

PSORIASIS

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Topics :

Definition

Epidemiology

Pathogenesis

Clinical presentations and variants

Histopathological features

Exacerbating factors

Differential diagnosis

Associated comorbidities

treatmen



PSORIASIS-DEFINITION



Psoriasis is a chronic, inflammatory, immune-mediated systemic disease affecting mainly the skin with characteristic cutaneous clinical and histopathological features .It can be associated with significant morbidity and impaired patient quality of life .

It's not curable, and it's not contagious.

Has two phases:

1. Remission (no plaques)
2. Relaps

EPIDEMIOLOGY



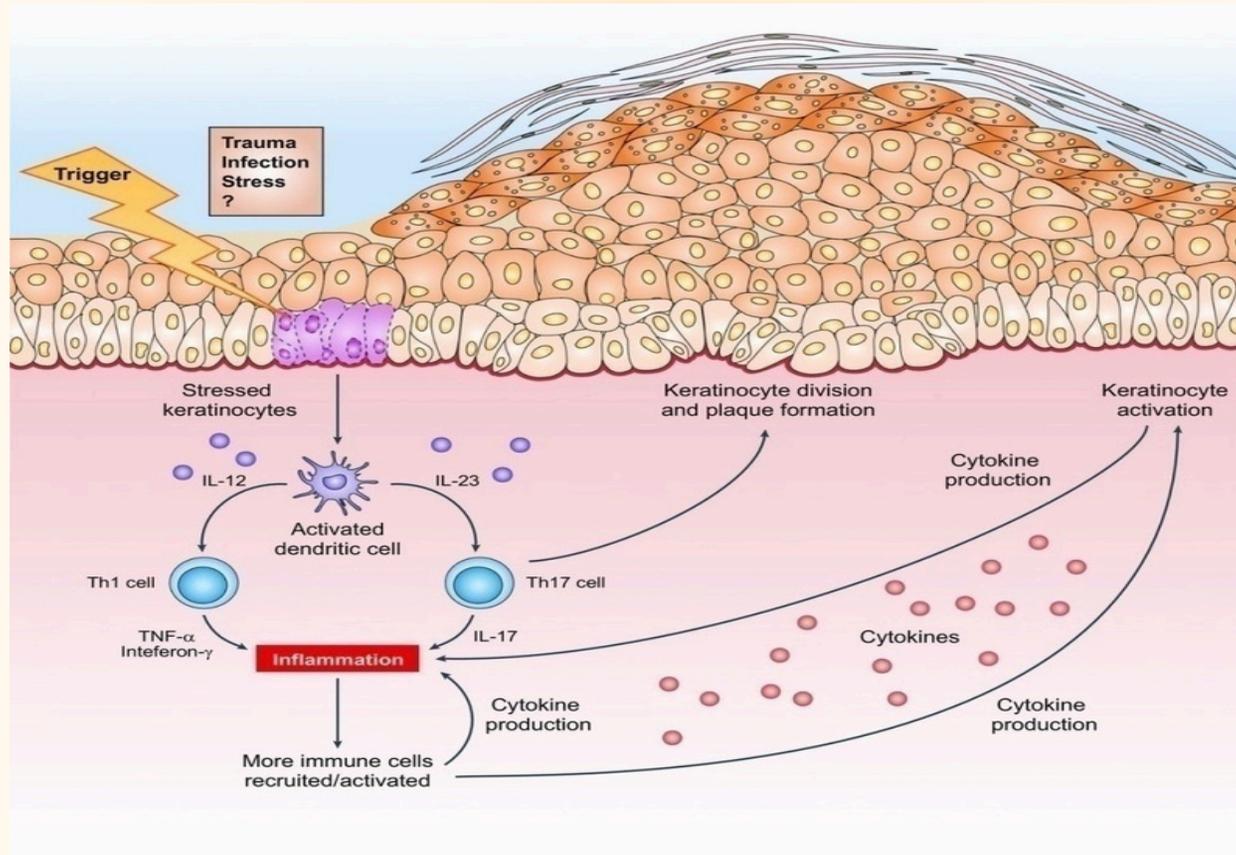
- It is a young person's disease with a median age at onset of 25 years in women and 28 years in men.
- Its incidence is 2-3% by some studies.
- Genetic predisposition is important (Between 60% and 90% of patients with psoriasis have a family history of the disease -by one study).
- **It's genetic but not hereditary.**

PATHOGENESIS

- Precise etiology of psoriasis is not known yet but the pathogenesis is well understood.
- The development of psoriasis is the end result of interplay between keratinocytes and T lymphocytes with the participation of dendritic cells-the end result of this is hyper proliferation and increased turnover of the epidermal cells and formation of psoriatic plaques.
- Keratinocytes need 28 days to complete the cycle from basal layer to the outer most layer, but in psoriasis this cycle take 3-4 days.



