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THE IMPACT OF THE CLINICAL PHARMACISIT ON THE CORRECT USE OF INHALERS AMONG ASTHMATIC PATIENTS IN AL KARAK REGION IN THE SOUTH OF JORDAN

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COMMITTEE DESSION

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AUTHRIZATION STATEMENT

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DEDECTION

I dedicate this work to my beloved parents; Mr. Radwan AL Nawayseh and Mrs. Shadia Shmaisani.

And those lovers who support me: my sister Dr. Rodaina AL Tarawneh who gave me a lot of her time. My brothers; lawyer Mohammad, Eng. Mogheeth and Dr. Bariq.

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I dedicate this also to my grandmother Mashael, my aunts and uncles.

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LIST OF ABBREVIATIONS

ABBREVIATION	DEFINITION
ACQ	Asthma control questionnaire
ACT	Asthma control test
ATAQ	Asthma therapy assessment questionnaire
COPD	Chronic obstructive pulmonary disease
DPIs	Dry powder inhalers
ED	Emergency department
ERS	European Respiratory Society
FEV1	Forced expiratory volume in one second
FVC	Forced vital capacity
GINA	Global initiative for asthma
ICS	Inhaled corticosteroids
ISAM	The international Society for Aerosols in medicine
Ig-E	Immunoglobulin E
LABA	Long acting β2 agonist
MDIs	Meter dose inhalers
MMAS-8	Morisky medication adherence scale-8
NAEPP	The national asthma education and prevention program
rh	Spearman rank correlation co-efficient
SABA	Short acting β2 agonist
SD	Standard deviation
SPSS	Statistical Package for the Social Sciences
WHO	World Health Organization

The Impact of Clinical Pharmacist on the Correct Use of Inhalers among Asthmatic Patients in AL Karak Region in the South of Jordan

By

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Abstract

The main aims of the study are; to assess the impact of the clinical pharmacist in educating the asthmatic patients about their disease, the correct use of inhalers and the factors associated with correct use of inhaler devices.

The current study is a prospective cohort study. Two types of devices were evaluated metered dose inhalers (MDIs) and dry powder inhalers (DPIs). Baseline assessment of the correct handling of inhalers, extent of adherence and level of asthma control was done by using validated questionnaires. Education about asthma and training on the devices were done at the first visit. Re-assessment of correct handing, adherence and control was done at the second visit.

One hundred asthmatic patient**s** were included in this study; female patients were 52%, median age 45±13.7 years and median duration of diagnosis 20±12.2 years. Ninety six percent of patients were previously educated about the correct use of inhalers by different health care professionals' specialty. There was a significant improvement in the correct handling of inhalers after education on DPIs (p=0.005) and MDIs (P=0.005). Also there was a significant improvement in the level of control and adherence after education (P=0.005, P=0.005), respectively. In this study

the result showed that patients with higher level of education gets higher correct handing scores in MDIs and DPIs at the before education (p=0.032, p=0.014), respectively. Incorrect handling of MDIs were significantly associated with frequent ED visits and hospitalizations (p=0.031, p=.039) respectively.

In conclusion the role of clinical pharmacist is very effective in the correctness of inhalers technique and improving adherence along with asthma control. Repeated evaluation and training on the correct handling of inhalers is a demand.