



ORAL PRESENTATION

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High risk of adult asthma following severe wheeze in early life

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Background

We have previously reported on the outcome in childhood and adolescence in children with severe wheeze in early life. The aim of the present follow-up was to report on the asthma prevalence and risk factors for asthma in adult age.

Methods

We have prospectively studied asthma development in 101 children hospitalized due to wheezing before the age of two. The cohort was re-investigated at age 25-29 years and tested for bronchial hyper-responsiveness and allergic sensitization. The response rate at adult age was 81%. The results were compared to a population based aged matched control group (n=1210) recruited from the West Sweden Asthma Study.

Results

Current asthma was seen in 37% (30/82) and 50% of these had a moderate to severe asthma. In the control group 10% reported current asthma (OR 5.3, 95% CI 3.2-8.9; $p < 0.001$) and 17% had wheezing during the last 12 months ($p < 0.001$). Current use of asthma medication was reported in 31% of the cohort (of which 66% used inhaled corticosteroids and/or montelukast), compared to 8% in the control group ($p < 0.001$). Current atopy was found in 54%, with 42% reporting doctor-diagnosed rhinitis, 11% current eczema and 16% food allergy. Among the controls rhinitis was reported in 29% ($p = 0.013$) and eczema in 13% (ns). Smoking was reported in 30% of the cohort, compared to 16% in the control group ($p = 0.002$).

In the cohort, current allergy (OR 9.7, 95% CI 3.0-31.1) and female gender (OR 3.2, 1.1-9.5) increased the risk of adult asthma independently of each other. Females with current allergy had the highest risk of adult asthma,

compared to males without allergy (OR 29.4, 5.0-173.3). This is illustrated in a stratified Cox regression analysis where the females with current allergy have the lowest chance of recovery (Hazard Ratio 0.2, 95% CI 0.06-0.5) compared to males without allergy.

Conclusion

Subjects with severe early wheezing have an increased risk of adult asthma. Females with current allergy had the highest risk of persistent asthma and the lowest chance of recovery.

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