Psoriasis for the primary care practitioner

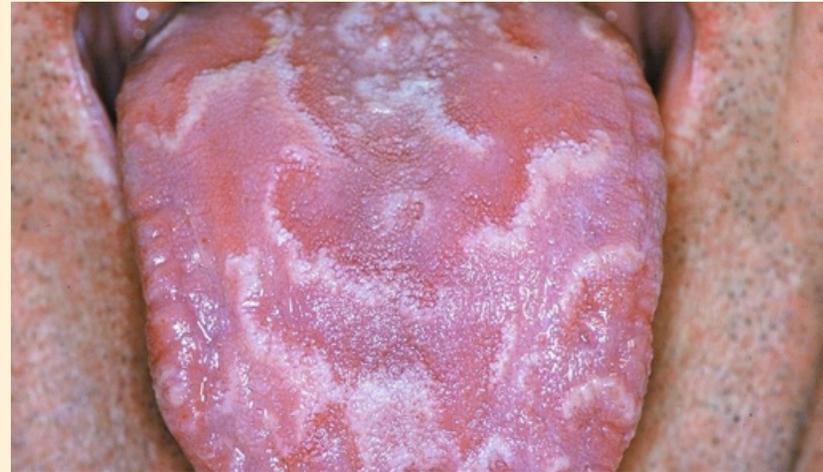


CLINICAL PRESENTATIONS

- Skin: Well demarcated erythematous plaques (raised lesions their diameter greater than their depth, it is **the primary skin lesion in psoriasis**) covered with dry silver scales on extensor surfaces (in psoriasis vulgaris).
- **Positive Auspitz sign** : after scratching of psoriatic plaque, pinpoint bleeding will appear below the scale.
- Nails: pitting, oil spot, onycholysis, discoloration and thickening.
- Scalp: Thick scaly plaques covered with silvery dry scales that may extend beyond the hair margin.
- Mouth –Geographical tongue (rare).



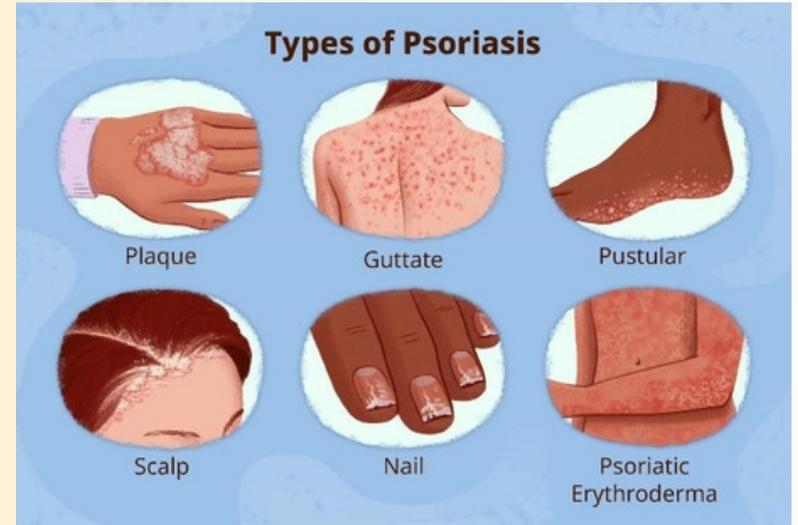
Auspitz sign



Geographical tongue

CLINICAL VARIANTS OF PSORIASIS

- Plaque psoriasis (psoriasis vulgaris)
- Scalp psoriasis
- Nail disease
- Inverse psoriasis
- Pustular psoriasis
- Palmoplantar psoriasis
- Erythrodermic psoriasis
- Guttate psoriasis



PLAQUE PSORIASIS(PSORIASIS VULGARIS)

- This presentation is most common and accounts for more than 80% of all cases.
- It is characterized by well-defined erythematous plaques that may have adherent dry silvery scales.
- Symmetrical plaques on elbows, knees, and lower trunk , with scalp involvement and it can be pruritic.
- The development of lesions on previously uninvolved skin following cutaneous injury is known as the **Koebner phenomenon** ,seen in psoriasis, vitiligo, lichen planus, eczema and erythema multiform.



