
Mending the Heartbreak of Psoriasis

By Charles E. Crutchfield III, M.D.

Descriptions of psoriasis have been present since the beginning of written history. Psoriasis manifests itself as red, scaling plaques that often itch, hurt and bleed. Commonly, it occurs on the elbows and knees, but it can be found anywhere on the body, including the face and scalp. It affects people in all walks of life and nationalities. It can be progressive, and may appear at any time during one's life. It is one of the most common skin diseases, striking an estimated 3-5% of the world's population. Of those affected, approximately 30% will develop an associated psoriatic arthritis, which is both progressive and degenerative. Psoriasis is not contagious, but it can interfere with normal life and social relationships, and cause many sufferers to isolate themselves from friends and family. Heredity plays a role in the disease, with approximately 20% of all sufferers being able to identify a genetic relative with the disease. Stress, injury, infection, medication or trauma can cause an initial episode or cause a flare-up.

There are many varieties of psoriasis, including *psoriasis vulgaris* (plaque psoriasis), *guttate psoriasis*, pustular psoriasis, scalp psoriasis and inverse psoriasis. The most common form of psoriasis, *psoriasis vulgaris*/plaque psoriasis, commonly manifests itself as scaling plaques on the knees and elbows. Inverse psoriasis occurs in the axillae, under the breasts and in the skin folds around the groin, buttocks and genitals. Scalp psoriasis is often mistaken for severe dandruff. *Guttate psoriasis* usually begins shortly after a sore throat associated with a streptococcal infection. Small raindrop (*guttate* is German for raindrop) papules and plaques cover the trunk. Pustular psoriasis is a painful condition that is limited almost exclusively to the palms and sole but in rare cases generally. Pustular psoriasis can be quite debilitating. It can even prevent walking and the ability to work with the hands. There is also a generalized erythrodermic exfoliative form of psoriasis that is considered a dermatologic emergency necessitating hospitalization due to high cardiac output failure. Psoriasis can also affect the nails, imitating a fungal infection, cause pits in the nails or produce brown spots under the nails known as "oil spots."

Psoriasis is also associated with inflammatory joint disease, psoriatic arthritis and recently linked in a published report from the Mayo Clinic to certain cases of cardiovascular disease.

WHAT CAUSES PSORIASIS?

Psoriasis is a genetic disorder involving both autoimmune and

inflammatory components. The pathogenesis of psoriasis involves a complex interaction of genetic and environmental factors. Markers for psoriasis have been identified on at least 11 chromosomes (1, 3, 4, 6, 8, 10, 16, 17, 18, 19 and 20).

The normal skin growth cycle requires approximately 28 days for the skin to grow from the basal layer to the upper level of the skin. In psoriasis, this growth rate is dramatically accelerated and occurs in three to five days. As a result, the skin cannot shed normally and, instead, piles up upon itself, forming thick, scaling plaques. In the past, it was believed that psoriasis was a disorder of skin cells (keratinocytes) where the cells were unable to regulate their growth at a normal rate. However, it is now understood that there are many contributing factors such as the immune system driving the psoriatic state. Sensitized lymphocytes cells can leave the bloodstream and park themselves in the skin and produce several cytokines (including TNF-alpha) that interact with keratinocytes inducing the rapid growth phase. The newer biologic treatments are targeted at the immune cells to interfere with their ability to produce the rapid growth of skin cells, either directly or indirectly by targeting the cytokines they produce, and also inhibit the inflammatory phase associated with psoriatic arthritis.

HOW IS PSORIASIS DIAGNOSED?

Dermatologists diagnoses psoriasis by examining the skin, nails and scalp. If the diagnosis is in doubt, skin biopsy is definitive. When examining the skin, hair and scalp, one looks for scaling plaques with punctate bleeding. Psoriasis also can occur or get exacerbated in areas of trauma (Koebner phenomenon).

HOW IS PSORIASIS TREATED?

My philosophy is to use a combination approach utilizing many different compounds in the treatment of psoriasis to achieve a synergistic effect. This includes but is not limited to topical medicine such as topical anti-inflammatories, topical tar containing treatments, topical vitamin A (retinoids) treatments and topical vitamin D treatments. In addition to topical medicines, I also use phototherapeutic measures including narrow-band ultraviolet B phototherapy. Phototherapeutic treatments can be performed using the full body and a hand and foot light box to treat resistant hand and foot psoriasis. Additionally, I employ oral and systemic medications



Left knee before



Left knee after



Right palm before



Right palm after



Left elbow before



Left elbow after

including methotrexate, cyclosporine and oral retinoids. I also successfully employ the new generation of therapeutic medicines known as “biologic agents” that are genetically engineered receptor proteins or antibodies that target lymphocytes or cytokines involved in producing the psoriatic state. When using systemic agents to treat psoriasis, the appropriate candidates must be selected and proper monitoring must be used.

Certain medications such as beta blockers can make it difficult to clear psoriasis. In resistant cases, I have patients check with their prescribing physician to see if a different class of anti-hypertensive can be used. Additionally, I find it difficult to clear completely patients with psoriasis who consume heavy amounts of tobacco or alcohol.

Once again, I tend to use a combination of topical, oral and systemic agents to achieve the best results for my patients.

More research is being done every day giving us better insight into the cause of psoriasis. This will allow the disorder to be treated even more effectively in the future. As mentioned, there is a cascade of cytokines involved in the psoriatic state and several different cytokines are the targets of active research in the treatment of psoriasis and psoriatic arthritis. It is vital to detect and treat psoriatic arthritis early, since it is both degenerative and progressive.

Psoriasis is a very common skin disorder that can be devastating, mentally and physically, to patients. Fortunately, with the correct diagnosis and appropriate treatment program, psoriasis and psoriatic arthritis can be managed quite successfully.

There is an award-winning video called “My Skin’s on Fire — Living with Psoriasis” that provides tremendous insight into living with psoriasis. For more information, visit www.sparklestone.org/skinfireorg.

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