

SPIROMETRIC EVALUATION OF PATIENTS PRESENTING TO MOI TEACHING AND REFERRAL HOSPITAL (MTRH) WITH DYSPNEA. D. Onentia Oyieng'o,¹ Charles Sherman,¹ Lameck Diero,² E Jane Carter,¹

1. The Warren Alpert School of Medicine, Brown University. U.S.A
2. Moi University School of Medicine, Kenya.

Introduction: Dyspnea is a common symptom in patients presenting to emergency departments worldwide. It is often difficult to determine the cause of dyspnea in developing countries due to lack of simple diagnostic tools such as spirometry. Spirometry may provide both an accurate diagnosis while evaluating severity and guiding targeted therapy for obstructive airway diseases. We report spirometric findings in patients presenting with dyspnea to large teaching and referral hospital in Kenya.

Objective: To determine the spirometric characteristics of patients presenting with dyspnea to MTRH..

Study Population and period: Patients who were 18yrs or older, without fever, or evidence of CHF or TB presenting with dyspnea to MTRH Emergency department during the months of September and October 2011.

Methods: 64 consecutive patients who met entry criteria were evaluated. A detailed respiratory questionnaire was administered. Pre and post bronchodilator spirometry after 4 puffs of salbutamol metered dose inhaler was done using an Easy One™ spirometer. Bronchodilator responsiveness was defined by a 0.2L/12% increase in FEV1 as per ATS criteria. Restriction was graded as per ATS guidelines. Severity of airflow obstruction was graded using NAEEP guidelines.

Results: 14 (22%) subjects could not perform spirometry due to severe dyspnea. 40 (80%) of subjects who performed spirometry were aged between 18yrs and 50yrs. 35 (70%) were female. All subjects had current or previous history of either wheezing or chest tightness. None had previous spirometric evaluation or regular follow up. 46 (92%) demonstrated obstructive airway pattern (5 mild, 23 moderate, 14 severe, 4 very severe based on initial Fev1 as per NAEEP guidelines). Of those with obstruction 16 (35%) did not have a previous diagnosis of asthma or COPD. 30(60%) of all the patients had reversibility after four puffs of salbutamol as per the ATS criteria. Of those with reversibility 10(33%) did not have a previous diagnosis of asthma or COPD.25

(50%) subjects were on various self-refilled medications for their respiratory symptoms. 20 (40%) subjects had FVC of less than 80% predicted (mild 6, moderate 10, severe 4) which could have been due to a restrictive process; Of these only one had no concurrent obstructive airway pattern.

Conclusion: Majority of patients can perform spirometry. Most patients had airflow obstruction with a significant percentage showing reversibility. Obstructive airway disease is underdiagnosed and regular follow up is lacking. Routine use of spirometry in developing countries is feasible and can lead to specific diagnoses that may improve both short term and long-term patient management.