

## Psoriasis Overview and Emerging Therapies


### Psoriasis – making the diagnosis

Important characteristics:

- Often symmetrical distribution
- Well defined lesions with a characteristic silvery scale
- Extensor surfaces typically affected
- Loss of scale in body folds

#### Psoriasis Overview


- Psoriasis is an autoimmune condition resulting from chronic activation of the immune system
- Activation of the immune system results in an excess of keratinocytes that mature at a rapid rate
- Usually the skin takes approx. 28 days to renew itself, in patients with psoriasis it only takes ~3-4 days.
- This causes the signs and symptoms characteristic of Psoriasis:
  - Redness
  - Thickened skin
  - Scaling



Mentzer A et al. JAAD 2008;58:626-50; Pictures on-line at google images

#### Psoriasis Overview

- Occurs most commonly in late teens or early 50's
- Most common type of psoriasis is plaque psoriasis<sup>1</sup>
- Prevalence in Australia is 1-3%<sup>2</sup>
- Possible genetic association – family history<sup>1</sup>
- Up to 30% of patients with Psoriasis can develop Psoriatic Arthritis (PsA)<sup>3</sup>
- In 75% of cases, psoriasis precedes the joint disease in PsA<sup>4</sup>




1. Mentzer A et al. JAAD 2008;58:626-50. 2. Raychaudhuri et al., JEADV 2001; 15:20-23. 3. Gottlieb A et al. JAAD 2008;58:851-64. 4. www.australiandoc.com.au 19-02-2010; Pictures on-line at google images

### Psoriasis is a hereditary disease

- A predisposing genotype for psoriasis can be inherited
- One-third of patients with psoriasis report relatives with disease
- Inheritance is polygenic and psoriasis is a multifactorial disease


### Psoriasis the commonest autoimmune condition to affect humans

- Previously psoriasis was thought to be due to an abnormal response to injury
- Evidence now that *psoriasis is a T- cell mediated autoimmune disorder*




### Psoriasis - triggers & aggravating factors

- **Infection**  
Streptococcal  
HIV
- **Drugs**  
Lithium  
B-blockers  
Antimalarials  
Interferon  
ACE inhibitors  
Corticosteroid withdrawal
- **Physical injury**
- **(Koebner phenomenon)**
- **Stress**
- **Excessive alcohol**



### Types of psoriasis

Morphology	Specific Sites
<ul style="list-style-type: none"> <li>• Plaque</li> <li>• Guttate</li> <li>• Erythrodermic</li> <li>• Pustular</li> <li>• Flexural</li> </ul>	<ul style="list-style-type: none"> <li>• Scalp</li> <li>• Palmo-plantar</li> <li>• Nail</li> <li>• Flexural</li> <li>• Genital</li> </ul>



### Nail psoriasis

- Onycholysis
- Pitting
- "Oil drop" spots
- Subungual hyperkeratosis
- Thickening & dystrophic nail plate
- Periungal psoriasis

### Psoriasis Co-morbidities

<ul style="list-style-type: none"> <li>■ PsA</li> <li>■ obesity</li> <li>■ hypertension</li> <li>■ diabetes</li> <li>■ hyperlipidemia</li> <li>■ metabolic syndrome</li> <li>■ cardiovascular disease</li> <li>■ Crohn's disease</li> <li>■ lymphoma</li> <li>■ multiple sclerosis</li> <li>■ increased mortality</li> </ul>	} immunopathogenic
<ul style="list-style-type: none"> <li>■ smoking</li> <li>■ alcoholism</li> <li>■ anxiety</li> <li>■ depression</li> </ul>	} psychosocial

Guenther L & Gulliver W. J Cutaneous Med Surg 2009;13(Suppl2):S77-87.

### How to assess psoriasis

- **Body Surface Area**
- **PASI score**
  - A scoring system based on erythema, scale, thickness and area
  - Possible scores 0 to 70
  - Used by PBS for access to biologic therapies
  - PASI > 15 severe psoriasis
- **Quality of Life (DLQI)\***
  - A validate research tool of ten questions
  - Possible score 0 to 30
  - DLQI > 5 indicate significant life impact

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### Psoriasis Treatments



**TOPICAL THERAPIES**■ **Topical corticosteroids**

Potent/very potent- trunk, limbs, scalp

Mild – face, flexures

Combination with non- steroidal topical therapies  
<100 g of moderate/high potency steroids/month

■ **Vitamin D3 analogs**

Calcipotriol, Tacalcitol, Calcitriol

100g/week Face and flexures to be avoided

■ **Coal tar**

LPC +SA

Staining of skin and clothing, local skin irritation

■ **Dithranol**

Dithranol in zinc oxide (Lassar's paste)

