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Managing Psoriasis
Improving Adherence and Compliance in your Practice

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Psoriasis overview

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Introduction

Psoriasis is a chronic skin condition which is characterized by, thick, red, plaques with silvery scales ranging from a few lesions to total involvement of the skin.

Psoriasis shows “Koebner” phenomenon” manifested by the appearance of lesions at sites of cutaneous trauma.

Itching is the most common symptom and extensive scratching can often lead to superimposed lichen simplex chronicus.

The diagnosis of psoriasis is usually be made on the basis of the clinical presentation; histologic confirmation is rarely needed. If the diagnosis is uncertain, a biopsy can be done.

Psoriasis has a tendency remissions and exacerbations related to systemic or environmental factors, including life stress events and infection.

Psoriasis has a bearing on quality of life and potentially long-term survival. Patients with psoriasis are more prone to depression.

Pathophysiology[1,2]

Psoriasis is a multi-factorial skin disease with a complex pathogenesis, characterised by focal formation of inflamed, raised plaques that constantly shed scales derived from excessive growth of skin epithelial cells. Psoriasis vulgaris has been conceptualised as a T lymphocyte mediated autoimmune disease.

Factors which have been suggested to play a key role in the pathogenesis are

- T cells
- Antigen presenting cells
- Keratinocytes
- Langerhans' cells
- Macrophages
- Natural killer cells
- Th1 type cytokines
- Growth factors such as vascular endothelial growth factor (VEGF), keratinocyte growth factor etc..

It has been postulated that the disease starts with the activation of T cell by an unknown antigen, which leads to secretion of an array of cytokines by activated T cells, inflammatory cells, and keratinocytes. The characteristic lesion of psoriasis is due to the hyper-proliferation of the keratinocyte. Activated Langerhans' cells migrate from skin to lymph nodes presenting the antigen to nodal naive T cells. The T cells activated by non-antigen-dependent mechanism may, however, become antigen-specific memory cells that react with a cross-reactive auto-antigen such as keratin (molecular mimicry). The genetic background of the disease may be suggested from the fact that concordance rate is 63-73% in monozygotic twins, as compared to 17-20% in dizygotic twins. Several disease susceptibility loci have been suggested as predisposing factors, PSORS1-PSORS9.

Types of psoriasis (Figs. 1–6)[3]

Plaque-type psoriasis

- Plaque psoriasis manifests as well-defined, sharply demarcated, erythematous plaques varying in size from 1 cm to several centimeters
- Patients may have involvement ranging from only a few plaques to numerous lesions covering almost the entire body surface.
- The plaques are irregular, round to oval in shape, and most often located on the scalp, trunk, buttocks, and limbs, with a predilection for extensor surfaces such as the elbows and knees
- Psoriatic plaques typically have a dry, thin, silvery-white or micaceous scale and tend to be symmetrically distributed over the body

Guttate psoriasis

- Guttate psoriasis is characterized by dew-droplike, 1- to 10-mm, salmon-pink papules, usually with a fine scale
- This variant of psoriasis, is found primarily on the trunk and the proximal extremities and occurs in less than 2% of patients with psoriasis


FIG.1: PLAQUE TYPE PSORIASIS


FIG.2: GUTTATE PSORIASIS


FIG.3: INVERSE PSORIASIS


FIG.4: LOCALISED PUSTULAR PSORIASIS


FIG.5: GENERALIZED PUSTULAR PSORIASIS


FIG.6: ERYTHRODERMIC PSORIASIS

- A history of upper respiratory infection with group A beta-hemolytic streptococci often precedes guttate psoriasis, especially in younger patients, by 2 to 3 weeks

Inverse psoriasis (flexural psoriasis)

- Inverse psoriasis is characterized by lesions in the skin folds
- Because of the moist nature of these areas, the lesions tend to be erythematous plaques with minimal scales
- Common locations include the axillary, genital, perineal, intergluteal, and inframammary areas

Localized Pustular psoriasis

- Erythematous papules or plaques studded with pustules; usually on palms or soles (known as palmoplantar pustular psoriasis)

Generalized Pustular psoriasis

- Same as localized with a more general involvement
- May be associated with systemic symptoms such as fever, malaise and diarrhea; patient may or may not have had pre-existing psoriasis

Erythrodermic variants

- Generalized erythema with varying degrees of scaling is seen
- Altered thermoregulatory properties of erythrodermic skin may lead to chills and hypothermia, and fluid loss may lead to dehydration.
- Fever and malaise are common

Scalp psoriasis[3]

Scalp psoriasis presents as focal, raised, inflamed, edematous lesions covered with silvery-white scales.

