Common skin Conditions

By Kavita Sodhi

Salaried GP

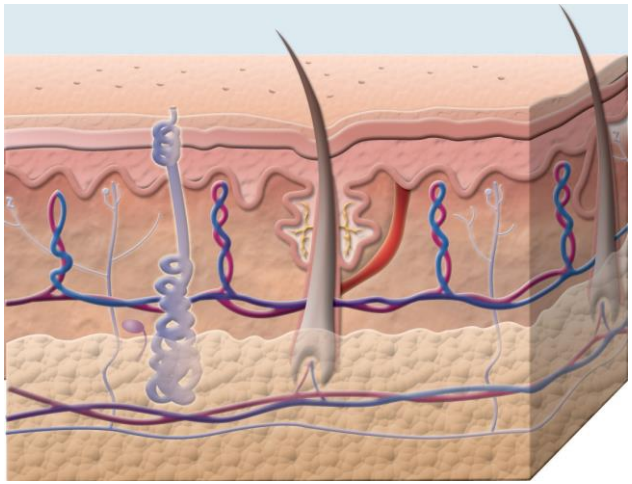
Skin Structure

Full thickness skin

Epidermis

Dermis

Hypodermis



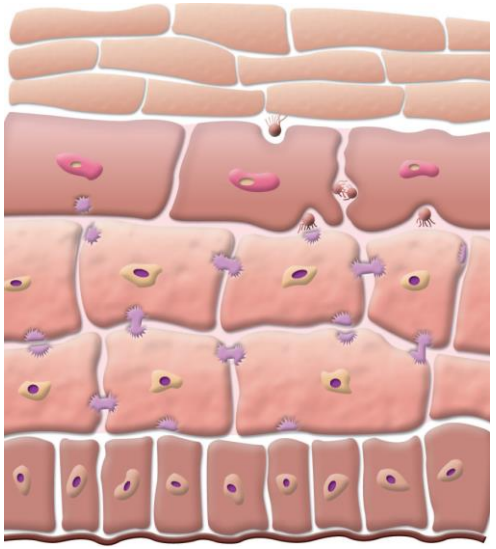
Epidermis

Stratum corneum

Stratum granulosum

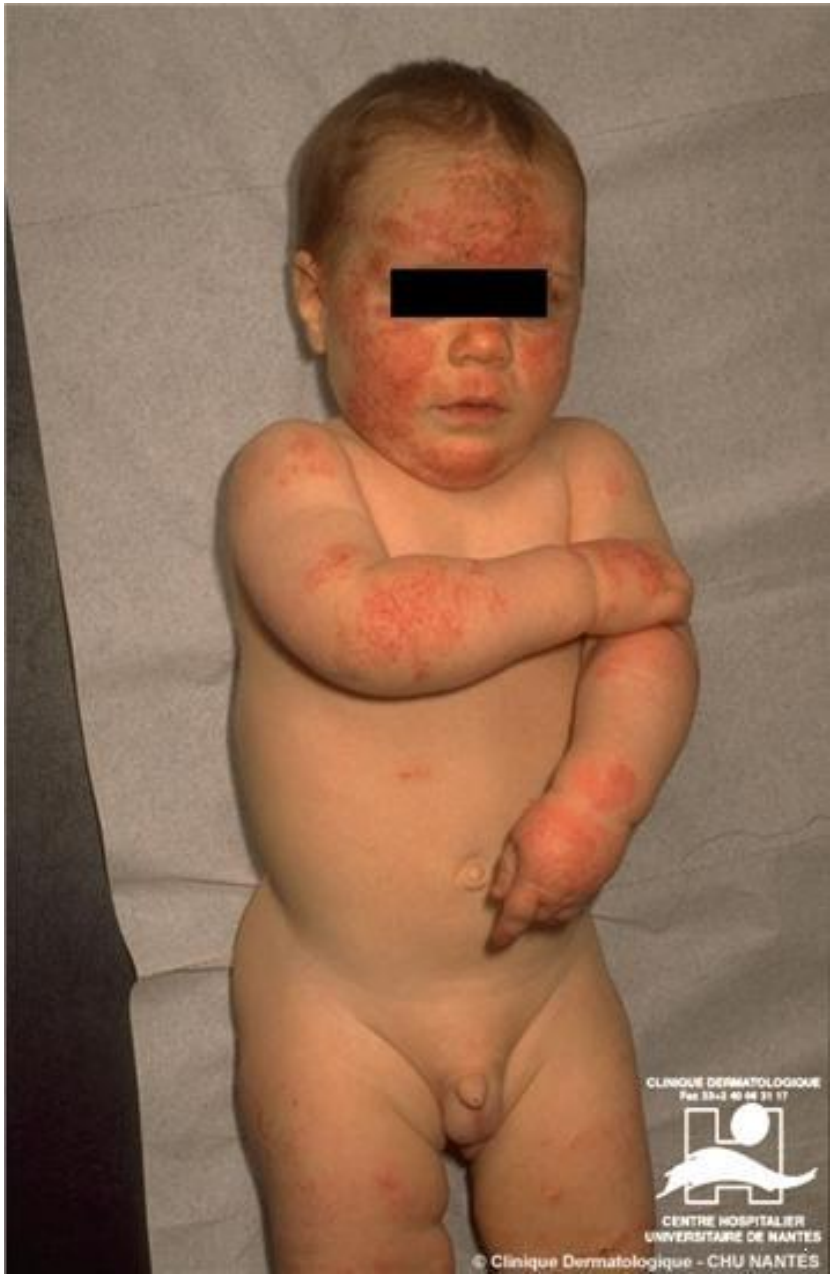
Stratum spinosum

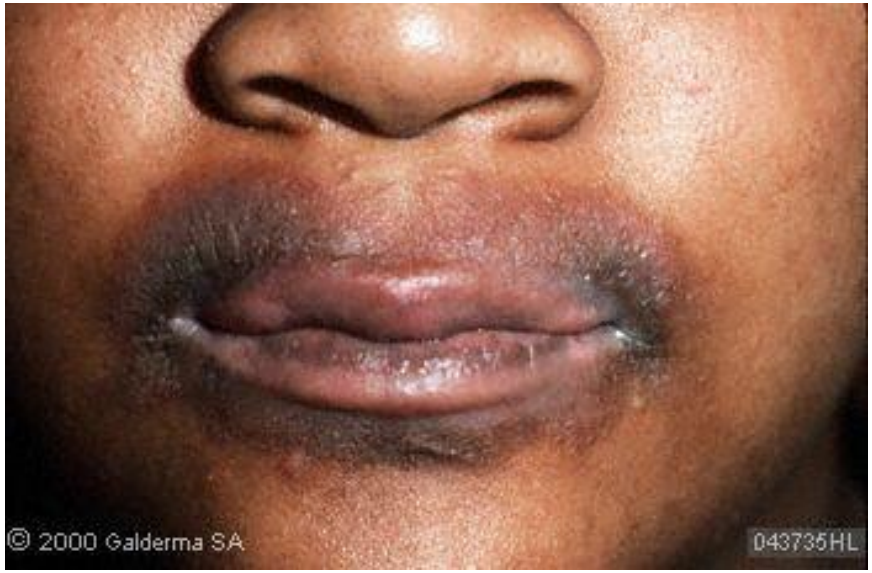
