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Title: A scoring algorithm for predicting the presence of adult asthma

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Body: To predict the presence of asthma in adult patients with respiratory symptoms, we developed a scoring algorithm using clinical parameters. We prospectively analyzed 566 adult out-patients who visited Kinki University Hospital for the first time with complaints of nonspecific respiratory symptom. Asthma was comprehensively diagnosed by specialists using symptoms, signs, and objective tools including bronchodilator reversibility and/or the assessment of bronchial hyperresponsiveness. Multiple logistic regression analysis was performed to categorize patients and determine the accuracy of diagnosing asthma. A scoring algorithm using the symptom-sign score was developed, based on diurnal variation of symptoms (1 point), recurrent episodes (2 points), medical history of allergic diseases (1 point), and wheeze sound (2 points). A score ≥3 had 35% sensitivity and 97% specificity for discriminating asthmatic patients from non-asthma, and assigned a high probability of having asthma (accuracy; 90%). A score of 1 or 2 points assigns an intermediate probability (accuracy; 68%). Conclusion: This pragmatic diagnostic algorithm is useful to predict the presence of adult asthma.