Nail Psoriasis[3]

Psoriatic nail disease usually occurs in patients with clinically evident psoriasis; less than 5% of patients have no other cutaneous findings of psoriasis. An estimated 10-50% of all patients with psoriasis have psoriatic nail disease.

Nail manifestations in psoriasis include

- *Oil drop or salmon patch of the nail bed* – translucent, yellow-red discoloration in the nail bed. It resembles a drop of oil beneath the nail plate. This patch is the most diagnostic sign of nail psoriasis
- *Pitting of the proximal nail matrix*
- *Beau lines of the proximal nail matrix* – These are transverse lines in the nails due to intermittent inflammation causing growth arrest lines
- *Leukonychia of the midmatrix* – Areas of white nail plate due to foci of parakeratosis within the body of the nail plate
- *Subungual hyperkeratosis* affects the nail bed and the hyponychium.
- *Onycholysis* is a white area of the nail plate due to a functional separation of the nail plate from its underlying attachment to the nail bed
- *Nail plate weakening* due to disease of the underlying structures causes crumbling of the nails
- *Splinter hemorrhages* – longitudinal black lines due to minute foci of capillary hemorrhage between the nail bed and the nail plate.
- *Spotted lunula* – erythematous patch of the lunula

Psoriatic arthritis[3]

Psoriatic arthritis is a chronic inflammatory arthritis that develops in at least 5% of patients with psoriasis.

Psoriatic arthritis is usually a seronegative oligoarthritis found in patients with psoriasis, with less common but characteristic differentiating features of distal joint involvement and arthritis.

Peripheral joint disease occurs in most of patients with psoriatic arthritis, while axial spine involvement occurs exclusively in a small minority of cases.

The patterns of psoriatic arthritis are:

- Asymmetrical oligoarticular arthritis
- Symmetrical polyarthritis- The hands, wrists, ankles, and feet may be involved.
- Distal interphalangeal arthropathy
- Arthritis mutilans
- Spondylitis with or without sacroiliitis

Approach to a patient with psoriasis[3]

History
• Worsening of a skin lesions
• Sudden onset of new lesions of scaling and redness
• Recent throat infection, viral infection, immunization, use of antimalarial drug, or trauma
• Family history of similar skin condition
• Pruritus
• Dystrophic nails
• Joint symptoms - stiffness, pain, throbbing, swelling, or tenderness of the joints.
• Ocular symptoms - redness and lacrimation due to conjunctivitis or blepharitis.
Local examination
• Skin lesions- Scales, erythematous macules, papules, and plaques
• Small salmon pink papules in guttate psoriasis
• Smooth, inflamed lesions without scaling flexural surfaces, armpit, groin, under the breast, and in the skin folds in inverse psoriasis
• Sterile pustules appearing on the palms and soles or diffusely over the body in pustular psoriasis generalized erythema, pain, itching, and fine scaling in erythrodermic psoriasis
• Erythematous raised plaques with silvery white scales on the scalp in scalp psoriasis
• Pits on the nails, which often become thickened and yellowish in colour, separation of nails from the nail bed
• Arthritis in the hands and feet and, occasionally, the large joints with stiffness, pain, and progressive joint damage in psoriatic arthritis
• Ocular manifestations- blepharitis, ectropion , trichiasis, conjunctivitis and conjunctival hyperemia, and corneal dryness with punctate keratitis
Diagnosis
• The diagnosis of psoriasis is essentially clinical

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