patients should be advised to drink plenty of fluids but avoid drinks high in sugar as these can prolong diarrhoea and avoid milky drinks as a temporary lactose intolerance occurs due to damage to cells lining the intestine.

Formula feeds for babies should be diluted to quarter-strength and built back up to normal over 3 days. During period of suffering from diarrhoea, babies should be fed more frequently than normal and feeds supplemented with oral rehydration therapy.

To avoid contracting or spreading infective diarrhoea:

- Always wash hands with soap and dry in air or with a clean towel before eating
- Avoid shared drinking water, especially untreated water when abroad
- Eat fresh foods, no uncooked meat
- Avoid shellfish and fish unless fresh and from freshwater

Heartburn and Indigestion

Symptoms:

Symptoms of heartburn and indigestion are very similar and the terms are used interchangeably. Heartburn is usually ascribed to burning discomfort and pain that can be felt in the stomach all the way up (behind the breastbone) to the oesophagus. Indigestion (also known as dyspepsia) refers more to pain from the chest to upper abdomen and lower abdominal symptoms. Sometimes heartburn can also be associated with an acid taste in the mouth. Heartburn and indigestion is most commonly experienced by patients over 55 years of age and in pregnant women.

Cautions and when to refer:

- Children
- When pain radiates to the back and arms check for any underlying conditions (e.g. symptoms can mimic a heart attack)
- Difficulty swallowing (dysphagia) may indicate obstruction of the oesophagus
- Regurgitation (can indicate oesophagitis and a peptic stricture)
- Certain drugs can cause the symptoms of heartburn including tricyclic antidepressants, calcium channel blockers, NSAIDs and caffeine
- Persistent pain that originates from one point in the abdomen (may indicate a duodenal or gastric ulcer)
- New or recently changed symptoms in a patient over 55 years of age
- Patients over 55 years taking any 'over-the-counter' indigestion or heartburn remedy on a daily basis should inform their pharmacist or doctor
- Previous gastric ulcer or gastrointestinal surgery
- Patient has been taking symptomatic treatment of indigestion or heartburn for 4 or more weeks
- Patient has jaundice or severe liver disease

Treatment:

- Antacids neutralise the excess acid produced by the body and can be taken during or immediately prior to symptoms developing. 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).
- Alginates form a raft that sits on the surface of the stomach contents and prevents reflux. Some alginate-based products contain bicarbonate which causes the release of carbon dioxide in the stomach meaning that the raft can float more easily on top of the stomach contents.
- A H_2 antagonist (e.g. ranitidine, famotidine) can be tried but is recommended for short-term use only when purchased OTC (maximum 14 days' supply). They are not as fast-acting as antacids but their effects can last up to 9 hours.
- Proton pump inhibitors (PPIs e.g. omeprazole, pantoprazole) work by inhibiting gastric acid secretion in the stomach by blocking the hydrogen potassium adenosine triphosphatase enzyme system. They can be used for

recurrent heartburn. They may take 1-3 days to provide full therapeutic effect (during which antacids can be used). PPIs may inhibit cytochrome P450 and so can interact with other medicines e.g. omeprazole can delay the elimination of warfarin, phenytoin and diazepam. Interactions can also occur due to the change in gastric pH causing differences in the absorption of drugs e.g. omeprazole reducing the absorption of itraconazole or ketoconazole and possibly increasing plasma concentration of digoxin.

Side-effects:

H_2 antagonists can cause headache, dizziness, diarrhoea and skin rashes but this is uncommon.

The most common side-effects of PPIs (1-10% of patients) are headache, abdominal pain, constipation, diarrhoea, flatulence and nausea/vomiting.

Commonly used OTC preparations:

Gaviscon, Peptac, Rennies, Tums, Zantac, Pantoloc Control, Nexium Control

Counselling points:

Heartburn and indigestion can be triggered or aggravated by bending, lying down or even slumping in a chair. Therefore warn patients to avoid these positions as much as possible and/or take medication beforehand (about 15-30 minutes before for antacids or 1 hour before for H2 antagonists). Some patients may find raising the head of the bed or using pillows to lift the upper body helps to prevent acid reflux whilst sleeping but would need to be careful not to increase pressure at the waist.

Tight clothing (particularly waistbands and belts) can trigger symptoms.

Excess weight increases the risk of symptoms therefore advise patients to try to lose any excess weight and inform them what their ideal weight (according to Body Mass Index) is.

For pregnant women (usually last trimester), elderly and hypertensive patients with heartburn – a sodium-free or low sodium antacid preparation containing an alginate.

Small meals eaten frequently are better than large meals, as reducing the amount of food in the stomach reduces gastric distension, which helps to prevent reflux. High-fat meals take longer to digest and therefore delay gastric emptying, which means longer acid exposure. The evening meal should be taken several hours before going to bed.

Smoking, alcohol, caffeine and chocolate have a direct relaxing effect on the oesophageal sphincter, therefore increasing risk of acid reflux.

Irritable Bowel Syndrome (IBS)

Symptoms:

Alternating symptoms of diarrhoea, constipation, abdominal distension/bloating and discomfort.

Cautions and when to refer:

- Children
- Older adult (over 45 years old) presenting with symptoms for the first time
- Loss of appetite
- Fever
- Nausea and vomiting
- Rectal bleeding may indicate inflammatory bowel disease, gastric ulcer or gastric carcinoma
- Weight loss

Treatment:

- Antispasmodics (e.g. alverine citrate, mebeverine, peppermint oil) work by relaxing the smooth muscle in the gut, thereby reducing abdominal pain. Symptomatic relief should be achieved within a few days
- Antimuscarinics (e.g. hyoscine, dicycloverine) also relax smooth muscle spasm
- Bulking agents (e.g. ispaghula, see Constipation chapter) may help some patients

Commonly used OTC preparations:

Colofac, Colpermin, Buscopan, Kolanticon

Counselling points:

Symptoms can be prevented by minimising certain foods and additives including caffeine, alcohol, dairy products and artificial sweeteners.

Orlistat (Alli 60mg capsules)

Indications:

OTC orlistat is indicated for weight loss in adults (18 or over) who are overweight (BMI ≥ 28 kg/m2) and should be taken in conjunction with a mildly hypocaloric, lower-fat diet.

Mode of Action:

Orlistat is a potent, specific and long-acting inhibitor of gastrointestinal lipases. It exerts its therapeutic activity in the lumen of the stomach and small intestine by forming a covalent bond with the active serine site of the gastric and pancreatic lipases. The inactivated enzyme is thus unavailable to hydrolyse dietary fat, in the form of triglycerides, into absorbable free fatty acids and monoglycerides.

Contraindications:

- Hypersensitivity to the active substance or to any of the excipients
- People with chronic malabsorption syndrome
- People with cholestasis (condition where the flow of bile from the liver is blocked)
- Concurrent treatment with ciclosporin (as can decrease ciclosporin plasma levels), warfarin or other oral anticoagulants (as INR may be affected by change in vitamin K levels)
- Pregnant or breast-feeding women

Dosage:

The recommended dose of Orlistat is one 60mg capsule three times daily. The capsule should be taken with water immediately before, during or up to one hour after each main meal. If a meal is missed or contains no fat, the dose of Orlistat should be omitted. No more than three 60mg capsules should be taken in 24 hours in accordance with the Alli 60mg hard capsules product licence. Treatment should not exceed 6 months.

Interactions:

- Orlistat may indirectly reduce the availability of oral contraceptives and lead to unexpected pregnancies in some individual cases. Advise users to use additional contraceptive methods if they experience severe diarrhoea
- Acarbose - orlistat is not recommended for use in those taking acarbose
- Amiodarone - possible decrease in plasma levels of amiodarone
- Hypothyroidism and/or reduced control of hypothyroidism may occur when orlistat and levothyroxine are taken at the same time

Haemorrhoids (also known as piles)

Symptoms:

Swollen veins which protrude into the anal canal (internal piles) or extend outside the anus (external piles) together with itching, burning, pain, swelling and soreness in the perianal area and anal canal. May also be associated with rectal bleeding.

Cautions and when to refer:

- Symptoms for longer than 3 weeks
- Unresponsive to 1 week of OTC treatment
- Blood in the stools may indicate an underlying condition e.g. gastric ulcer or gastric carcinoma
- Abdominal pain, nausea and vomiting
- Haemorrhoid preparations are not licensed during pregnancy. Although commonly used, a referral to the GP may be necessary, bearing in mind treatment would usually be short-term. Also, only when the baby is structurally formed would the mother potentially experience haemorrhoids, thus reducing chances of birth defects if treated.

Treatment:

- Local anaesthetics (e.g. benzocaine, lidocaine)
- Skin protecting agents (e.g. zinc oxide, kaolin)
- Astringents (zinc oxide, hamamelis (witch hazel), bismuth) theoretically cause aggregation of proteins to constitute a protective layer across mucous membranes
- Topical corticosteroids (e.g. hydrocortisone) reduces inflammation and swelling but use should be restricted to those over 18 years of age and for maximum 7 days

Side-effects:

Local anaesthetics may cause sensitisation and so they should be used for a maximum of 2 weeks.

Commonly used OTC preparations:

Anusol, Germoloids, Preparation H

Counselling points:

Pregnancy presents a heightened risk of developing haemorrhoids as there is increased pressure on the haemorrhoidal blood vessels and meanwhile constipation is a common problem which exacerbates the symptoms of haemorrhoids. Dietary advice similar to that for constipation is recommended, especially to prevent straining.

3. Oral Health

Mouth Ulcers

Symptoms:

Minor aphthous ulcers can occur in crops of one to five, up to 5mm in diameter and appear as a white or yellowish centre with an inflamed red outer edge that can present on the gum around the tongue, on the inside of the lips and cheeks. These symptoms can last 5-14 days.

