

The Role of the Pharmacist in Skin Diseases Management: Case Study in Muhimbili Medical Center, Dar es Salaam, Tanzania

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A total of 314 patients attending skin clinic at Muhimbili Medical Center (MMC) were interviewed about the role of the pharmacist in providing useful information about their diseases and medication. Fifty five percent reported that they knew the role of pharmacy profession. Among those who consulted the Pharmacist concerning their skin diseases and medications, 87% reported to have benefited from the knowledge gained in different aspects, such as, side effects of the drugs (59.5%); drug information (29.9%); what to do with missed dose and/or extra dose taken (86.7%) and awareness of effect of food and cosmetics on their disease and medication (67.6%).

Key Words: Pharmacist, dermatology, drugs.

INTRODUCTION

Skin diseases are prevalent in the third world countries like Tanzania with low socio-economic status. They are encountered and managed mainly in primary health care settings. The diseases can cause a diverse range of skin damage and/or disruption resulting in physical damage, thus breaking the barrier to infectious agents. Depending on the problem, all or only a specific part of the skin may be involved or primarily disease manifestation may be experienced in a particular section of tissue as a consequence of malfunction in another region [1].

Some of the commonly encountered skin problems in Tanzania include fungal infections, bacterial infections, viral infections such as herpes simplex and parasitic infections such as scabies. Others include acne, psoriasis, inflammatory dermatitis, pigmentation problems and wide range of nutritional deficiency dermatoses [2].

In Tanzania, fungal infections, various types of dermatitis, bacterial infections, acne and scabies give more workload to the medical practitioner, dermatologists as well as pharmacists. It is important to point out that many skin diseases are indistinguishable from one another by untrained personnel and only a dermatologist is capable of making a differential diagnosis [3]. Pharmacists have a role in acknowledging the presence of skin disease, encouraging patients to seek help from medical practitioners, seeing that dermatologicals are being used safely and effectively whenever necessary. In Tanzania clinical officers or general medical practitioners attend to most patients, with skin disorders. A significant number of patients opt to obtain dermatologicals from pharmacies without valid prescription. If the condition is clearly recognizable (identifiable) and regarded as minor in intensity, involving minimal body surface area, the pharmacist often recommends some over the counter symptomatic relief. Where infection is present or where

extensive regions of the body are involved, even so called minor problems should be referred to a physician. Referral is also proper if there is a question about the nature or cause of the skin problem [4].

Management of skin diseases need a commitment among health workers and patients understanding the rational and proper use of dermatological medications [5]. However, the success or failure of the therapeutic regimen depends on the patient concerned. Never the less, efforts must be made and time must be spent to ensure that the objective of each aspect of management is understood. Patients need to know whether there are side effects, drug interactions either with food or other drugs, [4,6,7,8,9]. It is the duty of the dermatological team including the pharmacist to bear the responsibility of educating the patients with skin diseases on their own condition, hygiene, drugs used, timing of dose, side effects, and drug interactions. Since the pharmacists play a significant role in skin disease management, it is therefore the objective of this study, to investigate the extent to which patients benefit from information given by pharmacists about their skin diseases, with a view to exploring the possible areas for improvement of that interaction.

METHODOLOGY

Study design

The research design for this study was cross-sectional. All patients with skin disease attending outpatient skin clinic at Muhimbili Medical Center (MMC) from December 1997 to March 1998 were asked to complete a questionnaire. Self-administered questionnaires were given to the patients by the nurse in-charge of the clinic, as they entered the consultation room. A pharmacist was available to assist in completing the forms for those who could not write, or had problem of reading/understanding, but did not intervene unless

asked. Another questionnaire was administered to Doctors, Nurses and Pharmacists to check if patients reporting to them benefited from any advice on skin treatment.

Sample size

A sample size of 350 patient was estimated to attend the skin clinic during the period of study. The estimated size was based on potential intervention rate of between 5-10 %. During the study only 314 patient attended the clinic and filled the questionnaire. This number is about 90% of the expected sample size

Data collection

A questionnaire was used to collect information from the patient. The questionnaire elicited if the patient had knowledge of the pharmacy profession, and consultation of pharmacist, side effects of the drugs, problems of using many drug at one time (drug interaction), source of information on skin problem, awareness of what to do on missed or extra dose taken, and awareness on the effect of food /cosmetics on skin disease. For the questionnaires submitted to the health professionals these elicited information on whether skin disease patients adhered to proper use of their medication, experience side effect from the medication they use; are aware of what to do on missed or extra dose taken (compliance) and any other information concerning complications of the skin disease in the patients.

Statistical analysis

The data were analyzed using the EpiInfo version 6- software [10]. The Chi square test was used in statistical comparisons and significance of findings was assessed at 5% level.

RESULTS

Patients knowledge and consultation of pharmacists

Three hundred and fourteen (314) patients participated in the study, which took place between December 1997 to March 1998. All completed the questionnaires. Out of the 314 patients who completed the questionnaires 173 (55.1%) knew about the pharmacy profession, while 141 (44.9%) were not aware of the existence of the profession. Of the 173 patients who knew about the pharmacy profession, 161 (93%) had consulted pharmacist about their skin diseases whereas 12 (7%) had not consulted a pharmacists at all. Among 161 patients who consulted pharmacists, 140 (87%) reported that they had found the information given to be useful while only 21 (13%) did not know if they had benefited.