1) PLAQUE PSORIASIS(VULGARIS)



SCALP PSORIASIS

- Between 50% and 80% of patients with psoriasis develop lesions on their scalp It can occur without skin lesions and called scalp psoriasis.
- The scales are dry and silvery and the lesions can be felt ,there's no hair loss.
- lesions may extend onto facial skin or posterior neck(do not respect the hair margin).



2) SCALP PSORIASIS



3-NAIL DISEASE(NAIL PSORIASIS)

- Nail involvement is common in all forms of psoriasis, affecting an estimated 80% of patients with the disease especially in pustular, Erythrodermic and palmoplantar forms and with psoriatic arthritis.
- Erythrodermic is very severe form of the disease.
- Nail pitting, oil drop-like patterns of yellow or salmon discoloration, nail thickening ,Onycholysis and discoloration.
- Nail disease can occur without any skin involvement(nail psoriasis) Which is sometimes difficult to diagnose. So we need biopsy.
- Certain histologic features seen on biopsy of psoriasis

NAIL PSORIASIS



- **Onycholysis , oil spots and pitting.**

- **Onycholysis**
- **(separation of nail plate from nail bed) , discoloration , oil spots.**

- **++Nail thickening and discoloration .**



Figure 25-9 Psoriasis of the nail bed causes serum to leak under the nail plate and make an "oil spot."



NAIL PSORIASIS



Onycholysis and oil spots



Onycholysis , pitting and discoloration.

4) INVERSE(FLEXURAL) PSORIASIS

- Inverse or flexural psoriasis involves the groin and/or other intertriginous areas, such as the armpits, under the breasts, or abdominal skin folds.
- It can also be present in the genital area.
- It is characterized by **well-defined, shiny, erythematous plaques with minimal scaling.**
- There is minimal scaling and no dryness. Why? Because this type occurs in skin folds, where there is constant moisture and friction.
- It should be differentiated from:
 - ~Fungal infection
 - ~Seborrheic dermatitis
- This type of psoriasis is missing the characteristic dry, silvery scaly plaques seen in classic plaque psoriasis.



FLEXURAL(INVERSE)PSORIASIS



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- Well demarcated erythema with minimal to no scaling (due to friction of the opposed skin leading to scale removal).



FLEXURAL(INVERSE)PSORIASIS



- Flexural psoriasis with nail changes (pitting).



- Peri- umbilical flexural psoriasis.

5-PUSTULAR PSORIASIS

- Eruption of **sterile pustules** that may be:
 - ~Generalized and extensive
 - ~Localized to existing psoriatic plaques
- **Acute Generalized Pustular Psoriasis**

Also known as the **von Zumbusch variant**.

- Uncommon but severe form
- May be associated with:
 - Fever
 - Edema
- May require **hospitalization**
- It needs systemic treatment.
- Bad prognosis and one of the most severe forms

Why Hospitalization Is Needed (Although Pustules Are Sterile)?

Even though the pustules are sterile:

- The affected skin becomes non-functional
- Loss of the skin's first-line defense
- Significant fluid loss
- Electrolyte imbalance
- Marked neutrophil infiltration due to intense inflammation

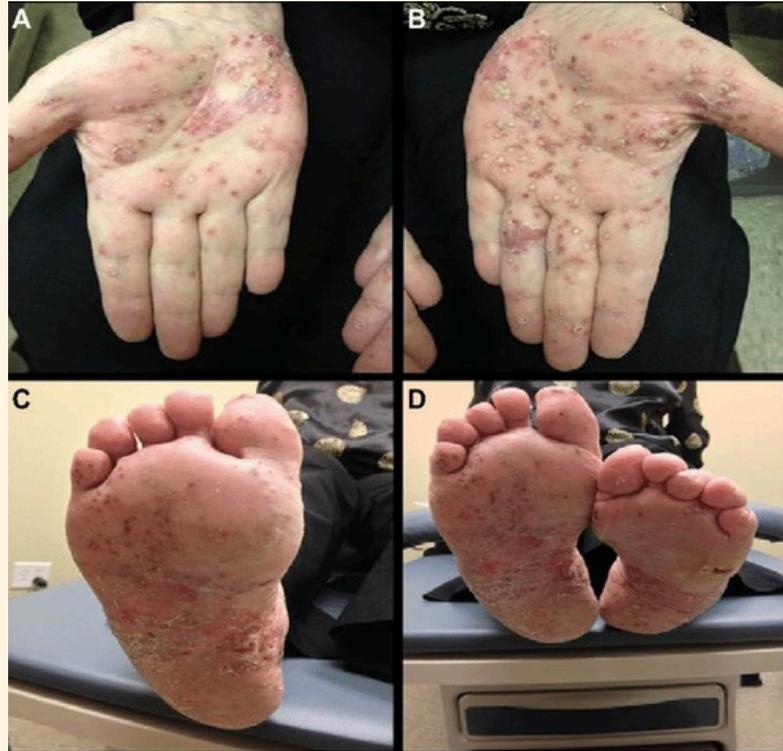


PUSTULAR PSORIASIS-GENERALIZED



Generalized erythema studied with sterile pustules.

