Efficacy and safety of 4 months of SLIT with recombinant Mal d 1 and Bet v 1 in patients with birch pollen–related apple allergy

Sixty participants as described above were randomized to daily sublingual application of placebo or 25 mg of rMal d or rBet v 1 (n=20 each) for 16 weeks. Sublingual challenges with standardized doses of rMal d 1, SPTs with recombinant allergens, and measurements of allergen-specific IgE and IgG4 antibodies were performed before and after treatment.

Results: Both formulations caused comparable, mainly local adverse events. No systemic reactions occurred. Compared with the placebo and rBet v 1–treated groups, SLIT with rMal d 1 reduced rMal d 1–induced oral symptoms (P=.001 and P=.038) accompanied by longitudinally reduced rMal d 1–specific cutaneous reactions (P=.022) and enhanced IgG4/IgE ratios (P=.012). SLIT with rBet v 1 neither improved the clinical reactivity to rMal d 1 nor enhanced rMal d 1– specific IgG4/IgE ratios. Participants receiving placebo showed no allergen-specific changes.

Conclusion: Sublingual treatment with a recombinant food allergen was safe and clinically effective, as determined by using standardized challenges. We present a promising approach for the effective treatment of birch pollen–related apple allergy.