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PREVENTION, EDUCATION AND INFORMATION: THE ROLE OF THE COMMUNITY PHARMACIST IN THE MANAGEMENT OF HEADACHES

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KEY WORDS

Community Pharmacy, counseling, headache, migraine, patient health education.

ABBREVIATIONS

WHO World Health Organization – OTC Over The Counter

CONFLICT OF INTEREST

All the Authors certify that there is no actual or potential conflict of interest in relation to this article.

ABSTRACT

Headaches are among the most common disorders of the nervous system. On a global level, it is estimated that the prevalence of headache disorder in adults is 47%. A proper treatment of headaches requires training of health care personnel, careful diagnosis and recognition of the condition, appropriate treatment with cost-effective drugs, simple changes in lifestyle and patient education. Unfortunately, a large number of people suffering from headache disorders are not diagnosed and treated. The unsatisfied needs in migraine can be faced by involving the pharmacist in the management of the pathology. To really understand which are the activities and the potential of community pharmacies in the management of patients with headache or migraine we took into account studies conducted around the world during the last 5 years. Based on the data collected it is clear that the role of the community pharmacist may be crucial in managing of patients with headache or migraine but only if he receives an adequate and continuous education both on the management of therapies and maintains a stable relationship with the medical doctor and / or patient. In Piedmont a specific study to identify migraine sufferers has involved the community pharmacies in the administration of a questionnaire, specially crafted by the Italian Headache Foundation (FICEF non profit association).

INTRODUCTION

The World Health Organization (WHO), in the "Atlas of headache disorders and resources in the world 2011", summarizes the current situation concerning problems related to headaches. According to the WHO, headaches are very common disorders of the nervous system. Headache is painful and invalidating, featuring a small number of primary headaches, in particular migraine, tension-type headache and cluster headache. Headaches can also be triggered by other conditions, such as medication overuse headache. Worldwide, the prevalence in the adult population of current headache disorders (symptomatic at least once in the past year) is 47%. In the world more than half of adults aged 18-65 years have suffered from headache during the last year and among these people more than 10% has reported migraine. Globally, headache affects the population for more than 15 days per month from 1.7 to 4% of cases. Although there are regional variations, the headaches are a global problem that affects people of all ages, races, economic availability and geographical areas. Headache is not only painful, but also creates disability. Headaches are a public health problem due to the large amount of disability and economic costs to society (mainly lost work hours and decreased productivity). Moreover, many of those disturbed by headaches do not benefit effective treatments. For example, in the United States of America and the United Kingdom, only 50% of the subjects

detected with migraine had consulted a doctor for reasons related to headache in the previous year and only two-thirds were properly diagnosed. Most of the patients used only over-the-counter (OTC) medications. A proper treatment of headaches requires the training of health workers, careful diagnosis and recognition of symptoms, appropriate treatment using cost-effective medicines, simple changes in lifestyle and patient education. The drugs most commonly used to treat headaches are: painkillers, anti-emetics and prophylactic drugs. However, many people with headaches are not diagnosed and treated [1].

The unsatisfied needs of migraine can be dealt by involving the pharmacist in the management of migraine. In the context of the community pharmacy the work of the pharmacist is not limited to dispensing medicine but also entering into direct relationship with citizens through initiatives in health education, primary and secondary prevention campaigns. Therefore, a trained pharmacist can be actively involved in preventive screening and monitoring of therapeutic adherence.

In this context, the pharmacist can improve incomplete diagnosis referring headache patients with suspected migraine to health care worker. The pharmacist can identify and refer patients who require preventive therapy, can also educate and advise patients receiving preventive therapies on their correct and safe use [2].

Community pharmacies are also potential locations where the risks associated with self-medication could be prevented. The lack of counseling is linked to easy access to OTC medicines that can make patients believe that OTC medicines are always safe. However, studies show that self-medication has potential for abuse and may lead to improper use of drugs, which increases the rate of drug-related problems and may compromise the patient's safety. The community pharmacists have an overall view both of prescriptions and OTC medications that patients are assuming. They have an high level of knowledge and are easily accessible to patients. This situation places them in a privileged position to support self-medication [3].