PUSTULAR PSORIASIS- LOCALIZED (PALMOPLANTAR)



6) PALMOPLANTAR PSORIASIS

- Palmoplantar pustular psoriasis is characterized by yellow-brown sterile pustules on the hands and feet.
- Nail changes are more frequent in this variant.
- Patients may also experience scaling and severe pruritus, making this variant difficult to differentiate from hand eczema.
- This form of psoriasis is more common in women.
- Smoking is a risk factor for this variant.
- Differential diagnosis includes ; eczema (biopsy is helpful for making the diagnosis of psoriasis) and fungal infection



PALMOPLANTAR PSORIASIS

Symmetrical , dry and well demarcated



- Well-defined Itchy erythema with scaling



- Well-defined itchy erythema with scaling ,some pustules



- Well-defined itchy erythema with scaling ,some pustules and nail changes

7-ERYTHRODERMIC PSORIASIS

- Erythrodermic psoriasis appears as generalized Exfoliative dermatitis that can affect a large percentage of a patient's body surface area.
- Erythrodermic : affection of more than 90% of BSA.
- Loss skin function , electrolytes imbalance .
- Hair loss and nail dystrophy are common with this type.
- Patients may experience fever, chills, and/or fatigue.
- Erythrodermic psoriasis can be life-threatening and require hospitalization



ERYTHRODERMIC PSORIASIS



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Generalized erythema with scales , can appear due to maltreated psoriasis vulgaris.

8-GUTTATE PSORIASIS

- It is characterized by small, scattered, pink, oval (drop-shaped) papules with silvery scaling that usually appear on the trunk and extremities.
- It is typically occurs as new onset psoriasis in patients under 30 years of age.
- Guttate psoriasis is often triggered by strep throat infections.
- Systemic antibiotic should be given.
- Differential diagnosis : pityriasis rosea , lichen planus, pityriasis lichenoides.
- Good prognosis



GUTTATE PSORIASIS



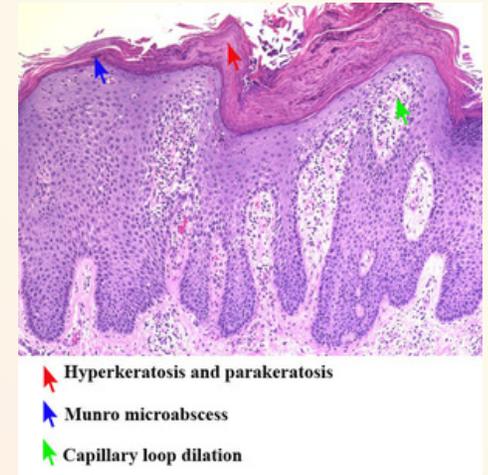
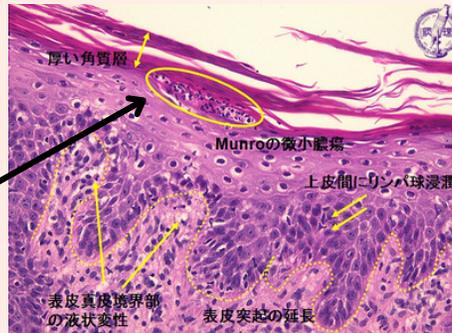
- Small , erythematous papules (drop shaped lesions) covered with scales on the trunk and extremities

