

A study of inhaler technique and associated factors among asthma patients attending medical clinic Teaching Hospital Jaffna

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Background: Asthma affects a large number of patients in Sri Lanka. Asthma can be controlled with adequate medication. However, correct inhaler-specific technique is needed for good asthma control. Inhaler technique is influenced by various factors. This study aims to assess inhaler technique and associated factors related to inaccurate in haleruse among asthma patients attending medical clinics in Jaffna Teaching Hospital.

Methods: This descriptive cross-sectional study involved 233 physician diagnosed asthmatics (minimum 3 months after diagnosis) attending medical clinics at Teaching Hospital Jaffna. Patients were asked to demonstrate inhaler technique while an inhaler-administration checklist was used to assess each patient's inhaler technique. Information on demographics, type of inhaler, history of asthma symptoms and history of technique education were obtained. Data was analyzed using standard statistical methods. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Medicine, University of Jaffna.

Results: A total of 233 asthma patients participated in the study. Sixty percent (n≤139) were females. Among the total sample, 81.1% used metered dose inhalers (MDI) and 15.9% patients used dry powder inhalers (DPI). For MDI, 22.8% (43/189) completed all required steps while 51.4% (19/37) did so for DPI (P < 0.05). “Hand mouth coordination,” “hold breath for 10-20 seconds” and “waits 20-30 second before repeating the procedure” were the steps found to be mainly difficult by MDI users, and “exhale deeply, away from the mouthpiece,” and “hold breath for 10 seconds” were the two major errors in using DPI inhalers. Patients with higher educational qualifications (above A/L) (P < 0.05) were more likely to use MDI inhalers properly.

Conclusion: Asthma patients on inhalation medications should have routine assessment of their inhaler technique at every visit. Attention needs to be given to the steps identified above and corrected if found to be poor.

Keywords: asthma, metered dose inhaler, dry powder inhaler, inhaler-administration checklist, inhaler technique