

## Self-medication In Ocular Conditions In Dar es Salaam, Tanzania

P.G.R. ANTHONY<sup>1</sup>, M. JUSTIN-TEMU<sup>1\*</sup>, D. MASESA<sup>2</sup>, A.Y. MASSELE<sup>3</sup>

<sup>1</sup>*Department of Pharmaceutics, Faculty of Pharmacy, Muhimbili University College of Health Sciences*

<sup>2</sup>*Department of Ophthalmology, Faculty of Medicine, Muhimbili University College of Health Sciences*

<sup>3</sup>*Department of Pharmacology, Faculty of Medicine, Muhimbili University College of Health Sciences*

A hospital based prospective study was conducted in Dar es Salaam, Tanzania, using a questionnaire to assess the extent of self-medication, types of drugs used, their source, and the outcome of the practice. It was found that out of the 323 patients interviewed, 51% of them had practised self-medication. Forty nine percent (49%), were males and 51% females. Twenty seven percent (27%) of those who self-medicated could not ascertain the type of medication they used. The most commonly used drugs were antibiotics (49%), followed by steroid containing preparations (12.6%), traditional medicines (4.8%), home made remedies such as salt, water and milk (2.4%), and mydriatics/cycloplegics (1.2%). Most of the drugs were obtained from community pharmacies (30.1%). Although no patient suffered sight loss due to self-medication, the practise was judged to be of benefit to only 17% of the patients. The trial of self-medication was judged to be of no significant effect to the presenting condition for about 47% of the patients, while 36% were judged to have put their sight at risk. 78% of those who self-medicated were judged to have used inappropriate drugs.

**Key words:** Self-medication, ocular disease.

### INTRODUCTION

Self-medication, as an aspect of drug use, may present an avenue for irrational drug use whereby inappropriate drugs are used, or drugs are used improperly. Most of those who practise self-medication are not properly informed on the effective use of the drugs.

In many developing countries there are problems facing the majority of the population as regards the accessibility to health facilities and the ability to meet hospital charges. Studies done in the developing countries have shown that the rate of self-medication is as high as 80% [1,2]. In Tanzania, similar high rates have been reported [3,4]. Although self-medication may present a lower cost alternative, the practise may be potentially dangerous when individuals attempt to self-medicate in major ailments without consulting medical personnel and/or use ethical drugs which may be obtained from pharmacies or other sources such as drug peddlers.

The eye is a delicate organ, and is of significant physiological and psychological importance. There are more than 17 different eye diseases; some of them present with similar symptoms. In view of these facts, and since there is little knowledge available to the general population concerning eye diseases, self-medication in ocular conditions, if practised, should be approached with much caution. This paper reports on the extent of self-medication, drugs used, source, and outcome of such practice for ocular conditions by

patients attending Mnazi Mmoja ophthalmology clinic, Dar es Salaam, Tanzania.

### MATERIALS AND METHODS

#### The setting

The study was undertaken at the Mnazi Mmoja dispensary, in Dar es Salaam Tanzania. The dispensary is centrally located and serves patients from all parts of the city. The city has a population of about 3 million people. It has a high population growth estimated at 8% as compared to the national population growth of 3.5% [5]. The dispensary conducts a casualty ophthalmology clinic daily and a consultant ophthalmologist from Muhimbili Medical Centre, a University teaching hospital, is always in attendance.

#### Study Sample

The study population consisted of patients attending ophthalmology casualty clinic for the first time between December 1995 and March 1996. Selection was done randomly during enrolment. Respondents were asked for consent to participate in the study at two stages. The ophthalmology assistant on enrolment requested the first consent. Before administering the questionnaire, the respondents were again asked for consent by the interviewer. All participants, who consented, were reassured of the confidentiality of the study.

\* Author to whom correspondence may be addressed

### Data collection

A standardised questionnaire was used to collect data. The questionnaire was translated into Swahili and pre-tested for clarity and feasibility before use. The questionnaire consisted of two parts; one part sought information from the patients on age, sex, duration of the presenting condition, and the use and source of the medication while the other part was administered to the ophthalmologist after the respective patient was examined. This was designed to find out the ophthalmologist's opinion on: outcome of self-medication, appropriateness of the medicament used and whether it was properly used.