Major aphthous ulcers are uncommon and can be as large as 30mm in diameter in crops of up to 10. They can present on the lips, cheeks, tongue, pharynx and palate of the mouth. Healing may take up to 30 days.

Herpetiform ulcers are generally smaller than minor aphthous ulcers and can form irregular shapes and large clusters (up to 100) that may affect the floor of the mouth and gums.

Cautions and when to refer:

- Any ulcer that has persisted for longer than 3 weeks
- Ulcers >10mm in diameter
- Crops of more than 5 ulcers
- Weight loss
- Persistent recurrent diarrhoea
- Certain drugs can cause mouth ulcers including NSAIDs, cytotoxic drugs and sulfasalazine as well as herbal remedies like feverfew

Treatment:

- Chlorhexidine gluconate mouthwash prevents secondary bacterial infection
- Topical corticosteroids (e.g. hydrocortisone muco-adhesive buccal tablets) can be used to reduce inflammation and swelling
- Local analgesics (e.g. benzydamine, choline salicylate) are short acting but useful for pain relief
- Local anaesthetics (e.g. lidocaine, benzocaine) also offer temporary pain relief

Side-effects:

Chlorhexidine can cause reversible brown staining of the teeth and discolouration of the tongue as well as possible taste disturbance.

Commonly used OTC preparations:

Bonjela, Anbesol, Iglü, Corsodyl, Difflam

Counselling points:

Deficiency of iron, folate, zinc or vitamin B12 may contribute to increased risk of developing aphthous ulcers and may also lead to glossitis (condition associated with soreness and redness of the tongue) and angular stomatitis (where corners of the mouth become sore, cracked and red).

Brushing teeth before using chlorhexidine may help reduce staining but rinse mouth thoroughly thereafter as toothpaste can inactivate chlorhexidine.

Be aware choline salicylate should not be used in under 16 years of age, and those taking certain medication e.g. methotrexate, anticoagulants.

Gum disease

Symptoms:

The initial symptoms of gum disease (gingivitis) can include:

- red and swollen gums
- bleeding gums after brushing or flossing your teeth

If gingivitis is untreated, the tissues and bone that support the teeth can also become affected. This is known as periodontitis and symptoms can include:

- bad breath (halitosis)
- an unpleasant taste in your mouth
- loose teeth that can make eating difficult
- gum abscesses (collections of pus that develop under your gums or teeth)

Cautions and when to refer:

All of the following are symptoms of a condition called acute necrotising ulcerative gingivitis (ANUG). Presentation of these symptoms in any combination should be referred to a dentist:

- bleeding, painful gums
- painful ulcers
- receding gums in between your teeth
- bad breath
- a metallic taste in your mouth
- excess saliva in your mouth
- difficulty swallowing or talking
- a high temperature (fever)

Treatment:

The most recommended method of treatment and prevention of gum disease is to practise good oral hygiene. Good oral hygiene involves:

- brushing your teeth for two to three minutes twice a day (in the morning and at night), preferably with an electric toothbrush
- using toothpaste that contains fluoride (fluoride is a natural mineral that helps protect against tooth decay)
- flossing your teeth regularly (preferably daily)
- not smoking
- regularly visiting your dentist (at least once every one to two years)

Further treatment options include antiseptic mouthwashes that contain chlorhexidine, hexetidine or hydrogen peroxide, or chlorhexidine spray or gel.

Side-effects:

Chlorhexidine can cause reversible brown staining of the teeth and discolouration of the tongue as well as possible taste disturbance.

Commonly used OTC preparations:

Corsodyl and Oraldene

Counselling points:

Chlorhexidine may be incompatible with some ingredients in toothpaste; patients should be advised to rinse the mouth thoroughly with water between using toothpaste and chlorhexidine-containing product.

For treatment of gingivitis a course of one-month treatment is recommended.

Oral Thrush

Symptoms:

White patches known as plaques are present on the mucosal surfaces in the mouth that cannot be easily scraped away.

Cautions and when to refer:

- Recurrent infection
- Occurrence in patients other than babies
- Symptoms unresponsive to treatment

Treatment:

- Miconazole should be applied to plaques four times daily after food. Not recommended for patients on anti-coagulants as there is evidence to suggest it increases bleeding time. Can be used in children over 4 months of age
- Where napkin rash is also present at the same time, both infections should be treated simultaneously

Commonly used OTC preparations:

Daktarin oral gel

Counselling points:

Reinfection from the mother's nipples during breast-feeding or from contaminated bottle teats must be prevented.

Product guidance includes that the treatment should be continued for at least a week after the symptoms have disappeared.

4. Respiratory System

Common Cold and Influenza

Symptoms:

- Cough
- Runny/blocked nose and sneezing
- Sore throat
- Irritated / watery eyes
- Headache
- Fever aches and pains
- Earache and acute otitis media
- Severe pyrexia (body temperature >38˚C or >37.5 ˚C in elderly)
- Persistent pyrexia (>24 hours 3-6 months or 72 hours > 6 months)

Cautions and when to refer:

- Earache not improving with analgesic (most earaches are self-limiting and resolve spontaneously in about 3 days)
- In the very young
- In the very old
- Long-term conditions such as COPD, asthma, kidney disease, diabetes, compromised immune system
- Persisting fever and productive cough

Treatment:

- Oral decongestants (sympathomimetics) e.g. pseudoephedrine constrict dilated blood vessels in the nasal mucosa
- Topical decongestants (e.g. xylometazoline sprays, drops) maximum 1 week use (due to risk of rebound congestion)
- Antihistamines (e.g. diphenhydramine) relieve runny nose and sneezing by their anticholinergic action

Side-effects:

Avoid decongestants (e.g. pseudoephedrine, ephedrine) in hypertensive patients (due to stimulant effects raising blood pressure), in hyperthyroidism (due to risk of stimulant effect on heart irregularities) and diabetes (due to risk of adverse effect on diabetic control) and in patients on beta-blockers (due to contradictory effect) or monoamine oxidase inhibitors (due to risk of hypertensive crisis).

Older antihistamines (e.g. chlorphenamine, promethazine) have a greater anticholinergic effect but this is associated with greater side-effects (e.g. sedation, constipation, blurred vision) than newer agents (e.g. loratadine, cetirizine, acrivastine).

Antihistamines should be avoided in patients with prostatic hypertrophy, epilepsy and closed-angle glaucoma because of increased risk of acute urinary retention, seizures and increased intraocular pressure.

Commonly used OTC preparations:

Nurofen Cold and Flu, Benylin Cold and Flu, Sudafed, Beechams Cold and Flu

Counselling points:

There is some evidence supporting the use of Echinacea and Vitamin C in the prevention and alleviation of cold symptoms.

Inhalants (e.g. menthol crystals, Olbas oil) are useful for aiding clearance of the nasal passage and can be recommended to patients for whom decongestants are contraindicated.

Provide hygiene advice on stopping spread of the infection and preventing exposure to further infections.

Cough

Symptoms:

Coughing is a natural protective reflex action triggered by an irritation or blockage of the airway. In a productive cough, excess sputum is secreted in response to an irritation of the airways. If this sputum is non-coloured (clear or whitish) then it not infected and is known as mucoid.

Cautions and when to refer:

- Cough lasting longer than 2-3 weeks
- Coloured sputum (may indicate bacterial chest infection)
- Blood in sputum (haemoptysis)
- Persistent fever and night sweats (together with cough and haemoptysis may indicate tuberculosis infection)
- Persistent harsh barking cough (indicates croup, also known as acute laryngotracheitis)
- Difficulty breathing
- Chest pain
- Whooping cough
- Recurrent night-time cough (can indicate asthma)
- 2-10% of patients taking ACE inhibitors can experience a cough

Treatment:

There is not much evidence to support the clinical effectiveness of cough remedies but patients can find them helpful (which may be due to a placebo effect).

- Dry irritating non-productive cough:
    - Cough suppressants: pholcodine, codeine, dextromethorphan
- Productive chesty coughs:
    - Expectorants: e.g. guaifenesin (also known as guaiphenesin), ammonium chloride, ipecacuanha, squill
- Demulcent preparations can be used to soothe any kind of cough: Simple Linctus and Glycerin Lemon and Honey.
- Antihistamines (e.g. diphenhydramine, promethazine, brompheniramine, triprolidine) work by drying up secretions that may be triggering the cough.

Side-effects:

For side-effects of antihistamines see previous chapter on Common Cold and Influenza.

Commonly used OTC preparations:

Veno's, Benylin, Covonia, Actifed, Buttercups

Counselling points:

An unproductive cough (dry, tickly) is usually caused by viral infection and is self-limiting.

Productive coughs should not be treated with cough suppressants because this may lead to accumulation of mucus in the lungs and a higher chance of infection.

Sore Throat

Symptoms:

Constant or varying levels of pain from the back of the throat, swollen lymph glands may be felt under the chin or in the neck and sometimes pain can be experienced upon swallowing. Around 90% of sore throats are caused by viral infection and 10% due to bacterial infection. The majority of infections are self-limiting and may be associated with other symptoms of a cold.

