Usefulness of asthma predictive index in ascertaining asthma status of children using medical records: An explorative study


Abstract

Background

Frequent wheezing in original asthma predictive index (API) was defined by parental report of recurrent wheezing within 1 year during the first 3 years of life. The nature of frequent wheezing in children, particularly aged over 3 years, has not been studied. We aimed to assess the frequency and interval of wheezing to define frequent wheezing in ascertaining asthma for children using medical records.

Methods

Among children who participated in a previous study (n = 427), all wheezing episodes documented in medical records were collected for children who had ≥2 wheezing episodes PLUS met one major criterion or two minor criteria of API. We compared the distribution of known risk factors for asthma between subjects having two consecutive wheezing episodes with shorter interval (≤1 year) compared to those with longer interval (1 to 3 years).

Results

A total of 62 children met API at median age of 2.3 years. During follow-up period (median age: 11.3 years), a total of 198 wheezing episodes were observed. 81% of wheezing intervals were within 3 years from the earlier wheezing episode, including 60% within 1 year. Children who met API based on 1-year interval (n = 40) vs 1- to 3-year interval (n = 13) appeared to be similar in regard to the known risk factors for asthma.

Conclusions

Our exploratory study finding suggests that children who had frequent wheezing episodes with longer interval (<3 years) need to be considered to be determined as asthma cases when API is applied to retrospective medical records. Prospective studies with a larger sample size need to replicate this finding.