NATIONAL ESSENTIAL MEDICINES LIST OF PAKISTAN: USE IN PRESCRIPTIONS AND AWARENESS IN MEDICAL PRACTITIONERS

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ABSTRACT

Objective: To find out the extent of use of essential medicines in the prescriptions and the knowledge of medical practitioners about the national essential medicines list of Pakistan.

Methodology: This paper describes two phases of a study focused on national essential medicines list of Pakistan. Conducted at Kuwait Teaching Hospital, Peshawar between February and March 2013, in the first phase, using purposive sampling, digital photographs of 110 prescriptions were taken and 94 legible prescriptions were analyzed. In the second phase, in March 2014, questionnaire based semi structured interviews were conducted from 35 medical practitioners.

Results: A total of 62(65.9%) prescriptions had medicines from the national essential medicines list of Pakistan. Out of 279 medicines prescribed in these prescriptions, 231 (82.8%) were from that list. 23 medical practitioners were aware of the existence of national essential medicines list of Pakistan. Medical practitioners reported that safety (n=20, 57.1%), efficacy (n=19, 54.3%), relevance; and cost of medicines both (n=17, 48.6%) & availability (n=10, 28.6%) were the factors that influence their selection of the prescribed medicines. They informed that the undergraduate course curriculum (n=22, 62.8%), specialty training (n=10, 28.6%) and the literature produced by the pharmaceutical industries (n=2, 8.6%) were the knowledge sources for prescribing a medication.

Conclusion: Almost one third of the prescriptions did not contain essential medicines. and only one forth of medical practitioners were aware of the existence of national essential medicines list.

Key Words: National essential medicines list, Medical practitioners, Prescription

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INTRODUCTION

The efficacy, safety and availability of medicines have been a major problem particularly for the less fortunate countries of the world, where the mortality & morbidity rate are quite high. With the advent of the newer medicines during the era after Second World War, it became clear that the less fortunate countries were unable to resolve this problem due to various factors including the lack of the availability, cost effectiveness & safety of the medicines[1].

In 1977, World Health Organization (WHO) declared a new policy for improving the health care needs of populations and put forth the concept of essential medicines[2]. Essential medicines are defined as those that fulfill the priority health care needs of majority of the population. They should therefore be available at all times in adequate amounts and in the appropriate dosage forms, and at a price, that individuals and the community can afford[3]. The first essential medicine list, prepared by WHO had 224 medicines and vaccines and is being regularly updated biennially[1,4]. The first national essential medicines list of Pakistan was prepared in 1994 and was last updated in 2016, containing medicines, classified for use at primary, secondary and tertiary levels of health care[2,5].

Expecting that the findings of this study may help the hospital managers to plan interventions for improved quality of care and facilitate patients in receiving essential medicines, it was decided to conduct this study to find out the extent of use of essential medicines in the prescriptions and the knowledge of medical practitioners about the national essential medicines list of Pakistan.

METHODOLOGY

This paper describes two phases of a study focused on national essential medicines list of Pakistan. It was conducted at Kuwait Teaching Hospital, Peshawar. A written permission was taken from the medical superintendent of the hospital, before the start of the study. The data, once collected, was compiled and analyzed by using SPSS version 17.

In the 1st phase of the study, conducted to find the extent of use of essential medicines in the prescriptions, from February to March 2013, using purposive sampling, digital photographs of 110 prescriptions presented to the pharmacy counter were taken and their comparison with national essential medicines list of Pakistan was made. For confidentiality, the upper portion of the prescriptions giving details of patient and doctor were not included in the photographs and analysis. Out of 110 digital photographs of the prescriptions, sixteen were discarded due to illegible handwriting and the analysis was done on 94 prescriptions.

In the 2nd phase of the study, carried out in March 2014, questionnaire based semi structured interviews of 35 prescribing doctors were conducted in Kuwait Teaching Hospital in which their knowledge about essential medicines was explored. A written consent was taken from all the interviewees whose identity was kept anonymous.

RESULTS

A total of 62(65.9%) prescriptions had medicines from the national essential medicines list of Pakistan. Out of 279 medicines prescribed in these prescriptions, 231 (82.8%) were from that list.