Cautions and when to refer:

- Sore throats lasting longer than 10 days
- Extreme pain, especially in the absence of cold, cough and catarrhal symptoms and symptoms are lasting over 1-2 days
- Difficulty in swallowing (dysphagia)
- Certain drugs can cause a sore throat which may require review of their medication by their doctor. Examples include: steroid inhalers, carbimazole (due to agranulocytosis)
- White plaques in the throat, gums and/or tongue (may indicate oral thrush)
- Red and swollen tonsils (that may have white, pus-filled spots on them) and/or swollen lymph glands (may indicate tonsillitis or other viral or bacterial infections)

Treatment:

- Anti-inflammatories e.g. flurbiprofen lozenges, gargling dispersible aspirin, benzydamine spray or oral rinse
- Local Anaesthetic e.g. benzocaine or lidocaine sprays or lozenges
- Antibiotic lozenges / pastilles e.g. cetylpyridium (antiseptic), dequalinium (antifungal)
- Demulcents e.g. glycerine pastilles

Commonly used OTC preparations:

Strefen, Strepsils, Difflam, Ultra Chloraseptic

Counselling points:

Drink plenty of water whilst symptoms are present.

Allergic Rhinitis (e.g. Hayfever)

Symptoms:

- Seasonal: April (tree pollen), May-July (grass pollen)
- Runny nose (rhinorrhoea) / nasal congestion / itchy nose
- Watery eyes may occur alongside the rhinitis
- Sneezing

Cautions and when to refer:

- Wheezing (difficulty breathing)
- When a severe secondary infection (e.g. purulent conjunctivitis) affects the eyes
- Painful ear

Treatment:

- Oral antihistamines
    - "newer" Non-sedating (acrivastine, cetirizine, loratadine)
    - "older" Sedating chlorphenamine (diphenhydramine, promethazine)
- Nasal steroids (only for patients over 18yrs, maximum use for up to 3 months)
- Oral or topical decongestants (sympathomimetics) can be used for short-term relief from nasal congestion and/or to increase passage of nasal corticosteroid to the nasal mucosa
- Eye drops e.g. sodium cromoglicate (discard 28 days after opening)

Side-effects:

- Topical decongestants can cause rebound congestion if used for over 1 week
- Antihistamines may cause drowsiness to varying degrees; cumulative drowsiness may occur if taken in conjunction with other medicines that may cause drowsiness

Commonly used OTC preparations:

Benadryl, Piriton, Pirteze, Clarityn

Counselling points:

Close windows and air vents and stay indoors when pollen count is high; wearing a cap/hat and sunglasses may also help.

5. Central Nervous System

Motion Sickness

Symptoms:

Nausea and sometimes vomiting, pallor and cold sweats triggered by travel by air, sea, road or water.

Cautions and when to refer:

- Be cautious of additive anticholinergic side-effects if patient takes tricyclic antidepressants (e.g. amitriptyline), butyrophenones (e.g. haloperidol) and phenothiazines (e.g. chlorpromazine)

Treatment:

- Anticholinergics e.g. hyoscine
- Antihistamines e.g. cinnarizine, promethazine, meclozine (main differences are in duration of action)

Side-effects:

Varying degrees of drowsiness.

Commonly used OTC preparations:

Stugeron, Joy-rides, Avomine, Phenergan

Counselling points:

Ginger can be used for travel sickness and is useful to recommend in those seeking a herbal or additional solution and for pregnant or breastfeeding mothers or drivers. Acupressure wristbands are another alternative.

Symptoms:

Tension headache - persistent dull pain around the base of the skull and the upper part of the neck, sometimes extending to the top of the head and above the eyes. Pain can be described as a band around the head. Not associated with neck stiffness.

Migraine - unilateral (affecting one side of the head), especially over the forehead, which can be preceded by alterations in vision or tingling/numbness on one side of the body, in the lips, fingers, face or hands before an attack starts (a prodromal phase). Symptoms can include nausea and vomiting and photosensitivity.

Cautions and when to refer:

- First migraine episode occurring over the age of 40 years
- Any headache that does not respond to OTC analgesics within a day
- Dull pain that is deep seated and severe and aggravated by lying down or pain that is worse in the morning and improves during the day (may indicate raised intracranial pressure such as from a tumour)
- Headaches of increasing frequency and severity
- Recurring headache can indicate medication-induced headache (also known as medication-overuse headache)
- Any woman taking combined-oral-contraceptive complaining of migraine-type headaches should be referred to their doctor for further investigation
- Severe headache of more than 4 hours duration
- Headache in children under 12 years
- Neck stiffness
- Headache following on from recent injury or trauma

Treatment:

- Paracetamol
- NSAIDs
- Analgesic combinations containing opioids (e.g. codeine, dihydrocodeine). Note: these are not to be used in tension headaches
- Sumatriptan

Side-effects:

Daily use of analgesics (especially combinations containing codeine) can cause chronic daily headache. Therefore patients should be advised that analgesics should not be used regularly in order to treat headache but be restricted to short-term use only.

Commonly used OTC preparations:

Nurofen (Migraine pain / Tension headache / Plus), Migraleve, Imigran, Paracodol, Solpadeine

Note: sumatriptan (e.g. Imigran) was the first triptan (5HT1 receptor agonist) to be licensed OTC for acute relief of migraine attacks, with or without aura, in adults aged 18-65 years. It should only be used where there is a clear diagnosis of migraine and should not be used prophylactically. It should not be given to patients who have existing medical conditions including: cardiovascular conditions, hypertension, peripheral vascular disease, liver or kidney disorders, any neurological condition or epilepsy.

Counselling points:

Patients taking products containing codeine should be warned of the possibility of adverse effects such as drowsiness, respiratory depression, constipation, addiction, etc.

Patients taking sumatriptan should be reminded that one 50mg tablet should be taken as soon as possible after onset of an attack. A second dose may be taken after 2 hours if migraine recurs. If there is no response to the first tablet, a second tablet should not be taken for the same attack. The maximum dosage is two tablets in 24 hours and the patient should not take any concurrent medication for migraine.

Insomnia

Symptoms:

Disturbed sleep (e.g. waking in the middle of the night), trouble getting to sleep, unintentionally waking too early or feeling tired throughout the day despite sleeping fully.

Sleep disorders can be classified as transient (lasting days), short term (lasting up to 3 weeks) or chronic (lasting longer than 3 weeks).

Cautions and when to refer:

- Chronic insomnia
- If suspected adverse effect from medication (e.g. fluoxetine, MAOIs, corticosteroids, phenytoin, theophylline)
- Suspected depression
- Children under 16 years
- Prostatic hypertrophy and closed angle glaucoma are contraindications to antihistamine therapy

Treatment:

- Antihistamines (e.g. diphenhydramine, promethazine)

Side-effects:

Antihistamines can have cholinergic side-effects including dry mouth, constipation, blurred vision and tinnitus.

Commonly used OTC preparations:

Nytol, Sominex

Counselling points:

May be helpful to recommend ways to prevent snoring. Also try lavender oil, light exercise in the evening, having a warm bath, avoiding caffeine and alcohol, as well as keeping to a regular sleep pattern.

6. Infestations

Head Lice

Symptoms:

Live lice can be detected by fine-tooth combing (most effective when done on wet hair). Nits are empty eggshells of lice that are oval and cream/white coloured that often stick to hair shafts. They do not necessarily indicate current lice infestation. Itching may be present but not always.

Treatment:

- Head lice should be treated with lotion, liquid or cream rinse formulations; shampoos are diluted too much during use to be effective
- Dimeticone (traps and suffocates the lice) having a different mechanism of action to insecticides
- Insecticides (also known as pediculicides) e.g. permethrin, malathion
- Alcohol formulations are preferred because of improved success rates except in asthmatic patients and patients with severe eczema where aqueous formulations are safer
- A treatment should be re-applied after 7 days to treat for any lice that had not hatched by the time of the first application

Commonly used OTC preparations:

Hedrin, Lyclear, Derbac M

Counselling points:

Insecticides must not be used as prophylaxis as this accelerates resistance.

Only treat all those in the household who are affected, and on the same day to avoid reinfestation.

Products can stain clothing, bedding, pillow cases and can have a strong smell.

Scabies

Symptoms:

Scabies mites burrow beneath the skin surface causing allergic reaction to their coat and exudates resulting in intense itching (pruritus). The burrows can lead to appearance of small thread-like grey lines, most visible in the webs of fingers and toes.

Cautions and when to refer:

- Babies and children
- Secondary infection of skin
- Treatment failure
- Unclear diagnosis

Treatment:

- Aqueous preparations are preferable to alcoholic lotions
- All members of the household and close contacts should be treated
- Clothes and bed linen should be washed at temperatures above 50˚C at time of treatment
- Permethrin or Malathion products can be used, 2 treatments are recommended 7 days apart
- Applications should be applied to the entire body and left on for 8-12 hours (for permethrin cream) or 24 hours (for malathion lotion) before bathing

Commonly used OTC preparations:

Lyclear cream, Derbac M

Counselling points:

The itch will continue for 2-3 weeks even after insecticide treatment as the allergens may still remain but symptoms will eventually fade. Crotamiton cream (Eurax) can be recommended.

The scabies mite is transmitted by close contact with an infected individual so infected patients should be alerted to avoid close contact with others. Infected people may not show symptoms until up to 8 weeks after infestation.

Wash clothing and bedding at temperatures above 50°C.

Threadworm (pinworm)

Symptoms:

Eggs and worms may be visible from the anus and in excrement after going to the toilet. Intense perianal itching, especially in the morning is to be expected.

Cautions and when to refer:

- Recent travel abroad
- Failed treatment
- Children under 2 years

Treatment:

- Mebendazole100mg (as 1 100mg tablet or 5ml of mebendazole 100mg/5ml suspension)
- One dose of mebendazole is usually sufficient for treatment of threadworms. If reinfection is suspected, a second dose can be given after 2 weeks
- Mebendazole is not licensed for children under 2 years

Commonly used OTC preparations:

Ovex

Counselling points:

Anthelmintics should be used in combination with good hygiene measures to break the cycle of autoinfection.

All members of the family should be treated.

7. Women's Health

Cystitis

Symptoms:

Dysuria, frequency, urgency to urinate, cloudy and smelly urine.

