ABSTRACT

BACKGROUND: Asthma and chronic obstructive pulmonary disease (COPD) are ongoing concerns to the health system. Inhaled therapy is the cornerstone in the management of asthma and COPD. Adequate and effective dose of inhalation drugs can be administered only if the correct inhaler-specific technique is followed by asthma and COPD patients. Poor inhalation techniques are associated with decreased medication delivery to lungs and poor disease control in asthma and COPD.There is paucity of data on how much of patients are practicing correct inhaler technique and factors associated with poor inhaler use among Ethiopians and Africans.

OBJECTIVE: The aim of the study was to assess metered dose inhaler technique amongst patients with asthma and COPD and to identify the factors related to an inaccurate or poor inhaler use.

METHODS: A cross-sectional observational hospital-based study was conducted on 238 physician-diagnosed asthma and COPD patients attending chest follow up clinic and admitted to medical wards from December 01, 2016 to June 30, 2017 with prescription for metered dose inhaler. Inhaler techniques was assessed using the ERS/ISAM task force recommendation for the inhalation technique. Collected data was first cleaned, edited and entered into a computer and analyzed using software program SPSS-21. A P-value of <0.05 was considered statistically significant. Then the findings were discussed, and compared with similar studies done elsewhere. Based on the result, recommendation and conclusion was made and planned to be disseminated.

RESULTS: A total of 238 patients (82% asthma and 18% COPD) participated out of which 52.5% were males. All the patients used pressurized metered dose inhalers (pMDI) type and the majority of the patients 164 (68.9%) had used it for 1 to 10 years. 98.3% (234) of patients claimed to know how to use the inhaled devices although only 0.8% (2/238) completed all required steps. One error at least in all and essential inhalation steps was committed in 99.2% and 97.1% of the patients respectively. No factors were identified as the cause of incorrect technique of inhaler use. This is probably because of the type and sample size of the data.

CONCLUSION: Improper pMDI technique is very common among our patients. Discrepancy between patients understanding and actual usage technique of inhalation devices was noted. Asthma and COPD patients on inhalation medications should have routine assessment of their inhaler technique in follow-up clinics and prior to discharge.