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Chapter 10

Notes & Notes for MRCP
By Dr. Yousif Abdallah Hamad Chapter 10

Dermatology

This image shows the generalised erythematous rash seen in patients with erythroderma, sometimes referred to as 'red man syndrome' Note the extensive exfoliation seen in this patient Fungal nail infections Onychomycosis is fungal infection of the nails. This may be caused by • dermatophytes - mainly Trichophyton rubrum, accounts for 90% of cases • yeasts - such as Candida • non-dermatophyte moulds Features • 'unsightly' nails are a common reason for presentation • thickened, rough, opaque nails are the most common finding Investigation • nail clippings • scrapings of the affected nail • Wood’s lamp useful, rapid and easy way to confirm the diagnosis Yellow to yellow-green fluorescence is characteristic of fine scales taken from active fungal lesions the sensitivity of this procedure is reduced when patients have taken a recent shower Management • treatment is successful in around 50-80% of people • diagnosis should be confirmed by microbiology before starting treatment • dermatophyte infection: first-line: oral terbinafine alternative: oral itraconazole. Treatment duration: for fingernail infections 6 weeks - 3 months for toenails 3 - 6 months • Candida infection: mild disease should be treated with topical antifungals (e.g. Amorolfine) whilst more severe infections should be treated with oral itraconazole for a period of 12 weeks

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Beau's lines • Beau's lines is a benign nail condition that presents as a jagged transverse groove on the nail plate corresponding to an episode of nail growth arrest, which can occur during an episode of severe medical illness. It usually affects several nails. Beau's lines Nail conditions • Fungal nail infections present with thickening and discolouration of the nail plate with prominent subungual debris. It usually only affects one or several nails. • Nail psoriasis presents with pitting, onycholysis, subungual debris and yellowish nail discolouration. Granuloma annulare Basics • Granuloma annulare is a benign inflammatory condition of unknown aetiology • characterised by dermal papules which can coalesce to form annular plaques. • papular lesions that are often slightly hyperpigmented and depressed centrally • typically occur on the dorsal surfaces of the hands and feet, and on the extensor aspects of the arms and legs • Histology reveals foci of degenerative

collagen surrounded by areas of granulomatous inflammation. • A number of associations have been proposed to conditions such as diabetes mellitus but there is only weak evidence for this • Treatment Observation (The eruption should disappear spontaneously.) • Locally delivered steroids are effective in resolving the condition.

Granuloma annulare Herpes simplex virus Overview • There are two strains of the herpes simplex virus (HSV) in humans: HSV-1 and HSV-2. Whilst it was previously thought HSV-1 accounted for oral lesions (cold sores) and HSV-2 for genital herpes it is now known there is considerable overlap Features • primary infection: may present with a severe gingivostomatitis • cold sores • painful genital ulceration Management • gingivostomatitis: oral aciclovir, chlorhexidine mouthwash • cold sores: topical aciclovir although the evidence base for this is modest • genital herpes: oral aciclovir. Some patients with frequent exacerbations may benefit from longer term aciclovir Pregnancy • elective caesarean section at term is advised if a primary attack of herpes occurs during pregnancy at greater than 28 weeks gestation

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Molluscum contagiosum Definition: A common skin infection caused by molluscum contagiosum virus (MCV), DNA poxvirus Transmission: Direct skin contact (contact sports, sexually transmitted), autoinoculation or indirectly via fomites (contaminated surfaces) such as shared towels and flannels. Risk factors: • Most common in children (often in children with atopic eczema) • Immunosuppression → HIV testing if lesions in adults and/or widespread Presentation • dome-shaped, smooth, pinkish or pearly white papules with a central umbilication, which are up to 5 mm in diameter. commonly seen on the trunk and in flexures.

Treatment • Usually self-limiting condition →Watchful waiting (especially in children) • Self-care advice: avoid direct contact and sharing towels . Exclusion from school, gym, or swimming is not necessary. • For cosmetic or lesions in the genital area: Cryotherapy is the first-line treatment Topical cantharidin Molluscum contagiosum Impetigo Impetigo is a superficial bacterial skin infection usually caused by either Staphylcoccus aureus or Streptococcus pyogenes. Features • 'golden', crusted skin lesions typically found around the mouth • very contagious Management • Limited, localised disease topical fusidic acid is first-line topical retapamulin is used second-line if fusidic acid has been ineffective or is not tolerated MRSA is not susceptible to either fusidic acid or retapamulin. Topical mupirocin (Bactroban) should therefore be used in this situation • Extensive disease oral flucloxacillin oral erythromycin if penicillin allergic

Erysipelas • Erysipelas is a Streptococcus pyogenes (a group A streptococcal bacterium) infection of the deep dermis and subcutis. Feature • It is a tender, intensely erythematous, indurated plaque with a sharply demarcated border. • Its well-defined margin can help differentiate it from other skin infections (eg, cellulitis). Treatment • IV antibiotics such as benzylpenicillin and erythromycin. • In a penicillin allergic patient a macrolide is the drug of choice .There is a 10% cross allergy between cephalosporins and penicillins. Complications • sepsis • cerebral abscess • venous sinus thrombosis. Well-demarcated, erythematous plaque of erysipelas.

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Koebner phenomenon Describes skin lesions which appear at the site of injury. It is seen in: • psoriasis • vitiligo • warts • lichen planus • lichen sclerosus • molluscum contagiosum

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Lichen planus Lichen planus is a skin disorder of unknown aetiology, most probably being immune mediated. Features • itchy, papular rash most common on the palms, soles, genitalia and flexor surfaces of arms • rash often polygonal in shape, 'white-lace' pattern on the surface (Wickham's striae) • Koebner phenomenon may be seen (new skin lesions appearing at the site of trauma) • oral involvement in around 50% of patients • nails: thinning of nail plate, longitudinal ridging • Fibrin deposits at the basement membrane zone are found in cases of lichen planus , although immunofluorescence studies are uncommonly done to diagnose it. Lichen planus

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Lichenoid drug eruptions - causes: • gold • quinine • thiazides Management • topical steroids are the mainstay of treatment • extensive lichen planus may require oral steroids or immunosuppression Lichen sclerosus • Lichen sclerosus was previously termed lichen sclerosus et atrophicus. • It is an inflammatory condition which usually affects the genitalia and is more common in elderly females. • Lichen sclerosus leads to atrophy of the epidermis with white plaques forming Features • itch is prominent Diagnosis • usually made on clinical grounds but a biopsy may be performed if atypical features are present* Management • topical steroids and emollients Follow-up • increased risk of vulval cancer *the RCOG advise the following • Skin biopsy is not necessary when a diagnosis can be made on clinical examination. Biopsy is required if the woman fails to respond to treatment or there is clinical suspicion of VIN or cancer. and the British Association of Dermatologists state the following: • A confirmatory biopsy, although ideal, is not always practical, particularly in children. It is not always essential when the clinical features are typical. However, histological examination is advisable if there are atypical features or diagnostic uncertainty and is mandatory if there is any suspicion of neoplastic change. • Patients under routine follow-up will need a biopsy if: (i) there is a suspicion of neoplastic change, i.e. a persistent area of hyperkeratosis, erosion or erythema, or new warty or papular lesions; (ii) the disease fails to respond to adequate treatment; (iii) there is extragenital LS, with features suggesting an overlap with morphoea; (iv) there are pigmented areas, in order to exclude an abnormal melanocytic proliferation; (v) second-line therapy is to be used.

Lichen simplex chronicus (LSC) • LSC presents with hyperpigmented, scaly, lichenified plaques. • Patients may volunteer a history of chronic scratching or manipulation, especially during times of stress. • The ankles are common sites for LSC.

Lichen amyloidosis • Lichen amyloidosis is a primary, localised cutaneous amyloidosis (amyloid deposition in the skin). • It results in intensely itchy shiny or hyperkeratotic, pigmented macules and occurs most commonly in South East Asia. • It appears that itching drives further amyloid deposition, and treatments are therefore directed at reducing the sensation of itching - for example, with the use of antihistamines and intra-lesional/topical corticosteroids. Lichen amyloidosis

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Onycholysis Onycholysis describes the separation of the nail plate from the nail bed Causes • idiopathic • trauma e.g. Excessive manicuring • infection: especially fungal • skin disease: psoriasis, eczema, dermatitis • impaired peripheral circulation e.g. Raynaud's • systemic disease: hyper- and hypothyroidism • Tetracycline

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Parvovirus B19 Parvovirus B19 is a DNA virus which causes a variety of clinical presentations. It was identified in the 1980's as the cause of erythema infectiosum Erythema infectiosum (also known as fifth disease or 'slapped-cheek syndrome') • most common presenting illness • systemic symptoms: lethargy, fever, headache • 'slapped-cheek' rash spreading to proximal arms and extensor surfaces Other presentations • asymptomatic • pancytopaenia in immunosuppressed patients • aplastic crises e.g. in sickle-cell disease (parvovirus B19 suppresses erythropoiesis for about a week so aplastic anaemia is rare unless there is a chronic haemolytic anaemia)

Pityriasis rosea • describes an acute, self-limiting rash which tends to affect young adults. occurs most commonly in people between the ages of 10 and 35 years. • The aetiology is not fully understood but is thought that herpes hominis virus 7 (HHV-7) may play a role. does not appear to be contagious; • aetiology is unknown Features • herald patch (usually on trunk) • followed by erythematous, oval, scaly patches which follow a characteristic distribution with the longitudinal diameters of the oval lesions running parallel to the line of Langer. This may produce a 'fir-tree' appearance • can be pruritic or asymptomatic Management • self-limiting, usually disappears after 4-12 weeks • moisturisers can help the pruritus

On the left a typical herald patch is seen. After a few days a more generalised 'fir-tree' rash appears

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Pityriasis versicolor also called tinea versicolor, is a superficial cutaneous fungal infection caused by Malassezia furfur (formerly termed Pityrosporum ovale) Features • most commonly affects trunk • patches may be hypopigmented, pink or brown (hence versicolor) • scale is common • mild pruritus Predisposing factors • occurs in healthy individuals • immunosuppression • malnutrition • Cushing's Management • topical antifungal. NICE Clinical Knowledge Summaries advise ketoconazole shampoo as this is more cost effective for large areas • Topical selenium sulphide • if extensive disease or failure to respond to topical treatment then consider oral itraconazole 200 mg once a day for seven days.

Psoriasis Definition • Psoriasis is a chronic relapsing inflammatory skin disorder most commonly characterised by erythematous, sharply demarcated papules and rounded plaques covered by silvery scales. Epidemiology • prevalence around 2%. • there are two peaks of incidence at 16-22 years and 57-60 years. • Males and females are equally affected. Pathophysiology • multifactorial and not yet fully understood genetic: polygenic inheritance

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 associated HLA-B13, -B17, and -Cw6. European populations are commonly affected, Strong concordance (70%) in identical twins immunological: abnormal T cell activity stimulates keratinocyte proliferation. may be mediated by T helper cells producing IL-17. IL-17 is a pro-inflammatory cytokine which is expressed at high levels in psoriasis lesions. Ixekizumab is an anti-IL-17 antibody which binds to IL-17, it is effective in treating active psoriasis and in reducing the risk of recurrence. environmental: psoriasis may be worsened (e.g. Skin trauma, stress), triggered (e.g. Streptococcal infection) or improved (e.g. Sunlight) by environmental factors • increase in mitotic activity of the cells in the malpighian layer of the epidermis The Malpighian layer of the skin is generally defined as both the stratum basalis and stratum spinosum as a unit. Recognised subtypes of psoriasis • plaque psoriasis: the most common sub-type resulting in the typical well demarcated red, scaly patches affecting the extensor surfaces, sacrum and scalp • flexural psoriasis: in contrast to plaque psoriasis the skin is smooth • guttate psoriasis: transient psoriatic rash frequently triggered by a streptococcal infection. Multiple red, teardrop lesions appear on the body • pustular psoriasis: commonly occurs on the palms and soles Features • Salmon colored skin plaques with silvery scales • Psoriasis may occur in hidden sites, such as the scalp (where psoriasis frequently is mistaken for dandruff), perineum, intergluteal cleft, and umbilicus The scalp is often involved in psoriasis. Most commonly, it causes a telogen effluvium, that is, the hair follicles are forced into the telogen resting stage. Other features • nail signs: pitting, onycholysis • arthritis • New lesions often appear at sites of injury or trauma (Koebner phenomenon), which typically occurs one to two weeks after the skin has been damaged. • Auspitz sign: small bleeding spots when psoriasis scales are scraped off. • Psoriasis can be associated with an anterior uveitis Complications • psoriatic arthropathy (around 10%) This can range from mild

distal interphalangeal joint involvement with nail pitting to severe arthritis mutilans.

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• increased incidence of metabolic syndrome • increased incidence of cardiovascular disease • increased incidence of venous thromboembolism • psychological distress Diagnosis • usually clinical • skin biopsy is rarely required to confirm psoriasis. Hyperkeratosis (described as an increased thickness of the stratum corneum), Parakeratosis, defined as hyperkeratosis with retention of nuclei in the stratum corneum, Munro's microabscess (or neutrophils) in the stratum corneum of the epidermis are a cardinal sign Exacerbating factors • trauma • alcohol • drugs: beta blockers, lithium, antimalarials (chloroquine and hydroxychloroquine), gold salts, NSAIDs, ACE inhibitors, infliximab antibiotics such as tetracycline and penicillin • withdrawal of systemic steroids • Notes Reactions may occur from less than one month to one year after the medication is initiated. the effect of antimalarials on trans-glutaminase activity leads to stimulation of epidermal proliferation beta blockers is more common than ACEi Management Topical potent corticosteroid + vitamin D analogue is first-line for chronic plaque psoriasis Management of chronic plaque psoriasis • regular emollients may help to reduce scale loss and reduce pruritus • First-line: potent corticosteroid applied once daily plus vitamin D analogue applied once daily (applied separately, one in the morning and the other in the evening) for up to 4 weeks as initial treatment • Second-line: if no improvement after 8 weeks then offer a vitamin D analogue twice daily • Third-line: if no improvement after 8-12 weeks then offer either: a potent corticosteroid applied twice daily for up to 4 weeks or a coal tar preparation applied once or twice daily

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• short-acting dithranol can also be used Using topical steroids in psoriasis • as we know topical corticosteroid therapy may lead to skin atrophy, striae and rebound symptoms • systemic side-effects may be seen when potent corticosteroids are used on large areas e.g.

> 10% of the body surface area • NICE recommend that we aim for a 4 week break before starting another course of topical corticosteroids • they also recommend using potent corticosteroids for no longer than 8 weeks at a time and very potent corticosteroids for no longer than 4 weeks at a time What should I know about vitamin D analogues? • examples of vitamin D analogues include calcipotriol (Dovonex), calcitriol and tacalcitol • they work by reducing cell division and differentiation • adverse effects are uncommon • unlike corticosteroids they may be used long-term • unlike coal tar and dithranol they do not smell or stain • they tend to reduce the scale and thickness of plaques but not the erythema • they should be avoided in pregnancy • the maximum

> weekly amount for adults is 100g A 'before and after' image showing the effect of 6 weeks of calcipotriol therapy on a large plaque. Note how the scale has improved but the erythema remains

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Steroids in psoriasis • topical steroids are commonly used in flexural psoriasis and there is also a role for mild steroids in facial psoriasis. If steroids are ineffective for these conditions vitamin D analogues or tacrolimus ointment should be used second line • patients should have 4 week breaks between course of topical steroids • very potent steroids should not be used for longer than 4 weeks at a time. Potent steroids can be used for up to 8 weeks at a time • the scalp, face and flexures are particularly prone to steroid atrophy so topical steroids should not be used for more than 1-2 weeks/month Scalp psoriasis Scalp psoriasis - first-line treatment is topical potent corticosteroids • First line potent topical corticosteroids used once daily for 4 weeks if no improvement after 4 weeks go to second line • Second line use different formulation of the potent corticosteroid (for example, a shampoo or mousse) and/or topical agents to remove adherent scale (for example, agents containing salicylic acid, emollients and oils) before application of the potent corticosteroid Face, flexutal and genital psoriasis • mild or moderate potency corticosteroid applied once or twice daily for a maximum of 2 weeks eg: clobetasone butyrate once a day Secondary care management Phototherapy • narrow band ultraviolet B-light is now the treatment of choice. If possible this should be given 3 times a week • photochemotherapy is also used - psoralen + ultraviolet A light (PUVA) • adverse effects: skin ageing, squamous cell cancer (not melanoma) Systemic therapy • Indications topical are not effective and person is impacted physically, psychologically, or socially by the problem and one or more of the following apply: extensive psoriasis (eg, > 10% of body surface area affected or a PASI score of > 10) or localised psoriasis and associated with significant functional impairment and/or high levels of distress (for example severe nail disease or involvement at high-impact sites) or phototherapy has been ineffective, cannot be used or has resulted in rapid relapse (rapid relapse is defined as greater than 50% of baseline disease severity within 3 months).

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• Methotrexate Oral methotrexate is used first-line. It is particularly useful if there is associated joint disease • Ciclosporin Offer ciclosporin as the first choice in patients who need rapid or short-term disease control (for example a psoriasis flare palmoplantar pustulosis or considering conception (both men and women) and systemic therapy cannot be avoided. Consider changing from methotrexate to ciclosporin (or vice-versa) when response to the first-choice systemic treatment is inadequate. • Systemic retinoids (acitretin) if methotrexate and ciclosporin are not appropriate or have failed or for people with pustular forms of psoriasis. • biological agents: infliximab, etanercept and adalimumab In situation with uncontrolled psoriasis and psoriatic arthritis, early instigation of a biological is recommended. TNF alpha is a pro-inflammatory

cytokine closely linked to the severity of psoriasis, and etanercept, a TNF alpha antagonist is the most appropriate intervention. Tuberculosis and viral hepatitis should be ruled out prior to starting therapy. Brodalumab is an anti-IL17 monoclonal antibody which has completed registration trials for psoriasis. It's likely to be reserved however for patients who fail to gain control on other interventions. • ustekinumab (IL-12 and IL-23 blocker) is showing promise in early trials it is not an anti- TNF agent (so did not reactivate TB) side effects: common dental infection uncommon depression and injection site reaction Mechanism of action of commonly used drugs: • coal tar: probably inhibit DNA synthesis • calcipotriol: vitamin D analogue which reduces epidermal proliferation and restores a normal horny layer • dithranol: inhibits DNA synthesis, wash off after 30 mins, SE: burning, staining Contra-indication: • Oral steroids are contraindicated in psoriasis and although one may see an initial improvement, a very serious rebound effect may be seen. Question: An elderly man with learning difficulties, is admitted to hospital with an acute exacerbation of congestive cardiac failure and severe raised plaques of psoriasis covering his chest, elbows, knees and scalp. he has been treating it with topical creams for years but has seen no improvement. What treatment would you recommend for his psoriasis? Refer for PUVA The safest treatment - that which produces the best clinical effect with minimal side effects in this patient - would be psoralen and ultraviolet light (PUVA). Emollients, baths and use of methotrexate require a fair amount of input from the patient in order to be effective and safe, which may not be the best option in this man. MRCPUK-part-1-sep 2017: Which medication is of most concern with respect to worsening of psoriasis? Atenolol

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Psoriasis: guttate • Guttate psoriasis is more common in children and adolescents. • It may be precipitated by a streptococcal infection 2-4 weeks prior to the lesions appearing Features • tear drop 'drop-like' papules on the trunk and limbs Management • if lesions are not widespread (<10% body surface area) and the person is not impacted physically, psychologically, or socially by the problem: No treatment required most cases resolve spontaneously within 2-3 months • If the lesions are not widespread (<10% body surface area) and treatment is desired: topical agents as per psoriasis. • If lesions are widespread (>10% body surface area): refer urgently to a dermatologist as phototherapy (UVB phototherapy) can be considered. • with recurrent episodes referral to ENT should be considered tonsillectomy may be necessary • Although guttate psoriasis can be triggered by an acute sore throat, it is not recommended to treat guttate psoriasis with anti-streptococcal antibiotics.

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Differentiating guttate psoriasis and pityriasis rosea Guttate psoriasis Pityriasis rosea Prodrome Classically preceded by a streptococcal sore throat 2-4 weeks Appearance 'Tear drop', scaly papules on the trunk and limbs Treatment / natural history Most cases resolve spontaneously within 2-3 months Topical agents as per psoriasis UVB phototherapy

Many patients report recent respiratory tract infections but this is not common in questions Herald patch followed 1-2 weeks later by multiple erythematous, slightly raised oval lesions with a fine scale confined to the outer aspects of the lesions. May follow a characteristic distribution with the longitudinal diameters of the oval lesions running parallel to the line of Langer. This may produce a 'fir-tree' appearance Self-limiting, resolves after around 6 weeks Guttate psoriasis • A 46-year-old man presents with an extensive pruritic rash shown in picture A. • Two weeks previously he had a sore throat with the appearance shown in picture B.

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Pyoderma gangrenosum Overview • Pyoderma gangrenosum typically is an expanding ulcer with a polycyclic or serpiginous outline and a characteristic undermined bluish edge. • The pathogenesis is unknown, and is presumed to be immunological. Features • typically on the lower limbs It is most common on the lower limb and in scars or sites of previous trauma. • initially small red papule • later deep, red, necrotic ulcers with a violaceous border • may be accompanied systemic symptoms e.g. Fever, myalgia Causes • idiopathic in 50% • inflammatory bowel disease: ulcerative colitis, Crohn's Estimates of the prevalence in inflammatory bowel disease (IBD) range between 2% and 5%. It tends to be associated with colonic involvement and is perhaps slightly more common in patients with UC. • rheumatoid arthritis, SLE • myeloproliferative disorders • lymphoma, myeloid leukaemias • monoclonal gammopathy (IgA) • primary biliary cirrhosis Management • the potential for rapid progression is high in most patients and most doctors advocate oral steroids as first-line treatment • other immunosuppressive therapy, for example ciclosporin and infliximab, have a role in difficult cases

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Dermatology Scabies • Scabies is caused by the mite Sarcoptes scabiei and is spread by prolonged skin contact. • It typically affects children and young adults. • The scabies mite burrows into the skin, laying its eggs in the stratum corneum. • The intense pruritus associated with scabies is due to a delayed type IV hypersensitivity reaction to mites/eggs which occurs about 30 days after the initial infection. Features • widespread pruritus Scabies can present with an itchy dermatitic-looking rash on the body, but the clues are at certain sites (soles, genitalia, buttocks) • linear burrows on the side of fingers, interdigital webs and flexor aspects of the wrist Burrows (linear crusted lesions of a few millimetres in length) are pathognomonic It has a predilection for the web-spaces and around the nipples. • in infants the face and scalp may also be affected • secondary features are seen due to scratching: excoriation, infection Management • permethrin 5% is first-line • malathion 0.5% is second-line • give appropriate guidance on use (see below) • pruritus persists for up to 4-6 weeks post eradication Patient guidance on treatment (from Clinical Knowledge Summaries) • permethrin cream doesn't have any direct effect on the pruritis itself but helps to settle symptoms indirectly by killing the mite, which is the root cause. • You should counsel your patients that it may take longer for the itching to settle as the allergic reaction to the mite abates • the cream should be applied everywhere below the neck, not merely where there is rash present. • avoid close physical contact with others until treatment is complete • all household and close physical contacts should be treated at the same time, even if asymptomatic • launder,

iron or tumble dry clothing, bedding, towels, etc., on the first day of treatment to kill off mites. The BNF advises to apply the insecticide to all areas, including the face and scalp, contrary to the manufacturer's recommendation. Patients should be given the following instructions: • apply the insecticide cream or liquid to cool, dry skin • pay close attention to areas between fingers and toes, under nails, armpit area, creases of the skin such as at the wrist and elbow • allow to dry and leave on the skin for 8-12 hours for permethrin, or for 24 hours for malathion, before washing off

• reapply if insecticide is removed during the treatment period, e.g. If wash hands, change nappy, etc • repeat treatment 7 days later Crusted (Norwegian) scabies • Crusted scabies is seen in patients with suppressed immunity, especially HIV. • The crusted skin will be teeming with hundreds of thousands of organisms. • Ivermectin is the treatment of choice and isolation is essential Seborrhoeic dermatitis • Seborrhoeic dermatitis in adults is a chronic dermatitis thought to be caused by an inflammatory reaction related to a proliferation of a normal skin inhabitant, a fungus called Malassezia furfur (formerly known as Pityrosporum ovale). • It is common, affecting around 2% of the general population Features • eczematous lesions on the sebum-rich areas: scalp (may cause dandruff), periorbital, auricular and nasolabial folds • otitis externa and blepharitis may develop Associated conditions • HIV in patients with HIV the prevalence of seborrheic dermatitis may be as high as 80%. the most useful next step HIV testing • Parkinson's disease Scalp disease management • Dandruff is an uninflamed form of seborrheic dermatitis and presents as scaly patches scattered within hair-bearing areas of the scalp. • over the counter preparations containing zinc pyrithione ('Head & Shoulders') and tar ('Neutrogena T/Gel') are first-line • the preferred second-line agent is ketoconazole • selenium sulphide and topical corticosteroid may also be useful Face and body management • topical antifungals: e.g. Ketoconazole • topical steroids: best used for short periods • difficult to treat - recurrences are common

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Skin disorder in pregnancy Polymorphic eruption of pregnancy • also known as Pruritic Urticarial Papules and Plaques of Pregnancy (PUPPP) • pruritic condition associated with last trimester • lesions often first appear in abdominal striae • management depends on severity: emollients, mild potency topical steroids and oral steroids may be used Polymorphic eruption of pregnancy Polymorphic eruption of pregnancy Pemphigoid gestationis • Definition bullous disorder that typically develops in the second or third trimester, beginning with urticarial lesions and blisters on the anterior abdominal wall surrounding the umbilicus. • Features pruritic blistering lesions often develop in peri-umbilical region, later spreading to the trunk, back, buttocks and arms usually presents 2nd or 3rd trimester and is rarely seen in the first pregnancy • Diagnosis A perilesional skin biopsy demonstrating linear C3 deposition at the dermoepidermal junction would confirm the diagnosis. • Treatment oral corticosteroids are usually required

Pemphigoid gestationis Pemphigoid gestationis Melasma • Melasma is a benign but relatively common skin condition which can appear in pregnancy. • it may resolve a few months after delivery. Chloasma • Overview Chloasma is a hormonally stimulated increase in melanogenesis that mainly appears on the face. The pigment is augmented by sunlight On testing, levels of melanocyte-stimulating hormone are normal more likely to occur in women with darker skin tones • Causes Pregnancy combined oral contraceptive pill • Treatment The pigmentation may take many months to resolve after parturition or pill discontinuation avoid prolonged sunlight exposure or to use a sunblock

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Skin disorders associated with tuberculosis Possible skin disorders • lupus vulgaris (accounts for 50% of cases) • erythema nodosum • scarring alopecia • scrofuloderma: breakdown of skin overlying a tuberculous focus • verrucosa cutis • gumma Lupus vulgaris • the most common form of cutaneous TB seen in the Indian subcontinent. • Cutaneous TB usually occurs due to spread from an endogenous source • It generally occurs on the face and is common around the nose and mouth. more than 80% of cases occur on the face and neck. • The initial lesion is an erythematous flat plaque which gradually becomes elevated and may ulcerate later

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• Diagnosis: On diascopy, it shows characteristic "apple-jelly" color. Biopsy will reveal tuberculoid granuloma with few bacilli. Mantoux test is positive. • Treated with combination of drugs used for tuberculosis, such as Rifampicin, Isoniazid and Pyrazinamide (with either streptomycin or ethambutol)

Spider nevi • most common on the face and upper chest. • typically asymptomatic • usually resolve spontaneously. • Causes chronic liver disease the presence of more than five lesions is likely to be due to chronic liver disease. may resolve when liver function increases or when a liver transplant is performed. the cause of the spider nevi patients cannot metabolize circulating estrogen pregnancy may resolve after childbirth. oral contraceptives, may resolve after stopping the contraceptives. forehead lesion (spider nevus (nevus araneus))

Tinea • Tinea is a term given to dermatophyte fungal infections. • Three main types of infection are described depending on what part of the body is infected

1. tinea capitis - scalp
2. tinea corporis - trunk, legs or arms
3. tinea pedis - feet Tinea capitis (scalp ringworm) • a cause of scarring alopecia mainly seen in children • if untreated a raised, pustular, spongy/boggy mass called a kerion may form

• Causes most common cause is Trichophyton tonsurans in the UK and the USA (>90% of cases) may also be caused by Microsporum canis acquired from cats or dogs • Diagnosis:

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 the most useful investigation is scalp scrapings lesions due to Microsporum canis green fluorescence under Wood's lamp (but do not fluoresce if caused by Trichophyton tonsurans.). lesions due to Trichophyton species do not readily fluoresce under Wood's lamp • Management (based on CKS guidelines): oral antifungals: Terbinafine for Trichophyton tonsurans infections Although not licensed in young children, a four-week course of the fungicidal drug terbinafine is often preferred. griseofulvin for Microsporum infections. Griseofulvin is fungistatic, so a prolonged course of 2-4 months is required. Topical ketoconazole shampoo should be given for the first two weeks to reduce transmission Image showing a kerion griseofulvin The enzyme that is most likely induced by griseofulvin requires which of the following cofactors? Vitamin B6 Griseofulvin is a microtubule poison that is used to treat skin and nail dermatophytoses strong inducer of cytochrome P450 enzymes. CYP450 enzymes require heme for proper function, and thus inducers of CYP450 increase heme synthesis. Tinea corporis (ringworm) • causes include Trichophyton rubrum and Trichophyton verrucosum (e.g. From contact with cattle) • well-defined annular, erythematous lesions with pustules and papules • may be treated with oral fluconazole

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Image showing tinea corporis Image showing tinea corporis. Note the well defined border Tinea pedis (athlete's foot) • characterised by itchy, peeling skin between the toes • common in adolescence Tinea incognito • What is the cause for tinea incognito? Inappropriate treatment with steroid cream • Tinea incognito is the name given to tinea when the clinical appearance has been altered by inappropriate treatment, usually a topical steroid cream • The result is that the original infection slowly extends Often the patient and/or their doctor believe they have a dermatitis, hence the use of a topical steroid cream • The steroid cream dampens down inflammation so the condition feels less irritable But when the cream is stopped for a few days the itch gets worse, so the steroid cream is promptly used again • The more steroid applied, the more extensive the fungal infection becomes

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Vitiligo Definition • Vitiligo is an autoimmune condition which results in the loss of melanocytes and consequent depigmentation of the skin. Epidemiology • It is thought to affect around 1% of the population • symptoms typically develop by the age of 20-30 years. Features • well demarcated patches of depigmented skin • the peripheries tend to be most affected • trauma may precipitate new lesions (Koebner phenomenon) Associated conditions • type 1 diabetes mellitus • Addison's disease • autoimmune thyroid disorders • pernicious anaemia • alopecia areata

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