

Evaluation of Asthma, Allergic Rhinitis, Eczema and Sensitization among the Grade-7 Students of Iqaluit

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Rationale

No data is available about this population in relation to the prevalence of asthma, allergic rhinitis, eczema and sensitization.

Methods

A cross-sectional study among grade seven students attending schools in Iqaluit, the capital city of Nunavut, was conducted during the 2016/2017 school year. We used the International Study of Allergy and Asthma in Children (ISAAC) questionnaire with added questions relevant to the population and performed skin prick test to common environmental allergens.

Results

The prevalence of current asthma is 5.2%, much lower than the 15.9% found in our previous study among grade-1 students, 2/3 of them are Inuit and all have a previous hospitalization related to a respiratory illness. Current allergic rhinitis prevalence is 8.6%, 60% of the cases are among the mixed ethnicity while no cases among the non-Inuit. Current eczema prevalence is high at 27.6%, with half of the cases among the mixed ethnicity (13.8% of that group), followed by Inuit (8.6%) with a protective effect of exclusive breastfeeding (OR 0.16, CI 0.04-0.57). We noted a high rate of sensitization to Cat at 29.2%, most of the cases are among the mixed ethnicity, while absent sensitization to dog and house dust mite.

Conclusions

Our study findings reiterated the known higher eczema prevalence at higher latitudes and absent sensitization to house dust mite in the very cold climates. The variations between the ethnicities living at the same subarctic environment may be related to genetic, genetic environment interaction and lifestyle factors that require further larger scale investigation.

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A **high** rate of **eczema**, a **low** rate of **asthma** and an absence of sensitization to **dog** and **house dust mite** in the arctic region of Canada.

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