Cautions and when to refer:

- Children
- Men
- Pregnant women
- Blood in urine (may indicate tumour in bladder or kidney)
- Vaginal discharge
- Deep abdominal pain (may indicate kidney or bladder infection)
- Fever, nausea, vomiting
- Loin pain or tenderness
- Longer than 2 days duration
- Recurrent cystitis
- Failed treatment
- Potassium citrate should not be given to anyone on potassium-sparing diuretics, aldosterone antagonists, ACE inhibitors
- Sodium citrate should not be given to hypertensive patients or those with heart disease and not to pregnant women

Treatment:

- Potassium citrate or sodium citrate (oral solution or sachets) for 2 days treatment

Commonly used OTC preparations:

Oasis Cystitis Relief, Cymalon, Cystocalm

Counselling points:

Cranberry (juice or supplement) has been reported to help (cause a bacteriostatic effect) but may be required in large quantities (300ml per day) to have any significant effect; recommending juice is not suitable for diabetics.

Vaginal Thrush

Symptoms:

Itch (pruritus), burning and discomfort in vaginal area; vaginal discharge may be watery or thicker and may be thick, curdy and cream-coloured. Dysuria (pain on urination) can also occur.

Cautions and when to refer:

- Yellow/green or white vaginal discharge (may indicate bacterial vaginosis, Chlamydia, gonorrhoea)
- More than 2 attacks in previous 6 months
- First occurrence of symptoms
- Pregnancy or suspected pregnancy
- Previous history of sexually transmitted disease
- Patient under 16 or over 60 years
- Abnormal or irregular vaginal bleeding
- Blood stain in vaginal discharge
- Vaginal sores, ulcers or blisters
- Lower abdominal pain or dysuria
- No improvement within 7 days of treatment

Treatment:

- Clotrimazole pessary/cream
- Fluconazole capsule

Commonly used OTC preparations:

Canesten

Counselling points:

Oral treatments may take 12-24 hours to achieve symptomatic improvement.

Treatment of a sexual partner with cream to apply to the penis is recommended.

Avoid nylon underwear and tights, use cotton instead and loose-fitted clothing where possible. Avoid deodorants and perfumes.

Emergency Hormonal Contraception (EHC)

Indication:

Emergency contraception (within 120 hours for ulipristal; within 72 hours for levonorgestrel) following unprotected sexual intercourse (including in those whose regular contraception method has failed).

Ulipristal acetate is shown to be more effective and is recommended first, and is suitable for any woman of child bearing age, including adolescents. Levonorgestrel is indicated in adults and adolescents >16 years of age.

Either one can be taken at any time during the menstrual cycle.

Mode of action:

Ulipristal (a progesterone receptor modulator) inhibits or delays ovulation via suppression of the LH surge.

Levonorgestrel is thought to act in a few ways, depending on the point in the menstrual cycle at which it is used:

- Before ovulation it may prevent ovulation by delaying or inhibiting the release of the ovum from the ovary
- It is also suggested the following, but further studies (small or in vitro) have shown there isn't a significant contraceptive effect:
    - After ovulation it may prevent fertilisation by affecting the motility of the fallopian tube and prevent sperm from meeting the ovum
    - After fertilisation it induces changes in the endometrium that render it unreceptive to the ovum and prevent implantation

Clinical trial data show that, overall, levonorgestrel prevents around 85% of expected pregnancies if used within 72 hours of unprotected intercourse – but effectiveness declines over time.

Cautions and when to refer:

- If ovulation has already occurred, neither EHC is thought to be effective, therefore an intra-uterine device (IUD) should be recommended. The timing of ovulation cannot be predicted and therefore oral EHC should be taken as soon as possible after unprotected intercourse
- Hypersensitivity to ingredients
- Severe hepatic dysfunction
- Severe diarrhoea
- Crohns disease
- Patient with asthma on oral glucocorticoid therapy
- Patient on ciclosporin therapy

Treatment:

- 1500 microgram of levonorgestrel or 30 mg ulipristal acetate

Commonly used OTC preparations:

Levonelle One Step, ellaOne

Interactions:

Levonorgestrel and ulipristal acetate are metabolised in the liver; drugs which induce liver enzymes will therefore increase metabolism and could reduce the effectiveness of the EHC. These drugs include: primidone, phenytoin, carbamazepine, St John's wort, griseofulvin, rifampicin, rifabutin and ritonavir.

Side effects:

The most commonly reported adverse reactions from ellaOne are headache, nausea, abdominal pain and dysmenorrhea. As well as those listed for ellaOne, Levonelle also has bleeding not related to menses and fatigue as very commonly reported side-effects.

Counselling points:

An IUD is the most effective contraceptive method and in the FSRH Guideline it states this should be offered as first-line. However, most individuals coming to the pharmacy may only prefer oral emergency contraception. If in any case of referral for an IUD, a supply should me made nonetheless as the person may be unable to have an insertion of an IUD or they may change their mind.

Take the EHC as soon as possible after unprotected sexual intercourse (for Levonelle: preferably within 12 hours and not more than 72 hours after or for ellaOne no later than 120 hours after). If vomiting occurs within 3 hours of taking either EHC, another tablet should be taken immediately.

If a woman's menstrual period is late or in case of symptoms of pregnancy, pregnancy should be excluded before EHC is administered. However, there is evidence to suggest that oral EHC does not cause abortion in a very early pregnancy.

After using emergency contraception it is recommended to use a barrier method (e.g. condom, diaphragm, spermicide, cervical cap) until the next menstrual period starts. The use of levonelle One Step does not contraindicate the continuation of regular hormonal contraception.

Although the use of ellaOne does not contraindicate the continued use of regular hormonal contraception, ellaOne may reduce its contraceptive action. Therefore, if a woman wishes to start or continue using hormonal contraception, she can do so after using ellaOn. However, she should be advised to use a reliable barrier method until the next menstrual period.

If menstrual periods are delayed by more than 5 days after taking Levonelle One Step or 7 days after taking ellaOne, or abnormal bleeding occurs at the expected date of menstrual periods or pregnancy is suspected for any other reason, women should be referred to a doctor so that pregnancy may be excluded. The possibility of an ectopic pregnancy should be considered. It is important to know that the occurrence of uterine bleeding does not rule out ectopic pregnancy.

Naproxen (for Dysmenorrhoea)

Indication:

Treatment of primary dysmenorrhoea in women aged 15 to 50 years.

Mode of action:

Naproxen is a non-steroidal anti-inflammatory drug. By its action on cyclo oxygenase, naproxen inhibits prostaglandin synthesis.

Cautions and when to refer:

- Peptic ulceration and/or GI bleeding
- Hypersensitivity to naproxen and naproxen sodium
- Caution is required if administered to patients suffering from, or with a history of, bronchial asthma or allergic disease, since administration of naproxen or other NSAIDs may elicit bronchospasm
- Heart failure, kidney or liver disease
- Pregnant or breast feeding
- Naproxen decreases platelet aggregation and prolongs bleeding time, therefore avoid in patients on anticoagulants
- Patients taking steroids
- The use of naproxen, as with any drug known to inhibit cyclooxygenase/prostaglandin synthesis, may impair female fertility and is not recommended in women attempting to conceive

Dosage:

1st dose – 2 tablets
2nd dose – after 6-8 hours take one more tablet if needed.
Subsequent doses on second and third days if needed.
No more than 3 tablets each day.
No more than 3 days treatment in any one month.
Swallow whole with water with or after food.

Side-effects:

- The most commonly-observed adverse events are gastrointestinal in nature. Nausea, vomiting, diarrhoea, flatulence, constipation, dyspepsia, abdominal pain, heartburn and epigastric distress.
- GI bleeding, ulceration or perforation, has been reported with all NSAIDs at anytime during treatment, with or without warning symptoms or a previous history of serious GI events.
- The elderly and/or debilitated patients have an increased frequency of adverse reactions to NSAIDs especially gastrointestinal bleeding and perforation which may be fatal. Prolonged use of NSAIDs in these patients is not recommended. Where prolonged therapy is required, patients should be reviewed regularly.

Tranexamic Acid (for Menorrhagia)

Indication:

Reduction of heavy menstrual bleeding (menorrhagia) over several cycles in women aged 18 years and over, with regular 21-35 day cycles, with no more than 3 days individual variability in cycle duration.

Mode of action:

Tranexamic acid is an antifibrinolytic which inhibits fibrinolysis, which therefore increases clot formation and reduces blood loss. It is often used to prevent bleeding or to treat bleeding associated with excessive fibrinolysis.

Contraindications:

- Mild to moderate renal insufficiency
- Hypersensitivity to tranexamic acid or any of the excipients
- Active thromboembolic disease
- A previous thrombolic event and a family history of thrombophilia
- Haematuria
- Irregular menstrual bleeding
- Patients taking warfarin or other anticoagulants
- Patients taking combined oral contraceptives or unopposed oestrogen or tamoxifen
- Pregnancy

Dosage:

It should be taken only once heavy bleeding has started. The recommended dosage is 2 tablets 3 times daily for as long as needed, but for a maximum of 4 days. If there is very heavy menstrual bleeding, the dosage may be increased. A total dose of 4 g daily (8 tablets) should not be exceeded. It can be used as long as periods remain regular and heavy.

Note: NICE guidance states that if there is no improvement in symptoms within 3 menstrual cycles then use of NSAIDs and/or tranexamic acid should be stopped.

Interactions:

Tranexamic acid will counteract the thrombolytic effects of fibrinolytic agents.

Side-effects:

Side-effects are unusual, those reported include mild nausea, vomiting and diarrhoea (affecting between 1 and 10% of patients). Visual disturbances and thromboembolic events have been reported but are very rare.

