

## **Asthma, hypersensitivity pneumonitis and cough**

**0088**

### **Exhaled and Nasal Nitric Oxide – Impact for Allergic Rhinitis Management**

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**Purpose:** Measurement of FeNO is validated non-invasive technique, which is frequently used for diagnosis and monitoring of asthma. It would be desirable to find reliable method to monitor allergic rhinitis (AR) via measurement of FeNO, nasal nitric oxide (nNO) or both. The aim of our study was to assess whether FeNO and nNO could be beneficial markers indicating efficacy of treatment of AR.

**Methods:** FeNO and nNO were measured with the portable NO analyser (NIOX MINO®, Aerocrine, Sweden) in healthy participants and in patients with AR. The patients were examined during pollen season and out of it. The effect of local corticosteroids and antihistamine therapy was observed in patients with AR during pollen season after three weeks of therapy.

**Results:** There are significant differences of FeNO and nNO in patients with AR when compared to healthy controls at all set points of measurements and they increased after the allergen exposure. While FeNO responded well to the treatment with both antihistamines and combined therapy, nNO did not decrease after antihistamines, only after combined therapy with antihistamines and nasal corticosteroids. Gender dimorphism in response to treatment was detected for FeNO, but not for nNO.

**Conclusions:** Nasal NO monitoring alone is not a suitable method to monitor inflammation of the upper airways in AR and its suppression by anti-allergic treatment and it should be correlated with other markers as FeNO or symptom scores.

**Keywords:** nitric oxide, allergic rhinitis, inflammation, pharmacotherapy