### RESULTS

A total of 323 patients who attended the clinic between December 1995 and March 1996 were interviewed. Patients were considered to have self-medicated if they agreed to have used medication for the presenting complaint without consulting a general practitioner, medical specialist or ophthalmological assistant. These patients attended the clinic despite prior self-medication

because their ocular conditions persisted. Of the 323 patients interviewed, 166 of them (51%) were judged to have self-medicated, 82 (49%) of whom were males.

Table 1 shows the pharmacological classification of the drugs used for self-medication in ocular conditions. A wide range of drugs was reported to have been used. The most used were the antibiotics followed by steroidal eye preparations. In most of the cases only one type of drug/preparation was used for self-medication. In only 1.8% of the cases a combination of two different drugs or preparations were used. The combinations were tetracycline eye ointment and Gentamycin/Chloramphenical eye drops. Some patients reported use of traditional herbal medicines whose composition could not be ascertained. Non-conventional remedies such as milk and saltwater were also reported to have been used by some of the respondents. Twenty seven percent (27%), of those who self-medicated could not remember and/or did not know the name of the drug they had used. Some of them could only remember the type of formulation they used such as eye drops or ointment.

**Table 1: Classification Of The Drugs Used In Self Medication Based On The Pharmacological Action**

Pharmacological Category	Name and type of formulation	Number of patients	Percentage
ANTIBIOTICS	Tetracycline eye ointment	48	28.9
	Chloramphenical eye drops	18	10
	Chloramphenical eye ointment	9	5.5
	Tetracycline eye ointment and Chloramphenical eye drops	2	1.2
	Gentamycin eye drops and Tetracycline eye ointment	1	0.6
	Gentamycin eye drops	1	0.6
	<b>Subtotal</b>		79
STEROIDAL PREPARATIONS	Soframycin and dexamethasone eye drops	13	7.8
	Dexamethasone eye drops	5	3.0
	Dexamethasone and neomycin eye drops	3	1.8
	<b>Subtotal</b>		21
MYDRIATCS CYCLOPLEGICS	Atropine eye drops	1	0.6
	Pilocarpine eye drops	1	0.6
	<b>Sub total</b>		2

Pharmacological Category	Name and type of formulation	Number of patients	Percentage
OTHERS	Sodium chromoglycate eye drops	2	1.2
	Xylomethazoline eye drops	1	0.6
	Vitamin A capsules	5	3.0
	Salt water	2	1.2
	Milk	2	1.2
	Traditional medicines	2	4.8
	<b>Subtotal</b>		8

Table 2 shows the percentage contribution of different sources of drugs used for self-medication in ocular conditions. The drugs were acquired from various sources such as community pharmacies, friends/relatives and traditional medicine practitioners. Most of the drugs were obtained from community pharmacies (30.1%),

while those previously stored at home as leftovers from unfinished doses were the next major source. Different categories of drugs were obtained from community pharmacies. It is noted that the majority of the prescription only drugs encountered in this study were obtained from pharmacies.

**Table 2. Source of the different drugs used in self-medication in ocular conditions**

Source	Antibiotics	Steroidal preparations	Mydriatic/cycloplegics	Other Drugs
Community Pharmacies	19.9%	7.8%	0%	2.4%
Home	13.9%	2.4%	6%	5.4%
Other Health Facilities	9.6%	2.4%	0.6%	1.2%
Friends/ relatives	4.2%	0.6%	0%	0.6%
Traditional healer	0%	0%	0%	2.4%

Table 3 shows the appropriateness of the drug used for self-medication with respect to the source. The appropriateness of the drugs used in self-medication for the eye disease was determined after consultation with the eye specialist who examined the respective

respondent. According to the specialist, 78% of the respondents were judged to have used inappropriate drugs. Most of those who used an appropriate drug obtained them from community pharmacies.

**Table 3: Appropriateness of the drugs used in self-medication with respect to the source of ocular conditions**

Source	Appropriate		Inappropriate	
	n	(%)	n	(%)
Community Pharmacy	106	(33)	217	(67)
Health Facilities	86	(24)	237	(76)
Home	47	(15)	276	(85)
Friends/relatives	39	(12)	284	(88)
Traditional healers	-	-	323	(100)

In this study no patient suffered sight loss as a result of self-medication. In only 17% of all the patients, self-medication had a beneficial effect in that a painful condition was alleviated. In about half of the patients (47%), the trial of self-medication was judged to be of no significant effect to the presenting condition. In about one third (36%), of the patients self-medication was judged to have put the visual outcome of the disease at risk.