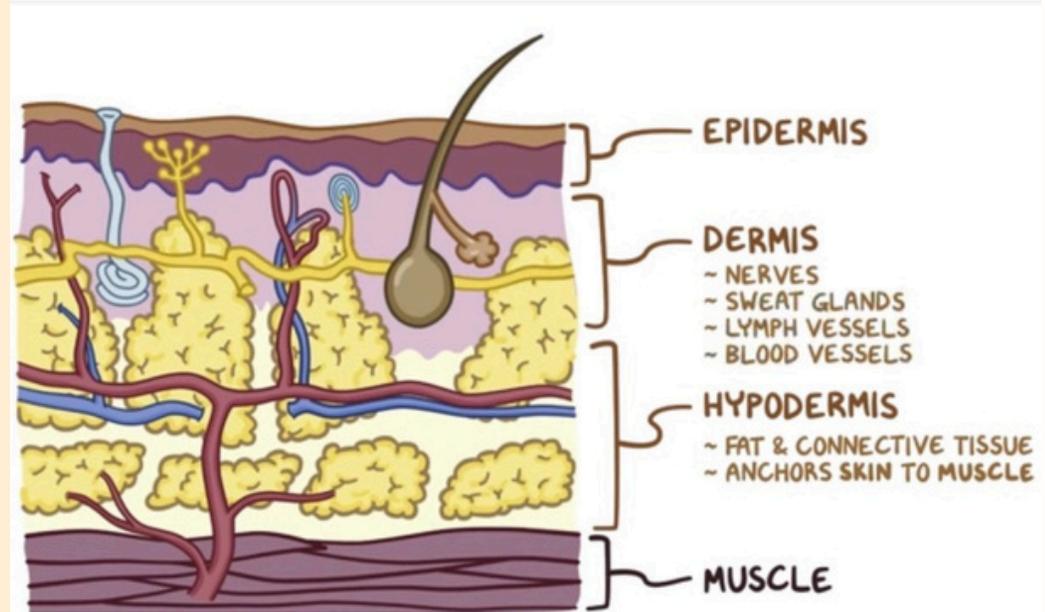
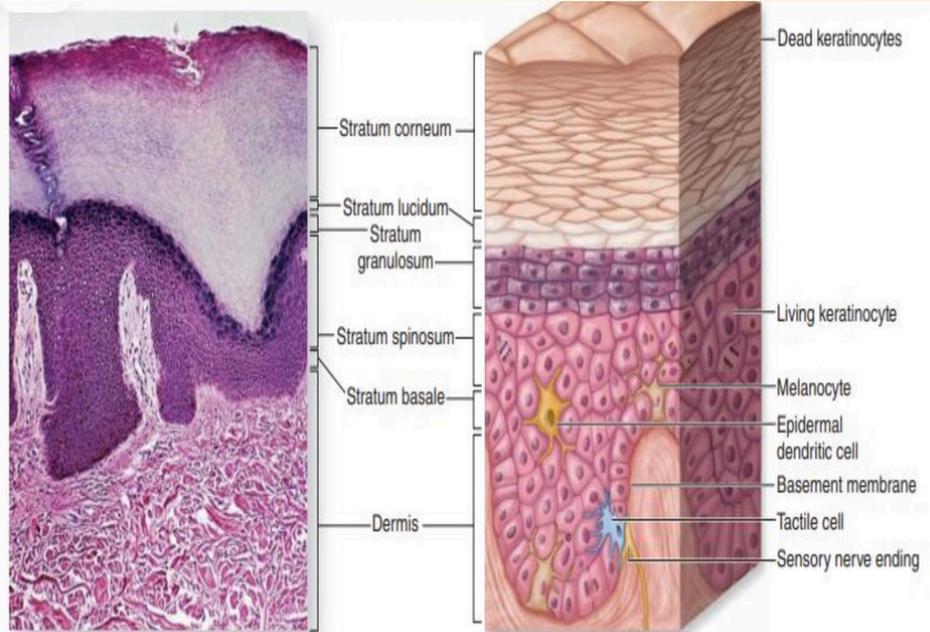


HISTOPATHOLOGICAL FEATURES

- **Hyperkeratosis** (Thickening of the horny cell layer (stratum corneum) .
- **Parakeratosis** (Immature keratinization) containing neutrophils (Munro`s microabscess) , immature keratinization , presence of nucleated keratinocytes in horny cell layer .
- **Acanthosis** (Thickening of the skin).
- **Hypogranulosis** (Thinning of the granular cell layer).
- Lymphocytic inflammatory infiltrate.
- So psoriasis has a **diagnostic histopathological features**

