ProPharmace

Responding to Symptoms Guide

Part 3 of 3

Foundation Training Programme

Contents

9. Eye and Ear Problems

Conjunctivitis

Symptoms:

- ✓ Inflammation of the conjunctiva characterised by redness, irritation, itching and discharge
- ✓ Allergic conjunctivitis: both eyes are affected, irritation, discomfort, and watery discharge
- ✓ Bacterial: usually one eye is affected but can be both, purulent discharge, gritty feeling, redness
- ✓ Viral: both eyes affected, discharge is watery, gritty feeling, associated with cough and cold symptoms

Cautions and referral

- Eye pain, redness extends into the iris
- Photophobia, vision is adversely affected
- Associated with a rash on the face or scalp
- Dry eye syndrome (keratoconjunctivitis sicca)
- Glaucoma
- Recent eye infection
- No improvement of symptoms after 48 hours of treatment
- Suspected viral infection
- Using other eye drops/ointment
- Contact lens wearer
- Pregnant or breastfeeding
- Eye looks cloudy, unusual looking pupil, affected vision, blurred, halos around lights

Treatment:

Chloramphenicol (optrex, golden eye)

- Broad-spectrum bacteriostatic antibiotic that is active against a variety of gram-negative and gram–positive organisms
- Licensed > 2 years old
- One drops every 2 hours for the first 48 hours, then reducing to four times day for a maximum of 5 days.
- Golden eye ointment: 3-4 times daily
- Optrex should be stored in the fridge

Propamidine isethionate: (brolene and golden eye drops)

- No age restriction
- Apply four times a day
- Can be used in pregnancy & breastfeeding

Allergic conjunctivitis

- Sodium cromoglicate

Counselling points:

- Patients that wear contact lenses should be advised to stop wearing them while treatment continues and for 48 hours afterwards. The preservatives in the eye drops can damage lenses
- Condition is self-limiting and anti-infectives are not absolutely necessary
- Patients should bathe the eyelids with lukewarm water to remove discharge
- Wash hands regularly and avoid sharing pillows and towels

Dry Eye (Keratoconjunctivitis sicca)

Symptoms:

- ✓ Sensation of sand or gravel in the eyes, worsened by dry air, wind, dust and smoke.
- ✓ Itchy, tired, burning, and irritated eyes
- ✓ Both eyes are usually affected

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

Treatment:

1. Hypromellose and carmellose: frequent dosing may be required initially until symptoms improve. Can be used by all patient groups
2. Polyvinyl alcohol: Liquifilm tears
3. Carbomer (Clinitas gel, geltears, Liquivisc, Viscotears) – carbomer should be used last if used with other drops. Blurred vision after instillation can be a side-effect
4. Lubricants: wool fats (Lacri-lube) – a mixture of white soft paraffin, liquid paraffin, and wool fat. Useful at bedtime when prolonged lubrication is needed, but because they blur vision, they are unsuitable to use during the day
5. Sodium hyaluronate (Oxyal, hayabak) – used on a when-needed basis

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
- ✓ The edges of your eyelids become swollen
- ✓ Finding contact lenses uncomfortable to wear
- ✓ Abnormal eyelash growth or loss of eyelashes in severe cases

Cautions and referral

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

Treatment:

Follow the steps bellow to keep your eyelids clean:

- Apply a warm (but not hot) compress to your closed eyelids for 5-10 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
- 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 do not 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 dibrompropamidine isetionate or propamidine isetionate e.g. Brolene or Golden eyes

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

Ear Wax Build-Up

Symptoms:

- ✓ Ears are regularly self-cleaning as the ear canal naturally sheds wax from the ear. However, this normal function can be interrupted, and wax can become trapped.
- ✓ A sensation that the ear is blocked by ear wax (cerumen) and that hearing is impaired (temporary deafness). Discomfort and pain within the ear may also be experienced

Cautions and referral

- Dizziness or tinnitus suggests inner ear problem
- Pain originating from the middle ear, fever, and general malaise in children – middle ear infection
- Associated trauma-related conductive deafness, foreign body in the ear
- Unusual discharge from the ear canal

