PATTERNS OF POLLEN SENSITISATION AND SEASONAL ALLERGIC RHINITIS IN HOBART, TASMANIA

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Background and Aim:

Allergic respiratory disease is highly prevalent in Australia[1]. It is having an increasing impact on work and school productivity and financial costs to health system[2,3]. Understanding the specific aero-allergens that trigger symptoms in allergic respiratory disease is critical to support the clinical diagnosis and management in these conditions. Currently there are limited data on the likely aeroallergen triggers in Australia, especially pollens from native Australian trees.

The three main objectives of this project are: (1) to determine the prevalence of sensitisation to native and introduced pollens in adults with allergic rhinitis in Hobart Tasmania (2) to compare the results to previous Australian pollen sensitisation studies, (3) to determine the implications for allergy diagnosis and management.

Methods:

Sixty-seven participants with allergic rhinitis were recruited and baseline characteristics were collected. All participants received a skin prick test (SPT) panel of 23 pollens. Statistical analysis was performed using R studio and descriptive statistics were applied on the baseline characteristics and SPT results.

Results:

Sixty-four participants had valid SPT results. The highest prevalence of sensitisation, as indicated by positive SPTs, in this population was: *Lolium perenne* (rye grass, 62.5%), *Betula pendula* (silver birch, 43.7%) and *Paspalum notalum* (bahaia grass, 40.6%). The Australian native species *Acacia longifolia* (golden wattle)*, Melaleuca quinquinervia* (paper bark) and *Eucalyptus globulus* (blue gum), recorded a prevalence of 25.0%, 20.3% and 18.7% respectively.

Conclusions:

High rates of sensitisation to introduced pollens from grasses and trees were observed in this study. In addition, sensitisation to native Australian tree species was also relatively common. This may inform SPT screening and subsequent management of allergic respiratory diseases in clinical settings.

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