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Lack of correlation between clinical patterns of asthma and airway obstruction.

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To evaluate the relationship between the classification of asthma and obstruction of airways, we have studied 100 children suffering from allergic asthma: 65 males and 35 females, aged 4.2-16.3 years (mean, 7.6 +/- 2.8 years), who were evaluated at least 1 month after the last attack of airway obstruction. We analyzed personal history of all children with special reference to number of attacks of airway obstruction in the last year, severity, and presence of respiratory symptoms in the last month. The children studied have been classified in three groups according to the International Pediatric Respiratory Allergy Forum (IPRAF) '98 method (Third International Pediatric Consensus Statement on the management of childhood asthma). All children underwent the assessment of their respiratory function by means of analysis of the flow/volume loops with measurement of the obstruction indices (forced expiratory volume in 1 second [FEV1], peak expiratory flow [PEF], and maximal midexpiratory flow [MMEF]). The efficacy of the aforementioned method has been evaluated by analyzing the number of the subjects who showed indices of airway obstruction not in agreement with the group assigned. Eighty-five of the children studied were diagnosed with infrequent episodic asthma (IEA), 14 children were diagnosed with frequent episodic asthma (FEA), and 1 child was diagnosed with persistent asthma (PA). Thirty-six of 100 children showed obstruction indices not in agreement with the asthma group: in particular, 24 of 85 children with IEA had FEV1 < 80%, 11 children with FEA had FEV1 > 80%, and 1 child with PA had FEV1 > 80%. The high percentage of discordance between clinical classification and obstruction index in the subjects with IEA can be caused by the persistence of abnormalities of the respiratory function without clinical symptoms. The presence of a normal obstruction index in the subjects with FEA can be explained by the pharmacologic therapies. These data suggest the usefulness of a careful evaluation of the respiratory function associated with a clinical assessment to carry out a more appropriate therapy.

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