Newer Biologics and Small Molecules for Psoriasis

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Psoriasis is a common chronic immune-mediated inflammatory skin disease. In recent years, a growing understanding of psoriasis pathophysiology allowed the development of an increasing number of effective and safe treatments, including biologics for moderate to severe psoriasis. As a result, different classes of biologics have already been approved, including TNF-α (etanercept, infliximab, adalimumab, and certolizumab pegol), IL-12/23 (ustekinumab), IL-17 (secukinumab, ixekizumab, brodalumab) and IL-23 (guselkumab, risankizumab, tildrakizumab) inhibitors.

Once-daily tapinarof cream was approved for treating plaque psoriasis in adults. The drug works by activating the aryl hydrocarbon receptor, downregulating proinflammatory cytokines such as IL-17, and normalizing the expression of skin barrier proteins such as filaggrin. In addition, once-daily roflumilast 0.3% cream was implicated in psoriasis for patients 12 years and older. Like apremilast, roflumilast is a phosphodiesterase4 inhibitor that blocks the degradation of cAMP and reduces the downstream production of inflammatory molecules. Bimekizumab, a humanized monoclonal IgG1 antibody, inhibits both IL-17A and L-17F, showed to be a safe and effective treatment option in managing moderate to severe psoriasis and psoriatic arthritis. Deucravacitinib, a tyrosine kinase, two selective inhibitors, that block IL-23 and type I interferon signaling. Deucravacitinib has the potential to become a safe, effective, and well-tolerated treatment for patients with moderate-to-severe disease. Spesolimab, an IL-36 receptor inhibitor, was approved for patients with generalized pustular psoriasis. Biologic agents that inhibit the IL-36 pathway have shown efficacy and safety in patients with GPP, addressing a generally unmet medical need.

This narrative review aims to revise the efficacy and safety data of the latest biologicals and small oral molecules for treating psoriasis.