

#MADEEASY



PSORIASIS
PART 1





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- Psoriasis is a **chronic, inflammatory, immune-mediated skin condition**.
- It is characterized by **hyperproliferation of keratinocytes**.
- It can affect the skin, nails, joints and sometimes lead to systemic comorbidities
- It presents with well-demarcated, red, scaly plaques and tends to follow a relapsing and remitting course.

Pathophysiology

- Psoriasis is caused by an immune response involving T cells (Th1 and Th17 pathways)
- It results in an overproduction of pro-inflammatory cytokines like TNF- α , IL-17.
- This immune activation leads to **rapid turnover of keratinocytes**, causing the characteristic thickened, scaly plaques.
- Genetic Factors:
PSORS1 located on chromosome 6p
- Triggers: Environmental factors such as
Infections (streptococcal pharyngitis)
Stress
Medications (lithium, beta-blockers)
Trauma (Koebner phenomenon) can exacerbate or trigger psoriasis.

Simple example

- Imagine your skin like a smooth, clean stone.
- Under normal conditions, it stays clear and intact.
- But with psoriasis, it's like algae rapidly growing on a wet surface.
- Just as algae can quickly spread covering the stone in thick, slippery layers, in psoriasis, skin cells multiply too fast, piling up on each other before the old ones have time to shed.
- This overgrowth causes thick, scaly patches on the skin like how algae forms uneven, rough layers on what was once a smooth surface.
- And just like scrubbing the algae off might reveal red, irritated spots underneath, removing the scales from psoriasis can expose inflamed skin beneath.

Clinical Findings

- Skin Lesions
Plaques: The hallmark of psoriasis
well-defined, erythematous plaques with silvery-white scales
commonly located on extensor surfaces (elbows, knees) & scalp





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Auspitz Sign: Upon removing the scales, pinpoint bleeding occurs due to dilated capillaries beneath the plaque.

Koebner Phenomenon: Psoriatic lesions can develop at sites of trauma or injury.



Nail Findings (Nail Psoriasis)

Pitting: Tiny depressions in the nail plate due to abnormal keratinization in the nail matrix.

Onycholysis: Separation of the nail plate from the nail bed, often with a yellowish tinge.

Subungual Hyperkeratosis: Thickening of the nail bed.

Oil Drop Sign: Yellowish-orange discoloration seen through the nail plate, resembling a drop of oil under the nail.

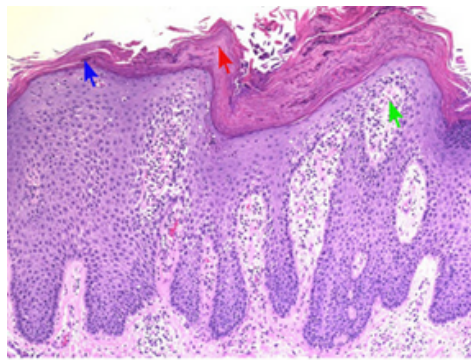
Splinter Hemorrhages: Thin, linear streaks of blood under the nails, often indicating vascular inflammation.



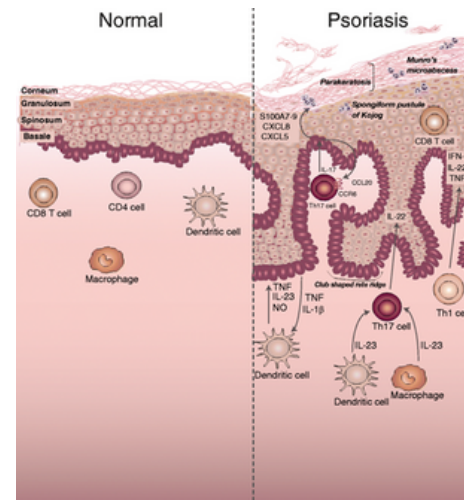


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Histopathological Findings



- ▶ Hyperkeratosis and parakeratosis
- ▶ Munro microabscess
- ▶ Capillary loop dilation



- **Epidermis:**
 - Acanthosis:** Thickening of the epidermis due to increased proliferation of keratinocytes.
 - Parakeratosis:** Retention of nuclei in the stratum corneum, indicating abnormal differentiation of keratinocytes.
 - Hypogranulosis:** Loss of the granular layer, a typical feature of psoriasis.
 - Munro Microabscesses:** Collections of neutrophils within the stratum corneum.
 - Spongiform Pustules of Kogoj:** Small aggregates of neutrophils within the stratum spinosum.
- **Dermis:**
 - Dilated Capillaries:** Increased blood vessel formation in the papillary dermis, accounting for the erythema of psoriatic plaques and the Auspitz sign.
 - Inflammatory Infiltrate:** Composed of T cells and neutrophils within the dermis.

