THE MANY GUISES OF PSORIASIS

The typical silver scales and salmon pink lesion may be absent not only in clinical variants but also in certain anatomic sites, so you have to know the full range of appearances

BY LEWIS H. KAMINESTER, M.D.

Psoriasis, an inflammatory proliferative disease of the skin, affects 2% of the U.S. population, making it one of the commonest skin diseases. Its spectrum of severity extends from a few scaly red patches on the knees or elbows to a severely disabling generalized erythroderma with crippling arthritis.

PATHOGENESIS
The development of psoriasis is at least partly determined by genetic inheritance. The exact mechanism has not been identified, but working theories have been constructed around the premise of autosomal-dominant genes with variable penetrance.

Psoriasis affects men and women with equal frequency. The disease may develop at any age and last only a few weeks or a lifetime. Exacerbations and remissions are unpredictable.

Precipitating factors. Several factors may provoke the onset or an exacerbation of psoriasis. Trauma may elicit a psoriatic response known as Koebner's phenomenon one or two weeks later in previously unaffected skin. That response occurs in at least 50% of psoriasis patients at some point in their lives. Infection, especially streptococcal infection in the throat, can initiate acute guttate psoriasis, particularly in puberty and menopause. Pregnancy may trigger psoriasis. Metabolic abnormalities, such as hypocalcemia, and changes caused by renal dialysis can precipitate the disease. Numerous drugs have been incriminated, especially lithium, beta blockers, and antimarials. Sudden withdrawal of systemic or potent topical corticosteroids, physical and emotional stress, alcohol use, and HIV infection can also initiate or exacerbate the disease.

HISTOPATHOLOGY
The histopathologic changes in fully developed plaques include focal parakeratosis and Munro microabscess formation (see illustration on page 28), near-absence of the granular layer, hyperplasia with elongation of the rete ridges, and suprapapillary epidermal thinning. Rete ridges are often clubbed, with mononuclear leukocyte infiltrates in the lower half of the epidermis. Dilated tortuous papillary blood vessels almost touch the undersurface of the thinned suprapapillary epidermis, causing what is known as the Auspitz sign—a fine pinpoint bleeding site when a psoriatic scale is removed.

CLINICAL PRESENTATION
The most characteristic psoriatic lesions are distinctive silver-scaled sharply demarcated plaques typically located on the scalp or the extensor prominences of the elbows and knees.

KOEBNER'S PHENOMENON

Trauma may provoke a psoriatic response—known as Koebner's phenomenon—within one or two weeks. In this patient, psoriasis developed in abdominal scar tissue.

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PSORIASIS

HISTOPATHOLOGY

Underneath the scales the skin is a full rich red, sometimes called a salmon pink. That color is very helpful in diagnosing disease on the palms, soles, and scalp. The quality of the color is lost in darker-skinned people, but the silver scales are readily seen.

The degree of scaling varies. Scaling does not occur in the intertriginous areas, where psoriasis can be misdiagnosed as seborrheic dermatitis or tinea infection. Psoriasis exhibits considerable symmetry. The lesions are well defined with sharply delineated margins. Those characteristics also help in establishing the diagnosis on the scalp, penis, palms, and soles, where other typical features may be absent. All lesions are elevated and easily palpable because of epidermal thickening and dermal infiltration. Disks or plaques of varying size may be seen alone or in scores.

The appearance of psoriasis varies according to its location on the body. Plaques on the scalp, especially on the occiput, are often very thick. Part or all of the scalp may be affected. Hair loss is uncommon. Genital lesions may lack scales, especially if the patient is uncircumcised. Scaling may also be absent or greatly reduced in flexural, or inverse, psoriasis of the groin, vulva, axilla, or inframammary folds (see illustration on page 30). Flexural psoriasis is commoner in older people. Psoriasis of the palms or soles may appear as typical scaly patches or as pustulosis and may mimic tinea pedis or contact dermatitis. A search for more typical psoriatic lesions elsewhere on the body may help pin down the diagnosis.

The signs of psoriasis of the nails are dependent on the anatomic site of

CLASSIC PSORIASIS

Indurated plaques with silver scales and sharply demarcated margins are the most commonly encountered psoriatic lesions (left). Underneath the scales the plaque is typically red to salmon colored (right).

LACK OF COLOR

In dark-skinned people, the underlying erythema may be faint or imperceptible, but the silver scales are still readily seen.

PSORIASIS OF THE SCALP

A thick, micaceous, scaly plaque is seen on a patient's scalp. Part or all of the scalp may be affected, but loss of hair is uncommon.
PSORIASIS

DIMINISHED OR ABSENT SCALES

Penile lesions (left) and inverse psoriasis (right) may have few or no scales. Unincriminated penises are especially likely to lack scales. Inverse psoriasis may be found in the vulva, axilla, and inframammary folds, in addition to the groin.

PSORIASIS OF THE FINGERNAILS

The psoriatic changes seen in this patient are pitting of the index nail and onycholysis of the third and fourth nails.

the affected nail unit. If the nail bed is affected, for instance, onycholysis or the oil drop sign may occur, whereas disease of the dorsal nail matrix causes pitting of the nails. Splitter hemorrhages are also common. Secondary invasion with Candida and Pseudomonas may follow onycholysis, but the primary disease is psoriasis, and oral griseofulvin will not help the underlying nail disorder.