Treatment:

1. Cerumenolytics: used to soften ear wax. Safe to use in all patient groups
    - Cerumol ear drops (arachis- peanut oil) – five drops into affected ear, two or three times a day. Plug ear with cotton wool moistened with Cerumol
    - Cerumol olive oil drops: two or three drops twice a day for up to 7 days
    - Earex (arachis-peanut oil, almond oil, camphor oil) four drops instilled twice a day for up to 4 days
2. Peroxide-based products (Exterol, earex advance and otex range)- react with natural catalase enzyme to release oxygen which helps to mechanically break up wax
    - Five drops once or twice daily for 3-4 days, drops should be retained for
    - several minutes by keeping the head tilted and then wipe away any surplus
3. Water-based products (sodium bicarbonate)
4. Docusate (waxol, molcer) – is a surfactant that facilitates the penetration of water
5. Glycerin-based products (Earex plus) – acts as a softener

Counselling points:

- Syringing can be recommended via referral to a GP or nurse if treatment with drops has been insufficient
- Advise against using 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
- Cerumol ear drops contain peanuts therefore allergies must be checked

Otitis Externa

Symptoms:

- ✓ Otitis externa refers to generalised inflammation of the ear and is often associated with infection
- ✓ Itching, irritation
- ✓ Pain or discomfort in the ear canal
- ✓ A watery discharge
- ✓ Dry, flaky skin around the outside of the ear and along the canal

Cautions and referral

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

Treatment:

1. Choline salicylate (Earex plus)
    - Adults & children > 1 years old
    - The ear should be completely filled with drops and then plugged with cotton wool soaked with ear drops
2. Acetic acid 2% (Earcalm spray)
    - Adults & children > 12 years old
    - One spray into affected ear at least three times a day
    - Treatment should be continued till 2 days after symptoms have disappeared but if symptoms do not improve or worsen within 48 hours then they should be referred
    - The spray should not be used for more than 7 days

Counselling points:

- Acute otitis media: most common in children aged 3 to 6 years old, pain and earache is the predominant feature and tends to be throbbing. Child would be irritable or crying with ear tugging/ rubbing/ Systemic symptoms such as fever and loss o appetite can also be present.
- Symptoms usually resolve within 3 days without treatment and antibiotics are not required.
- Patients should be managed with analgesia unless under 2 years old or in the presence of discharge

10. Childhood Conditions

Chickenpox (Varicella-zoster virus)

Symptoms:

- ✓ Transmitted by droplet infection or with contact with vesicular exudates
- ✓ Incubation period ranged from 10-20 days
- ✓ Before the rash, patients may experience up to 3 days of prodromal symptoms: fever, headache, and sore throat
- ✓ Rash begins on the face, stomach and back before spreading
- ✓ They appear as small red lumps that rapidly develop into vesicles which crust over after 3-5 days
- ✓ The vesicles are often very itchy and secondary bacterial infection may occur due to scratching
- ✓ It is highly contagious for the first few days until the lesions have all crusted over

Cautions and referral

- Seek medical advice if their condition deteriorates
- If child develops bacterial superinfection – high grade fever, erythema, tenderness surrounding the original chickenpox lesion
- If child develops dehydration

Treatment:

1. Paracetamol if pain or fever (avoid NSAIDs)
2. Topical calamine lotion to alleviate itch, colloidal oatmeal baths and cooling gels may also be used
3. Chlorphenamine for treating itch associated with chickenpox for people 1 years of age or older

Counselling points:

- Encourage adequate fluid intake to avoid dehydration
- Keep nails short to avoid scratching, wear smooth, cotton fabrics
- The most infectious period is 1-2 days before the rash appears, and continues until the lesions are dry and have crusted over (5 days after onset of rash)
- Avoid contact with immunocompromised people e.g. cancer patients, or those with reduced immunity, pregnant women, and children < 4 weeks old
- Children should be kept away from school until vesicles have crusted over
- Re-infection results in shingles (an infection of a nerve and the skin around it). This usually affects a specific area on one side of the body and does not cross over the midline of the body. This may be the result of being older, being stressed, taking medication that weakens the immune system.
- It is not possible to catch shingles from someone with the conditions or from someone with chickenpox, but you can catch chicken pox from someone with shingles if you have not had it before.

