



Indian Association of Dermatologists, Venereologists and Leprologists

Lichen Planus and Pityriasis Rosea



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Lichen Planus

DEFINITION :

- Lichen planus (LP) is a chronic inflammatory disease of unknown etiology affecting skin and mucous membranes, hair and nail.
- Clinically characterized by pruritic, pink, polygonal, violaceous, flat topped, papular lesions.

Epidemiology

- Incidence – 0.2% - 1%
- No racial predilection
- Seen in all age groups and both sexes
- More common in 30-60 years age group
- Familial cases are reported



Etiology & pathogenesis

Lichen planus represents :

- T-cell mediated autoimmune damage to basal keratinocytes.
- An increased association with other autoimmune disorders like ulcerative colitis, myasthenia gravis, lupus erythematosus, alopecia areata and diabetes.
- Exact nature of LP antigen is unknown.
- Increased frequency of HLA-B27, HLA-B51, HLA-BW57, HLA-DR1, HLA-DR4, HLA-DR6.
- In genetically predisposed person, the antigen can be self peptide or various exogenous agents like drugs, contact allergens, viruses or bacteria and mechanical trauma.



Triggers

Common drugs implicated in the pathogenesis of lichen planus :

- Antimicrobials – INH, ethambutol, griseofulvin, streptomycin, sulfonamides, tetracyclines
- Antihypertensives – Captopril, enalapril, labetalol, methyldopa, propranolol.
- Antimalarials
- NSAIDs
- Antidepressants and Antipsychotics
- Anticonvulsants
- Diuretics
- Gold salts
- TNF α inhibitors – Etanercept, infliximab
- Hypoglycemic agents



Other exogenous antigens

- Viruses – Hepatitis C (HCV)-Common in oral LP

Human herpes virus (HHV-6)

- Vaccinations – HBV, Killed influenza, MMR,DPT
- *Helicobacter. pylori*
- Contact allergens – dental amalgams(mercury),copper and gold



Pathogenesis

Neo-antigen (self peptide or induced by systemic drugs, contact allergens, mechanical trauma, infection)



Processed by the antigen presenting cell and presented to the T-lymphocytes



Production of IFN- γ and intercellular adhesion molecules (ICAM-1)



Facilitates the interaction between lymphocytes and keratinocytes



Results in band like infiltration of lymphocytes close to the dermo-epidermal junction



Activated CD8⁺ lymphocytes undergo clonal expansion



Activated CD8+ lymphocytes undergo clonal proliferation

Cross linking of Fas ligand on cytotoxic T lymphocytes and a death receptor(Fas) on the target keratinocyte

Activation of proteolytic enzyme catalase

Target cell apoptosis & lyses

Cytotoxic molecules, such as perforin and granzyme B

Release of MMP's altering extracellular matrix protein

Basement membrane disruption, subepidermal cleft formation

Perforin induces hole in the host cell membrane, Granzyme B induces a direct cytotoxic damage on keratinocyte

Colloid bodies



Clinical Features

- Mild to severe pruritus.
- Small polygonal, violaceous, flat topped, papules.
- The surface is transparent with a network of fine white striations (criss-cross lines).
- These lines are called “Wickham’s striae”
- These papules are widespread as clusters or coalesce into large plaques.
- Koebner’s phenomenon is commonly seen. Development of lesions along the lines of trauma over the normal skin.
- Common sites – flexor surface of wrists, forearms, hands, legs, neck and sacral areas.
- Other sites – oral mucosa, genitalia, scalp and nails.



