Psoriasis
Jenny

- 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, paternal grandfather had a chronic rash but details??
Bob

- 41 year old builder
- Chronic scaly plaques trunk and limbs
- Began in 20’s but worse last 5 years.
- Main issue is painful fissuring of hands – also fingers have begun to swell are painful in the morning
- PH – Hypertension, Hypercholesterolaemia, Obestiy (105kg), Depression, Arthritis – knees and back
- Alcohol – admits to 5 standard drinks per night
- Meds – atorvastatin, perindopril, NSAI
Bob

Past treatments

- Over the counter preps, method to fissures, Scrubbing hands with industrial cleaners
- Has used prescribe topicals – too hard to use
- UV therapy – helped for a short time
- Oral MTX - abnormal LFT’s

Now:

- Hard to work, financial probs, worsening depression
- Frustrated, disillusioned with treatment
- Not sleeping and drinking more
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
- Mild and common variants include dry scale on elbows and knees, scaly irritated scalp, umbilical or natal cleft irritation

- Severe variants can be both extensive and resistant to therapy
Psoriasis
a chronic relapsing condition

- Equally prevalent in males and females
- Most common age of onset is around 20 years, with a second smaller peak at 55-60 years
- Prolonged spontaneous remission maybe seen however chronic recurrent or persistent episodes are usual
Psoriasis - a common skin disorder

• 2-3% of the population

Overall rate of psoriasis is approximately 2-3% (range: 0.5% in native Americans to 2.8% in Faroe Islanders)

• 125,000,000 people world wide

Approximately 125 million people worldwide are affected (25% with moderate to severe psoriasis)

• 28 national associations

International Federation of Psoriasis Associations
## Types of psoriasis

<table>
<thead>
<tr>
<th>Morphology</th>
<th>Specific Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaque</td>
<td>Scalp</td>
</tr>
<tr>
<td>Guttate</td>
<td>Palmo-plantar</td>
</tr>
<tr>
<td>Erythrodermic</td>
<td>Nail</td>
</tr>
<tr>
<td>Pustular</td>
<td>Flexural</td>
</tr>
<tr>
<td>Flexural</td>
<td>Genital</td>
</tr>
</tbody>
</table>

Copyright
## Psoriasis type

<table>
<thead>
<tr>
<th>Type</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Plaque</td>
<td>293</td>
<td>81.8</td>
</tr>
<tr>
<td>Guttate</td>
<td>9</td>
<td>2.5</td>
</tr>
<tr>
<td>Pustular</td>
<td>7</td>
<td>2.0</td>
</tr>
<tr>
<td>Erythrodermic</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Not recorded</td>
<td>60</td>
<td>16.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>358</strong>*</td>
<td><strong>100.0</strong>*</td>
</tr>
</tbody>
</table>

* 12 patients have several types recorded
Myths

- A psoriatic plaque “heals” with scarring
- Psoriasis is treatable by diet
- Psoriasis is caused by stress
- Psoriasis is curable
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
Inflammation in the pathophysiology of psoriasis

- Th-1 and Th-17 mediated disease (not Th-2)
- T cell infiltration (mediated via LFA-1/ICAM-1) and interaction with keratinocytes triggers inflammation and hyperproliferation
- Hyperproliferation leads to formation of scaly lesions and inflammatory cascade
- Drivers of inflammation include
  - Many chemokines (esp. CCL20)
  - IL-1 family, IL-6, IL-8, IL-12, IL-15, IL-17, IL-19, IL-20, IL-22, IL-23
  - IFN-γ, TNF-α

Psoriasis

- A chronic inflammatory systemic disease (CISD)
Psoriasis and comorbidities

- Coronary heart disease, hypertension
- Central obesity, diabetes, metabolic syndrome
- Dyslipidemia
- Crohn’s disease
- Depression
- Lymphoma (equivocal data)
- Non-alcoholic steatohepatitis (NASH)

