
Commentary

USE OF EXHALED NITRIC OXIDE IN CLINICAL PRACTICE

Measurement of the fractional exhaled nitric oxide (FENO) concentration promises to be useful in the management of patients with asthma. It is a convenient and noninvasive test that can also be used in children. Measurement of FENO levels can be helpful in the diagnosis of asthma. High levels of FENO suggest the presence of eosinophilic airway inflammation in the corticosteroid-naïve patient, and an elevated FENO level predicts responsiveness to inhaled corticosteroids.

Several studies have shown that FENO is associated with some features of asthma and allergy. Adult patients with asthma and atopy have significantly higher levels of FENO than do nonatopic asthmatic patients, who have values similar to healthy individuals. In atopic children, levels of FENO are high irrespective of whether they have asthma, although children with asthma and atopy tend to have higher levels than do atopic patients. Moreover, the elevation of FENO levels in patients with other atopic conditions and the normal values seen in children with virus-induced asthma reduce the use of FENO as a diagnostic or screening test for asthma.

It is known that FENO levels decrease after treatment with inhaled corticosteroid and increase after corticosteroid withdrawal,

making it a possible tool to assess adherence. However, in persistent asthma, its levels may not be entirely counteracted by intensive medication use. We have shown that children with moderate and severe asthma have persistently high levels of FENO despite the use of high doses of inhaled corticosteroids.¹

Recently, Petsky et al,² reviewing relevant studies, concluded that tailoring the dose of inhaled corticosteroids based in FENO measurements compared with clinical symptoms or spirometry has shown only modest differences. Despite the various advantages already shown for FENO measurements, we believe that its determinants need to be better understood

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