THE WORLDWIDE COMMUNITY PHARMACIST ROLE IN THE MENAGEMENT OF HEADACHES

Given the important role that the community pharmacist may have in the management of patients with headache or migraine, in recent years several studies have dealt with this issue.

In order to really understand which are the activities and the potentiality of community pharmacies in this context, we considered the studies carried out worldwide over the past 5 years.

The key words used for the bibliographic research have been "community pharmacy" and "headache". The period covered by data has been 2008-2013.

The highlights of the studies that we have considered are reported in chronological order.

2008: UK, Germany, Australia

In a study conducted in UK, Germany e Australia a Migraine Questionnaire (MQ) was designed to assist pharmacists to detect consumers with migraine suitable for a non-prescription treating with triptans. During the course of the study, 1,353 recruited subjects filled out two independent evaluations with two designated health care providers, a pharmacist and a doctor. The aim was to evaluate the accuracy of the pharmacist evaluation of eligibility for treatment with a triptan with respect to the primary care clinical evaluation. Based on the findings the pharmacists less frequently concluded that a subject was suitable for a triptan (48.8%) than the physicians (76.8%). Discrepancy between pharmacists and physicians has been mainly related to the diagnosis of headache. In addition, the pharmacists, using MQ, were more prudent than the physicians in the assessment of cardiovascular contraindications and cardiac risk. In conclusion, the MQ has proven to be an effective instrument to sustain the pharmacist indication of non-prescription triptan [4].

The goal was to evaluate the impact of pharmaceutical care (defined as intensified organized counseling between the patient and the pharmacist) for patients with headache and migraine; a number of 112 pharmacies was randomly allocated to the intervention group or to the control group. The pharmacists in the intervention group participated in a 2-day education program carried out by experts. The intervention group took 201 patients who received pharmaceutical care, while the control group consisted of 209 patients who received standard advice. Based on the findings pharmaceutical care, sometimes not extensive, seems to improve patient's quality of life, even if it has not changed substantially the number and severity of the headache. So a continuous training for pharmacists may improve and / or strengthen the outcomes for patients with headache [5].

2009: Malta

In a study conducted in Malta, the purpose was to develop two protocols configured to help pharmacists care for consumers who seek treatment for headaches and back pain and then use the protocols to evaluate the management of pharmacists of these conditions. Ten community pharmacies were involved. Consumers who went to the pharmacy with a prescription, to purchase a specific product or for advice on how to approach the symptoms were enrolled in the study. In this study, patients who required counseling for the management of their symptoms have achieved the

highest degree of interaction with the pharmacist. The results suggest a lack of counsel given to consumers who are in the pharmacy to ask for a specific product [6].

2012: Slovenia, Belgium

In the Slovenian study the targets were to evaluate the consulting related to paracetamol through the method of simulated patients and to evaluate the approach of the patient (symptom-based vs. direct requests of products) as a key factor of counseling. The simulated patient methodology was applied in 17 community pharmacies. This study shows that pharmacy staff gave professional counseling (the information most commonly provided were dosage and side effects), particularly in the case of requests based on the symptoms. Patients who have denounced their symptoms have been provided with more detailed advice in terms of demand and supply of information than patients who have requested a specific product. There were no particular differences in the consulting quality between the Masters of Pharmacy and Pharmacy Technicians (the small sample size could have elicited this discrepancy) [3].

The observational study based on community pharmacy carried out in Belgium, aimed to evaluate the characteristics of the headache and of the use of drugs by people with regular headaches (headaches that occur minimum once a month) presenting for self-medication. Pharmacy customers who bought an OTC for headache were asked to fill out some questionnaires. The study allowed the identification of underdiagnosis of migraine, low use of prophylaxis for migraine and of triptan and moreover the high prevalence of medication overuse between subjects in search of self-medication for the headache. Based on the findings of this study, recommendations for a better management of headache complaints by community pharmacy must be formulated because the pharmacists are in a front line to improve the recognition of migraine in primary care; they can then play a significant role in the prevention and early detection of excesses in medicine use and the subsequent headache. Furthermore migraine patients with frequent invalidating attacks that are not living sufficient relief from pain with their current therapy should be referred to a physician to receive other therapeutic options [7].

