Comparison of effects of lokivetmab versus prednisolone on intradermal testing in *Dermatophagoides farinae*-sensitized Beagle dogs

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To determine whether lokivetmab (ZTS-00103289), a caninized anti-IL-31 monoclonal antibody, affects intradermal testing (IDT) we used an established in-house model of *Dermatophagoides farinae*-sensitized Beagle dogs. Following allergen sensitization, dogs (8 per group) were dosed with one subcutaneous injection of lokivetmab (3.3 mg/kg) or vehicle, or administered 2 weeks of BID oral dosing of prednisolone (PredniTabs, 0.5 mg/kg). IDT and IgE levels were evaluated before, and 13-14 days after, test article administration. 2-log reduction in skin sensitivity at Day 14 relative to baseline (Yes/No) was analyzed using a generalized mixed linear model for binomial distribution with logit link, fixed effect of treatment and random effect of block. Free IgE and urine output during dosing period were analyzed using a general mixed linear model with fixed effect of treatment and random effects of block and error. Proportion of dogs with a 2-log reduction in sensitivity was 0.37 in prednisolone-treated group compared to proportion of 0.12 for both placebo and lokivetmab treated groups. There were no differences among group proportions for reduction in sensitivity (P=.3702). Also, there were no significant (P≥0.1510) differences observed at Day 13 for mean free IgE levels between the lokivetmab-treated group and either placebo or prednisolone treated groups. Prednisolone caused a significant increase in urine volume for the two week dosing period compared to both placebo and lokivetmab-treated (P≤0.0004) dogs. These results demonstrate that one injection of lokivetmab does not induce the negative polyuria side effect associated with prednisolone treatment and provides evidence that lokivetmab does not interfere with IDT or circulating IgE levels in this model.

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