Stratum basale

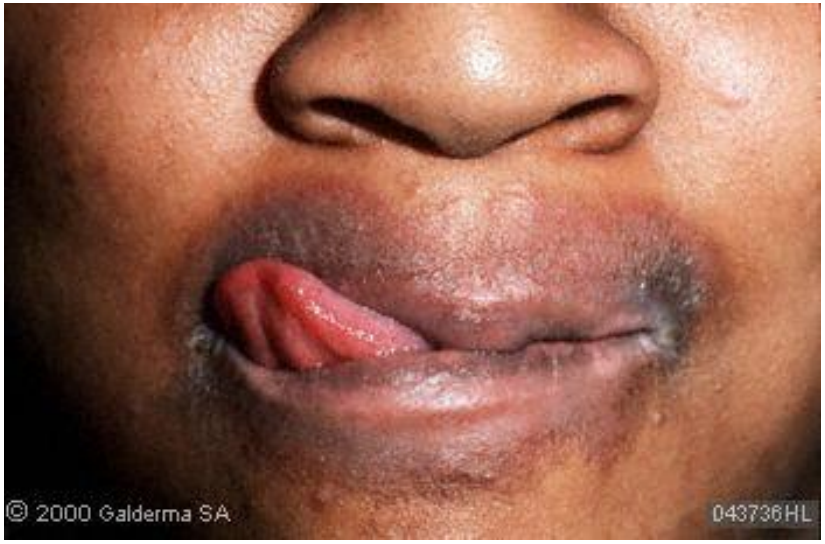


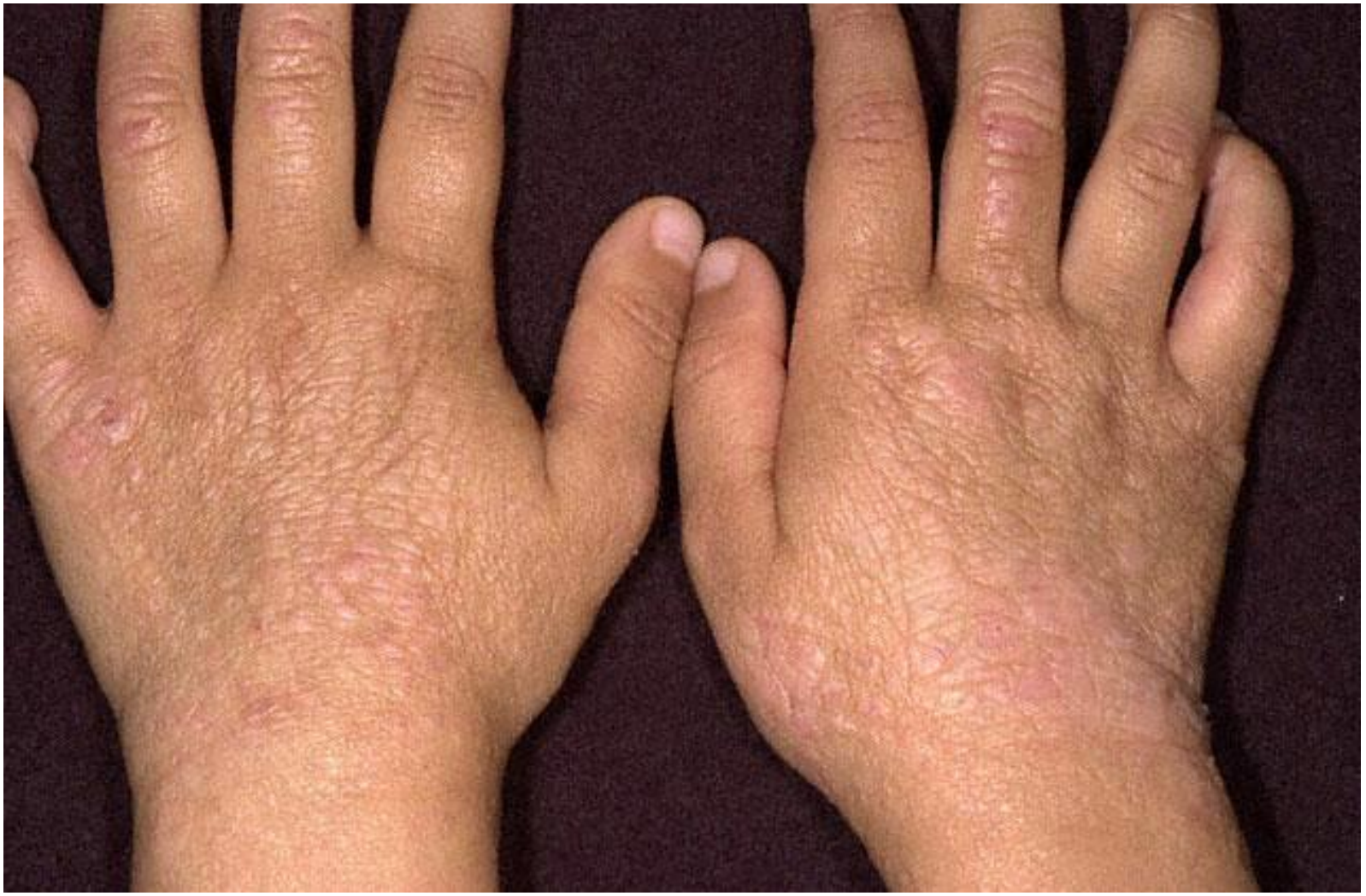
Exogenous Eczema

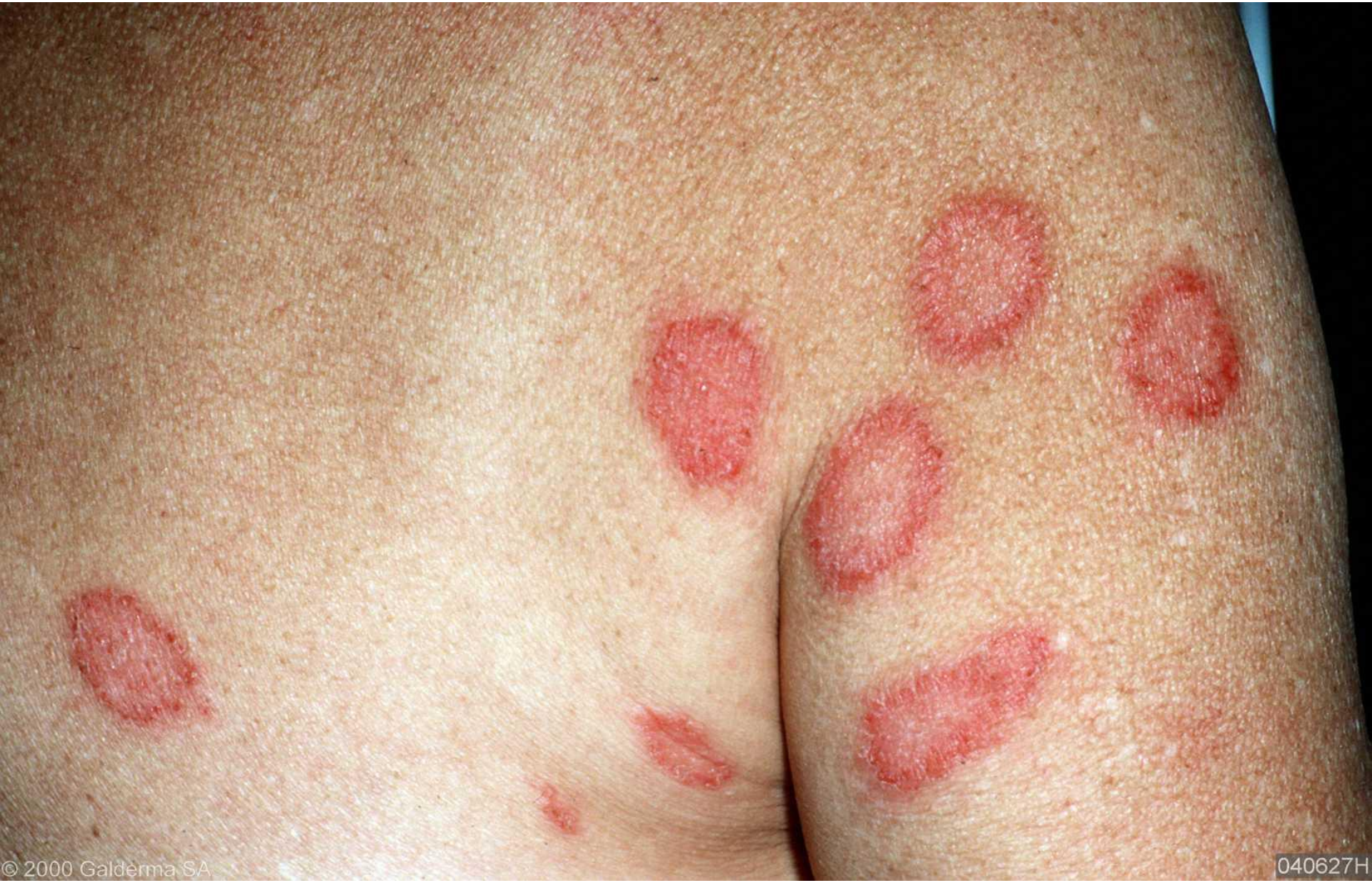
- Irritant Contact dermatitis
- Allergic Contact dermatitis


CLINIQUE DERMATOLOGIQUE
CENTRE HOSPITALIER
UNIVERSITAIRE DE NANTES
© Clinique Dermatologique - CHU NANTES


