Review

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Pathophysiology, Clinical Presentation, and Treatment of Psoriasis
A Review

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Abstract

Importance Approximately 125 million people worldwide have psoriasis. Patients with psoriasis experience substantial morbidity and increased rates of inflammatory arthritis, cardiometabolic diseases, and mental health disorders.

Observations Plaque psoriasis is the most common variant of psoriasis. The most rapid advancements addressing plaque psoriasis have been in its pathogenesis, genetics, comorbidities, and biologic treatments. Plaque psoriasis is associated with a number of comorbidities including psoriatic arthritis, cardiometabolic diseases, and depression. For patients with mild psoriasis, topical agents remain the mainstay of treatment, and they include topical corticosteroids, vitamin D analogues, calcineurin inhibitors, and keratolytics. The American Academy of Dermatology-National Psoriasis Foundation guidelines recommend biologics as an option for first-line treatment of moderate to severe plaque psoriasis because of their efficacy in treating it and acceptable safety profiles. Specifically, inhibitors to tumor necrosis factor α (TNF-α) include etanercept, adalimumab, certolizumab, and infliximab. Other biologics inhibit cytokines such as the p40 subunit of the cytokines IL-12 and IL-23 (ustekinumab), IL-17 (secukinumab, ixekizumab, bimekizumab, and brodalumab), and the p19 subunit of IL-23 (guselkumab, tildrakizumab, risankizumab, and mirikizumab). Biologics that inhibit TNF-α, p40IL-12/23, and IL-17 are also approved for the treatment of psoriatic arthritis. Oral treatments include traditional agents such as methotrexate, acitretin, cyclosporine, and the advanced small molecule apremilast, which is a phosphodiesterase 4 inhibitor. The most commonly prescribed light therapy used to treat plaque psoriasis is narrowband UV-B phototherapy.

Conclusions and Relevance Psoriasis is an inflammatory skin disease that is associated with multiple comorbidities and substantially diminishes patients' quality of life. Topical therapies remain the cornerstone for treating mild psoriasis. Therapeutic advancements for moderate to severe plaque psoriasis include biologics that inhibit TNF-α, p40IL-12/23, IL-17, and p19IL-23, as well as an oral phosphodiesterase 4 inhibitor.

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