## The efficacy of a management protocol in reducing emergency visits and hospitalizations in chronic asthmatics

To the Editor

Dr. Alamoudi reported on the effectiveness of a "simple protocol" (which consisted of a physician, an educator, steroid monotherapy and regular follow up in the asthma clinic) in reducing emergency room (ER) visits and hospital admissions.[1] These are a few comments regarding this study.

Firstly, the argument put forward for simplification of the current guidelines of asthma management in a protocol, is: "the lack of significant changes in asthma control as the total number of ER visits and hospitalizations is still high over the last 6 years since the introduction of the guidelines in KSA".[1] We are not aware of data to support this statement and hypothesis. Even if there is a true increase, it may be argued that this may be related to increasing asthma incidence or severity.[2] In addition, there is local as well as international evidence that guidelines and educational programs in general may bring on a positive change.[3-4]

Secondly, the number of ER visits before and after implementation of the protocol was used to assess its effectiveness. However, patients included in Dr. Alamoudi's protocol had direct access to the weekly asthma clinic if they felt unwell. In our experience, patients prefer to come to the clinic even if they have to wait several days to see their specialist rather than go to the ER. Emergency rooms are disliked due to their busy nature and patients have to wait many hours before being seen by a generalist who is not familiar with their problems. Hence, the number of ER visits is partially reduced by simply shifting patients from the ER to the clinic, which raises the question of its accuracy in assessing the protocol.

Finally, the concept of steroid monotherapy was emphasized in this protocol. However, this may not be sufficient for patients with moderate or severe asthma. Other additive therapies are now widely available, which can further improve symptoms, lung function and quality of life and decrease exacerbation's, such as long-acting beta-2 agonists (LABA) and anti-leukotrienes.[6,7] It is now believed that add on therapy is superior to increasing inhaled steroid dosage.[8] Dr. Alamoudi recommended the use of steroid monotherapy in the asthma clinic. While this simplification of the guidelines may be welcomed by the generalist, it may be viewed as restrictive by the specialist. We think management in asthma can afford to be more complex to suit the individual patient. If the idea is to improve compliance, the stress should be on one device rather than on monotherapy. Now combination therapy consisting of steroid and LABA in one device is available (Seretide® and sympbicort®) These remarks should not cast doubts on the clearly positive results of this study, which showed nicely what an interested physician can do to alleviate the suffering of his patients. Merely, a question is raised on the setting where it may be applicable.

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### *Reply from the Author*

We read with great interest the comments of Dr. Al-Mobeireek regarding my study on the efficacy of a management protocol in reducing emergency visits and hospitalizations in chronic asthmatics.[1]

Firstly, the aim of this simple protocol was not a replacement of the national[9] or the internationals guidelines.[10,11] It represents, as matter of fact, a better understanding and application of the knowledge available for the management of asthma based on the present guidelines. This protocol was applied on chronic asthmatics in the outpatients asthma clinic in which social circumstances, types of the asthmatics treated, types of medications available, and patients financial ability to purchase their medications were considered. Although the management of bronchial asthma has become standardized by the national[9] and internationals protocols[10,11] but still there is significant difficulty of implementing guidelines in the Kingdom of Saudi Arabia (KSA) as well as in Europe. A recent European telephone survey (asthma insight and reality in Europe [AIRE] on general population-based samples has shown that the guidelines were not followed.[12] Global initiative for asthma (GINA) guidelines have stated the objective of asthma management that can summarized in having minimal or non-chronic symptoms, steady state with minimal or infrequent symptoms, avoiding completely emergency room visits, minimum need of short B2-agonist, and to have no limitation in daily-life activities.[11] In countries where GINA guidelines were used AIRE found that 46% of the subject had daily symptoms, 61% reported severe episode of cough, wheeze, chest, tightness, and shortness of breath, 30% had emergency department visits, 63% had used asthma attack relievers and 63% of patients reported limitation in daily life activities.[12] We have been noticed during my regular participation of many workshops that usually held yearly in KSA that many physicians attending these workshops were neither aware of our national protocol nor have an idea on the existing guidelines of asthma management. Therefore, the hypothesis we used for this study was true.

We entirely agree with Dr. Mobeireek that proper use of the national protocol or any other protocols will lead to better control of asthma that will lead to reduction of ER visit and hospitalization among asthmatics. This was supported by this study as well as by other.[1,4] For instance, in countries where the GINA guidelines on treatment and prevention of asthma have been implemented, there appears to have been a reduction in the prevalence of moderate persistent asthma but no decrease in severe asthma.[13] Therefore, the questions that should have been raised how we can implement these guidelines on our asthmatics as what are the obstacles that have led to the difficulty of implementing such guidelines in KSA. This real problem needs to be studied.

Secondly, the aim of this simple protocol was to reduce ER visit and hospitalization in chronic asthmatics. In order to achieve that we have let the patient to have direct access to the asthma clinic mainly during the working hour from 9:00 am to 12:00 noon once per week. Therefore, if this has led to reduction of ER visit this should be considered as credit for the protocol rather than to be against it. However, from experience most of our asthmatics with acute asthma usually prefer to visit ER rather than to wait several days without medical attention. Therefore the shift from ER visit if any will be minimal and again it should be considered as a credit for the protocol rather than to be against it.

Thirdly, the concept of inhaled steroid therapy as a monotherapy in this study was based on the following facts; 1) inhaled steroid is the only single medication that has been shown to reduce and prevent asthma symptoms and exacerbation's, to reduce airway hyperresponsiveness, improve lung function and quality of life and at the same time to control and suppress airway inflammation,[14] 2) the majority of our patients attending the asthma clinic were unable to purchase their medications and at the same time we were unable to provide them medications from our pharmacy free of charge 3) to improve their compliance through reducing the cost of therapy by using monotherapy 4) inhaled steroid alone can control the majority of mild asthma without the need of add on therapy.[15] We also agree with Dr. Mobeireek that add on therapy using in particular long acting beta 2 agonist (LABA) will improve symptoms and lung functions values and decrease exacerbation in chronic asthmatics.[6] However, this may add an extra cost on the patients and therefore, may reduce their compliance. We agree with Dr. Mobeireek that a fixed combination inhaler of corticosteroid and LABA recently developed (Seretide®, Sympicort®) may cause better control of asthma and may be more convenient for asthmatics.[16] However, this may represent a more expensive alternative to the patients.

Finally, We agree with Dr. Mobeireek that the simplification of the guidelines was mainly meant for the generalist rather than for the specialist; however, it can be used as well by the specialist taking into consideration similar circumstances. Therefore, this simple protocol can be easily used by generalist in any outpatients asthma clinic as well as by specialist with limited resources.

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