8. Men's Health

Tamsulosin (for Benign Prostatic Hyperplasia)

Indication:

Treatment of symptoms of benign prostatic hyperplasia (BPH) in males aged 45 to 75 years.

Mode of action:

Tamsulosin is an alpha blocker that relaxes smooth muscle in BPH producing an increase in urinary flow-rate and an improvement in obstructive symptoms.

Dosage:

A single 400 microgram capsule should be swallowed whole after the same meal each day.

Contraindications:

- Symptoms are < 3 months duration
- Prostate surgery
- Unstable or undiagnosed diabetes
- Problems with liver, kidney or heart
- Fainting dizziness or weakness when standing (postural hypotension)
- Eye operation or cataract planned
- Recent blurred or cloudy vision that has not been examined by a GP or optician
- Known hypersensitivity to tamsulosin

Cautions and when to refer:

- Dysuria, haematuria, or cloudy urine in the past 3 months
- A fever that might be related to a urinary tract infection
- If urinary symptoms have not improved within 14 days of starting treatment with Flomax Relief®, or are getting worse, the patient should stop taking Flomax Relief® and be referred to the doctor

Medical review is required for the diagnosis of BPH. Patients must see their doctor within 6 weeks of starting treatment for assessment of their symptoms, and every 12 months for confirmation that they can continue to take Flomax Relief from their pharmacist.

Interactions:

- Antihypertensive medicines with significant alpha1 adrenoceptor antagonist activity (e.g. doxazosin, indoramin, prazosin, terazosin, verapamil)
- Theoretical risk of enhanced hypotensive effect when tamsulosin is given concurrently with drugs which may reduce blood pressure
- Tamsulosin hydrochloride should be used with caution in combination with strong (e.g. ketoconazole) and moderate (e.g. erythromycin) inhibitors of CYP3A4

Erectile Dysfunction (ED)

Indication:

To treat erectile dysfunction (ED – the inability to achieve or maintain a penile erection sufficient for satisfactory sexual performance) in men over 18 years of age.

Treatment:

50mg sildenafil tablet (Viagra Connect), to take one tablet an hour before sexual activity, no more than one a day.

Mode of action:

Sildenafil is a phosphodiesterase type-5 inhibitor, which prevents the breakdown of cGMP caused by nitric oxide activation. This delays the contraction of smooth muscle in the corpus cavernosum due to cGMP breakdown, allowing continual blood flow and aids in maintaining an erect penis. Sexual stimulation is required for sildenafil to actually work.

Cautions and when to refer:

If patients experience any of the following they should immediately seek medical attention:

- Priapism – a long-lasting, possibly painful erection. Sildenafil does have an effect of up to 4 hours, but any longer can potentially have irreversible damage to the penis
- Any of the following during or after sexual intercourse:
  - Chest pains which do not go away. Patients should initially get into a semi-sitting position and try to relax. If this doesn't help then they should call 999. Medication to help relieve angina pain e.g. GTN spray should NOT BE USED
  - Dizziness
  - Nausea
- Sudden decrease or loss in vision
- Any hypersensitivity or anaphylactic reaction to any of the ingredients
- Serious skin reactions e.g. Stevens-Johnson Syndrome

Contra-indications:

- Hypotension
- Hepatic impairment
- Severe renal impairment
- Any bleeding conditions (e.g. haemophilia) or suffer with stomach ulcers
- Those with cardiovascular condtions
- If a person does not have ED, then sildenafil will not work. It does not improve performance.

Interactions:

- The following MUST not be taken concomitantly with sildenafil as there can be a severe hypotensive effect:
    - Nitrates (e.g. glyceryl trinitrate, isosorbide mononitrate; and amyl nitrite, a type of recreational drug also known as “poppers”)
    - Nitric oxide donors (e.g. nicorandil)
- CYP3A4 inhibitors (e.g. erythromycin, diltiazem)
- Alpha blockers
- Grapefruit and its juice may increase blood levels of sildenafil

Side effects:

Common side effects that patients can experience include headaches, flushing, dizziness and nausea.

Counselling points:

It's important to discuss with patients on the possible contributing factors of ED. There may be a physical cause such as a long term condition (e.g. diabetes, hypertension), or possibly a psychological cause (e.g. anxiety). It is also important to note that any current medication may have an influence as well, such as ACE inhibitors, SSRIs and methotrexate.

Lifestyle advice may be necessary as well, discussing general healthy living, for example by exercising regularly, reducing stress, and giving up smoking, as relevant for the patient.

A general health check-up with the patient's doctor should be arranged within 6 months of starting treatment.

9. Eye and Ear Problems

Conjunctivitis

Symptoms:

Allergic conjunctivitis –irritation, discomfort and a watery discharge.

Infective (bacterial or viral) conjunctivitis – sticky, purulent discharge in bacterial infections; more watery discharge in viral infections. Can affect one or both eyes although if only one eye affected it suggests the presence of a foreign body in the eye.

Cautions and when to refer:

- Painful red eye
- Redness extends into the iris
- Photophobia
- Vision is adversely affected
- Patient is already using other eye drops or eye ointment
- Suspected foreign body in the eye
- Dry eye syndrome (keratoconjunctivitis sicca)
- Personal or family history of bone marrow problems
- Patient is pregnant or breast-feeding
- Where no improvement is seen after 48 hours of treatment
- Eye inflammation associated with a rash on the scalp or face
- Conjunctivitis in the recent past
- Patients with glaucoma
- If a patient is experiencing eye pain or visual impairment (e.g. loss of vision, reduced or blurred vision)
- If the patient wears contact lenses, suggest that they seek advice either from their contact lens practitioner (optician, optometrist) or doctor
- Eye or head injury
- Eye surgery or laser treatment in the past six months
- Pupil looks unusual, i.e., torn, irregular, dilated or sluggish/ non-reactive to light
- Eye looks cloudy
- Symptoms get worse
- Symptoms persisting longer than 2 weeks

Treatment:

Chloramphenicol:

- Broad-spectrum bacteriostatic antibiotic that is active against a variety of gram-negative and gram–positive organisms, exerting its effect by binding to bacterial ribosomes and inhibiting bacterial protein synthesis at an early stage

- First line treatment for bacterial conjunctivitis
- 5 day course:
    - 0.5% eye drops - Every 2 hours to affected eye(s) for the first 48 hours, then every 4 hours thereafter. Store in fridge (2-8°C). If needed, the patient can let the bottle warm up a little before use if it is uncomfortable to administer
    - 1% ointment – three to four times daily
- OTC licence – for 2 years and over

Propamidine isetionate:

- Has bacteriostatic properties showing effectiveness against certain gram-positive organisms, but not many gram-negative and spore forming organisms.
- Used to treat minor eye infections as an alternative including bacterial conjunctivitis and blepharitis
- Applied four times daily
- No age restriction
- Doesn't require refrigeration

Sodium cromoglicate 2%:

- Used to treat allergic conjunctivitis
- Has prophylactic action by stabilising mast cells (involved in allergic reactions), therefore needs to be used regularly even when symptoms improve
- Certain brands have an age restriction of using it under 6 year olds

Commonly used OTC preparations:

Optrex Infected Eyes, Golden Eye, Brolene; Opticrom, Allercrom, Optrex Allergy.

Counselling points:

Wash hands regularly and avoid sharing towels and pillows.

Contact lenses should not be worn until the infection has completely cleared and until 24 hours after any treatment has been completed.

Side-effects:

Chloramphenicol is absorbed systemically from the eye and systemic toxicity has been reported. The use of topical chloramphenicol may occasionally result in overgrowth on non-susceptible organisms, including fungi. If any new infection appears during treatment, the patient should be referred to the doctor.

Dry Eye (Keratoconjunctivitis sicca)

Symptoms:

Itchy, tired, burning and irritated eyes. Both eyes are usually affected.

Treatment:

Artificial tears: Hypromellose, carmellose, polyvinyl alcohol, carbomer gel and wool fats are all wetting agents or lubricants (tear substitutes) that can be used to manage symptoms of dry eye.

Commonly used OTC preparations:

Lacri-lube, Simple eye ointment, Celluvisc, Hypromellose, Viscotears

Counselling points:

Preservatives in eye drops or ointment (e.g. benzalkonium chloride) can cause eye irritation in certain individuals. If affected, preservative-free products should be recommended.

Blepharitis

Symptoms:

- Itchy, sore and red eyelids
- Eyelids that stick together and are difficult to open when you wake up
- Eyelashes that become crusty or greasy
- A burning, gritty sensation in your eyes
- An increased sensitivity to light (photophobia)
- The edges of your eyelids (eyelid margins) becoming swollen
- Finding contact lenses uncomfortable to wear
- Abnormal eyelash growth or loss of eyelashes, in severe cases

In most cases both eyes are affected, and the symptoms tend to be worse in the morning.

Cautions and when to refer:

- Unresponsive to treatment
- Constantly dry eyes
- Concurrent conjunctivitis
- Meibomian cysts (swelling on the inside of eyelids)
- Stye (swelling that produces pus and develops on the outside of the eyelid)
- Eye pain, sensitivity to light and a worsening in vision

Treatment:

Follow the steps below to keep your eyelids clean:

- Apply a warm (but not hot) compress to your closed eyelids for 5 to 10 minutes to help melt the oils that may have built-up in the glands behind your eyelids. A cloth or flannel warmed with hot water will usually be fine, although special eye packs that are heated in the microwave are available to buy
- Gently rub your closed eyelids vertically and horizontally with your finger or a cotton wool bud to help loosen any crusting, and push out any oils that may have built up
- Use a cloth or cotton bud with warm water and a small amount of cleaning solution, and gently wipe the edge of your eyelids to clean them. Try to avoid touching your eye and don't clean the inside of your eyelids, as this can irritate them

These steps should be carried out twice a day at first, then once a day when your symptoms have improved.