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LP with Wickham's striae



Multiple violaceous papules



LP with Koebner's Phenomenon



Clinical Types

- Acute lichen planus – Wide spread eruptions over the trunk, forearms, wrists and legs.
- Annular LP
- Atrophic LP
- Hypertrophic LP
- Inverse LP – Lesions appear in axillae, inguinal and inframammary folds.
- Bullous LP – Bullous lesions develop within pre-existing LP lesions.
- LP Pemphigoides – Bullous lesions develop within uninvolved skin
- LP Pigmentosus – Brown to gray brown macules over the face and neck
- Lichen planopilaris – Multiple violaceous follicular papules over the scalp (cicatricial alopecia) and legs
- Linear LP



Nail lichen planus

- 10% of cases
- Lateral thinning, longitudinal ridging and fissuring.
- Pterygium formation - fixation of proximal nail fold to the nail bed.
- Yellow discoloration, onycholysis and subungual hyperkeratosis.
- Twenty nail dystrophy – common in children



Oral lichen planus

- Prevalence 0.5% - 2.2%.
- Oral lesions occur in 70% - 77% with cutaneous LP lesions.
- Reticular - whitish linear lines in a lace like pattern –buccal mucosa
- Erosive(ulcerative)
- Atrophic
- Bullous
- Papular
- Plaques
- Pigmented
- These lesions are seen on buccal mucosa and tongue. Gingival involvement is also common.



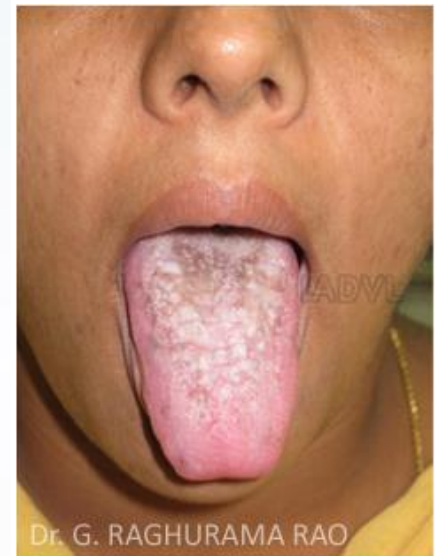
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Erosive LP lesions



White streaks in Lacy pattern
on the buccal mucosa



Whitish Plaques over the
tongue



Genital lichen planus

- Common in men
- Annular lesions over the glans penis
- Erosive lesions over the vagina
- Association with oral lesions is common



Histopathology

- Compact Hyperkeratosis
- Focal wedge shaped Hypergranulosis
- Acanthosis
- Saw toothed rete ridges
- Liquefaction degeneration of basal cell layers
- Band-like lymphocytic infiltrate is present in papillary dermis.
- Colloid or Civatte bodies – dyskeratotic keratinocytes – lower epidermis and upper dermis



Differential Diagnosis

- Lichenoid drug eruptions
- Disseminated eczema
- Scabies
- Prurigo nodularis
- Psoriasis
- Secondary syphilis
- Pityriasis rosea
- Lupus erythematosus
- Mucosal lichen planus – Candidiasis, leukoplakia, pemphigus vulgaris
- Genital lichen planus – Lichen sclerosus et atrophicus





Prognosis

- Self limiting
- Lesions resolve with hyperpigmentation within 3-9months
- Recurrences can occur
- Oral lesions may be pre-malignant
- Scarring alopecia is complication of lichen planopilaris of scalp.



Treatment

TOPICAL – for localised lichen planus lesions

- Topical potent corticosteroids
- Topical tacrolimus or pimecrolimus or cyclosporine – oral lichen planus and genital lichen planus
- Intralesional corticosteroids – hypertrophic lichen planus or oral lichen planus.

PHOTOTHERAPY – Generalised lichen planus

- Narrowband UVB (NBUVB)
- PUVA
- UVA1
- 308nm excimer laser for oral lichen planus



Treatment

SYSTEMIC THERAPY – for acute generalised lichen planus and recalcitrant forms.

- Antihistamines
- Systemic corticosteroids – acute, generalised lichen planus
- Oral prednisolone – 0.5-1 mg/kg for 2-6wks
- Inj. triamcinolone acetonide IM (0.5-1mg/kg/month × 3-6months) for nail LP
- Acitretin- 30-50mg/day
- Griseofulvin – 1 gm/day 3-6months
- Metronidazole- 500mg BD daily for 20-60days



Systemic Therapy

- Hydroxychloroquine (200-400 mg daily –lichen planopilaris)
- Oral sulfasalazine – 1.5-3g/day × 4weeks
- Low dose methotrexate – 4weeks
- Cyclosporine – 1-6mg/kg/day
- Mycophenolate mofetil
- Thalidomide(for lichen planopilaris of scalp)
- TNF α inhibitors – alefacept, basiliximab
- Dapsone for oral LP



PITYRIASIS ROSEA

DEFINITION :

- Pityriasis rosea (PR) is an acute self limiting, papulosquamous inflammatory disease of uncertain etiology, characterized by multiple erythematous scaly patches over the back and trunk along the cleavage lines.



