Quality of Life and Mental Health of Patients Stratified by Prior Biologic Exposure: Post hoc Analysis of Brodalumab

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Background: Psoriasis is associated with high rates of depression, anxiety, and difficulties with interpersonal relationships. Several clinical trials show that treatment with biologic agents is associated with a decreased incidence of depressive symptoms vs conventional systemic therapies. The dysregulation of several interleukin-17 (IL-17) cytokines promotes psoriasis pathogenesis; however, many systemic biologics target individual cytokines. Brodalumab, a human IL-17 receptor A antagonist efficacious for the treatment of moderate-to-severe psoriasis in adults, has a unique mechanism of action that blocks multiple inflammatory cytokines, including IL-17A, IL-17C, IL-17E, and IL-17F. Treatment failure can lead to increased disease severity, which can exacerbate depression and anxiety symptoms in patients with psoriasis. Thus, this post hoc analysis of the AMAGINE-1 trial evaluates patient-reported quality of life (QOL) and symptoms of anxiety and depression in patients with psoriasis stratified by prior exposure to biologics.

Methods: In AMAGINE-1, patients with (n=305) or without (n=356) biologic exposure before entering the study received brodalumab 210 mg every 2 weeks or placebo. The dermatology life quality index (DLQI) was used to measure patient-reported QOL (total score range: 0 [no impairment to QOL] to 30 [maximum impairment to QOL]); the hospital anxiety and depression scale (HADS) was used to measure symptoms of anxiety and depression (total score range for each: 0 [normal] to 21 [severe]).

Results: Mean DLQI at baseline was 14.2 and 14.1 for patients with or without prior biologic exposure, respectively. For patients with prior biologic exposure, those receiving brodalumab vs placebo exhibited a significant reduction in mean DLQI at week 12 (2.3 vs 15.2, respectively; *P*<0.0001); similar results were seen in patients without prior biologic exposure (3.2 vs 11.0, respectively; *P*<0.0001). Mean HADS anxiety scores at baseline were similar for the brodalumab group regardless of prior biologic exposure; in the placebo group, HADS anxiety scores were lower in patients with vs without prior biologic exposure (5.8 vs 6.9, *P*=0.04). Regardless of prior biologic exposure, there was a numeric reduction in mean HADS anxiety scores with brodalumab from baseline (range, 6.3-7.0) to week 12 (range, 4.6-5.1); in the placebo group, mean HADS anxiety scores were unchanged from baseline (range, 5.8-6.9) to week 12 (range, 5.8-6.6). A similar trend was seen in mean HADS depression scores, with the brodalumab group exhibiting a numeric reduction from baseline (range, 5.0-5.8) to week 12 (range, 3.2-3.6) and the placebo group exhibiting unchanged scores from baseline (range, 5.0-5.6) to week 12 (range, 5.4-5.5).

Conclusions: Patients with psoriasis can experience a profound psychosocial burden that may negatively influence QOL. Brodalumab demonstrated improvements in QOL and symptoms of mental health in patients with psoriasis regardless of prior biologic exposure.