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Title

Prevalence of childhood atopic triad: atopic dermatitis, asthma and allergic rhinitis, a Rijnmond Primary Care database study

Priority 1 (Research Category)

Child and adolescent health

Presenters

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Abstract

Context

Over the past 30 years the prevalence of atopic disorders (atopic dermatitis, asthma and allergic rhinoconjunctivitis) has been increasing worldwide, especially in developed Western countries. Most of the research on atopic disorders has been carried out in the open population, however these findings cannot be extrapolated to the population within general practice.

Objective

To determine the prevalence of childhood atopic dermatitis, asthma or allergic rhinoconjunctivitis in the General Practice population

Study Design and Analysis

A retrospective population-based cohort study

Setting or Dataset

Rijnmond Primary Care Database

Population Studied

General practice population in Rijnmond, the Netherlands

Intervention/Instrument

N.A.

Outcomes

Incidence and prevalence rates; and time trends

Results

Between 2013-2021 22,123 children (0-18 years) were available for analysis. The prevalence rate for atopic dermatitis was 8.4%; for asthma 4.2%; and for allergic rhinoconjunctivitis 5.3%. The lifetime prevalence of the atopic triad, meaning that a child had all three atopic disorder ever in their life, was 0.22%, which was 11-fold higher than expected based on chance. Median age of disease-onset and peak prevalence for atopic dermatitis was at 3 years for both outcomes; for asthma at 9 and 17 years; and for allergic rhinoconjunctivitis at 10 and 17 years. Asthma, allergic rhinoconjunctivitis and the atopic triad was more prevalent in boys across the whole childhood, while for atopic dermatitis it was only during infancy after which it shifted to a female preponderance.

Conclusions

Atopic disorders are prevalent among the General Practice population of Rijnmond. Atopic dermatitis had its peak prevalence at the youngest age, and is followed by asthma and allergic rhinoconjunctivitis. The percentage of children with the atopic triad in this study was 11-fold higher than the calculated probability based on the prevalence rates of the separate atopic disorders. Overall, boys had higher rates of atopic diseases. When an atopic child presents to the GP, one should be aware these children often have other co-existing atopic disorders.