© 2000 Galderma SA
043735HL


© 2000 Galderma SA
043736HL

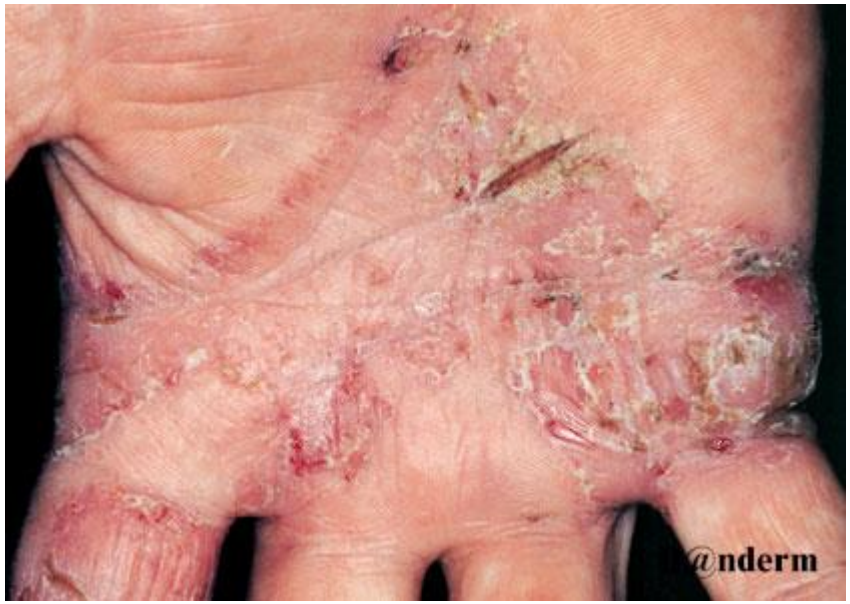


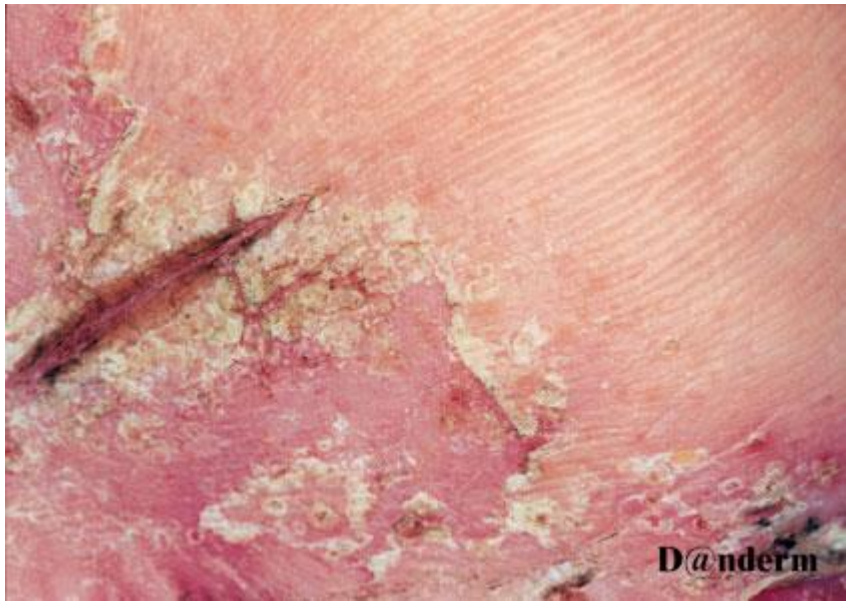


Endogenous Eczema

- Atopic eczema
- Discoid eczema
- Seborrhoeic eczema
- Gravitational eczema
- Aestiototic eczema
- Endogenous eczema on palms and soles

Acute &Chronic hand eczema





Endogenous Eczema on hands &soles

- Not related to any external factors
- Long-term treatment with potent or very potent topical corticosteroids
- Alitretinoin (Toctino) – retinoid licensed for chronic hand eczema
- Can be acute with blisters - pompholyx

Treatment

Use a stepped approach for managing atopic eczema:

- tailor treatment step to severity
- use emollients all the time
- step treatment up or down as necessary

Provide:

- information on how to recognise flares
- instructions and treatments for managing flares

Topical Corticosteriods

- Ointments – more greasy, use when skin is dry
- Creams – less greasy, use on wet or weeping lesions
- Scalp preparations
- Additives – salicylic acid (Diprosalic), antibiotics (Fucibet, Betnovate C, Dermovate NN), antifungals (Aureocort, Daktacort)
- Potency

Mild atopic eczema	Moderate	Severe
Emollients	**Emollients**	**Emollients**
Mild potency topical Corticosteroids	**Moderate potency topical corticosteroids**	**Potent topical corticosteroids**
	Topical calcineurin inhibitors	**Topical calcineurin inhibitors**
	Bandages	**Bandages**
		Phototherapy
		Systemic therapy

Finger tip unit

- Fingertip guide – 1 fingertip unit (FTU)= ½ g
- Average adult (maximum per application)

  face & neck = 2 ½ FTU

  Trunk front = 7 FTU

  Trunk back = 7 FTU

  One arm = 3 FTU

  One hand = 1 FTU

  One leg = 5 FTU

  One foot = 2 FTU
- Long & Finlay (1991)

Frequency

- "…no more frequently than twice daily, once daily is often sufficient" BNF 64
- No convincing evidence that more than once daily application more effective than once daily application Williams & Grindlay 2008
- Use once a day

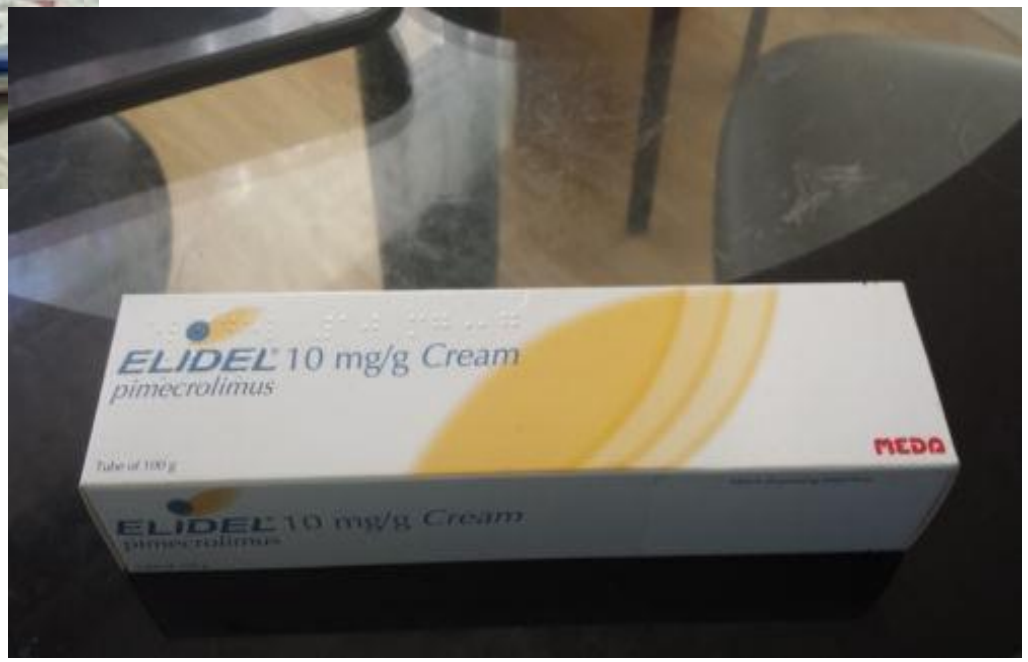
How long to apply for

- General advice is 7-14 days
- Reduce frequency or potency after initial period
- If no improvement then review treatment and/or diagnosis
- Intermittent long term treatment twice weekly can help reduce relapse rate Peserico et al 2008

Topical Calcineurin inhibitor

- Use on moderate eczema that has not responded to topical steroids or on areas where topical steroids are likely to be most damaging (sensitive areas)
- Pimecrolimus face (esp children)
- Tacrolimus body and face adults
- Use until lesions clear or have not improved for 2 weeks

Tacrolimus& Pimecrolimus



Tacrolimus&Pimecrolimus

- Are prescription-only , second line, non-steroid topical treatments for atopic eczema launched onto the UK market in 2002.

1. Protopic ointment containing tacrolimus
2. Elidel cream containing pimecrolimus

- are topical immunomodulators and belong to the class calcineurin inhibitors.
- reduce inflammation (pain, heat, redness and swelling) through the suppression of T-lymphocyte responses, a different mechanism of action to topical corticosteroids.
- have similar mode of action
- have different licensed indications

TCIs - Benefits to topical TCSs

- Have large molecular structures not significantly absorbed into the bloodstream, less likely than steroids to cause systemic side-effects. (Pimecrolimus molecule is larger than Tacrolimus).
- No effect on collagen in the skin so no local skin thinning (associated with steroids)
- Can be applied to delicate areas of skin such as the face, eyelids, neck and skin folds

Tacrolimus

It is a macrolide lactone discovered in 1984 from the fermentation broth of a Japanese soil sample that contained the bacteria *Streptomyces tsukubaensis*. (the name tacrolimus is derived from 'Tsukuba macrolide immunosuppressant)

Tacrolimus was first approved in 1994 (USA) for use in liver transplantation.

Tacrolimus: 2 strengths 0.1% & 0.03%

- Both strengths are licensed for adults (
- 16 years and above)
- The lower strength (0.03%) is only licensed for children aged 2 years and older.

- Tacrolimus is applied as a thin layer to affected areas of the skin twice daily and may be used on any part of the body, including the face, neck and flexural areas
- Emollients should not be applied to the same area within 2 hours of applying tacrolimus

Side effects

- burning sensation
- pruritus, erythema,
- Skin infections (including folliculitis and rarely impetigo, herpes simplex and zoster and molluscum contagiosum)
- papilloma (rarely)
- local reactions such as pain, paraesthesia, peeling, dryness, oedema
- worsening of eczema

Pimercolimus

- Similar mode of action to tacrolimus but more selective, with no effect on dendritic (Langerhans) cells
- It has lower permeation through the skin than topical steroids or topical tacrolimus
- Pimecrolimus does not produce skin atrophy

Pimecrolimus 1% Cream

Licensed in patients with mild to moderate atopic eczema aged 2 years and older.

- For short-term treatment of signs and symptoms and
- Intermittent long-term treatment to prevent flare-ups.

