

European Respiratory Society Annual Congress 2013

Abstract Number: 5065

Publication Number: P4159

Abstract Group: 5.2. Monitoring Airway Disease

Keyword 1: Pulmonary hypertension **Keyword 2:** COPD - exacerbations **Keyword 3:** Asthma - diagnosis

Title: Exhaled nitric oxide in diagnosis and management of respiratory diseases

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Body: Purpose of the study. To study the values of FENO in respiratory diseases and the relationship with disease stage and pulmonary function tests. Materials and Methods. This was a prospective study. FeNO has been measured in 111 patients: 41 with asthma, 3 GERD, 19 bronchiectasis, 11 sarcoidosis, 23 COPD, 14 secondary Pulmonary Hypertension. FeNO was measured by chemoluminescence using NIOX MINO, consistent with the ATS guidelines published in 2005. We used t test and ANOVA. Significance was defined as a p value of < 0.05. Results. The mean of FENO in asthma was 30.5pp ±30.7SD with range 5 – 124. p=0.003. The mean of FENO was 91ppb in moderate stage, 80.5ppb in intermittent, 63ppb in severe and 60ppb in mild stage. The mean of FENO in the asthma with normal value of IgE and high value of IgE were 15.8 ±13.4SD and 64.9 ±28.1SD respectively. P<0.01. The mean of FENO in the diseases with obstruction of the small airway was 18.2±20.4SD with range 5 – 63. The mean of FENO in GERD with obstruction of the small airway was 6.7 ±2.1SD, the mean of FENO in asthma with obstruction of the small airway was 27.0 ±25.0SD. p=0.2. (the difference is very high but it has not brought significant change due to the small size of the sample). The mean of FENO in COPD was higher in the second stage (41) than the third stage (13.5) and the fourth stage (7.7) The mean FENO in secondary pulmonary hypertension was 12.2 ±5.6D with range 5 – 20. Conclusions. The value of FeNO in asthma is not correlated with the values of FEV1 but with the activity of eosinophilic inflammation and atopy. There was significant change between the mean of FENO to the stages of COPD. There was negative moderate correlation between the value of FENO and PSAP.