PRACTICE REPORT

Contribution of community pharmacists in educating the asthma patients

Hamoud Saud Alotaibi *, Thippeswamy Boreddy Shivanandappa, Sivagurunathan Nagarethinam

College of Pharmacy, Al-Dawadmi Campus, Shaqra University, Saudi Arabia

Received 5 May 2015; accepted 9 June 2015
Available online 15 June 2015

KEYWORDS

Asthma; Community pharmacists; Counseling

Abstract Background: In asthma, the preventive measures taken by patients play an important role in improving life span and quality of life. This can be done more efficiently by community pharmacist by providing patient counseling and improving knowledge of patient about disease, risk factors, medication management and preventive measures to control asthma. Objectives: The objective of the study was to evaluate the contribution of community pharmacists in improvement of life span and quality of life of asthma patients. Method: The study was performed from Mid September to Mid-November 2014 in Dawadmi, Riyadh province, KSA. Data were collected by using a structured face to face questionnaire with randomly selected different community pharmacies. The questionnaire composed of different closed questions about the action plan of pharmacists in asthma management and factors that affect the counseling of asthma patients by the pharmacists. Results: It is noteworthy to observe that, in general, pharmacists are sufficiently knowledgeable and competent to counsel their asthma patients effectively.

1. Introduction

Asthma is a significant public health issue worldwide. The correct management of asthma requires a multidisciplinary approach that includes the doctor, the patient and the patient’s family. To optimize asthma management, international recommendations have been published (NHLBI/WHO Workshop Report. NIH publication 95–3659: Ait-Khaled and Enarson, 2005, 2006). Despite these progresses, asthma-related morbidity and mortality remain high (Ganyere et al., 1998). Today, asthma can be considered a condition that is not perfectly managed, since deaths due to this illness are usually from preventable causes, including poor treatment and observation (Koffi et al., 2001). Disease management programs are one of the clinical services being offered by pharmacists, and these particularly lend themselves to chronic conditions, such as asthma and diabetes (Boulet et al., 2002; Haathela, 2002). Underpinning these new trends in the practice of pharmacy is the philosophy of pharmaceutical care that calls for pharmacists to take responsibility for patient’s clinical
and humanistic outcomes. Community pharmacists are the most accessible health-care professionals in the desire to counsel primary care setting. Their frequent contact with patients due to the need for prescription refills, and their expertise in medication, ensures that they are optimally positioned to positively impact on asthma management (Mehuys et al., 2008; Hepler and Strand, 1990). Therefore the present study, aimed to assess the attitudes of private pharmacists toward asthma patients in Al-Dawadmi and its surrounding area, with the following objectives: To evaluate about the prescriptions known for asthma patients; to evaluate pharmacists’ knowledge of inhalation techniques and to describe the advice given by pharmacists to asthma patients.

2. Methodology

2.1. Study site

A survey among community pharmacists in Al-Dawadmi, Riyadh province, KSA, was conducted over a period of one month from Mid-September to Mid-October 2014. Data collection was carried out using a structured face-to-face questionnaire with 20 randomly selected community pharmacies from different areas of Al-Dawadmi region.

2.2. The questionnaire

A modified questionnaire from a previous report was prepared (NIH, 1995). The questionnaire included eight closed questions to pharmacists toward the contribution of dispensing process. The survey was conducted by a single investigator, who systematically met with the chief pharmacists to explain the objectives of the survey before administering the questionnaire. Apart from the rare cases where the pharmacist responded on the spot, the investigator was often obliged to return at a time suitable for the pharmacist.

The first two questions were about the education of pathophysiology of asthma to a patient by pharmacists. Questions three and four dealt with type and which drug prescribed by a doctor to dispensing drugs by the pharmacists. Question five asks the pharmacists about the asthma management plan ensure the patient is given written and verbal instructions that describe, when the patient takes drug, how the intervention patient takes drug; how much and when to seek medication cure to take. Questions six to eight explain about the role of each medication, side effect, adverse drug reaction and any drugs other than asthma medication. The last question is about knowledge of inhalation technique (Table 1).