For blepharitis that does not respond to regular cleaning, a course of antibiotic ointments, creams or eye drops can be used. Over-the-counter products include eye drops or ointment containing dibrompropamidine isetionate or propamidine isetionate.

Commonly used OTC preparations:

Golden eye or Brolene ointment or eye drops.

Counselling points:

Blepharitis cannot usually be cured, but the symptoms can be controlled with good eyelid hygiene. It is important to clean your eyelids every day if you have blepharitis, whether or not you currently have any symptoms or are using any treatments for the eye. Good eyelid hygiene can help to ease your symptoms and prevent it happening again.

Try to avoid wearing eye make-up, particularly eyeliner and mascara, as this can make your symptoms worse. If you do wear eye make-up, make sure it is a type that washes off with ease so you can clean your eyelids every day more easily using the method described above.

Ear Wax Build-Up

Symptoms:

A sensation that the ear is blocked by ear wax (cerumen) and that hearing is impaired (temporary deafness may occur). Discomfort and pain within the ear may also be experienced.

Cautions and when to refer:

- Unusual discharge from the ear canal
- Persistent pain from within the ear
- Tinnitus (ringing in the ears)

Treatment:

- Ear drops: preparations are available for softening and thereby easing the removal of wax from the ear
    - Water-based and oil-based products act as wax solvents
    - Glycerol and salicylate acts as softeners
    - Docusate is a surfactant that facilitates the penetration of water
    - Peroxide-based products react with natural catalase enzyme to release oxygen which helps to mechanically break up wax
- Syringing (also known as ear irrigation) can be recommended via referral to a GP or nurse if treatment with drops has been insufficient but complications after syringing have been reported including a risk of ear infection

Commonly used OTC preparations:

- Examples of water-based products: sodium bicarbonate
- Examples of oil-based products: olive oil, almond oil, Cerumol, Earex
- Earex Plus (contains glycerol and salicylate)
- Examples of peroxide-based products: Otex, Exterol

Counselling points:

Advise against use of cotton buds, hairgrips, matchsticks, pens or any other utensils for cleaning the ear. Wax should be allowed to clear naturally or products such as Audiclean can be tried.

Otitis Externa

Symptoms:

Pain from the ear due to inflammation of the skin in the ear canal. The inflamed skin can become infected leading to discharge from the ear.

Cautions and when to refer:

- Deafness
- Persistent pain from within the ear
- Tinnitus (ringing in the ears)
- Vertigo
- Blocked ears
- Discharge
- Bleeding
- Nausea and vomiting
- Children (<12 years old)

Treatment:

- Referral to a doctor to confirm diagnosis is recommended
- Acetic acid 2% spray is available OTC and licensed for the treatment of superficial ear infections for patients >12years old.

Commonly used OTC preparations:

Earcalm Spray

Counselling points:

Use of acetic acid should be stopped and medical advice sought if no improvement is seen within 2 days of treatment.

10. Childhood Conditions

Chickenpox (Varicella-zoster virus)

Symptoms:

Incubation period ≈11 – 21 days.

Prior to the rash developing the patient may experience up to 3 days of prodromal symptoms e.g. fever, headache, sore throat and malaise.

Small red lumps (macules) rapidly develop into vesicles/blisters in about 12 hours – usually on the face, scalp and trunk.

Vesicles burst forming crusted spots over a few days, then healing over the next 1 – 2 weeks.

Treatment:

Calamine lotion, colloidal oatmeal baths and cooling gels to help for itching (pruritus). Keep fingernails short and clean to reduce problems while scratching. Keep hydrated. Paracetamol preferred choice for treating symptoms.

Commonly used OTC preparations:

Calamine and glycerine cream, calamine and aqueous cream, Aveeno, Eurax

Counselling points:

The vesicles are often extremely itchy and secondary bacterial infection can occur due to the vesicles being scratched.

Chicken pox is highly contagious, from a few days prior to the onset of rash until all lesions have crusted over. Varicella zoster virus is transmitted either by droplet infection or with contact with vesicular exudates. Once the spots have all formed crusts, the individual is no longer contagious.

Reinfection by the varicella-zoster virus results in **shingles** (an infection of a nerve and the skin around it). Shingles usually affects a specific area on one side of the body and does not cross over the midline of the body. It is not known exactly why the shingles virus is reactivated at a later stage in life, but most cases are thought to be caused by having lowered immunity.

This may be the result of:

- being older
- being stressed
- taking medication that weakens your immune system
- a condition that affects your immune system, such as HIV or AIDS

It is not possible to catch shingles from someone with the condition or from someone with chickenpox, but you can catch chickenpox from someone with shingles if you have not had it before.

Measles (Rubeola virus)

Symptoms:

Incubation period ≈ 7 – 14 days

Pre-eruptive and catarrhal stage (prodromal phase):
3-4 days
Runny nose, cough, fever and conjunctivitis.
Small white spots (Koplik's spots) surrounded by inner red ring on the inner cheek and gums.

Eruptive or exanthematous stage (measles rash phase):
2 – 4 days after initial symptoms, lasting up to 7 days.
Small erythematous and maculopapular patches that are confluent, blotchy and red, which will blanch if pressed, appears around the ears before spreading to the face and trunk and limbs.

Treatment:

Paracetamol to help relieve fever, aches and pains. Keep hydrated. Clean eyes with damp cotton swabs to help with crusting around eyes. Stay away from school for about 4 days after the rash appears.

Counselling points:

In the UK a combined measles, mumps, rubella (MMR) vaccine is offered to children 12-13 months of age. It is the most dangerous of childhood diseases because of the complications that can occur. Approximately 7% of patients develop respiratory complications such as otitis media and pneumonia and encephalitis is seen in about 1 in 600-1000 cases.

People with measles are infectious from when the first symptoms develop until about four days after the rash first appears. Therefore, school or work should be avoided for at least four days from when the rash first appeared to limit the spread of infection.

Anyone can get measles if they haven't been vaccinated or they haven't had it before, although it's most common in children between one and four years old.

Once you have had measles, it is very rare to develop the infection again in the future because your body builds up immunity (resistance) to the virus.

Mumps (Epidemic parotitis)

Symptoms:

Incubation period ≈ 14 – 21 days.

Fever, headache and malaise; commonly inflammation of one or both parotid glands is observed (swelling on one or both sides of the face) causing pain when the mouth is opened.

Treatment:

Paracetamol or ibuprofen for symptomatic relief.

Counselling points:

Keep hydrated (avoid citrus juices as this may worsen the pain).

Stay away from school for about 5 days after the swelling appears.

Rubella (German measles)

Symptoms:

Incubation period ≈ 14 – 21 days.

Prodromal phase:
Catarrhal symptoms e.g. malaise fever, lymphadenopathy (swollen lymph glands, usually at the back of neck).

Rash phase:
After 7 days a macular rash appears on the face that spreads to trunk and limbs.
Very fine and red and blanch with pressure.
The spots do not become confluent like in measles.
The rubella rash lasts for 3-5 days.
Swollen glands may persist.
In adults rubella may be associated with painful joints.

Treatment:

Paracetamol or ibuprofen for symptomatic relief.

Counselling points:

Less contagious than measles and people can suffer from mild symptoms without having the infection diagnosed.

There is greater risk of complications during early pregnancy due to rubella's effects on the developing foetus.

Keep hydrated.

Stay away from school for about 6 days after the initial development of the rash.

Whooping Cough (Pertussis)

Symptoms:

Incubation period ≈ 7 days (range: 5 – 21 days)

Catarrhal phase:
About 1 – 2 week.
Starts with a dry cough.
May show signs similar to an upper respiratory tract infection such as catarrh.

Paroxysmal phase:
About 1 month.
Paroxysms (rapid and intense bouts) of coughs to expel mucous from chest, with whooping heard when breathing in after coughing.
Post-tussive vomiting and generalised symptoms.

Convalescent phase:
Can last more than 2 months.
Gradual improvement in symptoms.

Treatment:

Paracetamol or ibuprofen for symptomatic relief.

Counselling points:

Keep hydrated (avoid citrus juices as this may worsen the pain).

If suspected or confirmed, stay away from school for about 5 days after starting antibiotics, or 21 days after the start of cough (whichever sooner).

Meningitis

Bacterial meningitis (can be life-threatening):

- Neisseria meningitides – meningococcal
- Streptococcus pneumoniae – pneumococcal

Viral meningitis (usually a less serious disease with spontaneous recovery):

- Enteroviruses
- Herpes simplex virus

Symptoms:

Non-specific:

- Flu-like symptoms that may rapidly worsen
- Nausea and vomiting
- Lethargy
- Muscle ache

More specific:

- Severe headache
- Stiff neck
- Altered mental state e.g. confusion, drowsiness.
- Rash that appears as small widespread bruises that do not blanch with pressure
- Photophobia
- Seizures
- Unconsciousness

Treatment:

Immediate hospital admission is required in cases of suspected meningitis.

However most people with *viral* meningitis won't require hospital *treatment.* Viral meningitis is usually mild and can be treated at home with:

- plenty of rest
- painkillers for the headache
- anti-emetics (anti-sickness) medicine for the vomiting

Patients with severe viral meningitis or those with bacterial meningitis would need to be treated at hospital with intravenous fluids and antibiotics/antivirals where appropriate.

Cradle Cap (Infantile seborrhoeic dermatitis)

Symptoms:

Seen on the scalp (but can appear on other areas e.g. face and napkin area).
Scales are yellow-brown in colour, and are large and greasy.
Other areas may appear red.
Rash is confluent and itching is relatively mild if at all.

