

Correspondence

PREDICTIVE MARKER OF BRONCHIAL IMPAIRMENT

To the Editor: Asthma diagnosis in children may be difficult, mainly when spirometry results are normal and there is no reversibility. Yavuz and colleagues¹ provided an interesting article that proposed some features of clinical history and laboratory findings as predictive factors for bronchial hyperresponsiveness (BHR). This study concerned 111 children with suspected asthma but without an obstructive pattern. All children had undergone methacholine challenge, 60.3% of whom had positive test results. Nocturnal cough and exercise-induced cough (odds ratio [OR], 22.1), peripheral eosinophilia (OR, 18.7), and borderline reversibility (OR, 10.1) were identified as strong predictors for BHR. However, we maintain that a relevant spirometric parameter has been not considered in this study: the forced expiratory flow between 25% and 75% of the pulmonary volume (FEF_{25%-75%}).

We underline the clinical relevance of FEF_{25%-75%} in patients with respiratory allergy because there is a body of evidence supporting this issue. Simon and colleagues² recently published an interesting study of a cohort of asthmatic children. These authors suggested that FEF_{25%-75%} should be considered in asthmatic children with normal forced expiratory volume in 1 second (FEV₁) as might predict the presence of reversible airflow obstruction.

Previously, it was reported that a difference between the FEV₁ and FEF_{25%-75%} values greater than 20 was predicting for severe BHR in patients with allergic asthma and/or rhinitis.³ More recently, it has been evidenced that impaired FEF_{25%-75%} values (such as <65% of

predicted) may strongly suggest the presence of severe BHR (OR, 12.9) in patients with allergic rhinitis.⁴ Finally, it has been confirmed that FEF_{25%-75%} values less than 65% of predicted may define patients with bronchial impairment with good discriminating ability (area under the receiver operating characteristic curve, 0.92).⁵

Therefore, we conclude that FEF_{25%-75%} should be carefully assessed and considered in patients with suspected asthma and normal FEV₁ because FEF_{25%-75%} values less than 65% may be considered a suitable marker for initial bronchial obstruction, presence of severe BHR, and bronchial reversibility to bronchodilators.

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