Etiology & pathogenesis

- The precise cause is not known.
- Probably viral infections – HHV-7 & HHV-6 play a role.
- Some drugs – Metronidazole, gold, barbiturates, clonidine, captopril, isotretinoin, imatinib can cause PR like eruption.
- Cell mediated immunity may be involved with a presence of activated CD4 + / HLA – DR+ in the epidermal and dermal infiltrate in association with Langerhans cells(CD1a+).

Epidemiology

- Commonly seen in children and young adults (35 years).
- Slight female predominance.
- No racial predilection
- Worldwide
- Seasonal variations – peak in the spring and fall.



Clinical Features

- Mild constitutional symptoms. Mild pruritus.
- Initial lesion is a solitary skin to pink colored oval patch with collarette of scales.
- It appears on the trunk and less often on the neck.
- It is known as “Herald patch” or “Mother patch”.
- Occasionally they are multiple and seen in 50% cases.



Clinical Features

- Wide spread pink papules
- Appear 5-15 days after herald patch.
- Papular lesions coalesce to form multiple pink colored oval patches with collarette scales.
- Along the lines of cleavage on the posterior trunk and back.
- Resemble “Christmas tree pattern”.
- Vesicular, pustules and purpuric lesions are also seen.



Clinical Features

- These symptoms usually persist for 6-8 weeks.
- Spontaneously resolve. Heal with hypo/hyperpigmentation.
- Inverse PR – lesions are seen in the axilla and inguinal areas.
- Congestion of oral mucosa, nose.
- Face, palms and soles usually spared.



Pityriasis Rosea



Multiple pink papular lesions with Herald patch



Multiple pink oval patches along the rib lines



Differential Diagnosis

- Tinea corporis
- Guttate psoriasis
- Secondary syphilis
- Drug eruptions
- Seborrheic dermatitis
- Pityriasis lichenoides chronica





Treatment

- Self limiting condition
- Counseling and reassurance
- Anti-pruritic lotions
- Topical medium potency corticosteroids
- NBUVB therapy for 5-10 days
- Natural sunlight
- Oral antihistamines
- Erythromycin –25-40 mg/kg/day in four divided doses for 14 days
- Acyclovir 800 mg five times daily is also effective
- Systemic steroids in severe cases



MCQ's

Q.1) Herald patch is seen in

- A. Psoriasis
- B. Secondary syphilis
- C. Pityriasis rosea
- D. Seborrheic dermatitis



Q. 2) All of the following are papulo squamous eruptions except

- A. Pemphigus vulgaris
- B. Pityriasis rosea
- C. Seborrheic dermatitis
- D. Lichen planus



MCQ's

Q.3) A 16 year girl presented with cicatricial alopecia patch over the scalp with wide spread papulosquamous lesions over the trunk and lower limbs. What's your diagnosis?

- A. Psoriasis
- B. Seborrheic dermatitis
- C. Lichen planus
- D. Secondary syphilis



Q. 4) Koebner's phenomenon is seen in all these conditions except

- A. Psoriasis
- B. Vitiligo
- C. Lichen planus
- D. Pityriasis rosea



MCQ's

Q. 5) All of the following are histopathological features of lichen planus except

- A. Hyperkeratosis
- B. Focal hypergranulosis
- C. Band like lymphocytic infiltration
- D. Acantholysis

Q. 6) The drug of choice for localized lichen planus is

- A. Phototherapy
- B. Topical corticosteroids
- C. Systemic steroids
- D. Dapsone



Photo Quiz



Q. Identify the condition and describe the lesion?

Photo Quiz



Q. Identify the condition?



Photo Quiz



Q. Identify this variant of Lichen planus?

Thank You!