References:
Psoriasis - triggers & aggravating factors

- Infection
  - Streptococcal
  - HIV

- Drugs
  - Lithium
  - B-blockers
  - Antimalarials
  - Interferon
  - Corticosteroid withdrawal

- Physical injury (Koebner phenomenon)
- Stress
- Excessive alcohol
Psoriasis - Classic type and variants

- Classic
  Scaly erythematous plaques
  Extensor areas and scalp

- Variants
  Different morphologies
  Special sites
Classical appearance

- Round – oval shaped lesions
- Centrifugal expansion
- Bright erythema (red)
- Hyperkeratosis (scaly)
- Indurated plaques (raised)
- Sharp demarcation from surrounding skin
- Usually symmetrical
Types of psoriasis

- Plaque
- Guttate
- Erythrodermic
- Flexural

- Pustular
  - Localised
  - Generalised

- Local forms
  - Scalp
  - Nail
  - Flexural
  - Palmo-plantar
Types of psoriasis

- Plaque
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PSORIASIS
PSORIASIS
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Plaque Psoriasis

- Elbows
- Knees
- Scalp
- Other
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- Flexural
Guttate Psoriasis
Types of psoriasis

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Types of psoriasis

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Childhood Psoriasis
Nail psoriasis

- Onycholysis
- Pitting
- “Oil drop” spots
- Subungual hyperkeratosis
- Thickening & dystrophic nail plate
- Periungual psoriasis
Nail Psoriasis

- Onycholysis
- “Oil drop” sign
Nail Psoriasis

- Pitting
Nail Psoriasis

- Subungual hyperkeratosis
- Thickening of nail plate
- Periungual psoriasis
Psoriatic Arthritis

- Occurs in 10-40%
- Oligoarthritis
- Symmetrical DIP arthritis
- Ankylosing Spondylitis
- Rheumatoid-like
- Arthritis mutilans
- Combination of above
<table>
<thead>
<tr>
<th>Localised patches</th>
<th>Erythrodermic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tinea</td>
<td>Eczema</td>
</tr>
<tr>
<td>Eczema</td>
<td>Cutaneous T cell lymphoma</td>
</tr>
<tr>
<td>Bowen’s disease</td>
<td>Pityriasis rubra pilaris</td>
</tr>
<tr>
<td>Superficial BCC</td>
<td>Lichen planus</td>
</tr>
<tr>
<td>Paget’s disease of the nipple</td>
<td>Drug</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plaques</th>
<th>Palmo-plantar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discoid eczema</td>
<td>Tinea</td>
</tr>
<tr>
<td>Mycosis fungoides</td>
<td>Dermatitis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Guttate</th>
<th>Flexural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pityriasis rosea</td>
<td>Tinea</td>
</tr>
<tr>
<td>Drug eruption</td>
<td>Candida</td>
</tr>
<tr>
<td>Secondary syphilis</td>
<td>Intertrigo</td>
</tr>
</tbody>
</table>
Pityriasis Rosea
Tinea
Tinea
Discoid Eczema
Bowen’s Disease
Mycosis Fungoides
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

* Prof Andrew Finlay, Wales College of Medicine, Cardiff University, United Kingdom
## DLQI Score

