Dermatology

Acne vulgaris
- Disorder of pilosebaceous follicles - excess sebum, blockage, Propioni. acnes infection
  - papules, pustules, comedones (open - blackheads; closed - whiteheads)
  - may be associated with excess androgens e.g. PCOS, Cushing’s, steroid abuse
- Management - regular face wash, avoid high sugar / dairy diet?
  - if mild - benzoyl peroxide - irritant, causes burning sensation
  - if localised - topical erythromycin / tetracycline (combined with benzoyl peroxide)
  - if widespread - oral antibiotics - doxycycline, tetracycline / cocyprindiol (Dianette, COCP)
  - if severe - topical / oral retinoids (tretinoin) - teratogenic, photosensitive, dry skin / lips
  - consider laser therapy, blue light phototherapy; 1 in 5 will be left with significant scarring

Acne rosacea
- Chronic relapsing erythema / flushing, telangiectasia, papules, pustules affecting the face
  - ocular symptoms - blepharitis, conjunctivitis, stinging / dryness / irritation of eyes
  - skin often dry (cf. acne vulgaris); associated with rhinophyma (large nose) in men
  - triggers - temperature changes, alcohol, caffeine, spicy food, stress, amiodarone
- Management - use strong sunscreens, consider emollients, avoid topical steroids
  - if mild - topical metronidazole or azelaic acid
  - if more severe - oral tetracycline / erythromycin; consider isotretinoin if refractory

Alopecia areata
- Oval patches of hair loss characterised by ‘exclamation mark’ hairs and nail pitting
- Associated with thyroid disease, vitiligo, DM, CTDs; may run in families
- Often self-limiting with 1 year; consider steroids (intraluesional injections, topical, oral)

Basal cell carcinoma (BCC)
- Slow-growing locally invasive epidermal malignancy; usual head / neck; rarely metastatic
  - risk factors - UV exposure, increasing age, male sex, skin type I / II, previous BCC
  - pearly appearance, rolled edge, telangiectasia, may be ulcerated (rodent ulcer)
- Gorlin’s syndrome - AD; multiple BCCs, palmar pitting, jaw cysts, bony changes, cataracts
- Investigations - all specimens should be sent for histopathology
- Management - if age > 24 with < 1cm lesion - GPs can excise; otherwise hospital referral
  - if small - curettage and cautery, cryotherapy
  - non-surgical options - topical imiquimod / fluorouracil, PDT, radiotherapy
  - if severe / recurrent - Moh’s micrographic surgery (progressive excision)
Behçet’s disease

- Rare autoimmune multi-system disorder affecting aged < 30 years
- Symptoms - triad of oral / genital ulceration, uveitis; thrombophlebitis, headaches
  - also erythema nodosum, acne-like limb lesions, arthritis, DVT (APL), memory loss
- Investigations - pathergy test (skin trauma induces papule after 24hrs), APL antibodies
- Management - immunosuppression e.g. topical / systemic steroids, DMARDs, infliximab

Bowen’s disease

- Cutaneous SCC in situ related to sun exposure affecting aged > 60 years; also in HIV
- Symptoms - slowly expanding well-circumscribed erythematous patch / plaque e.g. on head
- Management - punch biopsy; cryotherapy + topical 5FU; Moh’s micrographic surgery
- Prognosis - without treatment up to 5% progress to local SCC

Cellulitis and erysipelas

- Infection of the dermis and below; majority caused by Strep. (esp. group A) or Staph.
  - cellulitis is a deeper infection with poorly demarcated borders
  - erysipelas is a superficial infection with sharply demarcated borders
- Risks - venous insufficiency, elderly, DM, alcoholism, IVDU, obesity, immunocompromise
- Symptoms (often lower limb) - precipitating skin lesion, erythema, pain, swelling, warmth
  - in erysipelas (classically the face) - burning (St. Anthony’s fire), pruritis, tenderness
- Management - flucloxacillin 500mg qds. (cellulitis) / penicillin V 500mg qds. (erysipelas)
  - consider co-amoxiclav if facial involvement; also NSAIDs, wound irrigation / debridement
- Complications - abscess, gangrene, chronic leg oedema, nec. fasc., osteomyelitis

Dermatophytosis (tinea)

- Common fungal infection of keratin causing pruritic annular lesions
  - may affect the scalp (capitis), feet (pedis), hands (manuum), trunk / body (corporis)
- Investigations - Wood’s light (UV - fungus fluoresces in tinea capitis)
- Management - imidazole bd. / clotrimazole if pregnant; avoid topical steroids

Eczema

- Atopic eczema - chronic relapsing inflammatory dermatitis; 20% of children, 10% of adults
  - characteristically itchy; flexural distribution - elbows, knees, neck, cheeks (in children)
  - associated with atopy, dry skin, excoriations, vesicles, crusting
- Irritants - soap, detergent, fabrics, cold, heat / humidity, dust mites, pollen, stress
- Management - mainstay is emollients (liberal, frequent - 500g / week in adults)
  - topical steroids - usually only short courses during flare-ups unless severe / chronic
  - in infants - trial of non-cow’s milk formula e.g. hydrolysed protein
• in bacterial superinfection - topical steroids with 14 days of flucloxacillin
• specialist - phototherapy, ciclosporin, azathioprine, MMF, alitretinoin, topical tacrolimus
• Complications - eczema herpeticum - painful, blisters, punched-out erosions, fever

Discoid eczema
• Commonest in aged > 60 - symmetrical oval erythematous plaques on extremities
  • intensely itchy esp. night; become hyperpigmented macules; may be central clearing
  • Benign and not associated with systemic disease, though may be chronic / recurrent
  • Management - cool showers, moisturisers, mild topical steroids, antihistamines (sedative)

Pompholyx (dyshidrotic eczema)
• Itchy epidermal vesicular eruption of hands, fingers, soles of feet with hyperhidrosis
  • symmetrical, pruritic, burning, may be periungual lesions
  • Management - topical steroids, cold compresses; consider PUVA, oral steroids

Impetigo
• Common superficial Staph. aureus infection, usually non-bullous, affecting broken skin
  • initially small pustules, then rapid spreading of crusted plaques; local lymphadenopathy
  • Management - cleansing, topical fusidic acid / mupirocin; consider oral flucloxacillin
  • Complications - cellulitis, suppurative lymphadenitis, staphylococcal scalded skin syndrome

Lichen
• Lichen simplex - well-demarcated scaly excoriated plaque, intensely pruritic
  • associated with eczema, insect bites, venous insufficiency
  • commonly affects calf, elbow, posterior neck, genitalia
• Lichen planus - violaceous polygonal papular eruption, ‘white lace’; associated with hep. C
  • commonly affects flexors, genitalia, mucous membranes; may be Kébner’s
  • histology - ‘saw-tooth’ epidermal hyperplasia, upper dermal T-cell infiltrate, IgM deposits
  • oral lesions have up to 2% malignant potential (SCC)
  • Management - topical steroids, tar, antihistamines; if severe - oral steroids, PUVA

Malignant melanoma
• Melanocytes present in basal cell layer - benign overgrowth causes moles and freckles
  • benign moles may be flat or pedunculated; > 50 increases risk of malignant melanoma
  • lifetime risk of malignant melanoma 1 in 60; invasive if penetrates dermis
• Majority superficial spreading but up to 30% nodular - aggressive, ulcerating
• Assess with ABCDE - asymmetry, border, colour, diameter, evolution; itching, bleeding
• Investigations - excisional biopsy (2mm margin), consider sentinel node biopsy
• Management - wide local excision; chemotherapy (dacarbazine) if advanced
• Metastases - lymph nodes, liver, lung, bone, brain
Necrotising fasciitis

- Deep soft tissues; type 1 (polymicrobial), 2 (Group A Strep.), 3 (gram-negative), 4 (fungal)
- Risks - skin trauma, alcohol abuse, IVDU, chronic liver disease, DM, malignancy
- Symptoms - disproportionately severe pain with initially minor skin changes, systemic upset
  - lesions appear grey, necrotic, ‘dishwater pus’
  - later - haemorrhagic bullae, tense oedema, anaesthesia, septic shock
- Investigations - FBC (leucocytosis), U&Es (hyponatraemia), CK (high), XR (soft tissue gas)
- Management - urgent surgical debridement, IV benzylpenicillin / clindamycin / gentamicin

Pemphigus and pemphigoid

Pemphigus

- Autoimmune superficial epidermal bullous blistering condition mediated by IgG
  - may be vulgaris (commonest), foliaceus (anti-DSG1 antibodies), paraneoplastic
- Triggers - drugs e.g. penicillamine, burns, stress, pregnancy, vaccinations, UV light
- Symptoms - painful flaccid blisters on normal / erythematous skin but rarely pruritic
  - often oral involvement before skin; foliaceus pemphigus affects skin only
- Management (control, consolidation, maintenance) - prednisolone, topical steroids
  - consider plasmapheresis if severe; later steroid-sparing agents e.g. azathioprine

Bullous pemphigoid

- Chronic autoimmune subepidermal bullous blistering condition; IgG / C3 at dermal junction
  - tends to affect the elderly; associated with furosemide, NSAIDs, antibiotics, UV light
- Symptoms - prodromal pruritis / erythematous rash, tense flexural blisters
  - oral involvement uncommon and mild; bullae heal without scarring
- Investigations - skin biopsy / direct immunofluorescence (DIF)
- Management - topical steroids; consider oral steroids

Pityriasis rosea

- Acute self-limiting generalised pruritic rash preceded by herald patch (primary plaque)
  - may be prodromal malaise, nausea, anorexia, fever, arthralgia, lymphadenopathy
  - oval lesions on trunk / proximal limbs in ‘Christmas tree’ distribution; lasts up to 6wks
- Management - exposure to sunlight, topical zinc oxide for pruritis; consider erythromycin

Psoriasis

- Relapsing inflammatory autoimmune T-cell mediated; related to IBD, metabolic syndrome
- Risks - FH, stress, smoking, alcohol, skin trauma, NSAIDs, ACEIs, lithium
- Itchy circular symmetrical extensor distributed erythematous plaques with fissuring
  - Auspitz’ sign - bleeding on scraping; Köbner’s reaction - lesions following trauma
- nail changes - pitting, onycholysis, subungual hyperkeratosis, ‘oil drop’ discolouration
- **Psoriatic arthritis** - associated with HLA-B27 / DR4 - relapsing oligo- / polyarthritis
  - oligoarthritis - hands / feet - **dactylitis**
  - polyarthritis - commoner in women - rheumatoid-like but predominantly DIP
  - manage with **NSAIDs**, steroid injections, methotrexate / biological therapies
- Management - initially regular **emollients**, topical vitamin D e.g. *calcipotriol* long-term
  - topical steroids - usually short-term potent preparations e.g. beclometasone 0.1%
  - vit. D alternatives - **coal tar**, tazarotene gel (vit. A), *dithranol* (30min exposures)
  - scalp - topical salicylic acid, olive oil; facial - short-term topical steroids
  - second-line - **phototherapy** (UVB, PUVA), methotrexate; ciclosporin in flare-ups
  - consider fumaric acid esters, MMF, etanercept, infliximab

**Scabies**
- Parasitic infection of *Sarcoptes scabiei* mite; deposits eggs into epidermal burrow
- Symptoms - intensely pruritic papular eruption esp. at interdigital, flexural creases
  - worse at night / after hot bath or shower; may be ‘wake sign’ (pattern of burrows)
- Management (whole household) - topical whole-body **permethrin**, antihistamines

**Seborrhoeic keratosis**
- Common benign hyperkeratotic skin lesions associated with advanced age esp. truncal
  - warty ‘stuck-on’ pigmented (often black) irregular pitted lesions with clear borders
- Associated with *acanthosis nigricans* (Leser-Trélat sign)
- Management - cryotherapy if cosmetically undesirable

**Severe cutaneous adverse reactions (SCARs)**
- Drug causes - trimethoprim, allopurinol, carbamazepine, sulfasalazine, aspirin, sertraline
- Viral causes - herpes simplex, EBV, HIV, hepatitides, mumps
- Associations - vasculitides, NHL, leukaemia, myeloma, polycythaemia
- Often preceded by **URTI prodrome** - fever, sore throat, headache, arthralgia, diarrhoea

**Erythema multiforme**
- Acute self-limiting eruption - characteristic **target lesions** - commonly due to *HSV*
  - abrupt onset **symmetrical papular rash** spreading *inward from extremities*
  - may be itch, mucosal involvement - oral erosions, lacrimation, genital lesions (retention)

**Stevens-Johnson syndrome (SJS)**
- Type III hypersensitivity usually to drugs - widespread macules / erythema / purpura
  - outbreaks occur suddenly, last up to 4 weeks, not pruritic, may be confined to one area
  - mucosal involvement more severe - painful red eye, dysuria, thick productive cough
- **SCORTEN** - age > 40, malignancy, tachycardia, metabolic acidosis, high urea / glucose
• Management - ITU if SCORTEN > 3, ABC, IVT, analgesia; consider steroids
• Complications - *oesophageal strictures*, scarring, hyperhidrosis, blindness

**Toxic epidermal necrolysis (TEN)**
• Widespread **full-thickness epidermal necrosis** - erythema, *bullae*, scalding exfoliation
  • associated with high pyrexia, severe hypovolaemic shock, Nikolsky sign (rubbing skin)
  • supportive management required in ITU setting; debridement, dressing, steroids
• Complications - sepsis, respiratory failure, PE, ATN, blindness, GI haemorrhage

**Skin manifestations of systemic disease**

**Acanthosis nigricans**
• Brown ‘velvety’ rash over flexural areas esp. axillae
• Related to conditions of *insulin resistance* / impaired glucose tolerance
• Associations - hypothyroidism, GI malignancy, DM, obesity, PCOS, acromegaly, Cushing’s

**Dermatitis herpetiformis**
• Autoimmune blistering disease associated with *coeliac* (up to 25% of patients)
  • *intensely pruritic* bullous rash on extensors esp. scalp, buttocks, elbows, knees
• Investigations - *skin biopsy* (subepidermal blisters, IgA in dermal papillae)
• Management - *dapsone* (anti-leprotic!), GFD; consider steroids; avoid NSAIDs

**Erythema nodosum**
• Hypersensitivity reaction typically affecting young adults esp. women
  • associated with *Strep.*, *IBD*, lymphoma, sarcoidosis, TB, *Mycoplasma* pneumonia
• **Eruptive phase** - fever, ache, arthralgia precede *painful red pretibial nodules*
  • lesions last 2-3wks; progress from red to blue to purple, bruise-like, fluctuant
• Investigations - throat swab for *Strep.*, ASO / antiDNAseB, *ESR* (high)
• Management - *NSAIDs*, consider steroids; self-limiting within 6wks

**Granuloma annulare**
• Benign inflammatory disorder - papules / *annular plaques*; associated with DM
  • typically affect *dorsal hands / feet / fingers, extensor area of arms / legs*
• Management - consider local *steroid injection* (effective in localised disease), cryotherapy
  • 50% self-resolve within 2 years; 40% recur; generalised disease poorer prognosis

**Necrobiosis lipoidica**
• Inflammatory disorder - collagen degeneration, granulomatous change, fat deposition
  • associated with DM (esp. concurrent smoking), *IBD*, sarcoidosis
• Symptoms - *pre-tibial* irregular red-brown centrally atrophic callous lesions
  • slowly enlarge over months; may be very painful; *Köbner phenomenon*
Pyoderma gangrenosum

- Rare serious disease - **painful nodule** erodes into *purulent progressive ulceration*
  - associated with IBD, RA, Behçet’s, hepatitis, PBC, myeloproliferative disorders, SLE
  - tends to affect lower legs / trunk; may be systemic illness / fever
- Investigations - **p-ANCA** (often positive), ulcer swab / biopsy
- Management - **prednisolone**, wound care, steroidal dressings, *intraleisional ciclosporin*
  - consider further immunosuppressants / DMARDs; potentially fatal

Seborrhoeic dermatitis

- Common inflammatory reaction to *Malassezia* commensal yeast
  - erythematous scaling rash over nose, nasolabial folds, eyebrows, ears, scalp (dandruff)
- Associations - immunocompromise, Parkinson’s
- Management - topical anti-fungals e.g. *ketoconazole*; consider topical steroids if severe

Staphylococcal scalded skin syndrome (SSSS)

- Strains of *Staph. aureus* release *epidermolytic toxins* degrading *desmoglein-1*
  - typically affects young children esp. boys
- Symptoms - prodrome of sore throat / conjunctivitis, fever, generalised erythema
  - widespread flexural **tender flaccid bullae** that rupture leaving ‘scalded’ appearance
- Management - *flucloxacillin* (oral / IV), emollients, IVT, opioid infusion, *physiotherapy*
- Complications - cellulitis, sepsis, pneumonia

Squamous cell carcinoma (SCC)

- Malignant locally invasive tumour with *metastatic potential*; less common than BCC
- Risks - chronic UV exposure (esp. fair skin), carcinogens, HPV, Bowen’s disease
- Symptoms - indurated nodular crusted tumour presenting as non-healing ulcer
  - actinic (solar) keratoses - rough, red, scaly areas; 10% progress to SCC
- Investigations - excisional / punch biopsy (full thickness), CT if suspected mets.
- Management - **complete surgical excision** - cryotherapy / topical fluorouracil if small

Urticaria

- Common histamine-mediated itchy white papules / plaques (*weals*) with *erythematous flare*
- Management - **antihistamines** (non-sedative e.g. cetirizine), menthol cream, prednisolone
- Angio-oedema - *subdermal* urticarial process; non-pitting facial erythematous oedema
  - often tender / painful but not necessarily pruritic (cf. urticaria)