Treatment:

- Regularly wash scalp with baby shampoo and brush with soft brush to loosen scales
- Can oil scalp then gently brush to soften scales, followed by shampooing
- Could suggest ketoconazole 2% shampoo twice weekly or other products e.g. Dentinox Cradle Cap
- Cradle cap usually starts in infancy, before the age of 6 months and is usually self-limiting

Commonly used OTC preparations:

Dentinox Cradle Cap, Olive Oil BP

Colic

Symptoms:

Normally occurs from infancy to 4 months of age and is characterised by crying for at least 3 hours per day on at least 3 days per week for at least 3 weeks. The baby may become red in the face, clench fists, and draw the knees up. Passing wind and difficulty passing stools may also occur.

Cautions and when to refer:

- Persistent crying by a baby who is inconsolable (may indicate a more severe an underlying condition)
- Baby failing to put on weight with age

Treatment:

- There is no substantial evidence to support any of the treatments available
- Simeticone has some evidence of benefit

Commonly used OTC preparations:

Colief, Infacol

Counselling points:

Parents should be reassured that colic is a natural occurrence and babies should grow out of it.

For breastfed infants the mother can try excluding cow's milk and other dairy products from their diet.

Massaging babies has had reported benefit.

Nappy Rash (also known as Napkin Rash)

Symptoms:

Erythematous rash on the buttocks area.

Cautions and when to refer:

- Yellow crusts or weeping (may indicate a bacterial infection)
- Broken skin
- Symptoms for longer than 2 weeks
- Concomitant symptoms of thrush in the nappy area or oral thrush
- Other body areas affected by rashes

Treatment:

- Satellite papules (small, red lesions) can indicate a fungal infection and can be treated with an azole antifungal (e.g. clotrimazole)
- Dimeticone is a water repellent contained in some preparations
- Zinc is a soothing agent
- Lanolin is an effective emollient to hydrate skin
- Castor oil / cod liver oil provide a water-resistant barrier

Counselling points:

Frequent changing of nappies, leaving nappies off and thorough cleansing at each nappy change is vital.

11. Skin

Eczema/Dermatitis

Symptoms:

Dry, flaky skin that may be inflamed and have small red spots. The skin may be broken and weepy and sometimes thickened. The affected skin may be irritating and extremely itchy. Most commonly affected sites include the nappy area, neck, back of scalp, face, limb creases, flexures (e.g. behind knees and elbows) and backs of the wrists.

Cautions and when to refer:

- Signs of infection (weeping, crusts, rash spreading)
- Severe symptoms e.g. cracked skin, bleeding
- Symptoms unresponsive to treatment
- No identified cause, not previously diagnosed as eczema
- Symptoms lasting longer than 2 weeks

Treatment:

- Topical corticosteroids (e.g. hydrocortisone, clobetasone) suitable for mild-moderate eczema that is not broken and should not be sold for use in children (under 10 years for hydrocortisone, under 12 years for clobetasone) for maximum 7 days use
- Emollients are the mainstay of treatment for soothing skin, preventing drying and for using as a soap substitute or as bath additives

Commonly used OTC preparations:

Oilatum, aqueous cream, emulsifying ointment, Epaderm, Cetraben, Doublebase

Acne (vulgaris)

Symptoms:

Excess keratin and sebum causes the development of comedones as either blackheads (an open comedone) or whiteheads (a closed comedone beneath which inflammation occurs). These may be accompanied by papules on the surface of the skin in mild cases and cysts in the deeper layers of the skin in more severe cases. Affected areas can include the face, neck, centre of the chest, upper back and shoulders.

Cautions and when to refer:

- Acne rosacea is a condition affecting mostly middle-aged or other patients and presents as reddening of cheeks and forehead alongside papules and pustules but is confined to the face only
- Certain drugs may cause acne as an adverse effect e.g. lithium, Phenytoin, progestogens, levonorgestrel and norethisterone
- Symptoms unresponsive to 8 weeks treatment

Treatment:

- Benzoyl peroxide has keratolytic effects (being mildly comedolytic) with antibacterial properties, and is generally used as a first-line treatment
- Nicotinamide is an alternative with anti-inflammatory properties but evidence of its usefulness in acne is limited

Side-effects:

Stinging, drying, soreness, peeling of skin can occur especially during initial stages of treatment. Reducing frequency of application or strength of product can be tried.

Commonly used OTC preparations:

Acnecide, Freederm, Quinoderm

Counselling points:

Treatment may take a while to have an effect and regular use is required. Avoid greasy, oil-based cosmetics and use water-based ones where possible. Sunlight is reported to help reduce acne. There is no evidence that poor hygiene or certain foods can cause acne.

Cold Sores

Symptoms:

Herpes simplex virus (normally HSV1) infection around the mouth. Prodromal phase - tingling, irritation in the skin 6-24 hours before appearance of any symptoms. Minute blisters on top of red, inflamed skin develop and grow into blisters filled with white matter that break down to reveal a raw area underneath and crusting within 4 days. Most lesions heal within 1 week.

Cautions and when to refer:

- Painless lesions (may indicate cancerous)
- Babies and young children
- Sore lasting longer than 2 weeks
- Eye affected
- Immunocompromised patient

Treatment:

- Aciclovir – most effective if started during the prodromal phase; applied 5 times daily
- Hydrocolloid patch – used for its wound healing properties
- Other creams – help to soothe and moisten which reduces risk of secondary bacterial infection

Commonly used OTC preparations:

Zovirax, Compeed, Cymex

Counselling points:

Wash hands thoroughly between applications of treatment and avoid contamination to eye makeup as infection can be transferred to the eye. The virus can be transferred so avoid direct contact to the infected area.

Warts and Verrucae

Symptoms:

Raised lesions with a roughened surface. Plantar warts (verrucae) occur on the weight-bearing areas of the sole and heel. Warts have a network of capillaries and these may be visible as black dots. Symptoms usually disappear naturally within 6 months to 2 years.

Cautions and when to refer:

- Facial warts
- Change in appearance (size and colour) of a wart (may suggest skin cancer)
- Bleeding
- Itching
- Genital warts
- Immunocompromised patients
- No significant improvement within 3 months of OTC treatment
- Diabetics

Treatment:

- Salicylic acid softens and destroys skin, therefore aiding the removal of infected tissue. Lactic acid is an antimicrobial keratolytic that enhances availability of salicylic acid
- Cryotherapy OTC products have little evidence supporting their use but can be tried and the wart should come away in about 10 days
- Duct tape is comparable to OTC cryotherapy in effectiveness
- Glutaraldehyde

Commonly used OTC preparations:

Bazuka, Salactol, Gutarol, Scholl Verruca and Wart Freeze Remover

Counselling points:

Treatments work more effectively if applied after soaking the affected hand or foot in warm water for 5-10min. Remove dead skin with the use of a pumice stone or emery board. Avoid transferring infection by exposing others to the skin of the infected site.

Dandruff

Symptoms:

Greyish-white flakes or scales on the scalp which is often itchy. The scalp is the only area affected (unlike in seborrhoeic dermatitis).

Cautions and when to refer:

- Suspected psoriasis
- Signs of infection
- Symptoms unresponsive to treatment

Treatment:

- Ketoconazole 2% shampoo is first-line for moderate-severe dandruff and is used twice a week for 2-4 weeks, after which used weekly or fortnightly as needed to prevent recurrence
- Selenium sulphide 2.5% has a cytostatic effect (i.e. reduces the cell turnover rate) and should be used twice weekly for the first 2 weeks then weekly for the next 2 weeks and thereafter as required
- Coal tar is the least effective for treatment of dandruff but may still be used as an alternative

Side-effects:

All the treatments may on occasions cause allergic or sensitisation reactions and coal tar can cause photosensitivity.

Commonly used OTC preparations:

Nizoral, Selsun, Polytar, Alphosyl

Counselling points:

Dandruff should start to improve within 12 weeks of initiating treatment. Dandruff treatments should be applied to the scalp and left on for at least 5 min before rinsing for best effect.

Psoriasis

Symptoms:

Silvery-white scales associated with inflamed, red, patchy plaques on the extensor surfaces of the elbow and knee and sometimes on the lower back area, the scalp and possibly the soles of the feet. Symptoms are often triggered by stress and the fingernails may show signs of pitting.

Cautions and when to refer:

- Patients presenting with symptoms with no prior diagnosis should be referred
- Patients with moderate to severe psoriasis may require treatment under the supervision of a dermatologist

Treatment:

- Emollients
- Prescription only treatments include vitamin D derivatives (e.g. calcipotriol), topical steroids, dithranol
- Coar tar preparations

Side-effects:

Possibility of skin sensitisation

Commonly used OTC preparations:

Polytar, Exorex

Tinea (Dermatophytosis)

Named differently depending on area affected:

- Tinea pedis – athlete's foot
- Tinea capitis – scalp
- Tinea cruris ("jock itch") – groin & thighs
- Tinea corporis (ringworm) – body

Symptoms:

- On the body, usually seen as an itchy rash that forms partial or complete rings
- The centre can be red, flat or slightly raised, and sometimes scaly (but commonly looks healthy)
- Has a distinctive "active border" that looks red and scaly
- In Athlete's foot: Itchy, flaky skin in the web spaces between the toes, these areas may become white and macerated and peel off. Underneath the skin is usually red, itchy and sore

Cautions and when to refer:

- Symptoms of a secondary bacterial infection e.g. yellow crusts, weeping
- Symptoms spreading
- Toenails also infected in athlete's foot
- Diabetics (especially for athlete's foot) or patients who are immunosuppressed
- Unresponsive to treatment

Treatment:

- Topical imidazole antifungal preparations such as clotrimazole, ketoconazole and miconazole
- Topical preparation combining antifungal with steroid (licenced for 10 years and up)
- Terbinafine

Commonly used OTC preparations:

Lamisil, Daktarin, Mycil

Counselling points:

The licences for OTC terbinafine differ depending on the preparation. All versions are licensed to treat tinea pedis (athlete's foot) and tinea cruris (jock itch) and the spray and gel are licensed for tinea corporis (ringworm).