BAD patient information leaflet

- Generally use twice daily (but as instructed by your doctor)
- For maintenance twice weekly but revert to twice daily for flares
- Occasionally used with moderately potent topical steroids
- Do not use on infected skin or 2 weeks prior or 4 weeks after vaccinations
- Not recommended if pregnant, breastfeeding or have weakened immune system
- Minimise exposure to sunlight
- Mentions unknown risk of skin cancers or lymphoma and quotes 2009 study indicating 4 year use and no increased risk

Martins et al 2015 tacrolimus Cochrane review

- Treatment regimens were once or twice daily!
- 0.1% tacrolimus is more effective than pimecrolimus, 0.03% tacrolimus and mild TCSs
- 0.1% tacrolimus is equivalent to moderate and potent TCSs
- No evidence to support risk of malignancy or skin atrophy

Role of antihistamines

- What is their place in eczema care?
- Only effect is if they make someone drowsy and therefore more able to sleep.

Bandages&Clothing

NICE QS 44

- Statement 1
- Children with atopic eczema are offered, at diagnosis, an assessment that includes recording of their detailed clinical and treatment histories and identification of potential trigger factors.
- Statement 2
- Children with atopic eczema are offered treatment based on recorded eczema severity using the stepped-care plan, supported by education.
- Statement 3
- Children with atopic eczema have their (and their families') psychological wellbeing and quality of life discussed and recorded at each eczema consultation.
- Statement 4
- Children with atopic eczema are prescribed sufficient quantities (250-500 g weekly) from a choice of unperfumed emollients for daily use.
- Statement 5
- Children with uncontrolled or unresponsive atopic eczema, including recurring infections, or psychosocial problems related to the atopic eczema are referred for specialist dermatological advice.
- Statement 6
- Infants and young children with moderate or severe atopic eczema that has not been controlled by optimal treatment are referred for specialist investigation to identify possible food and other allergens.
- Statement 7
- Children with atopic eczema who have suspected eczema herpeticum receive immediate treatment with systemic aciclovir and are referred for same-day specialist dermatological advice.

- National Eczema Society www.eczema.org
- Eczema outreach Scotland www.eczemaoutreachscotland.org.uk
- Nottingham support group for carers of children with eczema www.nottinghameczema.org.uk

ACNE

- Acne is a common skin disease (acne = acne vulgaris)
- Estimates of incidence in western industrialised cultures vary from 50% - 95% of the population
- Moderate to severe acne ranging from 20% - 35% of the population (Nast et al 2012)

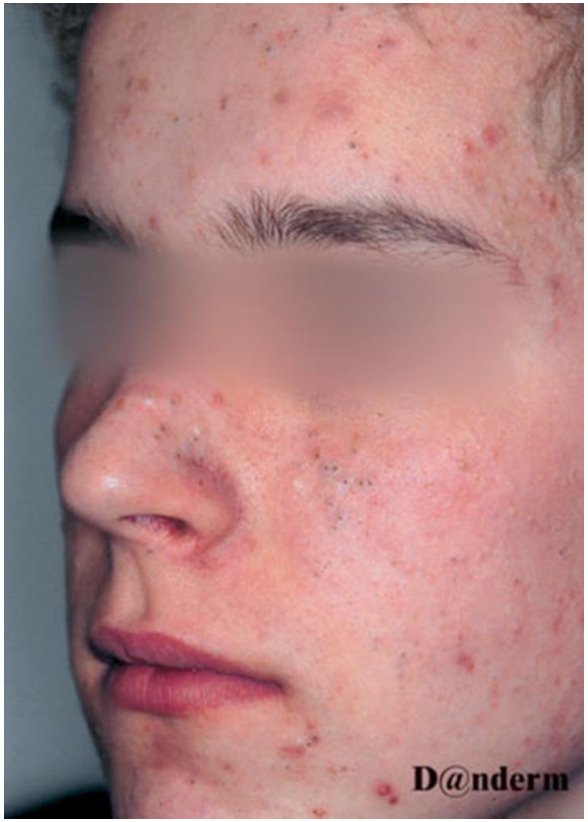
Mechanism

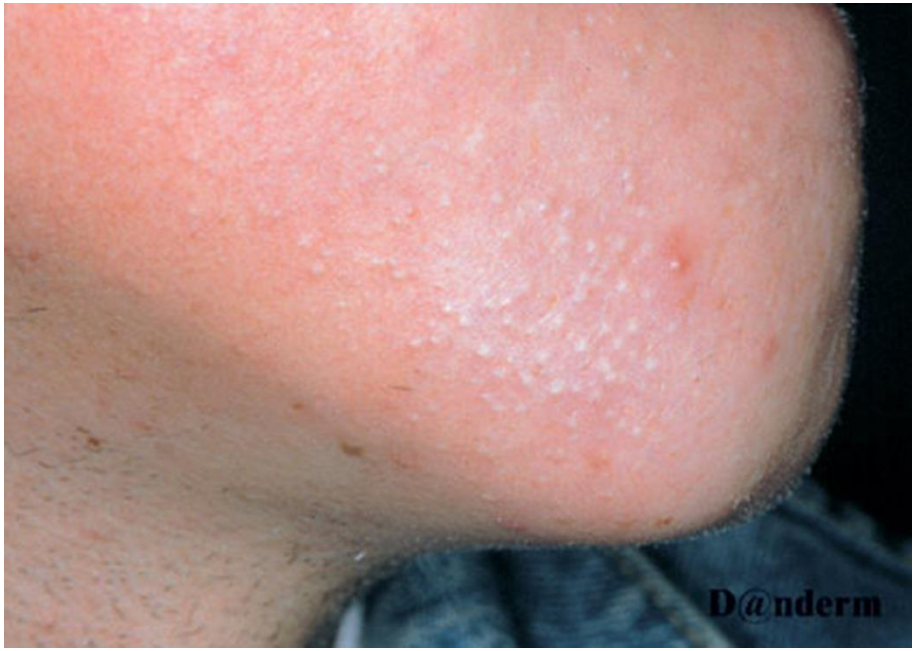
- Androgens stimulate sebum production
- Not usually higher levels of androgens but more sensitive sebaceous glands
- Abnormal shedding of keratin cells plugging hair follicles microcomedones (sub clinical)
- *Propionibaterium acnes* flourishes in the sebum-rich environment in blocked hair follicles
  release of inflammatory mediators – leak into surrounding dermis, more inflammation involving white blood cells
- Inflammatory lesions

Treatment

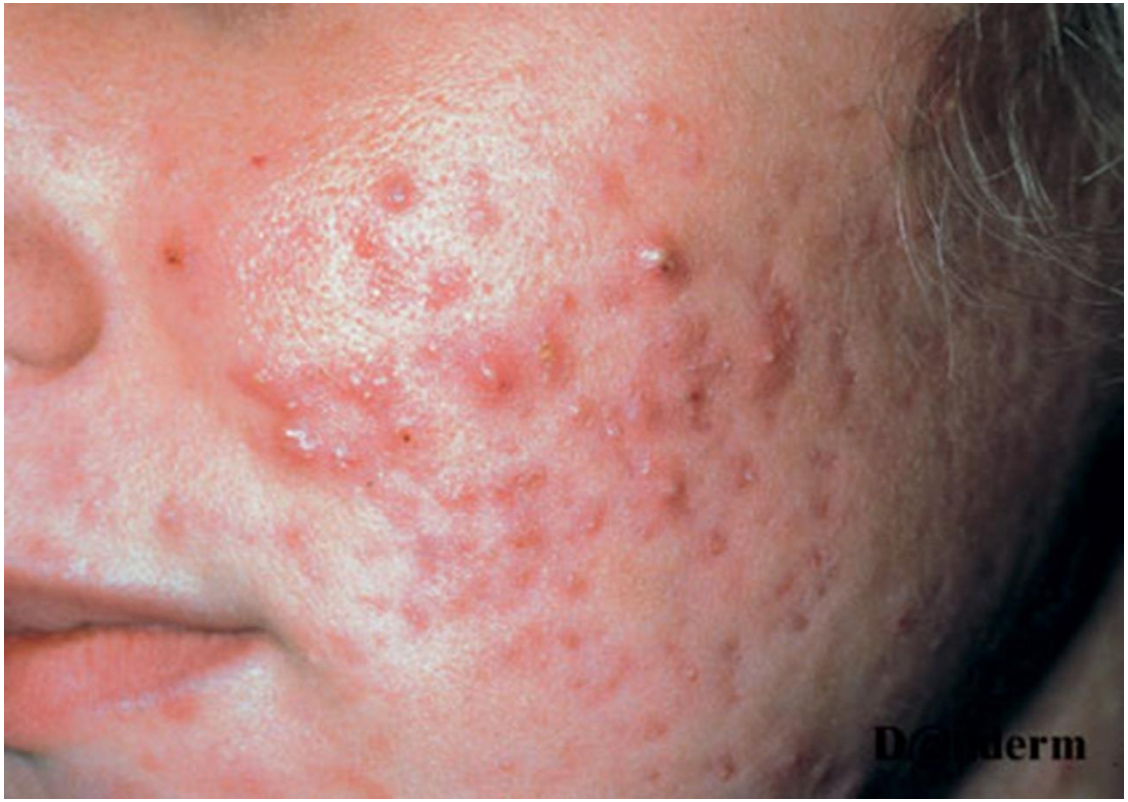
- Aims of treatment:
  - Reduce bacteria in the hair follicle
  - Normalise keratin cell formation in hair follicle
  - Inhibit sebaceous gland
- Decisions usually based on disease severity
- But also think patient adherence
- General skin care

