

Efficacy of SQ SLIT-tablets in mono- and poly-sensitized HDM, grass, and ragweed allergic subjects

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Introduction

Many allergic patients are poly-sensitized and the benefits of treatment with sublingual immunotherapy tablets (SLIT-tablets) targeting only one allergy have been debated. In 3 different patient cohorts we studied the effect of treating mono- and poly-sensitized allergic rhinitis/conjunctivitis (AR/C) subjects with SQ SLIT-tablets containing house dust mite (HDM), grass, or ragweed allergens, respectively.

Methods

We performed post-hoc analyses of pooled data from 10 double-blind, placebo-controlled SQ SLIT-tablet allergic rhinitis/rhinoconjunctivitis (AR/C) trials in adults and adolescents (Table 1): 2 HDM SLIT-tablet trials (N=1,762); 6 grass SLIT-tablet trials (N=2,299); and 2 ragweed SLIT-tablet trials (N=643). At screening, subjects were tested (SPT and specific IgE) for allergy to the main allergen (HDM, grass or ragweed, depending on the trial) as well as a panel of other allergens. Based on these tests subjects were assigned to the mono-sensitized or poly-sensitized subgroups. Efficacy was measured by total combined AR/C symptoms and medication scores (TCRS) and compared for mono-sensitized versus poly-sensitized subjects.

| Allergen | Geographical region | NCT/EudraCT number | Publication |
|----------|---------------------|--------------------|--|
| HDM | USA | NCT01700192 | Nolte et al. J Allergy Clin Immunol 2016 |
| HDM | Europe | 2011-002277-38 | Demoly et al. J Allergy Clin Immunol 2016 |
| Grass | Europe/USA | NA | Durham et al. J Allergy Clin Immunol 2006 |
| Grass | Europe | NA | Dahl et al. Allergy 2006 |
| Grass | Europe | 2004-000083-27 | Dahl et al. J Allergy Clin Immunol 2006 |
| Grass | USA | NCT00421655 | Murphy et al. J Negat Results in Biomed 2013 |
| Grass | USA | NCT00562159 | Nelson et al. J Allergy Clin Immunol 2011 |
| Grass | USA | NCT01385371 | Maloney et al. Ann Allergy Asthma Immunol 2014 |
| Ragweed | USA | NCT00783198 | Nolte et al. Ann Allergy Asthma Immunol 2013 |
| Ragweed | USA/Europe | NCT00770315 | Creticos et al. J Allergy Clin Immunol 2013 |

Table 1: Trials included in the analyses

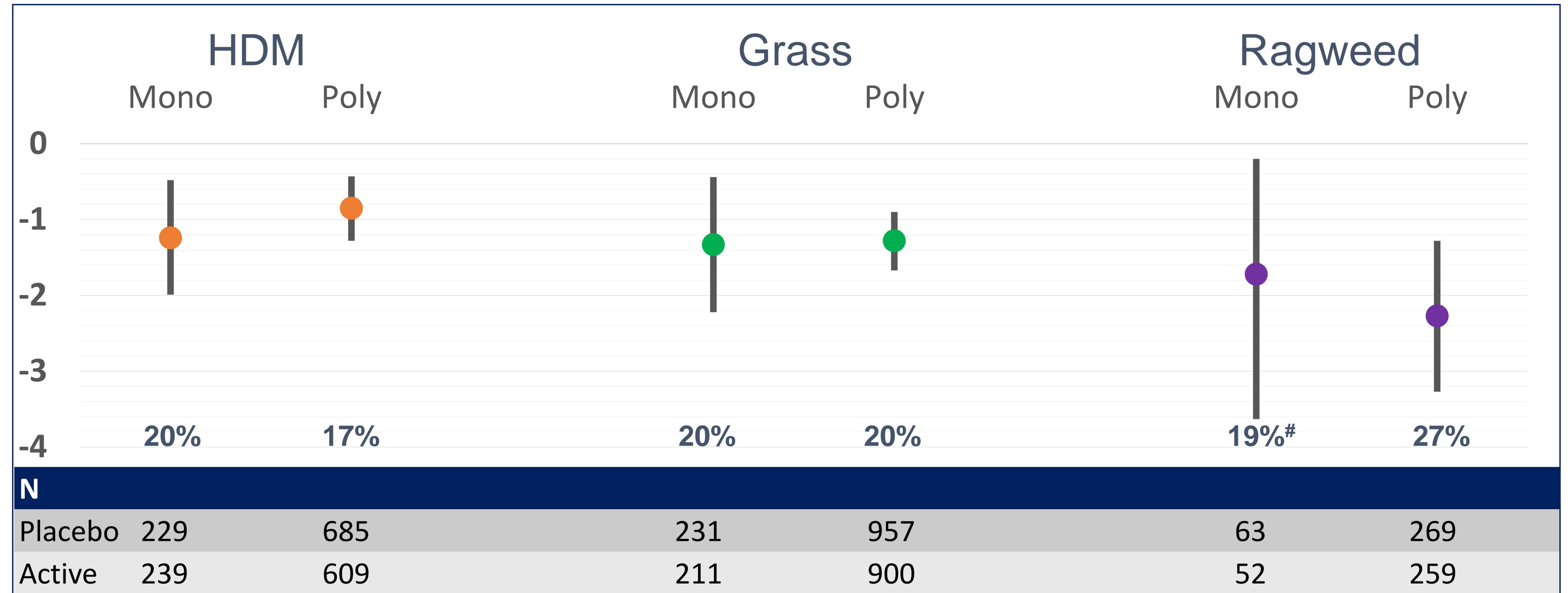


Figure 1: Comparison of efficacy in mono- and poly-sensitized subjects. Bars show absolute difference in TCRS (incl. 95% CI) for active vs. placebo for the three SLIT-tablets (HDM, grass, ragweed) for mono- and poly-sensitized subjects respectively. Numbers below zero favours active treatment. Percentages shown are the relative differences between active and placebo in TCRS. (TCRS: total combined AR/C symptoms and medication score ; #: Not significant)

Results

The majority (78%) of the subjects included in the trials were poly-sensitized (ranging from 68% to 89% in the individual trials). SQ SLIT-tablet treatments were similarly effective in improving TCRS in mono- and poly-sensitized HDM, grass or ragweed allergic subjects (Figure 1).

Conclusion

Regardless of mono- or poly-sensitization, treatment with SQ SLIT-tablets containing HDM, grass, or ragweed allergens yielded significant and similar improvements in TCRS. The analyses support that for these 3 major allergies, SQ SLIT-tablet treatment will be as effective in poly-sensitized as in mono-sensitized adult and adolescent patients.