

学 位 論 文 の 要 旨

三 重 大 学

所 属	三重大学大学院医学系研究科 甲 生命医科学専攻 臨床医学系講座 成育医学分野	氏 名	やまだ しんご 山田 慎吾
<p>主論文の題名</p> <p>Risk Factors for Lung Function Decline in Pediatric Asthma under Treatment: A Retrospective, Multicenter, Observational Study</p> <p>主論文の要旨</p> <p>Background: Childhood asthma is a major risk for low lung function in later adulthood, but it is not known what factors in asthma are associated with the poor lung function during childhood.</p> <p>Objective: To identify clinical factors in children with asthma associated with low or declining lung function during the treatment.</p> <p>Methods: We enrolled children with asthma who had been treated throughout 3 age periods: 6-9, 10-12, and 13-15 years old at 7 specialized hospitals in Japan. Clinical information and lung function measurements were retrieved from the electronic chart systems. To characterize the lung function trajectories during each age period, we evaluated the forced expiratory volume 1 (FEV1) with % predicted values and individual changes by the slope (S) from linear regression. We defined 4 trajectory patterns: normal (Group N) and low (Group L), showing %FEV1 $\geq 80\%$ or $< 80\%$ throughout all 3 periods; and upward (Group U) and downward (Group D), showing $S \geq 0$ or $S < 0\%$. Logistic regression analysis was performed to compare factors associated with the unfavorable groups (D/L) versus the favorable groups (N/U).</p> <p>Results: Among 273 eligible patients, 197 (72%) were classified into Group N (n=150)/U (n=47), while 76 (28%) were in Group D (n=66)/L (n=10). A history of poor asthma control, long-acting beta2 agonist use, and a lower height Z-score during 13-15 years were associated with an unfavorable outcome (Group D/L). Conversely, inhaled corticosteroid (ICS) use during 10-12 years and high-dose ICS use during 13-15 years were associated with a favorable outcome (Group N/U).</p> <p>Conclusion: We identified several factors that are associated with unfavorable lung function changes in pediatric asthma. Attention should be paid to the possible relationship between yearly changes in lung function and poor asthma control, use of ICS (and its dose) and use of LABA.</p>			