Measles (Rubeola virus)

Symptoms:

- ✓ Caused by an RNA virus and spread by droplet inhalation
- ✓ Incubation period of 7-14 days, followed by 3-4 days of prodromal symptoms: fever, head cold, cough, conjunctivitis
- ✓ Fever increases to 39°C at about the time the rash appears and then gradually decreases
- ✓ On the inner cheek and gum, small white spots are visible, like grains of salt and are known as Kolpik's spots.
- ✓ The rash is blotchy red which may become confluent as it progresses and then fades after about 5 days

Cautions and referral

- Seek advice for those that are immunosuppressed, pregnant or infants younger than 1 years old
- Consider admission if person develops complications: pneumonia, neurological problems (convulsions, encephalitis), children with fever who are otherwise at serious risk

Management:

1. Measles is usually self-limiting but is likely to cause unpleasant symptoms including rash, fever, cough, and conjunctivitis. These will usually resolve over the course of a week
2. To rest, drink plenty of fluids, take paracetamol or ibuprofen for symptomatic relief
3. To stay away from school or work for at least 4 days after the initial rash until full recovery
4. To avoid contact with susceptible people (who are not immunised or immunocompromised or pregnant)
5. To seek urgent medical attention if they develop signs of a complication: shortness of breath, uncontrolled fever, convulsions or altered consciousness

Mumps (Epidemic parotitis)

Symptoms:

- ✓ Caused by a paramyxovirus and is transmitted by airborne droplets from the nose and throat. It is the least contagious and requires close personal contact before infection can occur
- ✓ Incubation period of 16-21 days, followed by fever and swelling of one or both parotid glands
- ✓ The affected gland may be tender to touch, patient may complain of earache, and have difficulty with pronunciation of words or chewing
- ✓ Other non-specific symptoms: low-grade fever, headache, earache, malaise, muscle ache, loss of appetite

Management:

- Mumps is usually a self-limiting condition; it will usually resolve over 1-2 weeks with no long-term consequences and antibiotic treatment is not required
- To rest, drink plenty of fluids and take paracetamol or ibuprofen or symptomatic relief
- Apply warm or cold packs to the parotid gland as it may ease discomfort
- To stay off school and work for 5 days after the initial development of parotitis
- Advise the person to seek medical advice if they develop meningitis (severe headache, vomiting, neck stiffness, altered consciousness or convulsions) or epididymo-orchitis (swollen and painful testicles, high fever, chills, headache and vomiting)

Rubella (German measles)

Symptoms:

- ✓ Incubation period of 14-21 days
- ✓ Prodromal phase: catarrhal symptoms e.g. malaise fever, lymphadenopathy (swollen lymph glands, usually at the back of the neck)
- ✓ Rash phase: after 7 days a macular rash appears on the face that spreads to trunk and limbs, very find and red and blanch with pressure
- ✓ The spots do not become confluent like in measles and lasts 3-5 days
- ✓ In adults rubella may be associated with painful joints

Management:

1. Rubella is a notifiable disease to the local health protection team (HPT)
2. Advise the patient hat rubella is a mild, self-limiting condition which typically resolves within a week
3. There is not specific treatment – they should rest, drink adequate fluids, and take paracetamol or ibuprofen for symptomatic relief
4. To stay away from school or work for 5 days after the development of rash
5. To avoid contact with pregnant women

Whooping Cough (Pertussis)

Symptoms:

- ✓ Highly infectious disease caused by the bacterium Bordetella pertussis.
- ✓ Incubation period is approx. 7-10 days (range 5-21 days)
- ✓ Whooping cough has 3 phases of symptoms:
  - Catarrhal phase: lasts 1-2 weeks, nasal discharge, conjunctivitis, malaise, sore throat, low-grade fever, dry unproductive cough
  - Paroxysmal phase: occurs about 1 week after the catarrhal phase and lasts between 1-6 weeks. Between coughing fits, the person is usually relatively well and has undisturbed sleep. The episodes consist of short expiratory burst followed by an inspiratory gasp, causing a 'whoop' sound. More common at night and may yield thick mucous plugs or watery secretions but no wheeze or crackles
  - The convalescent phase: lasts up to 3 months, gradual improvement in cough frequency and severity

Management:

- Admission if person is 6 months of age or less and acutely unwell, has significant breathing difficulties (apnoea episodes, severe paroxysms, or cyanosis) or has significant complications (seiures or pneumonia)
- In general referral for antibiotics is recommended
- Advise rest, adequate fluid, and use of paracetamol or ibuprofen for symptomatic relief
- Inform patients that even with antibiotic treatment, whooping cough is likely to cause a protracted non-infectious cough that may take several weeks to completely resolve
- Advise children and healthcare workers with confirmed whooping cough should stay off school or work until 48 hours of appropriate antibiotic treatment of 21 days after onset of symptoms if not treated

Meningitis

Meningitis is a condition caused by inflammation of the meninges (the outer membrane covering the brain and spinal cord). This can be infective (bacterial viral and fungal) and non-infective (cancer, autoimmune disease, injury etc)
Bacterial meningitis is a life-threatening condition that affects all ages, caused by Neisseria meningitidis infection or meningococcal septicaemia and Haemophilus influenza type b (Hib), those are the most common in children aged 3 months or older and adults.
In neonates, streptococcus agalactiae, E. coli, and S. pneumoniae are the most common.
Viral meningitis is usually less serious with spontaneous recovery, caused by enteroviruses or Herpes simplex virus

Symptoms:

Common non-specific symptoms:

- Fever, nausea + vomiting, irritability, ill appearance, refusing food and drink, headache, muscle ache, difficulty breathing

Specific symptoms:

- Non-blanching rash, stiff neck (child would find it difficult to put their chin on their chest)
- Cold hands and feet, unusual skin colour, shock, and hypotension
- Leg pain, back rigidity, photophobia
- Unconsciousness, seizures

Assessing the rash:

- Red or purple non-blanching macules smaller than 2 mm in diameter or purpuric (haemorrhagic) rash. Look for petechiae (spots caused from bleeding under the skin)
- Glass test: press the side of a glass firmly against the rash to see if the rash fades or loses colour under pressure. A petechial or purpuric rash does not fade

Management:

- Immediate hospital admission is required in cases of suspected meningitis

- However, most people with viral meningitis won't require hospital treatment, it 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 IV fluids and antibiotics/ antivirals where appropriate

Cradle Cap (Infantile seborrhoeic dermatitis)

Also known as seborrhoeic dermatitis. It is a common inflammatory skin condition which occurs in areas rich in sebaceous glands such as the scalp, ears, eyebrows, skin folds etc.

Symptoms:

- It presents as erythematous patches with scales
- In children this usually appears in the first 6 weeks of life and commonly affects the scalp known as cradle cap
- Defined white patches of erythema associated with flaking of the skin, scales may be white or yellow.
- In infants this usually resolves by 6-12 months of age.

Management:

- Reassure parents that is not a serious condition and that it usually resolves within a few months
- If the scalp is affected, advise the parent to massage topical emollient (olive oil or vegetable oil) to loosen the scales, brush gently with a soft brush and wash off with shampoo
    - Thicker scales may be soaked overnight with petroleum jelly or oil and shampooed in the morning
- If this is not effective, you could suggest ketoconazole 2% shampoo twice weekly or other products e.g. Dentinox Cradle Cap
- If other areas are affected e.g. nappy area, then advise to bath the infant everyday using an emollient as a soap substitute; avoid soaps ad vigorous cleansing.
- Encourage frequent nappy changes and to use a barrier cream

