

1.02 The role of FENO in the diagnosis of asthma

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Background: Many asthmatic patients display type 2 inflammation and an upregulation of nitric oxide (NO) release into airway. This is reflected by an increase in fractional exhaled nitric oxide (FeNO). Hence, FeNO may be a quantitative, non-invasive, useful, and safe surrogate measure of assessing asthma. An elevated FeNO level signals active eosinophilic airway inflammation and may suggest a diagnosis of asthma and a response to steroids.

Aim: To review the usefulness of FeNO measurements in the diagnosis and management of asthma.

Methods: A single centre cohort study of patients attending the Pulmonary Function Test Laboratory from August 2021 to July 2023. Each subject had FeNO, and spirometry with reversibility testing carried out.

Results: 71 patients (39 females), mean age 35 (8-73) years, were analysed. An elevated FeNO (>25ppb) was seen in 33 (46%) subjects. In this group, only 52% had corresponding high bronchodilator reversibility. Conversely, 12 (17%) subjects had low FeNO levels but had significant improvement post bronchodilation. FeNO levels had no correlation with the severity of bronchodilator reversibility.

Conclusion: The measurement of FeNO helps in the diagnosis of asthma and suggests responsiveness to steroids. However, a low FeNO does not exclude asthma and should not replace reversibility testing.

Keywords: Asthma, fractional exhaled nitric oxide (FeNO), IgE, type 2 inflammation

Disclosures:

Conflict Of Interest: The authors declare that they have no conflict of interest.