Munro`s microabscess

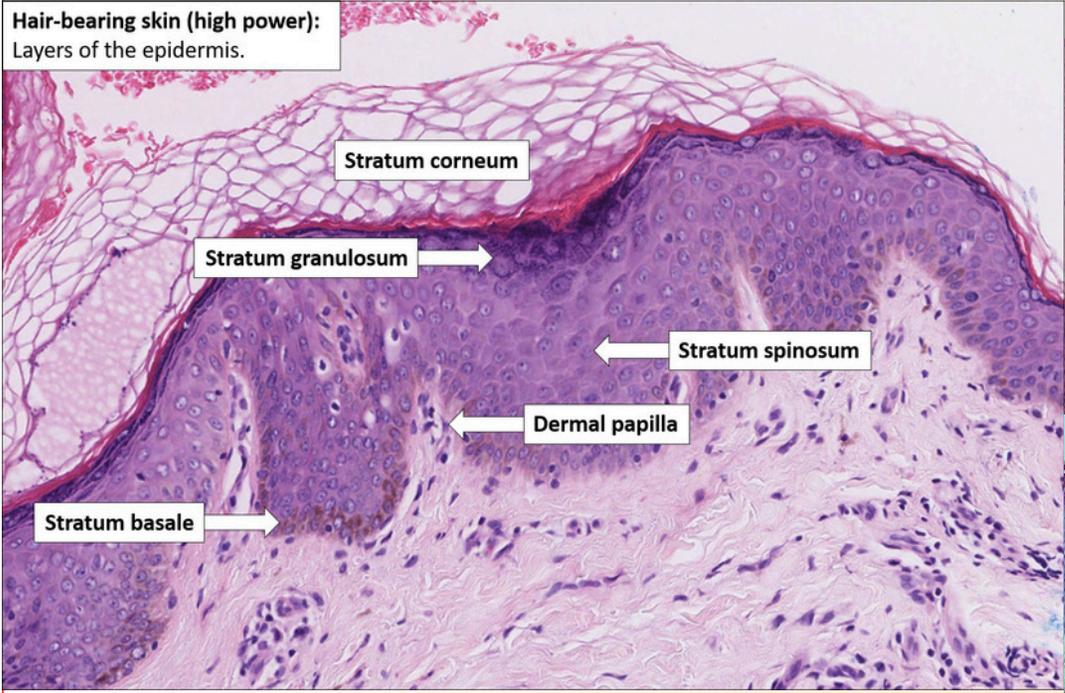




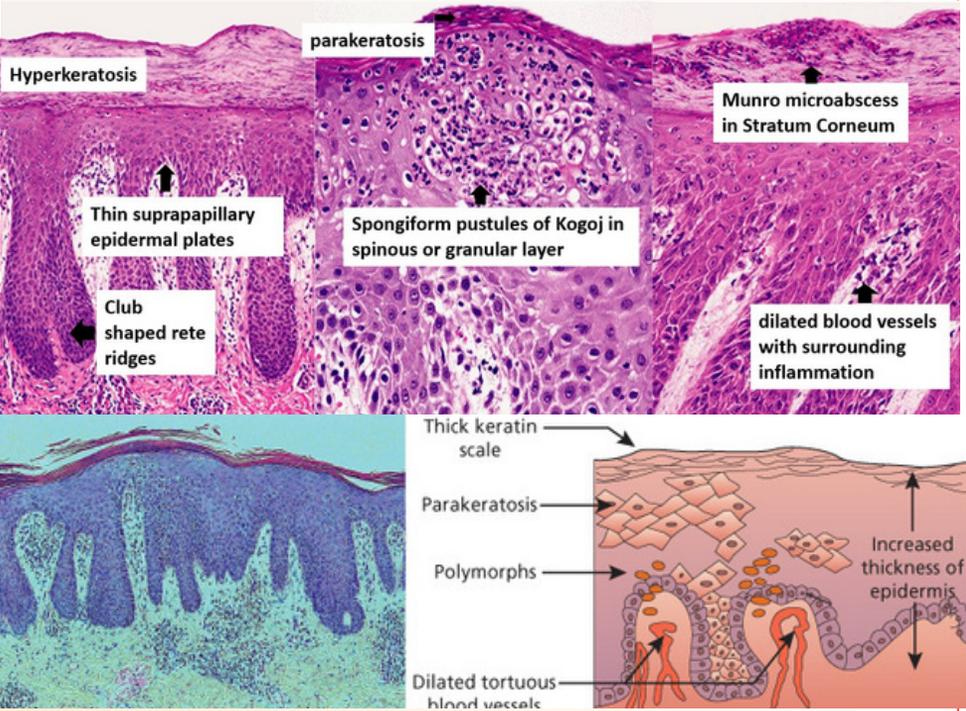
PSORIASIS PATHOLOGY COMPARED WITH NORMAL SKIN

Normal

Hair-bearing skin (high power):
Layers of the epidermis.



Psoriasis



EXACERBATING FACTORS

- Infections, particularly strep throat.
- Smoking, alcohol consumption , obesity.
- Drugs:**LMTBN**

lithium, synthetic antimalarial drugs, tetracycline antibiotics, beta blockers, and non- steroidal anti-inflammatory drugs (NSAIDS).