Comedonal Acne

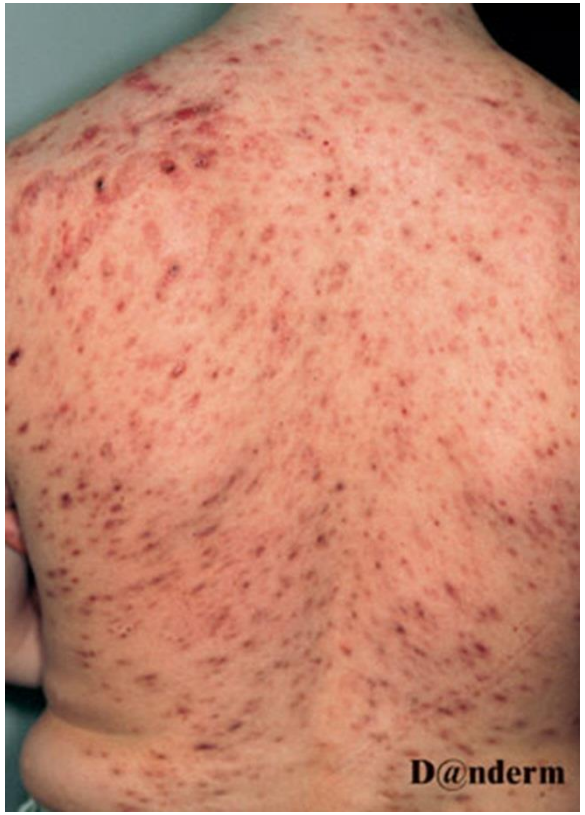


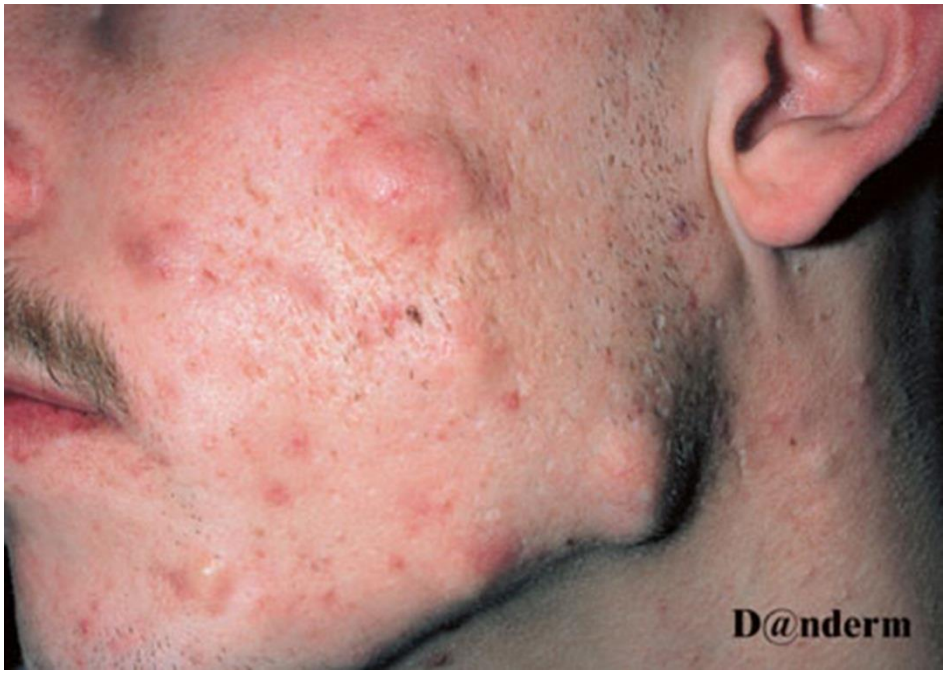


Papulopustular Acne

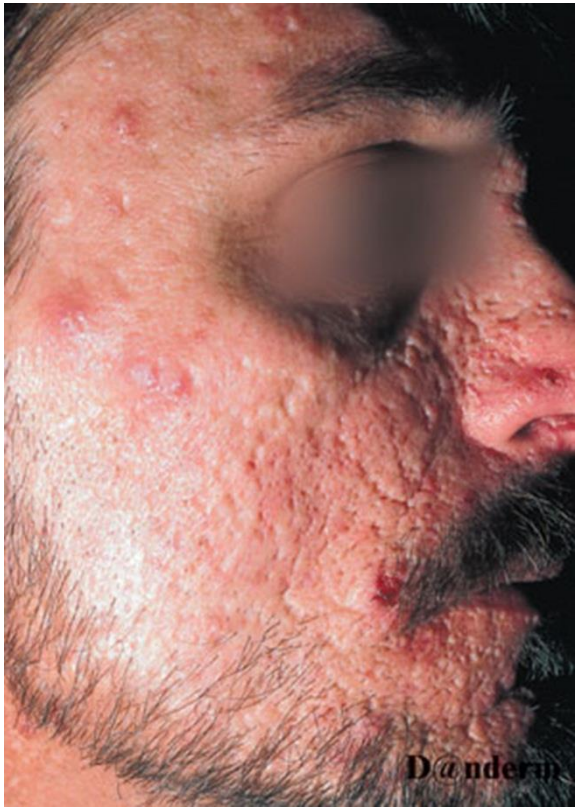


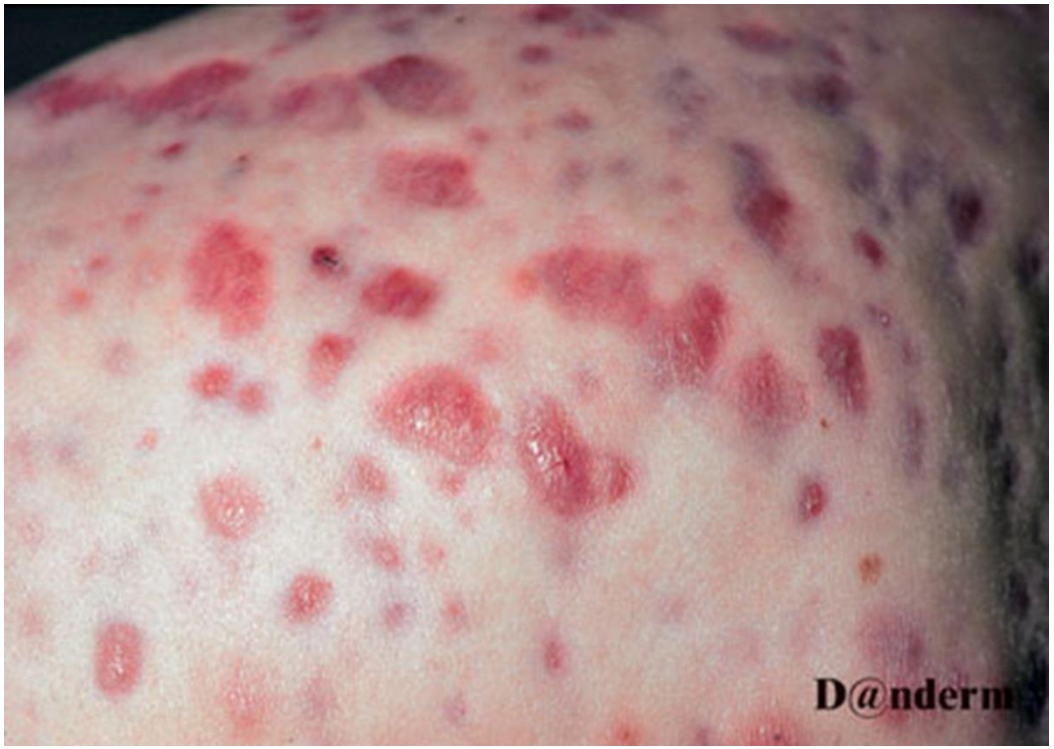
Nodular/Conglobate





Acne scarring





Acne grading

1. Comedonal acne
2. Mild-moderate papulopustular acne
3. Severe papulopustular acne and moderate nodular acne
4. Severe nodular and conglobate acne

Assessment

- All acne-prone areas
- Previous treatments and tolerability
- Any triggers?
- Family history
- Age of onset
- Impact on quality of life (DLQI, CADI)
- Depression screening

Treatments

- Benzoyl peroxide (BPO)
- Topical retinoids
- Topical azelaic acid
- Topical antibiotics
- (Topical Dapsone)
- Oral antibiotics
- Oral antiandrogens
- Oral retinoids (isotretinoin)

BPO

- Antimicrobial properties
- Irritant (as can most of the topical treatments for acne)
- Bleach – it is important to warn patients that it will bleach towels, clothes, bed linen and anything it comes into contact with (including hair)
- Start in small areas on alternate days and built up gradually to daily use. Commencing treatment with a preparation with a lower content of BPO initially may also help tolerability
- Photosensitiser
- Also has effect on keratin shedding