Second part of survey, asked respondents to indicate their level of agreement with a number of statements which identified factors/situations that could potentially influence pharmacists’ desire/ability to counsel their asthma patients (Buckley and Ryder, 2012). The concept of research and its impact in improving health care are partly understood by Dawadmi community pharmacists. Therefore, a close ended and simple question format was chosen to enable the pharmacists to answer easily and promptly (Table 2).

2.3. Data collection and analysis

The pharmacists were interviewed inside the community pharmacies after getting the agreement of the pharmacists. The purpose of the study was explained to each pharmacist and they were invited to complete the questionnaire after assuring the willingness to participate. The survey responses were treated anonymously and confidentially. Upon receipt of the completed questionnaires the% response of each variable was calculated.

3. Results and discussion

Since asthma is an allergic disease, preventive measures taken by patients play an important role in improving life span and quality of life which can be done more efficiently by clinical pharmacists by providing patient counseling through improving knowledge of patient about disease, risk factors, side effects, and pharmacotherapy for asthma. The first two questions were about the education of pathophysiology of asthma to a patient by pharmacists. Questions three and four dealt with type and which drug prescribed by a doctor to dispensing drugs by the pharmacists. Question five asks the pharmacists about the asthma management plan ensure the patient is given written and verbal instructions that describe, when the patient takes drug, how the intervention patient takes drug; how much and when to seek medication cure to take. Questions six to eight explain about the role of each medication, side effect, adverse drug reaction and any drugs other than asthma medication. The last question is about knowledge of inhalation technique (Table 1).
medication management and preventive measures to control asthma (Ratham et al., 2013). As there is no cure for asthma, the key instrument is to educating the people about asthma. Pharmacist education was also found to be key variable in assessing the knowledge of disease. Patient counseling has corner stone for pharmaceutical care and improves patient’s quality of life. In the present study, we asked the pharmacists to indicate their level of involvement in educating the patient about asthma and its pathophysiology followed by medication and its management, also to determine the opinions of community pharmacists about the current level of asthma management among their asthma patients (Figs. 1–3). Further, questions were included to explore the level of counseling that pharmacists carry out regularly with their asthma patients and to investigate whether there are certain areas, considered important in asthma management, which are being neglected. Questions were also included to examine the factors that influence pharmacists’ ability to counsel their patients (Buckley and Ryder, 2012). For optimum patient care appropriate communication links between the health-care professionals in the primary care setting are essential. The involvement and knowledge of pharmacists about asthma in counseling the patient were assessed with different questions related to disease, causative factors, medications and lifestyle modifications. The results shown in Fig. 1 represent percentage of responses (Yes or No) of the pharmacists about the interventions and

| Q          | Parameter                                      | Answer    |
|------------|------------------------------------------------|-----------|
| 1          | Time is a major limitation                     | Yes/No    |
| 2          | Patients are receptive to counseling           | Yes/No    |
| 3          | I have sufficient knowledge to counsel effectively | Yes/No    |
| 4          | I am not competent to educate on inhalation technique | Yes/No    |
| 5          | I am not competent to educate on peak flow meter usage | Yes/No    |
| 6          | Not my role to counsel to improve asthma control | Yes/No    |
| 7          | I do not counsel; I am underpaid to do so       | Yes/No    |

Table 2  Factors that affect the counseling of an asthma patient by the community pharmacist.

Figure 1  Interventions and action plan for asthma.