Patients' knowledge on side effects

Patients were asked if they were aware of the existence of side effects of the drugs they used against skin diseases. One hundred and three (59.5%) patients who knew and consulted a pharmacist were significantly

aware of the side effects of drugs, while 70 (40.5%) were not aware of possible side effects ($p < 0.001$). Out of those who did not know a pharmacist, 135 (95.7%) were not aware of any side effects of the drugs; while only 6 (4.3%) had some knowledge of existence of side effects from other sources ($p < 0.001$).

Knowledge on drug interaction

The results showed that few patients understood the possibility of drug-drug interactions. Fifty-one (29.5%) patients who knew about pharmacists were aware about the drug interactions while the rest, (70.5%) were not ($p < 0.001$). One hundred and thirty three (94.3%) patients who did not know a pharmacist did not know anything about drug interactions while only 8 (5.7%) knew about drug interactions ($p < 0.001$).

Patients awareness on what to do on missed or extra dose taken

It was also revealed that 150 (86.7%) of patients who knew a pharmacist were aware of what to do on a missed dose and/or extra dose taken for any drug prescribed, while only 23 (13.3%) did not know what to do ($p < 0.001$). For those who did not know pharmacists, 36 (25.5%) knew what to do with missed and / or extra dose depending on the type of drugs being taken, while 105 (74.5%) did not know what to do ($p < 0.001$).

Patients awareness on the effect of food/cosmetics on skin diseases

Majority of the patients (67.6%) who did know a pharmacist were aware of the effects of food and/or cosmetic (perfumed preparations) on their skin diseases, while 126 (89.4%) patients who did not know a pharmacist were not aware of the effects of food and/or cosmetics on their skin diseases ($p < 0.001$).

Source of information

Among the patients interviewed on who was the best source of information on skin diseases, 80.6% cited the medical doctor, 15% mentioned the pharmacist and 4.5% mentioned the nurse. Health personnel (Medical Doctors, Pharmacists and Nurses) who were interviewed felt that most skin disease patients adhered partially to proper use of their medication. Majority of these health personnel admitted that patients using medications prescribed and/or over the counter (OTC) experience side effects. Of the questionnaires distributed to the health personnel, about 99% of them admitted side effects occurred on patients using medications. They also confirmed that patients do not know what to do with missed and/or extra dose taken.

DISCUSSION

This study intended to explore from patients with dermatological problems their knowledge of the pharmacy profession and if they benefited from the advice concerning the skin problem and medications. In

this study, a majority of patients found it useful in talking to pharmacists about their skin disease as they gained knowledge. Failure of some patients to benefit from talking to the pharmacist, may be due to either the patients not understanding the instructions and advice given by the pharmacists on the use of the dispensed drugs, (including among others, side effects, drug interactions and precautions to take) or, failure of some of the pharmacists to spend enough time, advising and educating the patients on the proper usage of the drugs. For example drugs like neomycin and benzyl peroxide when applied on the skin may cause dermatitis [11]. Benzyl peroxide is a bleaching agent in food industry, but in combination with other components if is used cosmetically in the treatment of acne, may cause bleaching of the skin, as a result of side effect. Thus the results imply that there is a need for pharmacists to educate patients on the possibility of occurrence of untoward side effects from drugs they are using and to encourage them to report to their physicians in case of such problems [12].

The results further showed that only few patients understood the possibility of drug-drug interactions when on medication, while majority knew they had to be careful with their diet (avoiding certain foods) and cosmetics but not aware of interaction of these two components with drugs they were taking. Most health personnel interviewed in the skin clinic confirmed these findings. This observation calls for combined efforts in educating patients with dermatological problems attending the skin clinic.

With regard to giving drug information to the patients, it was really surprising to note that nurses scored poorer than pharmacists considering that they generally see the patients on a twice-weekly basis to give information either on the condition or on the treatment. Doctors were rated higher (2.5 times) compared to pharmacists on this question. This should be a matter of concern for the pharmacy profession, considering that most patients come into contact with a pharmacist at the end. When patients visit a hospital and community pharmacies to collect their prescription drugs, it is an opportunity to interact with the pharmacist. In a similar study conducted on diabetic patients, no patient mentioned the pharmacist as being the person who gave them information on their condition and/or treatment [13].

Of the questionnaires distributed to the health staff about 99% of them admitted that side effects occurred on patients using medications prescribed and/or obtained Over the Counter (OTC) for skin disease management. The health personnel, who filled the questionnaires, confirmed that patients needed to be educated on missed and/or extra dose taken and also on the effect of food and/or cosmetics on the medication they were taking. They stressed that there was a need for an initial interview to evaluate the knowledge of the patient regarding their drug therapy, followed by a counseling session based around that knowledge. They called for the combined efforts of all health care personnel.

CONCLUSION

This study showed that some patients with dermatological problems reported that they had never spoken to a pharmacist about their treatment. It also revealed that 87% patients found it useful to talk to a pharmacist about their medication. The types of information they found to be useful include drug interaction effect of food and/or cosmetics on drugs they were taking, missed or extra dose taken and untoward side effects. The little information given to patients by pharmacists should be a concern to the pharmacy profession considering that almost every patient has to come into contact with a pharmacist at the end.

Health personnel (Medical Doctors, Pharmacists and Nurses) who were interviewed felt that most skin disease patients adhered partially to proper use of their medication. Majority of the health personnel admitted that patients using medications prescribed and/or OTC experience side effects. In Tanzania, there is a Drug Information Center within the Ministry of Health, aimed at educating the mass on the outcome of medication consumption. Although the center is trying to disseminate drug information to the mass, the results of this study indicate that there is a need for the center to find ways of improving its services for better outcome. Therefore it is recommended that the drug information center be more active to deliver the information required to the health personnel as well as the community.

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