Topical Retinoids

- Reduce inflammatory processes in acne lesions and have an effect on the abnormal keratin processes in the epidermis
- Adapalene should be selected over tretinoin and isotretinoin topically as it shows the best tolerability/safety profile and patient preference favours it
- Side effects of topical retinoids are similar to BPO except that they do not bleach
- Not recommended in pregnancy as there may be some systemic absorption but can be used during breastfeeding as the absorption is likely to be minimal
- Fixed dose preparation of adapalene and BPO (marketed as Epiduo in the UK) has a high strength of recommendation for mild to moderate papulopustular acne

Topical antibiotics

- Due to the risk of developing antibiotic resistance, topical monotherapy with antibiotics is not recommended
- No evidence for the use of topical antibiotics in comedonal acne
- High strength evidence for the use of fixed dose clindamycin and BPO (marketed as Duac Once Daily in the UK) for the treatment of mild to moderate papulopustular acne
- Not for use as maintenance therapy

Oral antibiotics

- Comparable efficacy of doxycycline, lymecycline, minocycline and tetracycline orally
- All slightly more effective than clindamycin and erythromycin
- Doxycycline and lymecycline are preferred due to their tolerability and safety
- Minocycline associated with more side effects
- Doxycycline is photosensitiser
- Tetracyclines not for under 12s, pregnant or breastfeeding women
- Medium strength evidence for oral antibiotics plus adapalene for mild to moderate and severe papulopustular acne

Oral Isotretinoin

- High strength evidence for its use in severe papulopustular, nodular and conglobate acne
- BAD guidance on introduction and safe use
- Contraindicated in hypervitiminosis A, uncontrolled hyperlipidaemia and airline pilots
- Teratogen (pregnancy prevention plan)
- Mood changes

Acne	High	Medium	Low
Comedonal	none	Topical retinoids	Topical BPO Topical azelaic acid
Mild –moderate papulopustular	Topical adapalene + BPO Topical clindamycin +BPO	Topical azelaic acid BPO Retinoids Systemic abs +adapalene Topical clindamycin +tretinoin (2016 update)	Topical erthromycin +tretinoin Topical isotretinoin+ erythromycin . Systemic abs +adapalene .(+/-)
Severe papulopustular	Oral isotretinoin monotherapy	Systemic abs +topical adapalene (+/-BPO) or + topical azelaic acid	Oral antiandrogens+syse mic abs.

Support for patients

- http://acneacademy.org/ primarily designed for patients and gives this information: 'Through the **Acne Academy** website you can access all the information you need, compiled and written by our independent Expert Panel, to help you manage your acne, including advice on how to talk to parents and/or your GP'
- www.samaritans.org Samaritans are there to 'support anyone in distress, around the clock, through 201 branches across the UK and Republic of Ireland.'
- www.changingfaces.org.uk Changing faces are 'a charity for people and families who are living with conditions, marks or scars that affect their appearance.'
- www.kidscape.org.uk Kidscape is a charity supporting children and families in the area of bullying and abuse. Its mission is 'to ensure children live in a safe and nurturing environment. By providing training, support and advice to children, parents, schools and those in professional contact with young people, we enable them to gain knowledge and develop the confidence and skills to challenge abuse and bullying in all its forms'.
- http://www.dermatology.org.uk/quality/quality-life.html is the site for validated quality of life measurements

Psoriasis

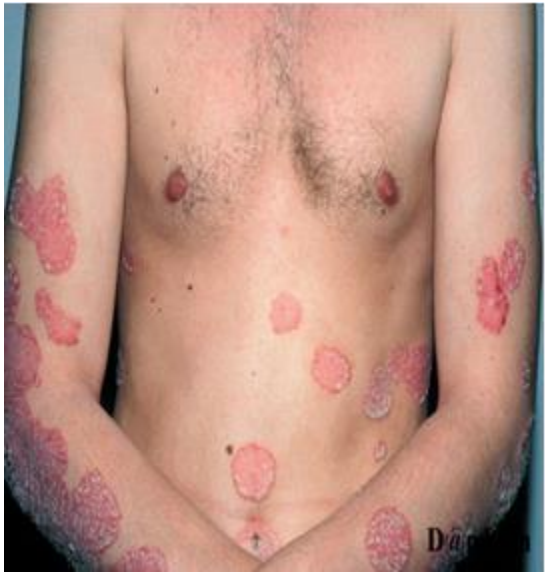
- The Psoriasis Association (n.d.) estimates that psoriasis affects between 1% and 3% of the UK population - up to 1.8 million people.
- Schofield et al (2011) found there were 448 episodes per 10,000 of people consulting their GP for psoriasis.
- Schofield et al (2011) also cite patients with psoriasis make up between 5% and 11% of patients attending specialist (secondary care) dermatology services.

Clinical features

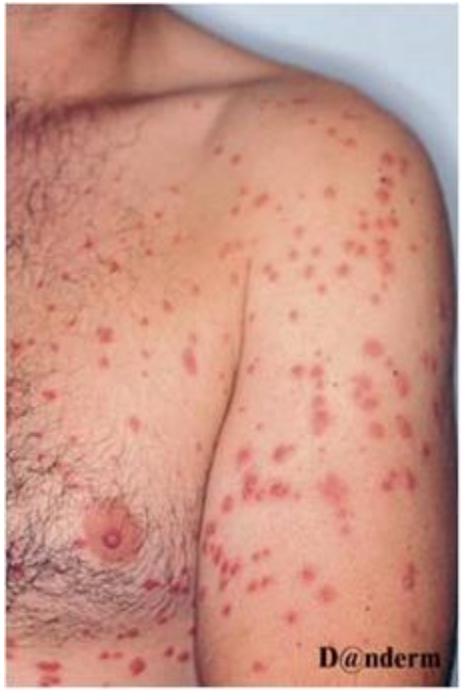
- Thickened epidermis
- Absence of granular layer
- Retention of nuclei in stratum corneum (parakeratosis)
- Accumulations of polymorphs in stratum corneum (micro-abcesses)
- Dilated capillaries in upper dermis

(Graham-Brown 2011)

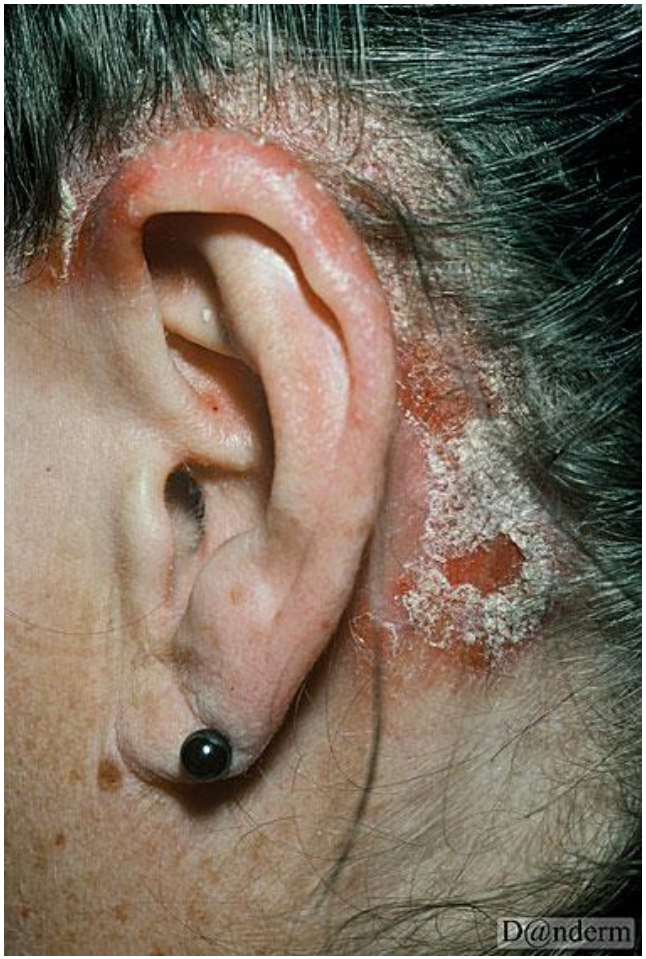
Presentations
Classic plaque-often on extensor surfaces