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 and for at least 3 weeks
- ✓ Repeated episodes of excessive and inconsolable crying in a child that otherwise appears to be healthy
- ✓ 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 referral

- Acute infection: of the ear or urinary tract, the child should have no previous history of excessive crying and have systemic signs such as fever
- Intolerance to cow's milk protein / GORD: infants frequently have regurgitation that is accompanied by excessive crying. There may be refusal to eat and regurgitation of up to 5 times a day
- If child is failing to put on any weight (this may be due to GORD or intolerance to milk)

Management:

- Parents should be reassured that the child's symptoms will subside over time
- Treatments include simethicone, lactase enzymes, milk formulas, grape mixtures (Colief, infacol)
- Simethicone is reported to have anti-foaming properties, reduce surface tension allowing easier elimination of gas from the gut by passing flatus or belching
- Lactase breaks down lactose present in the milk to glucose and galactose improving symptoms.

Nappy Rash (also known as Napkin Rash)

Symptoms:

- ✓ Nappy rash is an acute inflammatory reaction of the skin in the nappy area mostly caused by an irritant contact dermatitis.
- ✓ The skin barrier may be compromised by excessive hydration, friction between the skin and nappy, prolonged contact with urine and faeces and increased skin pH.
- ✓ The child may appear distressed, agitated, or uncomfortable as the rash may be itchy and painful
- ✓ There may be skin erosions, oedema and ulceration if it is severe
- ✓ Examine the child for oral candidiasis

Cautions and referral

- 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

Management:

1. If there is mild erythema advise on the use of barrier cream to protect the skin. Apply thinly at each nappy change e.g. zinc and castor oil ointment, Metanium, white soft paraffin ointment
2. If the rash appears inflamed and is causing discomfort or if candida infection is suspected, it can be treated with an azole antifungal (e.g. clotrimazole)
3. If rash persists and bacterial infection is suspected

Counselling points:

- Consider using a nappy with high absorbency
- Ensure it fits properly (not too tight or too loose)
- Leave nappy off for as long as possible to help skin drying
- Clean and change the nappy every 3-4 hours, or as soon as possible to reduce skin contact time to urine and faeces
- Use water or fragrance free and alcohol-free baby wipes
- Bath the child daily but do not use soap, bubble bath, lotions, talcum powder, or topical antibiotics which have an irritant effect

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 referral

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

Management:

1. Emollients: suitable for all patients and should be applied liberally.
    - The type of emollient chosen will depend on the patient's choice, urea containing products may be chosen for itch relief.
    - Different formulations available such as bath lotions, washes, and sprays
    - Dermol also contains antimicrobials
2. Corticosteroids (hydrocortisone, clobetasone)
    - Patient must be over 10 years old for hydrocortisone and over 12 years old for clobetasone
    - Duration of treatment is limited to a max of 1 week
    - Suitable for mild-moderate eczema that is not broken and should not be sold for use in children
    - They cannot be used on facial skin, the anogenital groin or broken or infected skin
    - When using a corticosteroid, an emollient can be applied to the same area 30 mins later

Acne (vulgaris)

Symptoms:

- ✓ Excess keratin and sebum cause the development of comedones as either blackheads (an open comedone) or white heads (a closed comedone beneath which inflammation occurs)
- ✓ Affected areas can include the face, neck, centre of the chest, upper back, and shoulders

Cautions and referral

- Acne rosacea is a condition affecting mostly middle-aged or other patients and presents as reddening of the 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 of treatment

Management:

1. Benzoyl peroxide has keratolytic effects (being mildly comedolytic) with antibacterial properties, and is generally used as a first-line treatment
    - Applied once or twice daily to all areas of the skin where acne occurs. It can cause drying, burning, peeling on initial application. If this occurs the patient should be told to stop using the product for a day or two before starting again
2. Nicotinamide (freedom) – applied to the affected area twice a day
3. 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

Cold Sores

Symptoms:

- ✓ A cold sore is an infection caused by the herpes simplex virus (HSV) around the mouth
- ✓ Patients experience prodromal symptoms of itching, burning, pain or tingling symptoms before vesicle eruption.
- ✓ These crust over within 24 hours and tend to be itchy and painful and may bleed. Lesions resolve within 7-10 days.