0.1- 0.6%

Short contact

■ **Tazarotene****Treatment of other forms of Psoriasis**■ **Guttate psoriasis**

Emollients

Topical steroids

Vitamin D3 analogs

NBUVB

■ **Chronic palmar- plantar psoriasis**

Potent/very potent steroids +/- occlusion

■ **Pustular and Erythrodermic psoriasis**

Potentially life threatening spectrum of diseases

In

**SPECIAL SITES**■ **Scalp psoriasis**

Formulation – lotions, gels, shampoos

**Mild- to – moderate scalp psoriasis**

Coal tar shampoos, Ketoconazole

Corticosteroids (potent/very potent)

Calcipotriol +betamethasone dipropionate gel

**Severe scalp psoriasis**

*Thick, adherent scale should be removed gently*

15-30% salicylic acid in mineral oil

Tar pomade (LPC 10%+SA 6% in acq cream/sorbolene)

**Scalp psoriasis**

Salicylic acid 30% in mineral oil left on for 15 mins to loosen the scales.

Patient is then asked to comb out the scales with a wide-toothed comb.

Patient is then to apply a tar pomade cream to be left on for 3 hours

Tar pomade consists of LPC 10% + SA 6% in sorbolene/acq cream.

This is then washed off using a tar based shampoo before going to bed.

**Flexural sites, the face and genitalia**■ **FACE**

Mild steroid +/- coal tar solution/antifungal agents

Tacrolimus, pimecrolimus

Methylprednisolone aceponate (Advantan)

■ **FLEXURAL**

Sec infection- bacterial/candidal

Topical steroid creams

Tacro/pimecrolimus

Weak antiseptic soaks (Burrows 1:40)

**TAR Preparations**

6% LPC, 3% Sal Acid in Aqueous cream/  
Sorbolene  
6% LPC, 3% Sal Acid in WSP  
10% LPC, 6% Sal Acid in Aqueous  
cream/Sorbolene/WSP  
1%-2% Crude Coal Tar in Aqueous  
cream  
5% Crude Coal Tar in Aqueous cream  
Tar/Dithranol Cream ( 10% LPC,  
Dithranol 0.1%, 6% Sal Acid in  
Sorbolene)

**DITHRANOL**

- Lower concentrations in long contact regimen  
*Dithranol 0.1 to 2% with Salicylic acid 2-5% in WSP*  
*Topically to lesions with care once daily*
- Higher concentrations in short – contact regimen  
*Dithranol 0.5 to 2% with Salicylic acid 2-5% in yellow soft paraffin, topically to lesions with care once daily for 30 minutes before washing off.*

**DITHRANOL**

- 0.1%/0.2/0.5/1% Dithranol, 3% Sal Acid Tar in WSP
- 2% Dithranol, 3% Sal Acid Tar in WSP
- 5% Dithranol, 3% Sal Acid Tar in WSP
- 0.5%- 2% Dithranol, in Lassar’s Paste

**Nail psoriasis**

General measures  
Treatment of sec infection  
Daivobet gel- nail folds  
Very potent topical steroids – Clobetasol 0.05%  
I/L KA 10mg/ml 1: 1 diluted with Xylocaine- PNF  
MTX  
Biologic agents

**PSORIASIS IN CHILDREN**

15% of cases of psoriasis in children <15yrs  
Infancy – nappy rash  
Flexural+ genital involvement  
Guttate psoriasis  
Treatment  
Topical steroids  
Coal tar  
Calcipotriol  
NBUVB

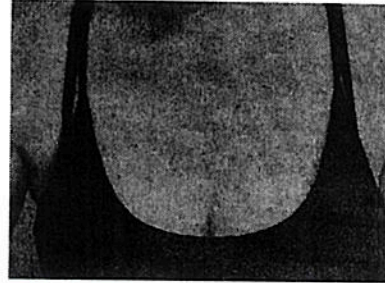
**PREGNANCY**

- Topical steroids  
Category A  
Hydrocortisone  
Triamcinolone  
Diprosone (betamethasone dipropionate)  
Betnovate (betamethasone valerate)
- Phototherapy  
NBUVB

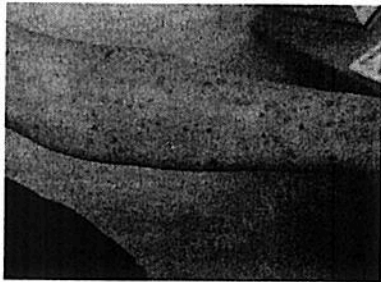
### Clinical diagnosis

- 19 yo University student
- Widespread non itchy rash trunk limbs for 12 days
- New spots appearing
- Very upset at the appearance and worried she is contagious
- PH tonsillitis 2 weeks ago treated with Augmentin
- Family history – mother bad dandruff, maternal grandfather had a chronic rash but details??

### Jenny



### Jenny



### Clinical diagnosis

- Differential diagnoses
- triggers
- investigations
- Management options
- Prognosis