Variants. Psoriasis has many other guises. Guttate psoriasis is described as a shower of small raindrop-like lesions usually distributed over the entire body but in greatest numbers on the trunk. Ostraceous psoriasis is characterized by grossly hyperkeratotic plaques that sometimes resemble oyster shells. Erythrodermic psoriasis manifests as red-man syndrome, a generalized exfoliative erythroderma. The disease causes severe itching and susceptibility to cold. The patient may be febrile and gravely ill.

THERAPY

As Wilson said of psoriasis in 1842, it’s “a very troublesome and, often, intractable disease, but it is rarely dangerous to life.” That remains true today. Reassure the patient that the disease is not contagious, and inform him of the wide range of therapeutic agents. Up to 40% of patients have complete but not usually permanent remissions at some point, often without any treatment.

Management should be tailored to the individual. The amount of time required to achieve clearing varies greatly from patient to patient. Sunlight and hot weather are helpful, but diet has been shown to be unimportant. Local therapy is the mainstay of management. Coal tar has been used for more than a century, although modern preparations are much more cosmetically acceptable than the original crude coal tar products. The Goette- man regimen of 2 to 5% crude coal tar in combination with tar baths and ultraviolet B light has been employed with success for more than 60 years. Today, modified regimens include more appealing alcoholic extracts of coal tar, such as Baker’s P and S plus or Estar gel, topical corticosteroids, and controlled doses of UVB radiation administered with a UV lightbox with an FS40 bulb. Clinical trials in Scandinavia of a new vitamin D3 analog, calcipotriol, have shown promising results.

Tar’s safety has been regarded as one of its most significant virtues, despite the presence of some carcinogens among the thousands of substances contained in crude coal tar. continued
Psoriasis

Nevertheless, prolonged application to the anogenital area and scrotum should probably be avoided, since carcinoma at those sites has been reported, though rarely. Primary irritation is uncommon, and allergic contact dermatitis is rare; folliculitis is the commonest adverse effect.

In Europe, the Ingram regimen of anthralin in 0.1 to 0.8% concentrations is used more commonly than tar. The paste stains linen indelibly and is highly irritating to undiseased skin, so it's not recommended for use by inexperienced physicians. Weaker formulations—below 0.5%—are now common, and a two-hour short-contact regimen has recently been hailed as effective for patients with severe psoriasis that cannot be controlled with psorales and UVA therapy (PUVA) or cytotoxic drugs.

Psoriasis of the scalp can be particularly refractory to treatment. If tar shampoos alone are not effective, tar solutions and shampoos with tar and salicylic acid should be tried. A cup dressing worn overnight—with the tar washed out in the morning—can help remove thick scaling, as can PsS liquid. Once the scaling has been reduced, corticosteroids will be more effective.

Corticosteroids. Topical corticosteroids, the most commonly used form of psoriasis therapy in the United States, are the treatment of choice for psoriasis. They are easy to apply and remove, do not irritate the skin, and do not stain linen and clothing. Occlusion with plastic dressing improves percutaneous penetration and efficacy. Switching from one product to another when efficacy diminishes often helps keep the disease under good control and prevents tachyphylaxis.

Exercise care in choosing among the wide variety of topical corticosteroid products. In general, ointments are most penetrating but lack the cosmetic acceptability of creams or lotions. Lotions and solutions are best for hairy areas.

All topical corticosteroids are ranked according to potency. Since psoriasis is a chronic disease requiring long-term, if not lifetime, management, choose the least-potent product that will keep the disease under control. The three most potent topical ointments—halobetasol, betamethasone dipropionate, and clobetasol—have a twoweek restriction on their use. Thus, while one of those preparations may rapidly clear psoriasis, the patient may be disappointed at having to discontinue its use after only two weeks. A good alternative is use of a midpotency ointment, such as mometasone furoate.
Psoriasis in the intertriginous areas does not cause scaling and can be mistaken for seborrheic dermatitis. When you aren't sure whether a lesion is psoriasis, a search for more-typical psoriatic lesions elsewhere on the body may help make the diagnosis. Prolonged application of coal tar products to the anogenital area and scrotum should probably be avoided, since carcinoma may result. Switching from one corticosteroid to another helps prevent tachyphylaxis.

Much inconvenience to the patient. Photochemotherapy. PUVA therapy was approved for use in the United States in 1982. High-intensity UVA bulbs are combined with oral 8-methoxypsoralen. UVA-opaque goggles must be worn, and UV-blocking glasses must be used for the rest of the day after therapy. Enhanced photosensitivity may result in burns even after the patient leaves the light box. Erythema, frank “sunburn,” and pigmentation are the commonest adverse effects of PUVA, but pruritus occurs in 25% of patients and nausea in 12%. Gross freckling on the face and elsewhere can be disfiguring. A large-scale study showed a 12-fold increase in the risk of squamous cell carcinoma after at least one year of high-dose PUVA therapy.

**SUGGESTED READING**


Kragballe K: Combination of topical calcipotriol (MC903) and UV-B radiation for psoriasis vulgaris. Dermatologica 181:211, 1990.


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