Out of 35 medical practitioners, there were 29 (82.9%) males. 23 medical practitioners were aware of the existence of national essential medicines list of Pakistan. Medical practitioners reported that safety (n=20, 57.1%), efficacy (n=19, 54.3%), relevance; and cost of medicines both (n=17, 48.6%) & availability (n=10, 28.6%) were the factors that influence their selection of the prescribed medicines. They informed that the undergraduate course curriculum (n=22, 62.8%), specialty training (n=10, 28.6%) and the literature produced by the pharmaceutical industries (n=2, 8.6%) were the knowledge sources for prescribing a medication.

DISCUSSION

Our study showed lack of legibility in 14.54% prescriptions that is much better compared to another study conducted in Peshawar that reported illegibility in 58.5% prescriptions[6]. This is important to mention that for the better understanding of pharmacists and patient safety, legibility of a prescription is a factor of serious concern in a prescription.

A total of 279 medicines were prescribed in the 94 prescriptions and 231 (82.8%) of those were from the national essential medicines list of Pakistan. Compared to this, a study conducted in Karachi reported only half of the prescribed medicines to be from national essential medicines list of Pakistan[7]. Although, it is a healthy sign but still far behind Ethiopia where 96.6% essential medicines were prescribed. However, the results of our study are much encouraging than Bangladesh, where 46.31% of prescribed medicines were from the national essential medicines list[8].

Twenty-three (65.7%) were aware of the existence of national essential medicines list of Pakistan. In a similar study conducted by in India, 57.06% practitioners from a medical college knew about the national essential medicines list[9] while a study done in Sri Lanka showed 29.27% of the medical practitioners knew about the list[10]. By looking at the results of these three studies, it is obvious that a large number of medical practitioners in South East Asia are unaware of national essential medicines list for their respective country, which leaves a big room for further dissemination of the concept of essential medicines.

Safety was the most reported response (n=20, 57.1%) when medical practitioners were asked about the factors they consider before including a medicine in their prescription. A study from Greece and Cyprus reported that clinical effectiveness was the most important factor considered in medicine prescription choice. Greek physicians added additional parameters for prescription, such as the drug form, recommended daily dose and the individual patient preferences while half of them also considered cost effectiveness of the medicine[11]. Similar study done in Karachi, Pakistan showed few additional factors the practitioners keep in mind while prescribing a medicine, which include; the emergence of new medicine in market, brand prescription, sponsorship to conferences, promotional tools and medicine samples[12]. The complete detail of the responses by medical practitioners in our study is given in table 1.

When asked about the source of knowledge concerning the choice of a particular medicine in their prescription, 22(62.8%) said that they studied it in their curriculum; 10(28.6%) described it to be due to the knowledge imparted during their specialty training; and 3(8.6%) mentioned that they were informed through the literature provided by the pharmaceutical companies. Somewhat similar sources of knowledge were described in a study from Greece and Cyprus, where the practitioners mentioned peer-reviewed medical journals, medical textbooks, proceedings of conferences and pharmaceutical sales representatives. In addition, they also informed to gain knowledge regarding adverse drug reactions primarily from the National Organisation for Medicines[11]. This source is, unfortunately,

Table 1: Factors considered important for making decision when prescribing medication*

Factors	Number of responses	Percentage
Safety	20	57.1%
Efficacy	19	54.3%
Relevance	17	48.6%
Cost of Medicine	17	48.6%
Availability	10	28.6%

*More than one response was allowed

non-existent in Pakistan. A few studies have shown that pharmaceutical representatives are an important source of information for general practitioners[13,14].

LIMITATIONS

Considering the fact that both the phases were conducted just as pilot studies, small sample size and purposive sampling technique are the obvious limitations.

CONCLUSION

More than one third of the prescriptions did not contain medicines from the national essential medicines list of Pakistan and only one forth of medical practitioners were aware of the existence of national essential medicines list of Pakistan.

RECOMMENDATIONS

For future, it is recommended that training of doctors in the concept of essential medicines and inclusion of its concept in the undergraduate curriculum may help in further increasing the access of population to cost-effective and quality medicines.

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CONTRIBUTORS

MT conceived the idea, did data collection and wrote the initial draft of the manuscript. MI supervised the study and critically reviewed the manuscript. All authors contributed significantly to the submitted manuscript.