Psoriasis and lichen planus

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What is Psoriasis

Psoriasis is a common, chronic, disfiguring, inflammatory and proliferative condition of the skin; in which both genetic and environmental influences play a critical role characterised by red, scaly, sharply demarcated indurated plaques of various sizes, particularly over extensor surfaces and scalp.
Aetiopathogenesis

• Genetic predisposition:
  HLA-B13, B17, and Cw6
• Epidermal hyperproliferation
• Antigen driven activation of autoreactive T-cells
• Angiogenesis
• Multifactorial inheritance
• Overexpression of Th1 cytokines such as IL 2, IL 6, IL 8, IL 12, INF-γ, TNF-α
Trigger factors

- Trauma (Koebner phenomenon): Mechanical, chemical, radiation trauma.
- Infections: Streptococcus, HIV
- Stress
- Alcohol and smoking
- Metabolic factors: pregnancy, hypocalcemia
- Sunlight: usually beneficial but in some may cause exacerbation
Trigger factors

Drugs:
Beta-blockers
NSAIDS
ACE inhibitors
Lithium
Antimalarials
Terbinafine
Calcium channel blockers
Captopril
Withdrawal of corticosteroids
Morphology

• **Classical Lesion:** Erythematous, round to oval well defined scaly plaques with sharply demarcated borders

• **Scales:** Psoriatic plaques typically have a dry, thin, silvery-white or micaceous scale.

• **Sites:** Elbows, knees, extensors of extremities, scalp & sacral region in a symmetric pattern. Palms/soles involved commonly
CLASSICAL LESION
Morphology

• **Auspitz sign:**
Removing the scale reveals a smooth, red, glossy membrane with tiny punctate bleeding points

• **Grattage test:**
On grattage, characteristic coherence of scales seen as if one scratches a wax candle (‘signe de la tache de bougie)
KOEBNER PHENOMENON
Morphological Types

- Chronic plaque psoriasis: plaques with less scaling
- Follicular psoriasis: follicular papules.
- Linear psoriasis: linear arrangement of plaques
- Annular/figurate psoriasis: ring shaped or other patterns.
- Rupoid, elephantine and ostraceous psoriasis
GUTTATE PSORIASIS
Distributional Variation

- Scalp psoriasis
- Palmoplantar psoriasis
- Nail psoriasis: pitting, onycholysis, subungual hyperkeratosis, or the oil-drop sign. (25-50%)
- Mucosal psoriasis
- Inverse psoriasis:
  - spares the typical extensor surfaces
  - affects intertriginous (i.e, axillae, inguinal folds, inframammary creases) areas with minimal scaling.
NAIL AND SCALP
INVERSE AND SEBO PSORA
PALMOPLANTAR PSORIASIS
Psoriasis in children and in HIV

Psoriasis in children:

• Plaques not as thick as in adults, less scaly
• Diaper area in infants, flexural areas in children
• Face involvement more common than in adults

Psoriasis in HIV:

• Acute onset
• Severe flares
• Poor prognosis
Complicated psoriasis

- Erythrodermic psoriasis
- Generalised pustular psoriasis
- Psoriatic arthritis
ERYTHRODERMIC AND PUSTULAR
PUSTULAR PSORIASIS

[Image of pustular psoriasis on a skin surface]
Differential diagnosis

- Nummular eczema
- Tinea corporis
- Lichen planus
- Secondary syphilis
- Pityriasis rosea
- Drug eruption
- Candidiasis
- Tinea unguium
- Seborrheic dermatitis
Treatment

General measures:

• Counselling regarding the natural course of the disease
• Weigh reduction in obese patients.
• Avoidance of trauma or irritating agents.
• Reduce intake of alcoholic beverages.
• Reduce emotional stress
• Sunlight and sea bathing improve psoriasis except in photosensitive
Topical therapy

- **Emollients**: white soft paraffin & liquid paraffin
- **Corticosteroids**: Potent steroids like fluocinolone acetonide, betamethasone dipropionate or clobetasol propionate
- **5-10% Coal tar**: for stable but resistant plaques
- **0.1-1% dithranol**: for few stable, thick, resistant plaques

Contd…
Topical therapy

- **Keratolytics & humectants**: as adjuvants eg. 
  Salicylic acid 3-10%, urea 10-20%
- **Calcipotriene**
- **Tazarotene**
- **Macrolactams (calcineurin inhibitors)**: 
  Tacrolimus & Pimecrolimus.
Phototherapy

1. Extensive and widespread disease
2. Resistance to topical therapy
Systemic Agents

Indications:

• Resistant to both topical treatment and phototherapy
• Active psoriatic arthritis.
• Physically, psychologically, socially or economically disabling disease
• **Steroids**: only used in life threatening situations like erythrodermic & pustular psoriasis.
• **Cyclosporin**: Immune modulator
  – Used in erythrodermic & resistant psoriasis
  – Limitations: expensive & nephrotoxic and hypertensive
Systemic Agents

- **Methotrexate:**
  - Three doses of 2.5-5 mg orally 12 hrly or 7.5-15 mg single dose; administered every week.
  - Contraindicated in hepatic & renal diseases. Close monitoring of blood counts & hepatic function essential.