Figure 2  Prescribed medications for asthma.
action plan for asthma. The results had shown that percentage of responses rate was very high. This indicates majority of the pharmacists are well competitive enough in intervening the asthma patient with their basic knowledge. Drugs such as anti-inflammatory agents, leukotriene modifiers, corticosteroid and β-blocker are the agents used for the treatment of asthma. In the present study, we asked the pharmacists to report, the widely prescribed medication for an asthma patient during counseling. The results indicate 60% pharmacists say β-blocker is widely prescribed drug for the treatment of asthma, another 25% pharmacists say corticosteroid, 10% of pharmacists say anti-inflammatory agents and 5% say leukotriene modifiers. Fig. 3 represents the % of responses in asthma management plan such as when, how and how much to take drug. Majority of the respondents are agreed in conveying the management plan such as when, how and how much to take drug.

It is apparent from Fig. 4 that, for the majority of respondents, time is the factor of greatest influence with regard to pharmacists’ ability to counsel asthma patients. It is noteworthy to observe that, in general, pharmacists are sufficiently knowledgeable and competent to counsel their asthma patients effectively (Fig. 4).

4. Conclusion

The present study has revealed a number of salient points. Firstly, community pharmacists believe that, on the whole, their patients’ level of asthma management is optimal. In an attempt to improve this situation, there is a need to broaden pharmacists’ perceptions of their role in asthma management beyond counseling primarily on the medications dispensed. However, as time is a major factor influencing pharmacists’ ability to counsel, significant changes are needed within community pharmacy that will facilitate pharmacists using their professional skills to become more actively involved in patient care and disease management and moving away from the traditional role of medication supply.

Acknowledgment

Authors are highly thankful to Dean Abdulmohsen H. Al Rohaimi for providing the necessary facilities and infrastructure.

References

Ait-Khaled, N., Enarson, D.A., 2005. Management of Asthma. Guide to the Essentials of Good Clinical Practice, second ed. International Union against Tuberculosis and Lung Disease, Paris, France.
Ait-Khaled, N., Enarson, D.A., 2006. Management of asthma: the essentials of good clinical practice. Int. J. Tubere Lung Dis. 10, 133–137.
Boulet, L.P., Thivierge-Rl, Amesse A., Nenes, F., Francoeur, S., Vollet, J.P., 2002. Towards excellence in asthma management: a population disease management model. J. Asthma 39, 341–350.
Buckley, K.N., Ryder, S.A., 2012. Asthma management in the community pharmacy setting in Ireland. Int. J. Clin. Pharm. 34 (1), 186.
Ganyere, R., Magar, Y., D’Ivernois, J.F., 1998. Eduquer le Patient Asthmatique. Vigot, Paris, France.
Global Initiative for Asthma (GINA). Global strategy for asthma management and prevention. NHLBI/WHO Workshop Report. NIH publication 95-3659. Boston, MD: National Institutes for Health, National Heart, Lung and Blood Institute, January 1995. Revision 2002. <http://www.ginasthma.com >.
Haahetla, T., 2002. The disease management approach to controlling asthma. Respir. Med. 96 (suppl A), S1–S8.
Hepler, C.D., Strand, L., 1990. Opportunities and responsibilities in pharmaceutical care. Am. J. Hosp. Pharm. 47, 533–543.
Kolf, N., Kouassi, B., Ngom, A., Kotchi, Z., Yavo, J.C., 2001. Rôle du pharmaciend dans la prise en charge de l’asthme en Afrique. Rev PneumoClin 57, 415–421.
Mehuys, E., VanBortel, L., DeBolle, L., VanTongelen, I., Annemans, L., Remon, J.P., Brusselle, G., 2008. Effectiveness of pharmacist intervention for asthma control improvement. Eur. Respir. J. 31, 790–799.
The role of pharmacists in improving in asthma care NIH Publication, 1995 July. National Institutes for Health, National Heart, Lung and Blood Institute, No-95-3280.
Ratham, S.M., Jyothi, D., Durga Prasad, T.S., Venkata Subbaiah, M., Ravindra Reddy, K., 2013. Role of clinical Pharmacists in Impact of Patient Counselling I Asthma Patients. J. Global Trends Pharm. Sci. 4 (2), 1111–1117.

Figure 3  Asthma management plan.

Figure 4 Factors influencing pharmacist’s ability/desire to counsel.