- Skin trauma
- Emotional stress.

- In women, psoriasis severity often fluctuates with changes in hormone levels(High levels of disease activity are often observed during puberty, postpartum, and during menopause psoriasis often improve during pregnancy when levels of estrogen are increased).

Koebner phenomenon

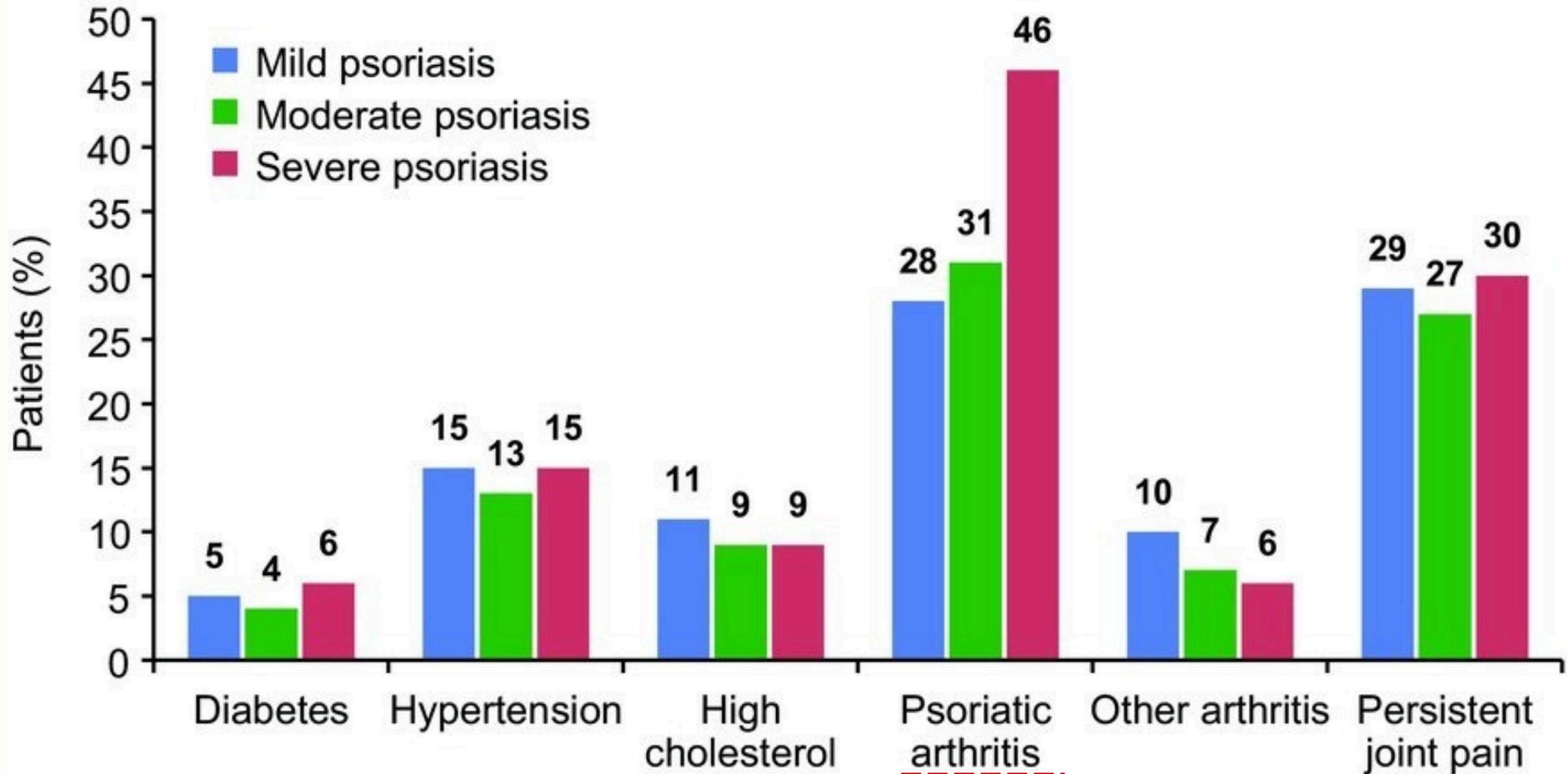


ASSOCIATED CO MORBIDITIES

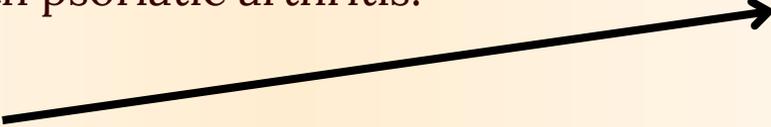
1. Psoriatic arthritis.
2. Hyperlipidemia.
3. Obesity.
4. Hypertension.
5. Hyper metabolic syndrome.
6. Increased risk for cardiovascular disease.



