

Therapy with anti-interleukin-31 receptor A antibody for atopic dermatitis

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Interleukin-31 has a key role in the pathophysiology of atopic dermatitis and pruritus. In this study (Ruzicka et al., 2017), the authors assessed the efficacy and safety of a humanized antibody against interleukin-31 receptor A, nemolizumab, in therapy of atopic dermatitis. Adults with moderate-to-severe atopic dermatitis that was inadequately controlled by topical treatments received subcutaneous nemolizumab (at a dose of 0.1, 0.5, or 2.0 mg/kg of body weight) or placebo every 4 weeks or an exploratory dose of 2.0 mg of nemolizumab per kilogram every 8 weeks. The primary end point was the percentage improvement from baseline in the score on the pruritus visual-analogue scale at week 12. Secondary end points included changes in the score on the Eczema Area and Severity Index (EASI), and body-surface area of atopic dermatitis.

Of 264 patients who underwent randomization, 216 (82%) completed the study. At week 12, among the patients who received nemolizumab every 4 weeks, changes on the pruritus visual-analogue scale were −43.7% in the 0.1-mg group, −59.8% in the 0.5-mg group, and −63.1% in the 2.0-mg group, versus −20.9% in the placebo group ($p < .01$ for all comparisons). Changes on the EASI were −23.0%, −42.3%, and −40.9%, respectively, in the nemolizumab groups,

versus −26.6% in the placebo group. Respective changes in body-surface area affected by atopic dermatitis were −7.5%, −20.0%, and −19.4% with nemolizumab, versus −15.7% with placebo. Among the patients receiving nemolizumab every 4 weeks, treatment discontinuations occurred in 9 of 53 patients (17%) in the 0.1-mg group, in 9 of 54 (17%) in the 0.5-mg group, and in 7 of 52 (13%) in the 2.0-mg group, versus in 9 of 53 (17%) in the placebo group. In this phase 2 trial, nemolizumab at all monthly doses significantly improved pruritus in patients with moderate-to-severe atopic dermatitis, which showed the efficacy of targeting interleukin-31 receptor A.

CONFLICT OF INTEREST

none.

REFERENCE

Ruzicka, T., Hanifin, J. M., Furue, M., Pulka, G., Mlynarczyk, I., Wollenberg, A., ... XCIMA Study Group. (2017). Anti-interleukin-31 receptor A antibody for atopic dermatitis. *New England Journal of Medicine*, 376(9), 826–835.