## DISCUSSION

The study shows prevalence of self-medication in patients with ocular conditions. The findings on the extent of self-medication are similar to those observed in the country by other searchers in other disease conditions [3 4]. The high frequency of antibiotic usage in self-medication has also been observed in other studies in developing countries [1,2]. On the other hand, the frequent use of antibiotics observed in this study may reflect the ocular disease pattern in the area of study. Records from the hospital shows that more than 50% of the patients who attended the ophthalmology clinic at the hospital during the study period were suffering from eye diseases caused by bacterial infections. The high frequency of usage of tetracycline eye ointment may be explained by the fact that it is the only drug for eye diseases which has been included in the Essential Drugs Programme (EDP) kits as from the time they were introduced in Tanzania in 1983. It has been widely used by both rural and urban population for eye diseases. It is comparatively cheap and stocked in most of the community pharmacies. Compared to a similar study conducted in the Ophthalmic Casualty Department of the Southampton hospital, in the United Kingdom, it is observed that mostly Over the Counter (OTC) products rather than antibiotics were used by those who attempted self-medication [6].

The use of steroidal eye preparations for self-medication is of great concern as their use may have detrimental

visual outcome. Steroids may lead to the enhancement of herpetic corneal disease and/or precipitate glaucoma. They also delay the healing of fungal infections of the eye in individuals with lowered immunity. Because of the potential problems associated with their use, it is necessary to obtain the advice and supervision of a qualified medical practitioner before using them.

The use of traditional herbal medicine and home-made remedies exposed the patients to a great risk of infection. It is known that contaminated eye preparations, especially if the contaminant is *Pseudomonas aurogenosa*, may cause corneal ulceration, which

eventually leads to blindness. Microbiological analysis of the herbal preparations available in Dar es Salaam revealed that some liquid preparations were contaminated with a wide range of organisms including potentially pathogenic ones like *Pseudomonas* and *Klebsiella* species [7]. The high percentage of improper drugs reported in this study may be explained by the fact that different ocular conditions present with similar symptoms. The individuals initiating self-medication, that is, self, relative, etc. usually lack knowledge and facilities to differentiate similar symptoms for different eye diseases and hence fail to make a proper drug selection. However, in the cases where self-medication was initiated after consulting a pharmacist, there was a lower proportion of inappropriate drug usage compared to when this was done after consulting relatives/friends or others. The pharmacy workers were obviously better placed to offer good advice than the others.

Most of the drugs used for self-medication in this study were obtained from community pharmacies. Two reasons may be advanced for this. One is the belief held by majority of lay people that pharmacists are qualified by training to treat and recommend proper medicines for different disease conditions. The second may be due to the fact that the pharmacies are well placed, patients are familiar with their nearby pharmacies, no consultation fee is charged and the pharmacist is readily available.

These make a visit to a pharmacy a cheaper alternative compared to a hospital visit. Training of pharmacists in ocular conditions so that they are able to screen out serious conditions for referral and manage the minor ailments would help to safeguard the health needs of the community.

Most of the patients whose self-medication was of no consequence to the visual outcome were those who were suffering from mild self limiting conditions such as poor sight due to accommodation problems or viral conjunctivitis. Self-medication was considered to have posed a visual risk to the patients who were suffering from conditions that cannot effectively be treated without medical supervision. Four (4) of these patients were suffering from herpes simplex infection and 24 had a corneal foreign body. Herpes infection requires the initiation of the proper antiviral therapy, while qualified medical personnel should remove the foreign bodies before any medication can be given.

## CONCLUSION

The study has shown that nearly half of the patients suffering from either mild or serious ocular conditions opted for self-medication. Different types of drugs were

used, antibiotics being the most common. In some cases, drugs which on long run could cause a serious threat to the eyesight were encountered.

The majority of those who self-medicated received their medicament and/or advise from community pharmacies. These dispensed prescription only products for self-medication. The outcome of self-medication for the majority of patients was of no consequence to the eyesight, while in few patients it was of benefit in that a painful condition was alleviated. No patient suffered sight loss as a result of self-medication.

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