Continue administration of antifungal for at least 7 days after symptoms have subsided.

Patients and families can be warned that tinea infection is easily transferred from contact with pets and animals.

Avoid tight shoes or clothing, accumulation of sweat and heat and avoid sharing of towels.

Wash regularly, change socks and towels regularly and fungicidal powder can be used as a prophylactic measure.

Impetigo

Symptoms:

Non-bullous impetigo (impetigo contagiosa):

- Usually starts as small red itchy patch of inflamed skin that quickly develops into vesicles that rapidly burst and weep, then dries into gold-crusted plaques
- Usually affecting the mouth and nose area
- May experience itching, otherwise usually asymptomatic

Bullousimpetigo (commonly affecting neonates):

- Fluid-filled vesicles and blisters that burst to leave raw skin and then crust over a yellow-brown colour
- Usually affects under armpits, neck folds and nappy area
- Lesions can be painful and other symptoms (e.g. weakness, fever, diarrhoea) are more common
- May notice swelling of lymph nodes as well

Cautions and when to refer:

- Upon first encounter of symptoms, refer for diagnosis
- Secondary infection

Treatment:

- Can help with removing crusted areas by washing with soapy water if it doesn't cause discomfort
- Treatment involves topical or systemic antibiotics (e.g. fusidic acid or flucloxacillin)

Counselling points:

It is contagious and children should be kept off school until the rash clears.

Hygiene measures: not sharing towels, cut nails short.

Amorolfine 5% nail lacquer (for fungal nail infection)

Indications:

Treatment of mild cases (no more than 2 nails and only beneath tips or sides of nails) of fungal infection caused by dermatophytes, yeasts and moulds in people over 18 years with no underlying medication conditions that predispose them to fungal infection (e.g. immunocompromised and diabetics).

Contraindications:

- Patients who have shown hypersensitivity to the treatment in the past
- Pregnancy and breast-feeding
- Patients under the age of 18 years

Cautions and when to refer:

Refer where there is a predisposing condition such as diabetes, peripheral circulatory problems and immunosuppression.

Mode of Action:

Amorolfine is an antifungal, it penetrates into and diffuses through the nail plate and is thus able to eradicate poorly accessible fungi in the nail bed.

Administration:

The nail lacquer should be applied to the affected fingernails or toenails once weekly.

Before the lacquer is applied, the affected areas of nail (particularly the nail surfaces) should be filed down.

The surface of the nail should then be cleansed and degreased using one of the disposable cleaning pads.

Amorolfine has to be applied regularly until all of the affected nail tissue has grown out. This takes nine to twelve months for toenails and six months for fingernails.

Side-effects:

Amorolfine is unlikely to cause side-effects but nail discolouration, broken or brittle nails, and skin irritation has been reported.

12. Travel Health

Malaria Prophylaxis

Indication:

Chemoprophylaxis of malaria in malarial regions. More information about recommended regimens for different countries can be found in the BNF within Chapter 5: Infection, and also travelhealthpro.org.uk for England and www.fitfortravel.nhs.uk for Scotland.

Treatment:

Treatment will depend on place of travel, and other contributing factors. The following are available as OTC products:

- **Proguanil 100mg tablet (Paludrine)**

- Daily dose:
  - Starting a week before entering malarial region (urgent cases can start 2 days before)
  - Continue during stay
  - Carry on for another 4 weeks after leaving the region

- Dosage:
  - Adults: 2 tablets (200mg)
  - Paediatrics (tablets can be crushed and mixed with foods, if needed):
    - < 1 year: ¼ tablet (25mg)
    - 1 – 4 years: ½ tablet (50mg)
    - 5 – 8 years: 1 tablet (100mg)
    - 9 – 14 years: 1 and ½ tablets (150mg)
    - > 14 years: adult dose

- **Chloroquine phosphate 250mg tablet (Avloclor; equivalent to 155mg of chloroquine base)**

- Weekly dose:
  - Starting a week before entering malarial region
  - Continue during stay
  - Carry on for another 4 weeks after leaving the region

- Dosage:
  - Adults: 2 tablets
  - Paediatrics:
  - ➢ 1 – 4 years: ½ tablet
  - ➢ 5 – 8 years: 1 tablet
  - ➢ 9 – 14 years: 1 and ½ tablets
  - ➢ > 14 years: adult dose

(The above are also available together as a travel pack, if required to be taken together)

- Atovaquone/Proguanil 250mg/100mg (Maloff Protect)

- Daily dose:
  - Starting 1-2 days before entering malarial region
  - Continue during stay
  - Carry on for another week after leaving the region

- Dosage:
  - Adults only: 1 tablets

Cautions and when to refer:

If a patient has any hypersensitivity to any of the OTC antimalarial products, they should avoid using it. If they suffer with an allergic reaction, they should stop taking it and seek medical assistance (severity would identify urgency). Signs include:

- Difficulty breathing
- Swelling of face, lips, tongue or throat causing dysphagia
- Rash

- Paludrine

- Those with renal impairment, especially severe impairment may need to be referred to their doctor
- It is important to check local malarial medical advice such as for resistance, as proguanil alone may not be sufficient

- Avloclor

- It is important to check local malarial medical advice such as for resistance, as chloroquine alone may not be sufficient
- Patients should be informed of risk of hypoglycaemia irrespective of diabetic state, and associated signs and symptoms
- Renal disease requires caution

- Those with a history of epilepsy should be cautioned, and potential risks and benefits weighed, and referred if necessary
- Those with psoriasis may experience a severe attack while using chloroquine
- Those who are planning to conceive, or are pregnant should be referred

- Maloff Protect

- It is not for anyone who weighs < 40kg, as safety and effectiveness have not been established
- Those who are planning to conceive, or are pregnant or breastfeeding should be referred
- It is only licensed to be used for up to a maximum of 12 weeks. Supply for travel requiring longer stay periods will need to be done via a prescription, or a patient group direction (PGD) as directed

Contraindications:

- Avloclor

- Not to be used alongside amiodarone

- Maloff Protect

- Patients with any degree of renal or hepatic impairment
- Children and adolescents cannot use Maloff Protect

Side effects:

- Paludrine

- Haematological changes e.g. megaloblastic anaemia
- Skin rash
- Gastro-intestinal disturbances e.g. diarrhoea

- Avloclor

- Blood disorders e.g. agranulocytosis
- Hypoglycaemia
- Depression
- Anxiety
- Headache
- Convulsions
- Extrapyramidal side effects e.g. dyskinesia
- Blurred vision

- Cardiomyopathy
- GI disturbances
- Stevens-Johnson Syndrome

- Maloff Protect

- Headache
- Nausea and vomiting
- Depression
- Dizziness
- Skin rash
- Fever
- Cough
- Stevens-Johnson Syndrome

Interactions:

- Paludrine

- Proguanil can potentially increase the effect of warfarin, thus caution should be taken (refer)
- Antiretrovirals for HIV e.g. atazanavir can sometimes reduce plasma concentrations of proguanil
- Antacids, and other medicines containing aluminium, calcium and magnesium salts may decrease the absorption of proguanil, thus should be taken at least 2 hours apart.

- Avloclor

- Caution use with drugs that prolong QT interval e.g. antiarrhythmics, tricyclic antidepressants, antipsychotics etc.
- Antacids, and other medicines containing aluminium, calcium and magnesium salts may decrease the absorption of chloroquine, thus should be taken at least 2 hours apart.
- Increased TSH levels observed with concomitant use of levothyroxine

- Maloff Protect

- Antiretrovirals for HIV e.g. atazanavir reduce plasma concentrations of atovaquone, and sometimes of proguanil
- Rifampicin reduces atovaquone concentrations significantly
- (as above for proguanil under Paludrine)

Counselling points:

Prophylaxis is not 100% effective so bite avoidance is necessary to prevent infection.

- Use of insect repellents e.g. diethyltoluamide (DEET), with stronger formulations providing longer duration of protection
- Use of mosquito bed nets, especially those impregnated with repellents
- Long sleeves and trousers to be worn after dusk to protect against bites, when mosquitos bites are most prevalent
- Areas with non-flowing (stagnant) water are likely to have numbers of mosquitos

Those that fall ill within 1 year and especially within 3 months after coming back from a malarial region may have malaria despite following all precautions. You should warn patients of this, and if they develop any illness (especially within 3 months of their return) that they should immediately see their doctor and mention their exposure to malaria. This would include flu-like symptoms, mainly fever, and these can develop up to year after travel; thus rapid differential diagnosis is key.

It is important that a full travel consultation is provided, where needed, involving an overall risk assessment. Malaria prophylaxis is only one of the aspects of pre-travel advice:

- Keep well hydrated
- Sun protection, as necessary
- Avoid unknown food sources to prevent traveller's diarrhoea and other diseases
- During flights take steps to minimise deep vein thrombosis (do leg exercises, wear compression stockings etc.)

13. Further sources of information

The following reference sources have been recommended by the GPhC:

- Minor illness or major disease?: The clinical pharmacist in the community (Stillman and Edwards)
- Symptoms in the Pharmacy, a guide to the management of common illness (Blenkinsopp et al)

Useful websites:

- NHS Choices www.nhs.uk
- Patient.co.uk www.patient.co.uk