Psoriasis

Shima Hatamkhani
Clinical Pharmacist
May 2011
EPIDEMIOLOGY

- Occurs in 2% of the world’s population
- Male = Female
- 75% before age of 46 years
- Family history in nearly half of them
PHYSICALLY DISABLING AND EMOTIONALLY DEVASTATING
MODERATE TO SEVERE PSORIASIS SIGNIFICANTLY IMPACTS THE MOST COMMON, INTIMATE ASPECTS OF DAY-TO-DAY LIFE:

Sleep
Covering up with clothes
shame, embarrassment
Hours of treatment

Work
Children
Relationships
Suicide
PATHOGENESIS

- Chronic, auto immune
- Hyperproliferation of keratinocytes secondary to cytokine stimulus
- Thickened erythematous epidermis or dermal plaques with silvery scale
PATHOGENESIS
EXACERBATING FACTORS

- Cold and dry weather
- Stress
- Viral or bacterial infection
- Trauma, burns, cuts, abrasions
- Drugs
  - Chloroquine
  - Li
  - Beta-blockers
  - Indomethacin
  - Systemic corticosteroid withdrawal
  - High potency topical corticosteroid withdrawal

Dr. Shima Hatamkhani
CLINICAL FEATURES

8 clinical subtypes

- psoriasis vulgaris (most common)
- guttate psoriasis (post infective)
- flexural psoriasis
- erythrodermic psoriasis
- palmoplantar psoriasis
- psoriatic arthritis
- nail psoriasis
- acute pustular psoriasis
PSORIATIC PLAQUE

Most lesions are asymptomatic
Pruritis in 50% of cases
PSORIASIS VULGARIS
OR PLAQUE TYPE

Most Common Variant (90%)

Sites (extensor):

- Elbows
- Knees
- Presacrum
- Scalp
- Hands and Feet
GUTTATE PSORIASIS

- Multiple small lesions post infection
- Usually on trunk, arm and leg
- Most common form in children following Streptococcal throat infection

Spontaneous remissions in children
FLEXURAL OR INVERSE PSORIASIS

Shiny, red, often without scale
ERYTHRODERMIC PSORIASIS

- Most severe
- Acute inflammatory erythema and scales of >90% BSA
- Precipitated by withdrawal of steroids
PALMOPLANTAR OR PUSTULAR PSORIASIS

- Vesicles on soles of hands & feet
- Painful rather than itchy
- Chronic condition
PSORIATIC ARTHRITIS
NAIL PSORIASIS

- 50% of patients with skin involvement
- 90% of psoriatic arthritis
- Pitting
- Onycholysis of distal nail bed
- Subungal hyperkeratosis
NAIL PSORIASIS
WIDESPREAD CHRONIC PLAQUE PSORIASIS

TREATMENT

Controlling rather than cure it

Psychological aspects
Treatment

- Lubrication
- Slow down lesion proliferation
- Season and climate
- Lessen patient stress
- Pruritus management
- Removal of scales
CHOICE OF THERAPY
TOPICAL OR SYSTEMIC

- Severity:
  - mild – moderate (often topical treatments)
  - moderate to severe (often systemic treatments)

- Patient’s preference (cost & convenience)

- Location of disease
  - Hand, foot or face psoriasis may deserve more aggressive treatment

- Response
MODERATE- SEVERE PSORIASIS

Involvement of >20% BSA
Involvement of the face, palm or sole
Disabling disease
OLA PHOTONUMERIC GUIDELINES (OVERALL LESION ASSESSMENT)

0 = none  
1 = minimal  
2 = mild  

3 = moderate  
4 = severe  
5 = very severe
TOPICAL DRUGS

- Topical corticosteroids
- Emollients
- Alternatives:
  - Tar
  - Topical retinoids (tazarotene)
  - Vitamin D analogs: calcipotriene
  - Dithranol (inhibits mitochondrial DNA)
PHOTOTHERAPY

UVB

PUVA = Psoralen + UV\textsuperscript{A} light

Useful for multiple lesions, erythrodermic psoriasis, pustular psoriasis

SYSTEMIC TREATMENT

Methotrexate (hepatic fibrosis + myelosuppression)

Cyclosporin (hypertension, hypertrichosis, skin malignancy + lymphoma)

Retinoids (good for pustular psoriasis)

Biologic drugs
TOPICAL CORTICOSTEROIDS

High potency:

- Fluocinolone
- Betamethasone
- Clobetasol
- Momethasone

Response:

