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Perception of primary care physicians about guidelines of bronchial asthma

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Abstract *Background:* Adopting clear guidelines for diagnosis and management of bronchial asthma could improve the medical care services administered to asthmatic patients. This can be reflected on amelioration of manifestations, decrease of attacks of asthma and hence decrease the medical burden of the disease.

Objectives: The current study was designed to evaluate the adherence of primary health care physicians to the recommendations of the National Protocol for Management of Asthma in Kuwait and the factors affecting this adoption, reveal their knowledge, attitude and practices about bronchial asthma, and identify barriers for caring of asthmatic patients.

Subjects and methods: The target population was primary health care physicians. All the primary health care physicians of two randomly selected health districts, out of five, were included. Out of 376 physicians available during the field period, 250 agreed to share in this study with an overall response rate of 66.5%.

Results: The results showed that only 37.2% of the studied primary health care physicians were adhering to asthma guidelines. Level of education, Knowledge about asthma, and clinical practice proved to be significant predictors of adherence to asthma guidelines. Although physicians had a high positive attitude toward asthma yet, they have poor knowledge and practice scores. The most common institutional barriers were improper follow up system and lack of spirometers, while heavy

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workload and lack of training were the main barriers related to health staff. Non compliance of patients to management and follow up schedules were on the top of barriers related to patients.
Conclusion: Physicians at the primary health care centers had a low adherence rate to asthma guidelines. Although they had high positive attitude toward asthma yet their knowledge and practice need improvement. To enhance adequate medical care to asthmatics; focus should be concentrated on increasing awareness and task based on job training of physicians as well as providing lung ventilation measuring equipment and improving the follow up system of bronchial asthma.

1. Introduction

Bronchial asthma is defined as a chronic inflammatory disease characterized by hyper-responsiveness and hypersensitivity affecting mainly the medium sized and small bronchi. It is considered as one of the most frequent obstructive chronic respiratory conditions that is characterized by a highly recurrent nature. Incidence of bronchial asthma is increasing. Worldwide; an average estimate of 8% of the population are suffering from bronchial asthma.[1] The World Health Organisation estimated that 15 million disability-adjusted life years are lost annually due to bronchial asthma.[2] In addition, the high prevalence and mortality rates of the disease as well as the heavy social and economic burden need to be carefully addressed.[3–5]

Proper diagnosis and management of patients suffering from bronchial asthma can save both suffering and medical cost. However, it has been shown that knowledge and competence of primary care physicians vary among countries and with time in the same country.[6–11] To reduce practice variability and improve the quality of asthma care, the Global Initiative for Asthma (GINA) guidelines had been developed and updated by the World Health Organization in collaboration with the National Heart, Lung and Blood Institute.[12,13] Kuwait adopted these guidelines with minor modifications. The guidelines include recommendations for diagnosing and monitoring and organize treatment strategies into a stepwise approach in response to the asthma severity along with offering a self-management plan.

Preparation and distribution of the guidelines, alone, do not guarantee efficient medical management of asthmatic patients. To obtain the required data about actual medical management and therapeutic schedules adopted according to asthma guidelines requires investigations of the extent of adoption of these guidelines by primary health physicians. Reviewing the available literature about adherence to asthma guidelines in Kuwait did not reveal any previous studies. Thus, the current study was designed to evaluate the adherence of primary health care physicians to the recommendations of the National Protocol for Management of Asthma in Kuwait and the factors affecting non adoption, estimate their knowledge, attitude and practices about bronchial asthma, and identify barriers for caring of asthmatic patients.

2. Subjects and methods

An observational cross-sectional study design was adopted for this study. The study was carried out in the primary health care centers in Kuwait. Out of the five health districts in Kuwait; two districts were randomly selected to carry out this study. All physicians available during the field work of the study in the primary health care centers were the target population of this study. The study covered the period between March 2012 to September 2012. Data were collected over three months starting from the May to July, 2012. All selected physicians were directly interviewed, using a structured questionnaire, in their primary health care centers in a specially prepared quiet room that provided privacy. Physicians were interviewed during the working time in response to the coordination suggested by director of the center.

Data of this study were collected through a specially designed questionnaire. This questionnaire consisted of several sections. The first section covered socio-demographic characteristics, including age, sex, nationality, marital status, educational qualification, and current job. The main outcome variable of this study is adherence to asthma guidelines thus, strict adherence to these guidelines was used to classify physicians as adherent and non adherent to guidelines. One question dealt with prevalence of asthma in Kuwait. The attitude scale consisted of ten questions (importance of asthma inside and outside Kuwait, impact of asthma on quality of life and welfare, economic and emotional impacts, while the remaining four questions covered medical burden, resources and the multidisciplinary approach for asthma management). A five point Likert scale (1–5) was utilized to score each question of the attitude scale (total score = 50), while dichotomous questions (yes or no) were used for knowledge and practice scores. The knowledge domain consisted of four sub-domains (diagnostic tools, predisposing factors, asthma medicines, and ways of drug use). The first sub-domain dealt with diagnostic tools of asthma (history taking, spirometry, and chest imageing, total score = 5), while the second sub-domain (common predisposing factors for asthma) consisted of seven factors, namely air temperature, humidity, pollution, dust, pollen grains, animal products, and foods/medicines, with a total score of 7. The third sub-domain included the common groups of asthma drugs (short and long acting beta 2 adrenoceptor agonists, anticholinergics, glucocorticoids, ketotifen, adrenoreceptors, leukotrience antagonists, and mast cell stabilizers, total score = 8), while the last sub-domain dealt with the common ways for administering asthma drugs (metered dose inhalation, powder inhalation, nebulisers, oral, and injections, total score = 5). Asthma guidelines were enquired about using four questions (existence of the guidelines, keeping a copy of the guidelines, receiving training on implementation, and strict adherence to the guidelines). In addition, one question about causes of non adherence to asthma guidelines was included. Another section dealt with the adopted practices about asthma. This section consisted of four questions (use and interpretation of asthma diagnostic and management methods), in