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Title: Investigation on the effectiveness of the Mostgraph and fractional exhaled nitric oxide measurement in chronic cough

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Body: Objectives: Mostgraph, Fractional exhaled nitric oxide(FeNO) measurement, and pulmonary function tests were conducted in patients with chronic cough. The effectiveness of Mostgraph, FeNO measurement, and pulmonary function tests were examined in elucidation of pathology, differential diagnosis, and therapy evaluation of chronic cough. Methods: The subjects were 120 patients who presented with chronic cough. The respiratory resistance measuring device Mostgraph (Chest MI, Inc) was used. For FeNO, NIOX-MINO (Aerocrine) was used. Pulmonary function tests used spirometry. Imaging and blood tests were performed as diagnostic aids. Patients treated with combination of β stimulants and inhaled corticosteroid. Results: Airway resistance at 5 Hz (Rrs5) and 20 Hz (Rrs20) as well as FeNO tended to increase in patients with chronic cough. Airway resistance and FeNO showed a significant reduction as symptoms improved. Pulmonary function tests showed no significant changes. Conclusions: In patients with chronic cough, Rrs5 and Rrs20 increased, and FeNO tended to increase, but decreased with treatment. A combination of Mostgraph and FeNO measurement can be conducted quickly and noninvasively, and this study suggests that this combination may be useful in diagnosis of chronic cough, and in assessing the effectiveness of treatment.