- 25% of patients in 3-4 weeks
TOPICAL CORTICOSTEROIDS

- **Side effects**
  - Skin atrophy
  - Burning and stinging
  - Suppression of the hypothalamic-pituitary-adrenal (HPA) axis
    - This may occur after 2 weeks of use with certain topical corticosteroids
  - Acute flare up after corticosteroid therapy termination
  - Systemic corticosteroid have no place in therapy
COAL TAR

- Tar preparations
  2 -10% concentration

- Side effects:
  Less than anthralin,topical steroids

- Problems
  • Smell
  • Sting
  • Stain
  • Sensitize (photosensivity, acneiform eruption, follicolitis, irritation dermatitis)

- Caution
  • Avoid apply on face, flexures, genitalia and in inflammatory psoriasis
ANTHRALIN (DITHRANOL)

Most cases of chronic plaque resolve in 3 weeks

- Problems
  - Irritation
  - Staining
TOPICAL VITAMIN D₃ ANALOGUES

Prototype for this group is calcipotriene

❖ Side Effects
  • Cutaneous
    • Burning
    • Stinging
    • Pruritus
    • Skin irritation
    • Tingling of the skin
TOPICAL RETINOIDS

Tazarotene Gel and Cream

• Available in two strengths
  • 0.05% and 0.1%

• Side Effects
  • Pruritus
  • Burning/Stinging
  • Erythema
  • Worsening of psoriasis
  • Irritation
  • Skin pain
  • Hypertriglyceridemia
PHOTO(CHEMO)THERAPY

- Ultraviolet B (UVB)
- Ultraviolet A + Psoralen (PUVA)
UVB

Treatment is time consuming

- 2-3 visits/week for several months
- No need to additional sensitizer

- Side effect (like sunlight)
  - Sunburning
  - Photoaging
  - Skin cancer
PUVA
(PSORALEN + UVA)

- Ingestion or topical psoralen followed by UVA
- Reserved for severe psoriasis
- Time consuming
  2-3 visits/ wk. at least 6 weeks
- **Precautions**
  - Patients must be protected from further UV light for **24 hours** post treatment
PUVA

Side effects of oral psoralen

• Nausea
• Dizziness
• Headache

Side effects with PUVA

• Phototoxic reactions (erythema)
• Skin cancer
• Cataract formation
• Inconvenience of wearing photoprotective eyewear after treatment
SYSTEMIC THERAPIES

Oral
• Methotrexate
• Neoral (cyclosporine)
• Soriatane®, Neotigasone® (acitretin)

Parenteral
• Amevive (alefacept)
• Raptiva (efalizimab)
• Enbrel (etanercept)
ACITRETIN

Oral retinoid
ACITRETIN SIDE EFFECTS

- Hypervitaminose A
  - Dry skin
  - Skin thinning and fragility
  - Chapped lips
  - Dry nasal mucusa
  - Skin peeling
  - Alopecia
  - Nail dysrophy

- Retiniod rash
- ↑TG, Chol
- ↑Liver enzyme
ACITRETIN

Pregnancy Category X

Contraindicated during therapy e up to 3 years post therapy
METHOTREXATE

- Folic acid antagonist
- Reserved for severe, recalcitrant, disabling psoriasis

**Side Effects**
- hepatotoxicity
- Bone marrow suppression
- Pneumonitis

**Rx:** folic acid 1mg/daily
CYCLOSPORINE

Potent Immunosuppressive
Adult, non-immunocompromised patients with severe, recalcitrant plaque psoriasis

Side effects
Renal damage
HTN
Headache
Hypertriglyceridemia
Hirsutism/hypertrichosis
Paresthesia/hyperesthesia
Influenza-like symptoms
Nausea/vomiting
Diarrhea
Lethargy
Arthralgia

Dr. Shima Hatamkhani
macrophage or activated T-cell

Infliximab
(binding TNF preventing activation of target cell)

Etanercept
(binding TNF preventing activation of target cell)

TNF binding to receptor

TNF

Infliximab
(monoclonal antibody)

Etanercept
(soluble TNF receptor)
ACT ON IMMUNE SYSTEM

Alefacept

Efalizumab
BIOLOGIC AGENTS
ACT ON TNF-ALPHA

infliximab

Etanercept

Adalimumab
RISK/BENEFIT CONSIDERATIONS

What we know vs. what we don’t know

- Existing systemic treatments for psoriasis have serious known long-term risks, or are limited in efficacy

- Many patients and physicians are willing to accept unknown long-term risks of biologic therapy
ALTERNATIVE THERAPY
Mild – moderate psoriasis

Rx
High potency corticosteroid Oint + TAR Oint at night

Rx
Add calcipotriene Oint BID
Or tazarotene gel (8wks)

Rx
Topical anthralin ± UVB
Thank you for your attention