Discordance Between Conventional and Acetone Precipitated (AP) Dog Extract in Skin Prick Testing

J.C. Turbyville, M. Nelson, C. Mikita

Rationale

Can f 1 has been identified as the major dog allergen. Conventional dog extract contains approximately 5 ug/mL of Can f 1. AP dog extract is produced with the same material as conventional extract, but concentrated through a process of acetone precipitation, and contains about 150 ug/mL of Can f 1. We sought to determine if this difference in allergen concentration changed the skin test results.

Methods

AP dog was added to the standard aeroallergen panel as part of a clinic project to determine if discrepancies exist between skin test results from conventional and AP dog extracts. We evaluated positive vs. negative skin pricks as well as mean wheal size among positives. A significant positive reaction was defined as ≥3 mm increase in wheal size over negative control.

Results

73 patients received skin testing that included AP and conventional dog. 11 patients (15%) had a significant positive skin prick to dog (AP, conventional, or both). Of those testing positive to dog, 3/11 (27%) were positive to both AP and conventional dog, and 8/11 (73%) were positive only to AP dog. Among these 11 patients, the mean wheal size for AP dog was 7.6 mm and that for conventional dog was 3.4 mm. No patients were positive to conventional dog and negative to AP dog.

Conclusions

AP dog extract appears to be a more sensitive indicator of dog skin prick reactivity than conventional dog extract. Further studies are needed to determine clinical correlation between AP skin prick results and allergy symptoms to dog.

Walter Reed Amy Medical Center, Washington, DC
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