Efficacy and safety of tralokinumab in adolescents with moderate-to-severe atopic dermatitis: results of the phase 3 ECZTRA 6 trial

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Introduction. Atopic dermatitis (AD) is a chronic inflammatory skin disease that negatively impacts quality of life in adolescents. Tralokinumab is a high-affinity, monoclonal antibody that specifically neutralizes interleukin (IL)-13. In adult phase 3 trials, tralokinumab demonstrated efficacy and safety for AD treatment [Wollenberg A, et al. *Br J Dermatol.* 2021;184:437-449; Silverberg JI, et al. *Br J Dermatol.* 2021;184:450-463]. We evaluated tralokinumab efficacy and safety in adolescents with moderate-to-severe AD in the phase 3 ECZTRA 6 trial (NCT03526861).

Methods. Adolescents (aged 12-17 years) were randomized to receive subcutaneous tralokinumab 150 mg (n=100) or 300 mg (n=101), or placebo (n=100) every 2 weeks. Primary endpoints were Investigator's Global Assessment (IGA) score 0/1 and ≥75% improvement in Eczema Area and Severity Index (EASI-75) at Week 16. Patients achieving primary endpoints without rescue treatment were re-randomized for 36 weeks of maintenance treatment. EASI-75, IGA 0/1, and ≥4-point improvement in adolescent pruritus Numerical Rating Scale (NRS) were analyzed using Cochran-Mantel-Haenszel test stratified by geographic region and baseline disease severity. Patients receiving rescue therapy or with missing data were considered non-responders. SCORing AD (SCORAD) and Children's Dermatology Life Quality Index (CDLQI) were analyzed using a linear mixed model for repeated measurements.

Results. At Week 16, significantly greater proportions of patients receiving tralokinumab (150 mg/300 mg vs placebo) achieved IGA 0/1 (21.4%/17.5% vs 4.3%; $P<0.001$/$P=0.002$), EASI-75 (28.6%/27.8% vs 6.4%; $P<0.001$/$P<0.001$), and ≥4-point improvement in adolescent pruritus NRS (23.2%/25.0% vs 3.3%; $P<0.001$/$P<0.001$). Tralokinumab treatment was associated with greater improvement than placebo in SCORAD (adjusted mean change ± SE: −27.5 ± 2.4/−29.1 ± 2.4 vs −9.5 ± 3.0; $P<0.001$/$P<0.001$) and CDLQI (−6.1 ± 0.6/−6.7 ± 0.6 vs −4.1 ± 0.7; $P=0.040$/$P=0.007$) from baseline to Week 16. Through Week 16, percentages of adverse events (AEs; 67.3/64.9 vs 61.7), serious AEs (3.1/1.0 vs 5.3), AEs leading to discontinuation (1.0/0 vs 0), and conjunctivitis events (4.1/3.1 vs 2.1) were similar between the tralokinumab and placebo groups.

Conclusions. At Week 16, tralokinumab 150 mg and 300 mg every 2 weeks demonstrated efficacy compared with placebo across primary and secondary endpoints in adolescents with AD. Tralokinumab was well tolerated; efficacy and safety profiles were comparable to those in phase 3 adult tralokinumab trials.