Psoriasis for the primary care practitioner



PSORIATIC ARTHRITIS

- One in five patients with psoriasis has psoriatic arthritis (20%).
- Psoriasis appears to precede the onset of psoriatic arthritis in 60-80% of patients (by as many as 20 years, but usually by less than 10 years).
- In as many as 15-20% of patients, arthritis appears before the psoriasis. They may appear simultaneously.
- It is a Seronegative arthritis.
- Nail changes is seen more with psoriatic arthritis.
- Dactylitis is a clinical feature. 
- X-ray is helpful in the diagnosis



Psoriatic arthritis

Etiology

Genetic predisposition: associated with HLA alleles (e.g., HLA-Cw6, HLA-B27)
Environmental triggers: infection, trauma, drugs (e.g., beta blockers, aspirin)

Epidemiology

♂ = ♀
Peak age of onset: bimodal pattern; between 20–30 years and 50–60 years

Serology

Rheumatoid factor negative
Anti-CCP antibodies positive in 10–15% of patients

Note

Psoriasis typically precedes arthritic symptoms by several years.
Nail changes are typically associated with arthritis of the small joints.



Uveitis



Morning stiffness

Skin

Erythematous plaques with silver-white scaling

Nail involvement

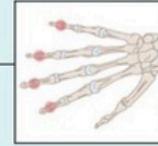


Nail pitting, oil drop sign, brittle nails, onycholysis

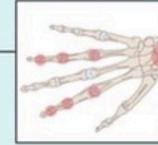


Joints

Peripheral type (common)
Symmetrical polyarthritis of small joints (esp. PIP and DIP):



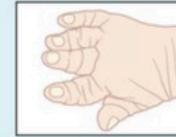
a) Transverse involvement of DIP joints



b) Longitudinal involvement of IP joints



Dactylitis: arthritis with soft tissue swelling of the entire digit



Arthritis mutilans ("telescoping fingers")



Tendinitis

Central type
Unilateral axial manifestation and oligoarthritis of large joints (e.g., knee)

PSORIATIC ARTHRITIS-CLINICAL VARIANTS

1. PSORIATIC ARTHRITIS-CLINICAL VARIANTS

Asymmetrical oligoarticular arthritis(most common).

2. Symmetrical polyarthritis.

3. Distal interphalangeal arthropathy.

4. Arthritis mutilans.

5- Spondylitis with or without sacroilitis



PSORIATIC ARTHRITIS



Swollen DIP joint.



DIFFERENTIAL DIAGNOSIS FOR PSORIASIS

1. Eczema.
2. Lichen planus.
3. Fungal infection.
4. Pityriasis rubra pilaris.
5. Pityriasis lichenoides.
6. Mycosis fungoides.
7. Secondary syphilis (especially in Guttate psoriasis).



TREATMENT

- No curable treatment till now.
- Our treatment control the disease to go into a remission.
- Topical treatment for less severe not extensive disease (less than 10% body surface area) as first line of treatment.
- Systemic treatment for more extensive and severe disease and for disease that is not responding to topical treatment and affecting the quality of life of the patients



TOPICAL TREATMENT AGENTS

1. Crude coal tar (Carcinogenic , irritant and smelly).
2. Emollients (Petrolatum / Vaseline).
3. Dithranol.
4. Topical steroids.
5. Topical calcipotriol (Vit.D derivative) help in keratinization .
6. Topical Calcineurin inhibitors (Tacrolimus).
7. Topical retinoids (Vit. A derivatives).
8. Local phototherapy.
9. Local laser treatment.

Best topical treatment :

Steroid (anti- inflammation)+ vit D+ Vaseline

SYSTEMIC TREATMENT OPTIONS

1. Phototherapy (PUVA and NB-UVB).
2. Methotrexate (low weekly dose).
3. Retinoids (Vit. A derivatives : Acitritin).
4. Cyclosporine.
5. Apremilast.
6. Biological treatment(Adalimumab (IL23), Etanercept, Secukinumab , Ustekinumab (IL17) and others).

PHOTOTHERAPY MACHINE



Phototherapy-Local for nail disease/ Palmoplantar type

Thank You!