<table>
<thead>
<tr>
<th>DLQI ID:</th>
<th>1913</th>
<th>DLQI Date:</th>
<th>14/01/2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Over the last week, how itchy, sore, painful or stinging has your skin been?</td>
<td>Very Much</td>
<td>A lot</td>
</tr>
<tr>
<td>2)</td>
<td>Over the last week, how embarrassed or self-conscious have you been because of your skin?</td>
<td>Very Much</td>
<td>A lot</td>
</tr>
<tr>
<td>3)</td>
<td>Over the last week, how much has your skin interfered with you going shopping or looking after your home or garden?</td>
<td>Very Much</td>
<td>A lot</td>
</tr>
<tr>
<td>4)</td>
<td>Over the last week, how much has your skin influenced the clothes you wear?</td>
<td>Very Much</td>
<td>A lot</td>
</tr>
<tr>
<td>5)</td>
<td>Over the last week, how much has your skin affected any social or leisure activities?</td>
<td>Very Much</td>
<td>A lot</td>
</tr>
<tr>
<td>6)</td>
<td>Over the last week, how much as your skin made it difficult for you to do any sport?</td>
<td>Very Much</td>
<td>A lot</td>
</tr>
<tr>
<td>7)</td>
<td>Over the last week, has your skin prevented you from working or studying?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>If 'No', over the last week, how much has your skin been a problem at work or studying?</td>
<td>Very Much</td>
<td>A lot</td>
</tr>
<tr>
<td>8)</td>
<td>Over the last week, how much has your skin created problems with your partner or any of your close friends or relatives?</td>
<td>Very Much</td>
<td>A lot</td>
</tr>
<tr>
<td>9)</td>
<td>Over the last week, how much has your skin caused any sexual difficulties?</td>
<td>Very Much</td>
<td>A lot</td>
</tr>
<tr>
<td>10)</td>
<td>Over the last week, how much of a problem has the treatment for your skin been, for example, by making your home messy or taking up time?</td>
<td>Very Much</td>
<td>A lot</td>
</tr>
</tbody>
</table>
Emotional Impact of Psoriasis

- Concern That Disease Would Worsen: 88%
- Feelings of Embarrassment: 81%
- Feelings of Unattractiveness: 75%
- Depression: 54%
- Contemplation of Suicide: 10%

Percentage of 18 to 34 Year Old Respondents
Social Impact of Psoriasis

- Psoriasis Mistaken as Contagious: 57%
- Psoriasis Mistaken as Other Disease: 48%
- Trouble Receiving Equal Treatment in Service Establishments: 40%

Percentage of Respondents
Comorbidities in Psoriasis

- *psoriasis is a systemic disease*

- Hypertension
- Diabetes Mellitus Type II
- Dyslipidaemia
- Obesity
- Metabolic Syndrome
- Cardiovascular Disease
- Psoriatic Arthritis
- Inflammatory Bowel Disease
- Anxiety and Depression
- Smoking and Alcohol Abuse
- Malignancies
## Psoriasis Co-morbidities in Australia

<table>
<thead>
<tr>
<th>Co-morbidity</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>101</td>
<td>28.2</td>
</tr>
<tr>
<td>Obesity</td>
<td>77</td>
<td>21.5</td>
</tr>
<tr>
<td>Hyperlipidaemia</td>
<td>73</td>
<td>20.4</td>
</tr>
<tr>
<td>Depression</td>
<td>50</td>
<td>14.0</td>
</tr>
<tr>
<td>Diabetes</td>
<td>47</td>
<td>13.1</td>
</tr>
<tr>
<td>Non-melanoma skin cancer</td>
<td>35</td>
<td>9.8</td>
</tr>
<tr>
<td>Liver disease</td>
<td>19</td>
<td>5.3</td>
</tr>
<tr>
<td>Other psychiatric illness</td>
<td>19</td>
<td>5.3</td>
</tr>
<tr>
<td>Ischaemic heart disease</td>
<td>18</td>
<td>5.0</td>
</tr>
<tr>
<td>Other cancer</td>
<td>14</td>
<td>3.9</td>
</tr>
<tr>
<td>Melanoma skin cancer</td>
<td>9</td>
<td>2.5</td>
</tr>
<tr>
<td>Alcoholism</td>
<td>8</td>
<td>2.2</td>
</tr>
</tbody>
</table>
Number of Co-morbidities recorded by patients in the Australasian Psoriasis Registry

Mean = 1.78
Std. Dev. = 1.841
N = 358
Choice of therapy

- Patient preference
- Disease severity
- Co Morbidities
- Treatment cost and convenience
- Patient response to therapy
Managing difficult areas

- Scalp
- Flexures
- Genitalia
- Nails
Tips for better outcomes

• Encourage patient to access a support group
• Stay positive in approach to management
• Screen patients for co-morbidities
• Identify the severely affected patient and consider systemic therapy