2013: Thailand, Brazil

Recently, in 2013, two studies involved two different Developing Countries: Thailand and Brazil.

The study conducted in Thailand was designed to evaluate the practice and the knowledge of pharmacy staff in managing the mild to moderate migraines and to compare pharmacists and non-pharmacists in relation to practice and knowledge. The sample included 142 community pharmacies selected randomly. Simulated patients visited the pharmacy to request for the treatment of mild to moderate migraines. The main results of this study were that the majority of pharmacists had insufficient practice and insufficient knowledge regarding the management of mild to moderate migraines. The most part of pharmacists and non-pharmacist staff provides inappropriate question asking, dispensing drugs and giving recommendations for mild to moderate migraine. Many pharmacists unreasonably dispensed prophylactic drugs for the management of migraine, especially in moderate disorder. Typically in developing countries, community pharmacists diagnose disease, dispense medicines and provide recommendations to patients. In the study, pharmacists demonstrated a more suitable knowledge in making a diagnostic history compared to non-pharmacists. However, their level of knowledge was not enough for diagnosis. Their knowledge on counseling for migraine was also minimal. In conclusion, educational interventions need to be developed (both at the level of the Schools of Pharmacy and after graduation) to improve the knowledge and practice of the pharmacy staff in the management of migraine [8].

The purpose of the study conducted in Brazil was to assess the skills of counseling of community pharmacists in terms of managing headaches using the approach of the simulated patient. The study involved 24 pharmacists. The simulated patient lamented that he experienced headaches approximately twice a week, for which he hired paracetamol. However, the patient felt the need of a more effective treatment and therefore went to the pharmacy. The simulated patient had a passive role, only responding to questions when asked and not providing information spontaneously. The majority of the pharmacists in the study provided information voluntarily and the 50% of pharmacists asked about signs and symptoms of the patient. The majority of the pharmacists recommended a painkiller. The most discussed topics in the simulated visits were contraindications (70.8%), information (41.6%) and timing of administration of drugs (33.3%). None of the pharmacists recommend non-pharmacological treatment options. This study showed that the counseling skills of pharmacists and the information provided by pharmacists to the simulated patient were not sufficient for the satisfactory management of headache, this fact may be related to the graduation of pharmacists in Brazil. Of the 64 disciplines offered by the course of pharmacy, only 6 were part of the core in Social Pharmacy [9].

DISCUSSION

The analyzed studies have shown that:

- generally, people suffering from headache do not treat themselves in an appropriate manner favoring acute treatment and ignoring the existence of preventive treatments;

- a trained pharmacist is able to recommend the most appropriate OTC therapy to a subject affected by headache;
- a trained pharmacist is able to identify people suffering from migraine and addressing them to the physician for a diagnosis;
- a trained pharmacist can play an important role in identifying and addressing a suitable subject for pharmacological prevention of migraine to the physician;
- a trained pharmacist can provide important information regarding the management of subjects' therapies in acute or preventive treatment.

Unfortunately, the studies also have shown that:

- in case of a prescription or request for a specific product the pharmacist does not usually provide explanations to the patient;
- pharmacists usually do not recommend non-drug alternatives;
- in Developing Countries the knowledge of pharmacists have not adequate proved and moreover technicians act as if they are pharmacists. This problem stems from the lack of university education and continues for the lack of post-graduate training.

On the basis of the foregoing it is clear that the role of the community pharmacist can be crucial in the management of patients with headache or migraine but only if he receives an adequate and continuous training on both the management of therapies and the relationship with physician and / or patient.

In consideration of the potential and the capacity of the community pharmacist in the management of headaches, in Piedmont (Italy) it has been conducted a study that involves the administration of a questionnaire to patients that go to the pharmacy for the management of migraine with an OTC. The questionnaire was specially crafted by the Italian Headache Foundation (FICEF). Through the questionnaire pharmacists will be able to identify and address to a physician those who suffer from migraine and tend to self-medication, too frequently incurring the risk of therapy abuse and related adverse drug reactions.

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