Pimecrolimus: A New Treatment for Seborrheic Dermatitis

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Seborrheic dermatitis is a chronic recurrent inflammatory skin condition that mainly affects areas containing sebaceous glands. I present a case of a novel effective topical nonsteroidal treatment (pimecrolimus 1.0% cream) for facial seborrheic dermatitis. Pimecrolimus is a member of a new class of nonsteroidal agents—macrolactam immunomodulators.

Seborrheic dermatitis is a chronic recurrent inflammatory skin condition that affects the nasolabial folds, ears, eyebrows, scalp (dandruff), chest, umbilicus, and other areas containing sebaceous glands.[1] This condition also may have hormonal influences—hence the appearance of seborrheic dermatitis on both the scalp in infants younger than 6 months (cradle cap) and on sebum-rich areas in postadolescents.[1-3] Seborrheic dermatitis also has been associated with *Pityrosporum* yeasts, AIDS, and neurologic disease.[4-6] The course of the condition is usually intermittent, chronic, and progressive. There is no known cause or cure for seborrheic dermatitis, which affects 3% to 5% of the adult population.[1] Standard treatment for facial seborrheic dermatitis relies heavily on topical glucocorticoids. Unfortunately, chronic use of topical steroids is associated with many side effects, including atrophy, telangiectasia, glaucoma, adrenal suppression, and diminishing effectiveness.[7]

Pimecrolimus is a member of a new class of nonsteroidal agents—macrolactam immunomodulators. An ascomycin derivative, pimecrolimus has a molecular weight of 809 d. This agent was initially designated *ASM 981* during development. Pimecrolimus, like the related macrolide agent tacrolimus, exerts its anti-inflammatory effects by inhibiting production of many of the cytokines involved in the inflammatory response. Specifically, pimecrolimus inhibits calcineurin, a calcium-dependent phosphatase enzyme. As a result, macrolactam immunomodulators also are known as calcineurin inhibitors. Calcineurin is essential in activating a nuclear transcription factor of activated T cells—a factor that enhances production of many of the cytokines involved in the inflammatory response. Pimecrolimus seems to not produce the side effects common with chronic use of topical steroids.[7,8]

Case Report

A 33-year-old man presented with pink-to-red patches and plaques on the central area of the face (including the nasolabial folds) and overlying greasy scales (Figure 1A). Ear, scalp, and chest involvement was minimal. The rash, which had been present intermittently for $1^1/_2$ years, was progressing in severity and frequency and was failing to respond to over-the-counter hydrocortisone 1% cream. The patient had no history of neurologic disease. Four months before presentation, he had had a general physical examination, including a test for human immunodeficiency virus, and had been found to be in good health.

A diagnosis of seborrheic dermatitis was made. The patient was instructed to apply approximately 0.5 g of topical pimecrolimus 1.0% cream to affected areas twice daily until he returned to the clinic for follow-up 14 days later. By follow-up, the seborrheic dermatitis had cleared completely (Figure 1B). The patient reported that clearing had been complete on approximately day 8 but that he had continued the regimen as instructed. At follow-up, he was instructed to start a preventive regimen (once-daily applications, weekends only) and to treat any breakthrough recurrences with 3 to 10 days of twice-daily applications.

Comment

Seborrheic dermatitis is a frustrating, recurrent, chronic inflammatory skin condition of unknown cause and cure. Mainstays of treatment have been

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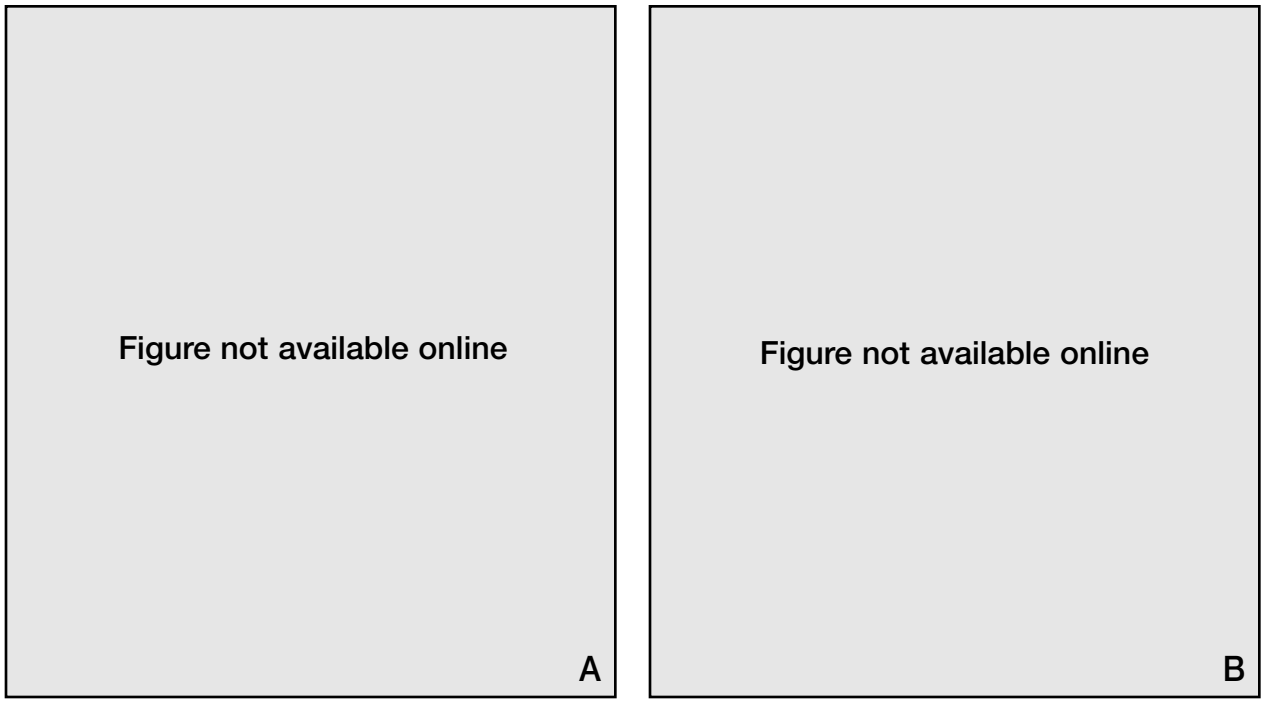

Facial seborrheic dermatitis before (A) and after (B) 14 days of twice-daily application of topical pimecrolimus 1.0% cream.

topical corticosteroid preparations, antifungal creams, and antidandruff/antifungal shampoos.[1,9,10] Unfortunately, these treatments can become ineffective, and certain risks are associated with long-term use of steroids on the face. Reported here is a case of facial seborrheic dermatitis successfully treated with pimecrolimus 1.0% cream. What is unclear is whether the molecular size of pimecrolimus makes this agent less than maximally effective (by virtue of forming a barrier to penetration) in treating inflammatory skin disorders with epithelial disruption—as occurs with tacrolimus. Nevertheless, because of the significant effectiveness and minimal side-effect profile of pimecrolimus in treating atopic dermatitis and seborrheic dermatitis, this agent may be used to treat a variety of inflammatory skin conditions. Pimecrolimus represents a promising alternative to topical glucocorticoids, especially when it is desirable to minimize or avoid their use.

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