RISK FACTORS FOR ASTHMA IN SCHOOL CHILDREN - RESULTS OF A SEVEN-YEAR FOLLOW-UP

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SUMMARY

The objective of the study was to evaluate the cumulative incidence of physician-diagnosed asthma over the period of 7 years, and to determine its host and environmental risk factors in children aged 7-9 years at the beginning of follow-up. The incidence of the disease was determined from answers to respiratory questionnaire on two occasions (in 1993 and 2000) in a group of 663 children aged 14-16 years in 2000. The data on host and environmental factors obtained in 1993 were used to explore predictors of asthma, by means of relative risks and the results of logistic regression analysis. The cumulative incidence of asthma (3.9%) appeared to relate to using coal for cooking/heating (RR=2.78) and parental smoking (RR=1.21), in addition to known effects of parental asthma (RR=5.54), history of atopic eczema (RR=4.66) or allergic conjunctivitis (RR=4.11). Although the cumulative incidence of asthma increased from 2.0% in non-smoking families to 4.2% in one-parent-smoking families and 5.4% in two-parent-smoking families the results of multivariate analysis confirmed only the effects of parental asthma (logOR=4.59), atopy (logOR=3.88) and using coal for cooking (logOR=3.33). The effect of exposure to parental smoking was not statistically significant (logOR=2.33). The findings, in addition to well known host-related factors, suggest the role of environmental exposures (indoor air quality) in childhood asthma and support a challenging hypothesis concerning protective effect of measles infection - the study revealed no incidence of asthma in a group of 38 children who acquired measles before the follow-up started.

Key words: asthma, children, risk factors, follow-up

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