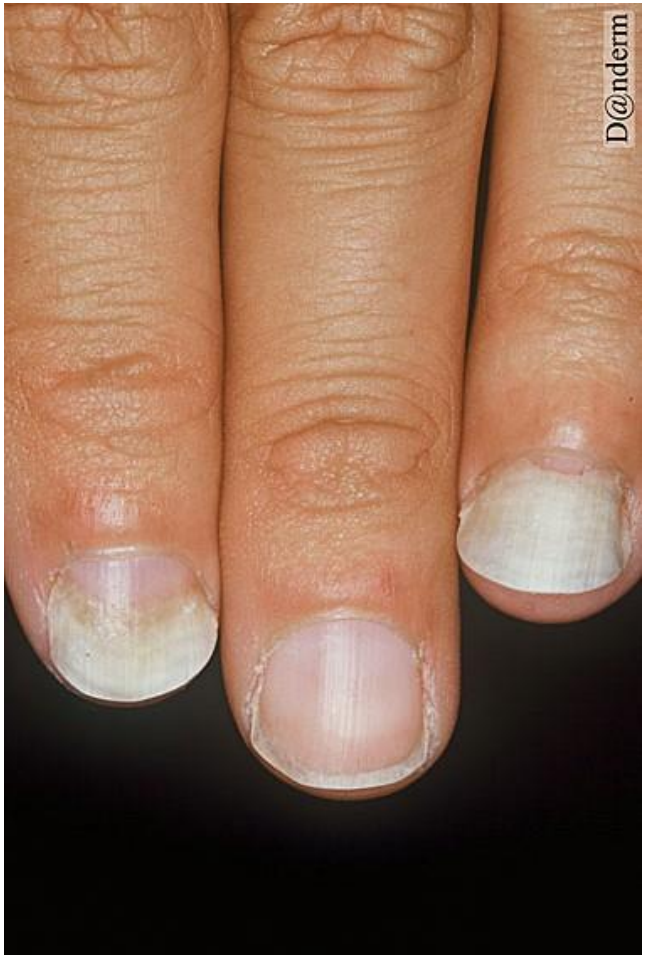
Guttate



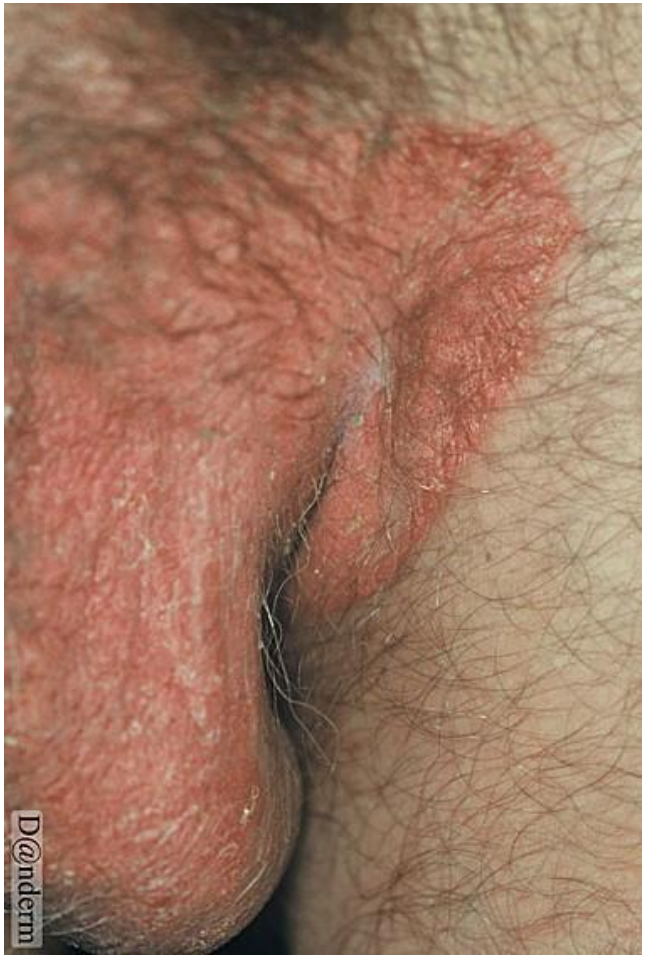
Scalp psoriasis



Nail psoriasis



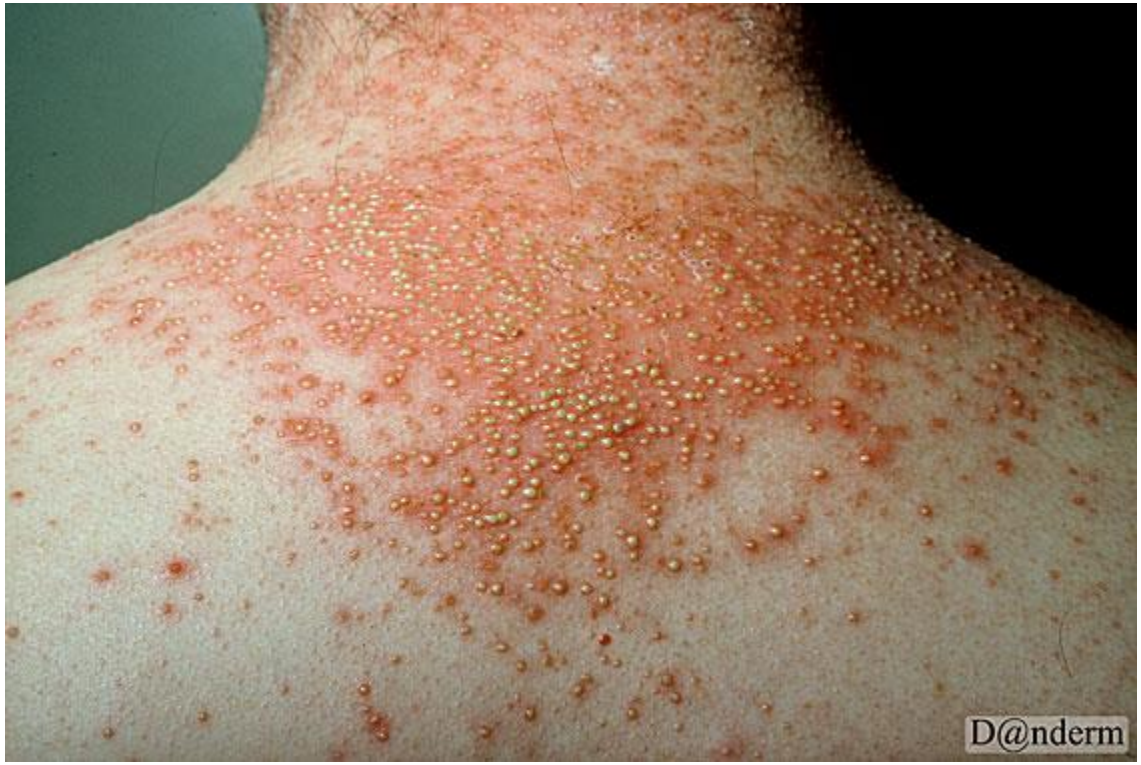
Flexural psoriasis(inverse psoriasis)



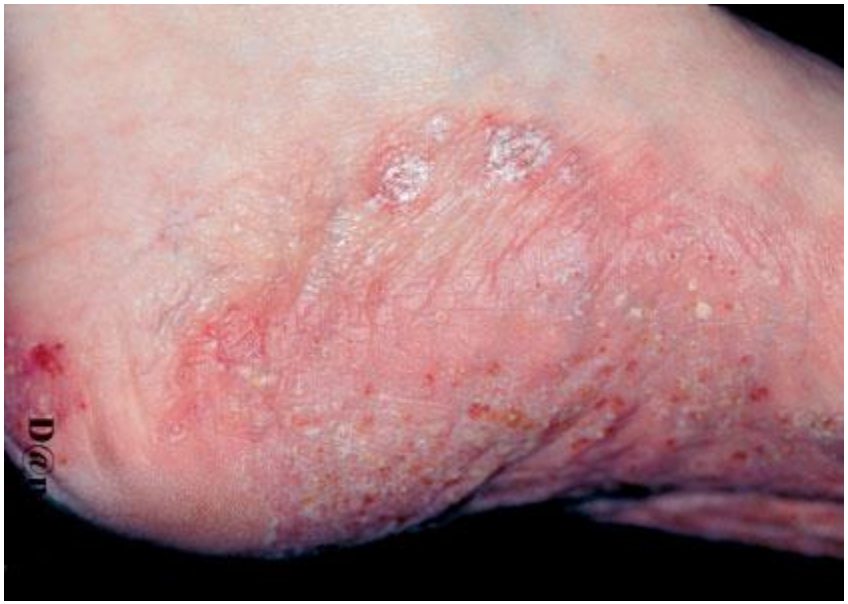
Erythrodermic

- Develops slowly via unstable plaquepsoriasis or very rapidly occasionally as a new presentation.
- Red flag condition

