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Self-Medication during Eye Affections among Consultant Patients at Chu-Iota

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Abstract

Introduction: According to the World Health Organization (WHO), self-medication consists in the fact that an individual resorts to a drug, on his own initiative or that of a loved one, with the aim of treating an ailment or a symptom that he identified himself without having recourse to a health professional. Self-medication involves the use of medicinal products by the consumer to treat self-recognized disorders or symptoms, or the intermittent or continued use of a medication prescribed by a physician for chronic or recurring diseases or symptoms. The aim of this study is to determine the different characteristics of ophthalmic self-medication at the CHU-IOTA. **Patients and Method:** We conducted a prospective study in patients of any age who resorted to ophthalmological self-medication before the first consultation or during the ophthalmological care of consulting patients at the CHU-IOTA between January 1 and July 31, 2021. **Results:** Over the period, 521 cases of ophthalmological self-medication were collected out of a total of 24,512 consultations, which corresponds to a frequency of 2.12%. The average age was 37.7 years, [2 months - 78]. The sex ratio was 0.50. Economic factors were the main factor mentioned, 66.79%. Corticosteroids accounted for 45.26% of the pharmacological class with dexamethasone/neomycin eye drops being the most widely used, *i.e.* 22.94%. The most common complication was corticosteroid-induced ocular hypertension on ametropia, *i.e.* 15.54%. Our patients were 68.13% educated. Among his educated patients 53.35% had no knowledge of the products. **Conclusion:** Given the harm associated with this practice, awareness and information campaigns aimed at the population, caregivers and pharmacists or pharmacy vendors are necessary in order to reduce the frequency of the practice of self-medication.

Keywords

Self-Medication, Conditions, Eye, CHU-IOTA

1. Introduction

According to the World Health Organization (WHO), self-medication consists in the fact that an individual resorts to a drug, on his own initiative or that of a loved one, with the aim of treating an ailment or a symptom that he himself identified without having recourse to a health professional [1]. Several factors can contribute to the growth and spread of self-medication, including economic, cultural, difficult access to health services [2] [3]. Ignorance, misunderstanding of the dangers of self-medication and simplification of their disease are among the factors of ophthalmic self-medication [4] [5]. Obtaining and consuming one or more medications without the advice of the eye care professional can have serious consequences [6] [7]. The prevalence of self-medication has risen sharply around the world. Common practice in developing countries, 80% of drugs purchased without a prescription in the world come from these countries [4] [8]. Globally, it varies from 25.6% to 73.6% [8] [9]. Very few studies have been conducted, hence the interest of this preliminary study at the CHU-IOTA in order to determine the extent of ophthalmological self-medication.

2. Results

Over the period, 521 cases of ophthalmological self-medication were collected out of a total of 24,512 consultations, *i.e.* a frequency of 2.12%. There was a female predominance of 66.41% in the study population; the sex ratio (M/F) 175/346 was 0.50. The 21 - 40 age group was the most represented at 51.24%. The average age was 37.7 years, [2 months - 78]. Nearly half of our patients were in the informal sector, *i.e.* 47.79% and 68.13% were educated (read and understand instructions in French). Economic factors were the main factor mentioned, 66.79% (Table 1). They predominated in both sexes, *i.e.* 48.57% in males and 76.01% in females. These factors were also mentioned most often in the informal and formal sector, *i.e.* 86% and 49.03%. Allergic and bacterial conjunctivitis were the most encountered pathologies during ophthalmological self-medication, *i.e.* 20.53% and 17.85% of cases. Eye drops were the galenic form used at 79.32%. Corticosteroids represented 45.26% of the pharmacological class (Table 2). Dexamethasone/Neomycin eye drops were the most used, *i.e.* 22.94%. Corticosteroid-induced ocular hypertension on ametropia was the most common complication, 15.54% (Table 3). Patients practicing both self-medication and those

Table 1. Distribution of patients according to factors motivating self-medication.

Factors motivating self-medication	Numbers	Percentages
Economic factors	348	66.79
Cultural factors	20	3.83
Difficult access to health service	105	20.15
Others	48	9.23
Total	521	100.00

prescribed by an eye health professional represented 19.57% of cases and 84.06% of patients said they had no knowledge of the products. The majority of the molecules were obtained via the pharmacy, *i.e.* 58.12%. The initiative came most often from the pharmacy in 50.86% of cases and 58.15% of cases said they were not satisfied. Among the patients with no knowledge of the products, 53.35%

Table 2. Distribution of patients according to pharmacological class.

Therapeutic class	Number	Percentage
Antibiotics	165	16.97
Antiallergic	229	23.55
Corticosteroids	440	45.26
NSAIDs	65	6.68
Hypotonizing	8	0.82
Tear substitute	29	2.98
Antiseptics	36	3.74
Total	972	100.00

Table 3. Distribution of patients according to complications encountered following self-medication.

Complications encountered	Number	%
Corticosteroid-induced ocular hypertension + ametropia	23	15.54
Steroid-induced cataract + sequelae of ETCL		14.86
Corticosteroid-induced cataract + allergic conjunctivitis	9	6.08
Corticosteroid-induced HTO + allergic conjunctivitis	50	33.73
Steroid-induced HTO + secondary glaucoma	12	8.10
Steroid-induced cataract + ametropia	30	20.27
Others	2	1.35
Total	148	100.00

Table 4. Distribution of patients according to factors motivating self-medication and profession.

Factors motivating self-medication	Profession					Total	P
	Pupils/Students	Formal sectors	Informal sector	Children	Retired		
Economic factors	40	51	214	17	26	348	$P = 10^{-8}$
Cultural factors	4	1	10	5	0	20	P = 0.037
Difficult access to health services	18	32	20	22	13	105	$P = 10^{-8}$
Others	18	20	5	3	2	48	
Total	80	104	249	47	41	521	

Test statistique: P (<0.05).

were educated. Economic factors were most often mentioned in patients who are in the informal and formal sector, respectively 86% and 49.03% (**Table 4**).

3. Discussion

The frequency of ophthalmological self-medication in our study, 2.12%, is lower than those of Gabriel E *et al.* which was 25.6% of Noopur G. *et al.* which was 18.2% [2]-[10]. This difference can be explained by the large quantity of our sample compared to the studies cited above. Self-medication occurs at any age [11]. And the practice does not depend on gender [12]. The female predominance in our sample could be explained by the fact that we interviewed more women than men during the survey. The majority of our patients, 47.79% of whom were in the informal sector and 19.96% in the formal sector. This could be due to the fact that the majority of subjects in the formal sector having a stable economic level and being most often insured in health insurance tend to take care of their state of health by consulting in the different health structures [13] [14].

Self-medication does not depend on the level of school attendance [15]. According to our results 68.13% of patients were educated. In several jurisdictions economic factors have long been associated with self-medication [4]. Concerning our study, economic factors were the most mentioned, *i.e.* 66.79%, followed by difficult access to health services, *i.e.* 20.15%. Our results are in agreement with the studies carried out in Ghana [5]. But parallel to those of Angeline S *et al.* among whom the availability of drugs in pharmacies (easy accessibility) was the most mentioned, *i.e.* 30.4%; only 11.7% cited economic reasons (high cost of products) [16]. In the study conducted by Thomas B *et al.*, 76.8% of cases mentioned economic factors, in particular the high cost of drugs [8]. