Common Important Problems

- There are several commonly-encountered skin problems in clinical practice. Below are some of the important differential diagnoses for each of these presentations.
- Clinical exposure is the key to achieve competence in diagnosing, investigating and managing these skin problems.

Learning objectives:

Ability to formulate a differential diagnosis, describe the investigation and discuss the management in patients with:

- chronic leg ulcers

- itchy eruption

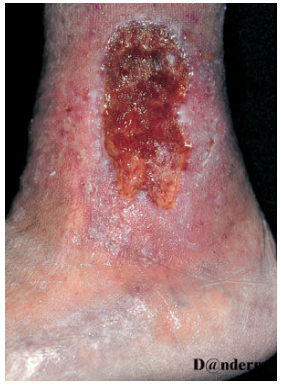
- a changing pigmented lesion

- purpuric eruption

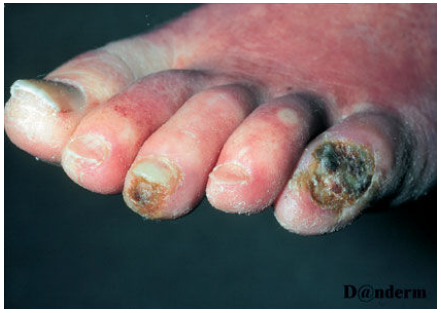
- a red swollen leg

Chronic leg ulcers

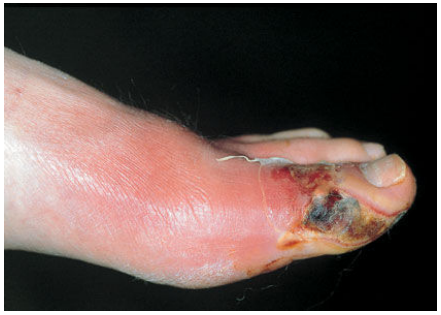
- Leg ulcers are classified according to aetiology. In general, there are three main types: venous, arterial and neuropathic ulcers. Other causes include vasculitic ulcers (purpuric, punched out lesions), infected ulcers (purulent discharge, may have systemic signs) and malignancy (e.g. squamous cell carcinoma in long-standing non-healing ulcers).
- In clinical practice, there can be mixture of arterial, venous and/or neuropathic components in an ulcer.



Venous ulcer



Arterial ulcer



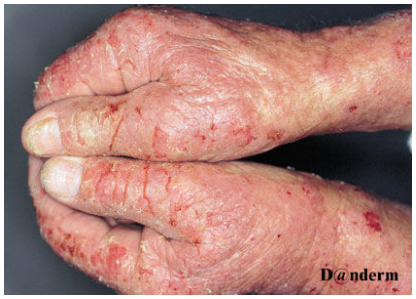
Neuropathic ulcer

Chronic leg ulcers

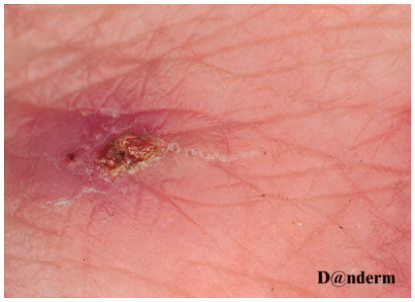
	Venous ulcer	Arterial ulcer	Neuropathic ulcer
History	- Often painful, worse on standing - History of venous disease e.g. varicose veins, deep vein thrombosis	- Painful especially at night, worse when legs are elevated - History of arterial disease e.g. atherosclerosis	- Often painless - Abnormal sensation - History of diabetes or neurological disease
Common sites	- Malleolar area (more common over medial than lateral malleolus)	- Pressure and trauma sites e.g. pretibial, supramalleolar (usually lateral), and at distal points e.g. toes	- Pressure sites e.g. soles, heel, toes, metatarsal heads
Lesion	- Large, shallow irregular ulcer - Exudative and granulating base	- Small, sharply defined deep ulcer - Necrotic base	- Variable size and depth - Granulating base - May be surrounded by or underneath a hyperkeratotic lesion (e.g. callus)
Associated features	- Warm skin - Normal peripheral pulses - Leg oedema, haemosiderin and melanin deposition (brown pigment), lipodermatosclerosis, and atrophie blanche (white scarring with dilated capillaries)	- Cold skin - Weak or absent peripheral pulses - Shiny pale skin - Loss of hair	- Warm skin - Normal peripheral pulses* **cold, weak or absent pulses if it is a neuroischaemic ulcer* - Peripheral neuropathy
Possible investigations	- Normal ankle/brachial pressure index (i.e. ABPI 0.8-1)	- ABPI < 0.8 - presence of arterial insufficiency - Doppler studies and angiography	- ABPI < 0.8 implies a neuroischaemic ulcer - X-ray to exclude osteomyelitis
Management	- Compression bandaging (after excluding arterial insufficiency)	- Vascular reconstruction - Compression bandaging is contraindicated	- Wound debridement - Regular repositioning, appropriate footwear and good nutrition

Itchy eruption

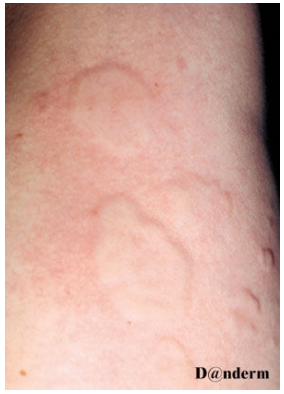
- An itchy (pruritic) eruption can be caused by an inflammatory condition (e.g. eczema), infection (e.g. varicella), infestation (e.g. scabies), allergic reaction (e.g. some cases of urticaria) or an unknown cause, possibly autoimmune (e.g. lichen planus).



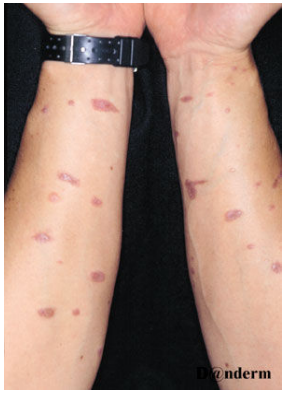
Chronic fissured hand eczema



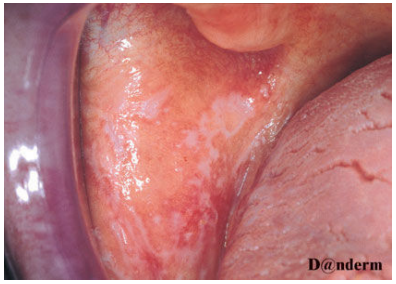
Scabies



Urticaria



Lichen planus



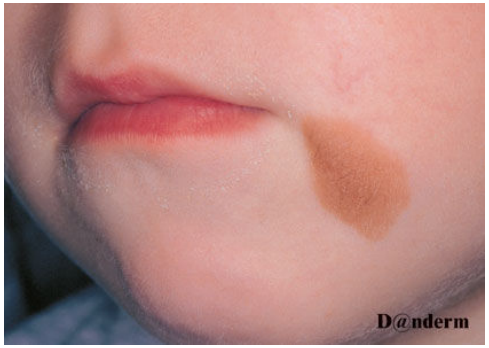
Wickham's striae

Itchy eruption

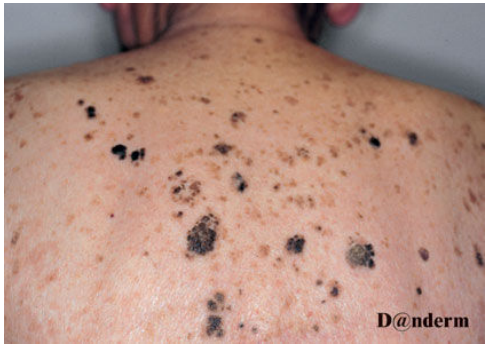
	Eczema	Scabies	Urticaria	Lichen planus
History	- Personal or family history of atopy - Exacerbating factors (e.g. allergens, irritants)	- May have history of contact with symptomatic individuals - Pruritus worse at night	- Precipitating factors (e.g. food, contact, drugs)	- Family history in 10% of cases - May be drug-induced
Common sites	- Variable (e.g. flexor aspects in children and adults with atopic eczema)	- Sides of fingers, finger webs, wrists, elbows, ankles, feet, nipples and genitals	- No specific tendency	- Forearms, wrists, and legs - Always examine the oral mucosa
Lesion	- Dry, erythematous patches - Acute eczema is erythematous, vesicular and exudative	- Linear burrows (may be tortuous) or rubbery nodules	- Pink wheals (transient) - May be round, annular, or polycyclic	- Violaceous (lilac) flat-topped papules - Symmetrical distribution
Associated features	- Secondary bacterial or viral infections	- Secondary eczema and impetigo	- May be associated with angioedema or anaphylaxis	- Nail changes and hair loss - Lacy white streaks on the oral mucosa and skin lesions (Wickham's striae)
Possible investigations	- Patch testing - Serum IgE levels - Skin swab	- Skin scrape, extraction of mite and view under microscope	- Bloods and urinalysis to exclude a systemic cause	- Skin biopsy
Management	- Emollients - Corticosteroids - Immunomodulators - Antihistamines	- Scabicide (e.g. permethrin or malathion) - Antihistamines	- Antihistamines - Corticosteroids	- Corticosteroids - Antihistamines

A changing pigmented lesion

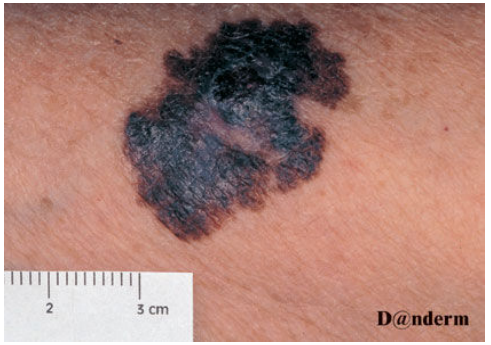
- A changing pigmented lesion can be benign (e.g. melanocytic naevi, seborrhoeic wart) or malignant (e.g. malignant melanoma).



Congenital naevus



Seborrhoeic keratoses



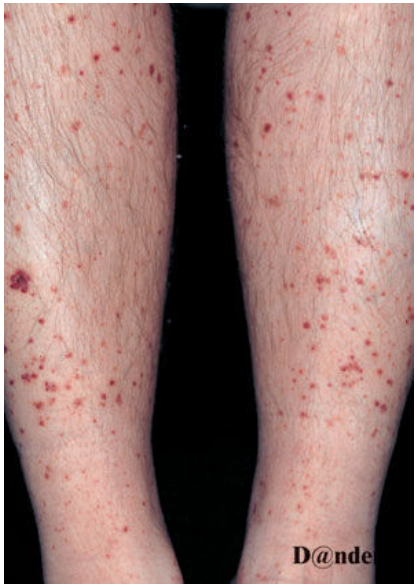
Malignant melanoma

A changing pigmented lesion

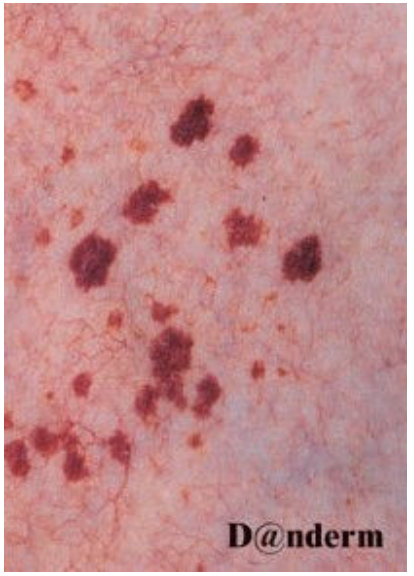
	Benign		Malignant
	Melanocytic naevi	**Seborrhoeic wart**	**Malignant melanoma**
History	- Not usually present at birth but develop during infancy, childhood or adolescence - Asymptomatic	- Tend to arise in the middle-aged or elderly - Often multiple and asymptomatic	- Tend to occur in adults or the middle-aged - History of evolution of lesion - May be symptomatic (e.g. itchy, bleeding) - Presence of risk factors
Common sites	- Variable	- Face and trunk	- More common on the legs in women and trunk in men
Lesion	- Congenital naevi may be large, pigmented, protuberant and hairy - Junctional naevi are small, flat and dark - Intradermal naevi are usually dome-shape papules or nodules - Compound naevi are usually raised, warty, hyperkeratotic, and/or hairy	- Warty greasy papules or nodules - 'Stuck on' appearance, with well-defined edges	- Features of **ABCDE**: **A**symmetrical shape **B**order irregularity **C**olour irregularity **D**iameter > 6mm **E**volution of lesion
Management	- Rarely needed	- Rarely needed	- Excision

Purpuric eruption

- A purpuric eruption can be thrombocytopenic (e.g. meningococcal septicaemia, disseminated intravascular coagulation, idiopathic thrombocytopenic purpura) or non-thrombocytopenic e.g. trauma, drugs (e.g. steroids), aged skin, vasculitis (e.g. Henoch-Schönlein purpura).
- Platelet counts and a clotting screen are important to exclude coagulation disorders.



Henoch-Schönlein purpura



Senile purpura

Purpuric eruption

	Meningococcal septicaemia	Disseminated intravascular coagulation	Vasculitis	Senile purpura
History	- Acute onset - Symptoms of meningitis and septicaemia	- History of trauma, malignancy, sepsis, obstetric complications, transfusions, or liver failure	- Painful lesions	- Arise in the elderly population with sun-damaged skin
Common sites	- Extremities	- Spontaneous bleeding from ear, nose and throat, gastrointestinal tract, respiratory tract or wound site	- Dependent areas (e.g. legs, buttocks, flanks)	- Extensor surfaces of hands and forearms - Such skin is easily traumatised
Lesion	- Petechiae, ecchymoses, haemorrhagic bullae and/or tissue necrosis	- Petechiae, ecchymoses, haemorragic bullae and/or tissue necrosis	- Palpable purpura (often painful)	- Non-palpable purpura - Surrounding skin is atrophic and thin
Associated features	- Systemically unwell	- Systemically unwell	- Systemically unwell	- Systemically well
Possible investigations	- Bloods - Lumbar puncture	- Bloods (a clotting screen is important)	- Bloods and urinalysis - Skin biopsy	- No investigation is needed
Management	- Antibiotics	- Treat the underlying cause - Transfuse for coagulation deficiencies - Anticoagulants for thrombosis	- Treat the underlying cause - Steroids and immunosuppressants if there is systemic involvement	- No treatment is needed

A red swollen leg

- The main differential diagnoses for a red swollen leg are cellulitis, erysipelas, venous thrombosis and chronic venous insufficiency.

	Cellulitis/Erysipelas	Venous thrombosis	Chronic venous insufficiency
History	- Painful spreading rash - History of abrasion or ulcer	- Pain with swelling and redness - History of prolonged bed rest, long haul flights or clotting tendency	- Heaviness or aching of leg, which is worse on standing and relieved by walking - History of venous thrombosis
Lesion	- Erysipelas (well-defined edge) - Cellulitis (diffuse edge)	- Complete venous occlusion may lead to cyanotic discolouration	- Discoloured (blue-purple) - Oedema (improved in the morning) - Venous congestion and varicose veins
Associated features	- Systemically unwell with fever and malaise - May have lymphangitis	- Usually systemically well - May present with pulmonary embolism	- Lipodermatosclerosis (erythematous induration, creating 'champagne bottle' appearance) - Stasis dermatitis (eczema with inflammatory papules, scaly and crusted erosions) - Venous ulcer
Possible investigations	- Anti-streptococcal O titre (ASOT) - Skin swab	- D-dimer - Doppler ultrasound and/or venography	- Doppler ultrasound and/or venography
Management	- Antibiotics	- Anticoagulants	- Leg elevation and compression stockings - Sclerotherapy or surgery for varicose veins