Pustular
Acute and generalised.
Red Flag



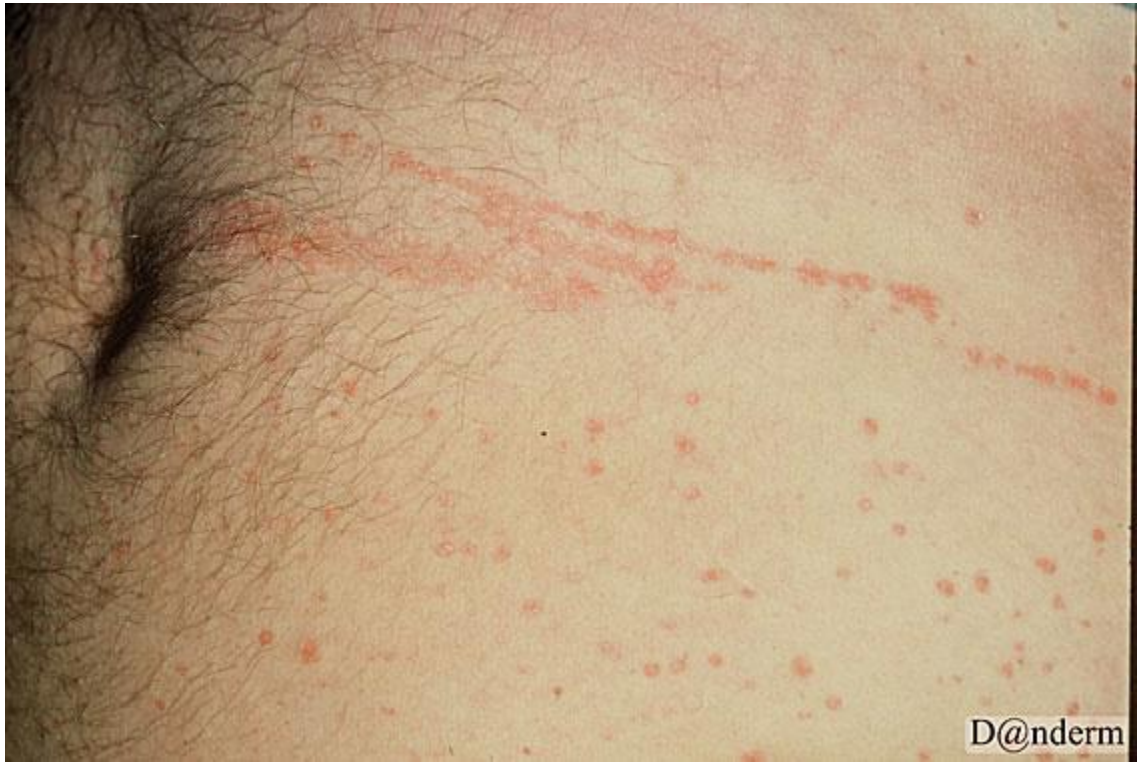
Palmo plantar pustular psoriasis



Triggers

- Trauma
- Infection (esp strep throat infection)
- Drugs (lithium, chloroquinine, beta blockers)
- Ultraviolet light
- Stress

Koebner phenomenon



Co-morbidities

- NICE CG 153 (2012) advises that people with any type of psoriasis should be assessed for psoriatic arthritis and co-morbidities specifying cardiovascular risk, giving links to other NICE guidance such as NICE CG 67 (2008) (lipid modification).
- NICE CG153 (2012) people with any type of psoriasis should be assessed for depression alongside assessing disease severity and impact
- NICE CG91 (2010) (depression in adults with a chronic physical health problem) depression is two to three times more common in people with a chronic physical health problem than in those in good physical health

Assessment of symptoms

- NICE CG 153 (2012) at each visit assess using:
- Physician's global assessment and patient's global assessment (each classifying as classify as clear, nearly clear, mild, moderate, severe or very severe)
- DLQI
- In specialist settings use PASI

Topical preprations

- Emollients
- Topical corticosteroids
- Vitamin D analogues – calcipitriol (Dovonex, Dovobet, Enstilar), calcitriol (Silkis), tacalcitol (Curatoderm)
- Coal tar – crude coal tar, Exorex, Psoriderm, Cocois, Sebco
- Dithranol – Dithrocream, Micanol
- Flexural areas and face – mild-moderate topical corticosteroids (BNF 2012)
- Scalp – tar shampoo, keratolytic, topical corticosteroid or vitamin D analogue
- Cochrane Skin Group – 23 reviews
- Unstable psoriasis – refer
- NICE CG153 (2012)

Emollients

- Improve hydration
- Reduce scale
- May reduce itch
- Improve comfort

Topical therapy (NICE 153 2012

- Offer potent TCS OD plus vitamin D or analogue OD (applied separately) for up to 4 weeks (adults trunk and limbs)
- If ineffective after a max of 8 weeks offer vitamin D or analogue alone applied twice daily
- If ineffective after 8-12 weeks offer either a potent TCS applied twice daily for up to 4 weeks or a coal tar prep applied once or twice daily
- If this cannot be used or once daily prep would improve adherence (in adults) offer combined calcipitriol monohydrate and betamethasone diproprionate OD up to 4 weeks
- Review 4 weeks after starting new topical treatment (adults), 2 weeks (children)

Topical treatment – face, flexures, genitals

- Mild or moderate TCS once or twice daily up to 2 weeks
- If ineffective or risk of TCS-induced side-effects offer calcineurin inhibitor twice daily for up to 4 weeks (unlicensed indication)
- Do not use potent or very potent TCS in these areas

Summary of Cochrane Skin Group: Topical treatments for chronic plaque psoriasis (Mason et al 2013)

- Vitamin D analogues compared with topical corticosteroids showed similar effects except on the scalp where topical corticosteroids appeared to work better. Topical corticosteroids are less likely than vitamin D analogues to cause skin irritation (people are more likely to stop using vitamin D analogues)
- Vitamin D analogue combined with topical corticosteroid compared with vitamin D analogue or potent topical corticosteroid alone showed vitamin D analogue combined with topical corticosteroid to be more effective
- Vitamin D analogue compared with tar products showed vitamin D analogue to be more effective
- Vitamin D analogue compared with dithranol was inconclusive
- Tazarotene (topical retinoid) compared with a placebo was more likely to cause local adverse events (people with psoriasis were more likely to stop using it)

Which Vitamin D analogue

- Work by inhibiting cell proliferation and promoting normal cell maturation
- Systematic review suggested that calcipotriol was more effective than tacalcitol and no significant difference to calcitriol (REF: Mason et al 2009)
- Calcipotriol is available as a generic in a ointment

Vitamin D3 Analogue	Amount used	Special instructions
Calcitriol ointment (Silkis ™)	• No more than 210g/week • No more than 35% body surface area • Twice daily application sparingly	• Use with caution on those who are on treatment that affects calcium levels e.g. thiazide diuretics • Contraindicated for people with liver or kidney problems and those being treated for calcium homeostasis • Not for use in children • Use on face with caution

Vitamin D3 Analogue	Amount used	Special instructions
Calcipotriol (Dovonex ™ ointment and scalp application)	• No more than 100g/week (adult) • 75g/week (children over 12) • 50g/week (children 6-12) • Twice daily application (thickly)	• Avoid use on face • Avoid exposure to natural or artificial light • Contraindicated for patients with known calcium disorders • Can be used in children over 6

Vitamin D3 Analogue	Amount used	Special instructions
Tacalcitol (Curatoderm ™ lotion or ointment)	• 70g/week • Daily application	• Contraindicated for patients with known calcium disorders • Not recommended for use in children • Can be used on face and flexures

Vitamin D3 Analogue	Amount used	Special instructions
Calcipotriol and betamethasone diproprionate (Dovobet ™ ointment/gel)	• No more than 100g/week • No more than 30% of body surface area • Daily application • 4 weeks (children); 8 weeks (adult)	• As with Calcipotriol • Not to be used on infected skin • Not to be used under occlusion • Not for use in children under 18 • Not to be used in conjunction with other steroids

- Stinging
- Length of time to work
- How a plaque clears
- What is looks like once a plaque has cleared
- How to use with topical emollients

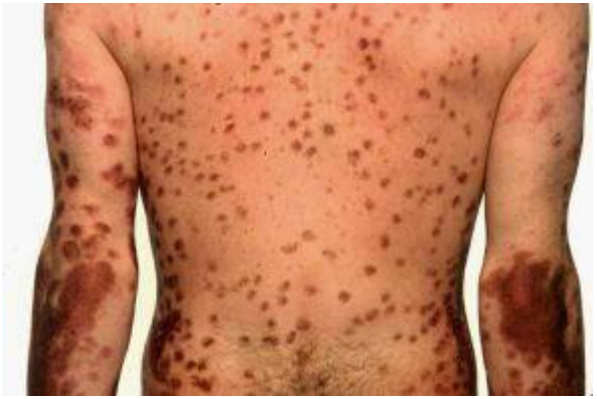
Tar based treatments

- Options are limited in the community to Exorex, Carbo-Dome, Clinitar or Psoriderm
- Alphosyl HC also available
- Used in widespread small lesions that are difficult to individually treat
- Cosmetic issues are considerable

Dithranol

- Successful treatment for single or limited well defined plaques
- Short-contact is often used
- Start at 0.1%
- Next strengths are 0.25%, 0.5%, 1% and 2%
- Staining and soreness can be an issue

Post -dithranol treatment



Scalp psoriasis

- First descale the scalp using tar and salicylic acid preparation (e.g. Cocois or Sebco)
- Wash out with tar-based shampoo. May need physical removal of scale
- Thin scaly plaques will respond to calcipotriol scalp application (or calcipotriol+betamethasone)
- Steroids also helpful (potent are first line in psoriasis guideline). Consider preparation.
- Maintenance with tar based shampoo

Practical tips

- Use hydrocolloid for lone lesion especially one subject to lots of trauma
- Prevent repeated rubbing/trauma to stop Koebnerisation
- Consider dry/wet wrapping if itch a problem
- Tubigrips may be helpful on lower limbs to speed up plaque resolution
- Treat nails with calcipotriol scalp application

- Phototherapy
- Systemic treatments
- Acitretin
- Ciclosporin
- Methotrexate
- Biologics

Resources

- The psoriasis association: www.psoriasis-association.org.ukw.psoriasis-association.org.uk/.org.uk/
- Psoriasis and psoriatic arthritis alliance: www.papaa.org