

Psoriasis: as an Imitation of Skin, Scalp and Nail Infections

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Abstract

Psoriasis is a common inflammatory, hyperproliferative skin disorder that affects 1% to 2% of the world population. The clinical diagnosis of psoriasis is relatively easy, especially when the lesions consist of erythematous, silvery white scaly, sharply demarcated, indurated plaques. Psoriasis is a chronic dermatosis of genetic origin, often precipitated by an event such as an infection, an injury or psychological stress. There are many types of clinical presentations called plaque psoriasis, guttate psoriasis, flexural or inverse psoriasis, annular psoriasis, pustular psoriasis, erythrodermic psoriasis and also can be present on scalp and nails that should be differentiated from various possible infection.

Keywords: Psoriasis; Infection disease; Imitation

Introduction

Psoriasis is a common inflammatory, hyperproliferative skin disorder that affects 1% to 2% of the world population. The clinical diagnosis of psoriasis is relatively easy, especially when the lesions consist of erythematous, silvery white scaly, sharply demarcated, indurated plaques. They have an oval or irregular shape, vary from one to several centimeters in diameter and are distributed symmetrically on the extensor surfaces of limbs, the lower back and the scalp. The most affected parts of body are knee, elbow and sacral regions. Because the clinical presentation of psoriasis is varied, many times the definitive diagnosis depends on the histological examination. However, the histological changes of psoriasis are as varied as the clinical presentations. Prior approaches that have been taken to classify psoriasis include age of onset, severity of the disease, and morphologic evaluation. The latter has yielded plaque, guttate, pustular, and erythrodermic as subtypes of psoriasis. Some clinical types of psoriasis can mimic infectious diseases. Psoriasis should be kept in mind the differential diagnosis of some viral, bacterial, fungal and parasitic diseases [1,2].

Psoriasis of the Skin

Psoriasis is a chronic dermatosis of genetic origin, often precipitated by an event such as an infection, an injury or psychological stress. Plaque psoriasis, also known as psoriasis vulgaris, makes up about 90% of cases. It typically presents with red patches with white scales on top (Figure 1). Itching is very variable, but it is usually absent. If there is a severe itching, plaque psoriasis may be confused with gale. For differential diagnosis, a microscopic examination can be useful. Scrapings of the lesions show mites, eggs or faecal pellets of *Sarcoptes scabiei* by potassium hydroxide examination [3].

Guttate psoriasis is the most frequent psoriasis variant observed in children and young adults. It is characterized by an acute eruption of numerous, small, round or oval, erythematous and scaly papules and

plaques which are widely disseminated, particularly on the trunk and proximal part of the extremities.



Figure 1: Plaque psoriasis.

The lesions typically appear one or two weeks after a severe streptococcal infection of the upper respiratory tract. The principal differential diagnosis includes some papulosquamous disorders, such as secondary syphilis. The non-pruriginous papulosquamous lesions of secondary syphilis may mimic a guttate psoriasis, but the coppery red colour and the collarette of scales of papules, the presence of other cutaneous signs of papular syphilis, the generalized lymphadenopathy with enlarged lymph nodes remove any diagnostic doubts even before the results of serological testing are known [4].

Flexural or inverse psoriasis is characterized by the development of shiny, red, sharply demarcated thin plaques in the body folds (axillae, inguinal folds, intergluteal cleft). This psoriasis pattern must be differentiated from bacterial intertrigo, candidal intertrigo and erythrasma. The potassium hydroxide examination and the culture of

scales, Wood's lamp examination may be useful to exclude fungal or bacterial infections.

Annular psoriasis is a form of plaque psoriasis, characterized by annular erythematous plaques and can mimic the tinea corporis. Annular psoriasis has more infiltrative and red plaques compared to tinea corporis. Also scaling is intense than tinea corporis in psoriatic lesions. The potassium hydroxide examination and the culture of scales can be used for the differential diagnosis [1].

Pustular and erythrodermic psoriasis are the most severe clinical variants. In the diffuse pustular form recurrent episodes of fever occur, followed by new outbreaks of pustules (Figure 2).



Figure 2: Pustular Psoriasis.

Pustular psoriasis is characterized by non-follicular sterile pustules, which represent the macroscopic aspect of the massive neutrophil infiltration of epidermis. In differential diagnosis infective conditions (pustular dermatophytoses, bacterial impetigo, cutaneous pustules arising during gram positive and gram negative septicemia) must be excluded by carrying out PAS or GRAM stains and cultures of biological material [5].

Erythrodermic psoriasis corresponds to the generalized form of the disease. The entire skin is bright red and is covered by superficial scales (Figure 3). Fatigue, myalgia, shortness of breath, fever and chills may also occur. Because of these symptoms erythrodermic psoriasis can mimic many systemic febrile infectious diseases. In an undiagnosed patient of erythroderma the nail changes may be indicative of erythrodermic psoriasis. Also skin biopsy may helpful for diagnosing psoriasis and to rule out other diseases [6].

Psoriasis of the Scalp

Scaling of the scalp is a frequently experienced discomfort. Slight scaling of the scalp as dandruff is often difficult to diagnose as a specific condition (Figure 4). Often inspection of the entire body surface may help further. Classical psoriatic lesions elsewhere are helpful in the diagnosis psoriasis [1,4].

In fungal infections of the scalp hairs often are broken, pustulation may occur and alopecia may be more prominent.



Figure 3: Erythrodermic psoriasis.



Figure 4: Scalp psoriasis.

Also cutaneous leishmaniasis can be confused with psoriasis. Scalp settled cutaneous leishmaniasis has been reported differential diagnosis of scalp psoriasis in literature [7]. For differential diagnosis tissue smear and histologic examination should be performed.

Psoriasis of the Nails

Toe nails and mainly fingernails are frequently involved in all types of psoriasis, especially in psoriatic arthropathy. Pitting, oil spots, subungual hyperkeratosis and onycholysis are the most common but are not pathognomonic disorders (Figure 5). Subungual hyperkeratosis is very frequent in psoriasis and results from involving the nail bed or hyponychium, like onychomycosis. The changes in psoriatic nails can closely resemble an onychomycosis. Onychomycosis is the most common nail disease and constitutes about half of all nail abnormalities. Clinical discrimination between nail psoriasis and onychomycosis often is difficult. Diagnostic techniques including direct microscopy, fungal culture and polymerase chain reactions may

identify onychomycosis and help to distinguish it from nail psoriasis [8,9].



Figure 5: Nail psoriasis.

Eventually in most cases of psoriasis, no specific investigations are required. Skin swabs for bacteriology: to identify secondary infection, throat swab for beta hemolytic streptococcus, skin scrapings and nail clippings to rule out dermatophyte infection and skin biopsy can be useful to confirm the definitive diagnosis.

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