

THE CORRELATION BETWEEN ATOPY LEVEL AND ASTHMA MANIFESTATION IN CHILDREN 3-10 YEARS OF AGE AT THE PULMONARY COMMUNITY HEALTH CENTER (BBKPM) SURAKARTA, CENTRAL JAVA

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ABSTRACT

Background: Asthma is a chronic inflammation of the airways that involves many cells and their elements. In Indonesia, the incidence of asthma in children ranges from 2 to 30% and it causes the loss of child's school days. One of the factors that induce susceptibility to asthma is the child's atopy level. However, the relationship between atopy and asthma is not straight forward. Many studies have failed to show significant relationship between clinical severity or lung function and markers of atopic level. This study aimed to determine the relationship between atopy level and asthma manifestation in children aged 3-10 years with asthma at the Pulmonary Community Health Center (BBKPM), Surakarta, Central Java.

Subjects and Method: This was a cross-sectional study conducted in children clinic (BBKPM) Surakarta, Central Java, in December 2017. A sample of 31 patients aged 3-10 year with asthma was selected for this study by random sampling. The dependent variable was asthma manifestation. The independent variable was atopy level. The atopy level was measured by Family Atopy Score (FAS). The data on atopy level was obtained by filling out the early detection questionnaire of allergy risk. Asthma was diagnosed by the doctor based on the national guideline of child asthma. The relationship between atopy level and asthma manifestation was measured by Odds Ratio and tested by Chi square.

Results: Clinical manifestation became more severe with increasing atopy level in children with asthma. Children with high atopy level had 12.50 times more risk of getting severe asthma than low atopy level (OR= 12.50; CI 95%= 1.27 to 11.11; p= 0.020).

Conclusion: There is a positive relationship between atopy level and asthma clinical manifestation. High atopy level increases the risk of severe clinical manifestation in children with asthma.

Keywords: atopy level, clinical manifestation, asthma, children

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