Cautions and referral

- Painless lesions (may indicate cancerous)
- Babies and young children
- Sore lasting longer than 2 weeks
- Eye affected
- Immunocompromised patient
- Sore located within the mouth
- Severe and widespread lesions

Treatment:

Aciclovir (Cymex Ultra, Zovirax)

- Can be used in all patient groups including pregnant and breastfeeding.
- Can cause transient stinging after fist application
- It should be applied 5 times a day at 4 hourly intervals and continued for 5 days

Other available treatments:

- Ammonia and phenol (blistex relief cream)
- Zinc and lidocaine (Lypsyl cold sore gel)
- Urea (Cymex)
- Hydrocolloid patch – used for its wound healing properties

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:

- ✓ Warts and verruca are benign growths, raised lesions with a roughened surface.
- ✓ Plantar warts (verruca) 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 referral

- Multiple and widespread warts
- Diabetic patients
- Change in appearance (size & colour) of a wart (may suggest skin cancer)
- Bleeding, itching, genital warts
- Immunocompromised patients
- Patients over 50 presenting with a first-time wart

Treatment:

The majority of warts and verrucas will resolve with time and treatment is not necessarily needed

Salicylic acid products (bazooka, occlusal, salactac)

- Before using salicylic acid, the affected area should be soaked in warm water and towelled dry. The surface should be rubbed with a pumice stone or emery board to remove any hard skin. A few drops of the product would be applied to the lesion only.
- This should be repeated daily. Avoid in diabetic patients

Glutaraldehyde (Glutarol)

- Applied twice a day in the same way as salicylic acid

Formaldehyde (Veracur)

Silver nitrate

- Tip of the pen must be moistened and then applied to the wart or verruca for 1-2 mins. This should be repeated after 24 hours. It is recommended that three applications are used for warts and six applications for verruca

Treatments work more effectively if applied after soaking the affected hand or foot in warm water for 5-10 min. Remove dead skin with the use of a pumice stone or emery board.

Dandruff

Symptoms:

- ✓ Dandruff is a chronic, relapsing non-inflammatory hyperproliferative skin condition
- ✓ Dry, itchy, flaky, and not usually associated with scalp redness unless the person has been scratching

Cautions and referral

- 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. It can discolour hair and alter the colour of hair dyes
- Coal tar products – least effective for treatment of dandruff but may still be used as an alternative

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 mins before rinsing for best effect

Psoriasis

Symptoms:

- ✓ Psoriasis is a chronic relapsing inflammatory disorder. Salmon-pink lesions with silvery-white scales and well-defined boundaries. This often presents on the scalp, elbows, or knees
- ✓ If the scales on the surface of the plaque are gently removed and the lesion then rubbed, it reveals pinpoint bleeding from the superficial dilated capillaries

Cautions and referral

- 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 should be recommended for the dry skin area, it can be applied liberally
- Coal tar: often recommended for scalp psoriasis, examples: Alphosyl 2-in-1 shampoo, capasal, polytar, T/Gel
- Short- term topical corticosteroids may be tried alongside topical vitamin D preparations (Dovonex (calcipotriol)) for psoriasis presenting on trunk and limbs.
- Corticosteroids should not be applied for more than 8 weeks on one site and a 4-week break should be advised before restarting treatment and stopped when scales clear
- Advise the person to seek urgent medical advice if they experience unexplained joint pain or swelling, this may be a sign of psoriatic arthritis

Tinea (Dermatophytosis)

Symptoms:

- ✓ Dermatophytes are responsible for athlete's foot (tinea pedis), groin infection (tinea cruris), ringworm of the skin (tinea corporis) and scalp ring worm (tinea capitis)
- ✓ 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
- ✓ In athlete's foot: itchy, flaky skin in the web spaces between the toes, these areas may become white and macerated and peel off.

Cautions and referral

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

Treatment:

1. Topical imidazole antifungal preparations such as clotrimazole, ketoconazole and miconazole
2. Topical preparation combining antifungal with steroid (licensed for 10 years old and over)
3. Terbinafine 1% cream: > 12 years old

- All preparations of terbinafine can be used to treat athlete's foot, jock itch and the spray and gel are licensed for ringworm
- Continue to use the antifungals for at least 7 days after symptoms have resolved
- Advise to wear well-fitting, non-occlusive footwear that keeps the foot cool and dry
- Maintain hygiene, wear cotton absorbent socks
- Avoid scratching the skin as the infection may spread
- Do not share towels, wear protective footwear when using communal bathing places
- Wear loose clothing made of cotton to keep moisture away from the skin

Impetigo

Symptoms:

- ✓ Impetigo is a common superficial bacterial infection of the skin.
- ✓ Non-bullous impetigo: lesions begin as thin-walled vesicles or pustules which release exudate forming a golden/brown crust. Healing occurs spontaneously without scarring within 2-3 weeks.
- ✓ Bullous impetigo: (affects neonates) fluid-filled vesicles and blisters that burst to leave raw skin and then crust over a yellow-brown colour.
- ✓ Lesions can be painful and other symptoms such as weakness, fever, diarrhoea

Cautions and referral

- Upon first encounter of symptoms, refer for diagnosis
- Secondary infection
- Complications (sepsis, glomerulonephritis, or deeper soft tissue infection) are suspected.
- If bullous impetigo is suspected in an infant
- The person is immunocompromised, and infection is widespread

Management:

1. Reassure the person that impetigo usually heals completely without scarring, and that serious complications are rare
2. Advise the person that hygiene measures are important to aid healing and stop infection spreading to other areas
3. Recommend that they wash affected areas with soap and water, wash their hands regularly, avoid scratching affected areas
4. Children and adults should stay away from school and other childcare facilities or work until lesions are healed, dry and crusted over or 48 hours after initiation of antibiotics

Amorolfine 5% nail lacquer (for fungal nail infection)

Symptoms:

- ✓ Amorolfine 5% medicated nail lacquer is a topical antimycotic (antifungal) agent, indicated for the treatment of mild cases of fungal infections, affecting the nail, for adults over 18 years of age
- ✓ Features symptomatic of fungal nail infection: the nail has thickened and turned yellow/white at the tip
- ✓ Changes to the nail appear to have spread along the length of the nail towards the nail base
- ✓ Debris has accumulated under the nail, causing scaling and distortion of the nail
- ✓ The nail has become brittle and/or some of the nail broken away

Cautions and referral

- Patients with hypersensitivity to the treatment in the past
- Pregnancy and breastfeeding
- Patients under the age of 18 years old
- Patients with underlying conditions predisposing to fungal nail infections should be referred to a doctor. Such conditions include peripheral circulatory disorders, diabetes mellitus, and immunosuppression
- Patients with nail dystrophy and destroyed nail plate
- Patients who have more than 2 nails infected at the one time

Mode of action:

- ✓ Amorolfine inhibits sterol biosynthesis and thereby disrupts the fungal cell membrane, leading to cell death
- ✓ When applied to the nail surface, the solvent evaporates to leave a highly concentrated deposit of amorolfine in an occlusive film to the nail which acts as a depot over the next 7 days

Treatment:

- The affected area should be filed down thoroughly, the surface should be cleansed and degreased using an alcohol cleaning pad
- Using one of the applicators supplied, apply the nail lacquer to the entire surface of the nail and allow to dry
- After use, clean the applicator with the alcohol pad
- Treatment should be continued for six months (fingernails) and nine to twelve months (toenails)
- Amorolfine is unlikely to cause side-effects but nail discolouration, broken or brittle nails, and skin irritation has been reported

Counselling points:

- ✓ Keeping the nails short and filed down
- ✓ Avoiding exposure to situations which aggravate the infection e.g. prolonged exposure to warm damp conditions, wearing occlusive footwear, damaging the nail

12. Travel Health

Malaria Prophylaxis

Indications:

- ✓ Chemoprophylaxis of malaria in malarial regions. Information about recommended regimens for different countries can be found in BNF and/or travelhealthpro.org.uk for England and fitfortravel.nhs.uk for Scotland
- ✓ Symptoms of malaria infection: fever chills, general malaise, nausea, vomiting, headache. Some parasites remain in the liver and may not manifest until a year after you've been infected.
- ✓ Symptoms of severe malaria: renal impairment, acidosis, hypoglycaemia, impaired conscious level or seizures, anaemia, shock, sepsis

Management:

Exposure to infective bites increases by being outside between dusk and dawn, and unscreened accommodation. People born in malarious countries lose immunity after migrating to the UK

Recommend personal protective measures:

- Application of insect repellent containing atleast 20% DEET or icaridin (Picardin)
  - Can be used on children > 2 months old, duration of protection is 1-3 hours for 20%, up to 6 hours for 30% and up to 12 hours for 50%
  - DEET can damage some types of plastic e.g. watch straps, glasses and jewellery
  - DEET should be applied after sunscreen. It may also induce a reduction in SPF so a high SPF should be recommended
- Protective clothing: wear full length, loose-fitting clothing with long sleeves, long trousers, and socks if outdoors after sunset, clothes can be sprayed with DEET also
- Insecticide impregnated bed nets; long-lasting pyrethroid insecticide impregnated nets have an expected to have a useful life of up to 3 years. Standard nets need re-impregnation every 6-12 months
- An electric pyrethroid vaporiser can be used during the night
- Pyrethroid spray have a rapid knock-down effect on mosquitoes

Chemoprophylaxis:

Proguanil 100 mg tablets (Paludrine)

Duration of treatment	Cautions & referrals	Side effects	P+BF
1 week before, during & 4 weeks after – daily dose	Renal impairment Antacids reduce absorption Increases anticoagulant effect It's important to check local malarial medical advice such as for resistance, as proguanil alone may not be sufficient	Haematological changes e.g. megaloblastic anaemia Skin rash Diarrhoea	Under doctors' advice only

Interactions:

- Proguanil can increase the effect of warfarin
- Antiretrovirals for HIV can sometimes reduce plasma concentrations of proguanil
- Antacids, aluminium, calcium and magnesium salts may decrease the absorption of proguanil – take at least 2 hours apart

Chloroquine phosphate 250 mg tablet (Avloclor, equivalent to 155 mg of chloroquine base)

Duration of treatment	Cautions & referrals	Side effects	P+BF
1 week before, during & 4 weeks after – once weekly dose	Prolong QT interval Hypoglycaemia Cardiomyopathy Retinopathy Epilepsy Renal impairment Aggravates psoriasis Pregnancy or planning to conceive Contra-indicated with amiodarone	Blood disorders Hypoglycaemia Depression Anxiety Headache Convulsions Dyskinesia Blurred vision Cardiomyopathy GI disturbances Stevens-Johnson syndrome	Refer

Interactions:

- Caution use with drugs that prolong QT interval e.g. antiarrhythmics, TCA's, antipsychotics etc
- Antacids may reduce absorption – take 2 hours apart
- Increased TSH levels observed with concomitant use of levothyroxine

Atovaquone/ Proguanil 250 mg/ 100mg (Maloff protect)

Duration of treatment	Cautions	Side effects	P+BF
Starting 1-2 days before, during and 1 week after – daily dose	Not for anyone who weighs < 40 Kg, as safety and effectiveness have not been established Those planning to conceive or are pregnant or breastfeeding should be referred Only licensed for up to a max of 12 weeks. Longer periods require a prescription Contraindicated in renal or hepatic impairment and children	Headache Nausea & vomiting Depression Dizziness Skin rash Fever Cough Steven-Johnson Syndrome	Refer

Interactions:

- Antiretrovirals for HIV e.g. atazanavir reduce plasma concentrations of atovaquone and sometimes proguanil
- Rifampicin reduces atovaquone concentrations significantly

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

www.propharmace.com

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