- **Acitretin:**
  - For widespread psoriasis; combination with PUVA reduces total cumulative dose of UV irradiation
  - Contraindicated in pregnancy & women of child bearing age
Prognosis

- Course of plaque psoriasis is unpredictable.
- Characterised by remissions and relapses
- Often intractable to treatment
- Relapses in most patients
- Improves in warm weather
- Poor Prognostic factors:

  Early onset, Family history, Stress, HIV infection
LICHEN PLANUS

DEPARTMENT OF DERMATOLOGY
Definition

Lichen Planus is a common inflammatory disorder of skin characterized clinically by distinctive, violaceous, flat topped papules; and histologically by a band like lymphocytic infiltrate at the dermo-epidermal junction.
Aetiology

• Exact cause unknown
• Probably immunologically mediated
• Genetic predisposition:
  HLA-B7, HLA-DR1, HLA-DR10
• Associations: ulcerative colitis, alopecia areata, vitiligo, hepatitis, and primary biliary cirrhosis.
• Drugs:
  NSAIDs, Chloroquine, ACE inhibitors, hypoglycaemic agents
  Mercury, gold, nickel sensitivity seen in oral lichen planus
Clinical features

- Lichen planus can involve skin, mucous membranes, genitalia, nails and scalp.
- Associated with pruritus
- Commonly affects young adults
- Males and females equally affected
- Various clinical types seen
- **Characteristic papules/ plaques of Lichen planus**:
  Violaceous, erythematous, flat topped, shiny, and polygonal; varying in size from 1 mm to greater than 1 cm in diameter. They can be discrete or arranged in groups of lines or circles.
LP WITH WICKHAMS STRIAE
Clinical types

- **Acute wide spread**: involving flexor surface of wrists, forearms, shins, ankles, dorsae of feet, anterior thighs and flanks
- **Chronic localized**: around ankle & wrist.
- **Hypertrophic**: extensor surfaces of lower extremities
- **Actinic**: nummular patches with a hypopigmented zone surrounding a hyperpigmented center
- **Lichen Planus Pigmentosus**: Diffuse macular, slate grey or brownish pigmentation of face, neck, upper limbs
Clinical types

- **Annular**: buccal mucosa and the male genitalia.
- **Linear**: zosteriform lesion on extremities
- **Vesicular and bullous**: lower limbs, oral cavity
- **Atrophic**: resolution of annular or hypertrophic lesions.
- **Erosive**: mucosal surfaces
- **Follicular**: Lichen planopilaris; more common in women than in men, scarring alopecia may result.
- **Oral**: reticular (white lace-like), atrophic, erosive, plaque
- **Genital**: common in men; typically annular lesion on glans seen
- **Nail**: thin striated nails with pterygium
ACTINIC, CLASSICAL, GENERALISED, KOEBNER
GENITAL, HYPERTROPHIC, ORAL
FOLLICULAR AND NAIL LP
LP PIGMENTOSUS
Differential diagnosis

- Disseminated Eczema
- Scabies
- Drug eruption
- Pityriasis Rosea
- Psoriasis
- Prurigo nodularis
- Secondary syphilis
- Mucosal lesions: candidiasis, leukoplakia, pemphigus
Treatment

- Lichen Planus is a self-limited disease that usually resolves within 8-12 months.
- **Topical:**
  - Calamine lotion, Steroids, Cyclosporin, Tacrolimus
- **Systemic:**
  - Antihistaminics, Steroids, Dapsone, Griseofulvin, Retinoids, PUVA, Cyclosporin

**Acute widespread LP:**
- Prednisolone 0.5-1 mg/kg/day tapered over few weeks for symptomatic control and rapid resolution. Monitoring of side-effects & judicious use recommended.
Treatment

Mild cases & localised lesions:
- Antihistamines
- Topical steroids eg: Fluocinolone acetonide, Betamethasone valerate

Hypertrophic Lichen Planus:
- Topical clobetasol propionate
- Intrallesional injection of triamcinolone acetonide (40mg/ml)

Oral Lichen Planus:
- Topical steroids in orabase
- Tacrolimus, cyclosporin
- Systemic steroids
- Dapsone
Prognosis / Complications

• Lesions resolve with pigmentation that may last for many months
• Recurrent episodes can occur
• Oral lesions may be premalignant
• Scarring alopecia