

















## Psoriasis

Psoriasis may be divided into psoriasis vulgaris, generalized pustular psoriasis, and localized pustular psoriasis.

### *Psoriasis Vulgaris*      Clinical Features

Psoriasis vulgaris is a common chronic inflammatory skin disorder that affects approximately 1.5% to 2%



associated with acute group A ~-hemolytic streptococcal infections . Involvement of the nails is common



Psoriatic arthritis characteristically involves the terminal interphalangeal joints, but frequently the large joints

### ***Generalized Pustular Psoriasis***

#### **Clinical Features**

Generalized pustular psoriasis includes (a) acute generalized pustular psoriasis (von Zumbusch type and

This cutaneous eruption is characterized by the presence of variable numbers of sterile pustules appear

The four variants of generalized pustular psoriasis show considerable resemblance and overlapping in th

mainly in the mode of onset and the distribution of the lesions. Frequently, all four diseases show oral pu

*Acute generalized pustular psoriasis*      *von Zumbusch*      is generally diagnosed when the

*Generalized pustular psoriasis* *pregnancy* is a rare pustular eruption *impetigo*

In some instances of *subacute annular pustular psoriasis* or gyrate lesions show a clinical resemblance



Very rarely, children develop generalized pustular psoriasis. This disease has a benign course with frequent relapses and remissions.

***Localized Pustular Psoriasis***

**Clinical Features**

There are three types of localized pustular psoriasis: (a) "psoriasis with pustules" , in which only one or a

*Acrodermatitis continua* of

*Hallopeau*

is the term used when the pust

*Pustulosis palmaris et plantaris* is a chronic, relapsing disorder occurring on the palms, soles, deep

***Psoriasis and Acquired Clinical Features***

The association between psoriasis and human interleukin-17 receptor (IL-17R) is a strong association. See <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1091009/> for more information.



## ***Psoriasis Vulgaris***

### **Histopathology**

The histologic picture of psoriasis vulgaris varies considerably with the stage of the lesion and usually is

The earliest pinhead-sized macules or smooth-surfaced papules show subtle histologic changes with a p

exocytosis of neutrophils, they may aggregate in the uppermost portion of the spinous layer to form sma

In the fully developed lesions of psoriasis, as best seen at the margin of enlarging plaques, the histologic

Of the listed features, only the spongiform pustules of Kogoj and Munro microabscesses are truly diagnostic

The rete ridges show considerable elongation and extend downward to a uniform level, resulting in regular



show thickening ("clubbing") in their lower portion. Not infrequently, adjacent rete ridges seem to coalesce

The suprapapillary epidermis appears relatively thin in comparison with the markedly elongated rete ridges

In some instances the cornified layer consists entirely of confluent parakeratosis forming a platelike scale

Munro microabscesses are located within the parakeratotic areas of the cornified layer . They consist of

The dermal papillae, in accordance with the elongation and basal thickening of the rete ridges, are elong

An entirely typical histologic picture as described earlier is not always found, even if the biopsy specimen

indicates a fluctuation in the activity of the psoriasis.

The bleeding points that may be produced by gentle scraping of the skin (Au spitz sign) correspond to th

*Guttate or eruptive psoriasis* shows the histologic features of an early or active lesion of psoriasis, where there is

The histologic picture of *erythrodermic psoriasis* in some instances shows enough of the characteristics of

### ***Generalized Pustular Psoriasis***

**Histopathology**

Whereas in ordinary psoriasis the spongiform pustule of Kogoj is a very small micropustule and is seen



In addition to the large spongiform pustules, the epidermal changes in generalized pustular psoriasis are

In the healing stage, the lesions of all types of generalized pustular psoriasis may present the same hist

### ***Localized Pustular Psoriasis***

## Histopathology

In the variants of localized pustular psoriasis "psoriasis with pustules" and localized annular pustular psoriasis

In localized acrodermatitis continua of Hallopeau, the nail bed is mainly affected, showing marked epithelial

In pustulosis palmaris et plantaris there is a fully developed large intraepidermal unilocular pustule. It is c

the pustule, most commonly at the junction of the lateral walls and the overlying epidermis . These spong

Very early lesions may show spongiosis and exocytosis of lymphocytes in the lower epidermis overlying

***Psoriasis and Acquired Immunodeficiency Syndrome***

## Histopathology

The histologic picture in most cases is similar to that of psoriasis. In others, the histologic sections may s

## *Pathogenesis*                      of                      *Psoriasis Vulgaris*

Although the cause of psoriasis is unknown, there is increasing evidence of a complex interaction among

## Electron Microscopy



The earliest recognizable morphologic events in psoriasis have been investigated in lesions that cleared



Ultrastructural studies of the spongiform pustule of Kogoj, one of the most characteristic histologic structures

The ultrastructure of the capillary loops in the dermal papillae shows them to be different from normal capillaries

**Epidermal Cell Cycle Kinetics**

The rate of epidermal cell replication is markedly accelerated in active lesions of psoriasis, as shown by

Early calculations made it appear likely that in psoriatic lesions there was a great acceleration of the tran

Further investigations have found that (a) the general cell cycle is shorter (b) from 311 to 36 hours, i

100% of the germinative cells of the epidermis enter the growth fraction instead of only 60% for normal s

The source of the cycling cells in the suprabasal layers of the epidermis is not well defined. They could b

Recent studies suggested that psoriatic epidermis shows aberrant expression of apoptosis-related mole



## Keratinocyte Differentiation

Keratinocytes undergo the process of differentiation as they migrate upward through the epidermis from



## **Immunopathology**

Immunologic factors play a very important role in the pathogenesis of psoriasis. Psoriasis is now regarded

CD4+ T cells produce a variety of cytokines, including interleukin-2 (IL-2), tumor necrosis factor- $\alpha$  (TN F

Keratinocytes stimulated by TNF $\alpha$  may produce IL-6, which is a potent T-lymphocyte and neutrophil ch







γIFN is believed to play an important role in the initiation of psoriatic lesions as demonstrated by the indu

γIFN induces the expression of the ICAM-1 in keratinocytes and endothelial cells. This molecule mediate

not to be responsive to the growth inhibition effects of  $\gamma$ IFN, leading to their hyperproliferative state in the

Increased expression of p53 and downregulation of Bcl-2, consistent with the dynamics of psoriasis, hav

*Pathogenesis*                      of                      *Localized Pustular Psoriasis*

A relationship of pustulosis palmaris et plantaris with psoriasis is not generally accepted, although two fa

***Pathogenesis***      **of**      ***Psoriasis and AIDS***



There is evidence of the role of both CD8+ and CD4+ T lymphocytes and  $\gamma$ IFN in the pathogenesis of ps

. Paradoxically, as T-helper cell counts decline, it appears that psoriatic lesions exacerbate until a prete

The immunodysregulation resulting from HIV infection may trigger psoriasis in those genetically predispo

***Differential Diagnosis***

Two histologic features are not helpful in the diagnosis of psoriasis vulgaris (a) microabscesses in the stratum corneum (b) elongation of rete ridges (c) parakeratosis (d) thinning of the stratum corneum





Because of the clinical and, particularly, the histologic resemblance of the tongue lesions in pustular psoriasis





























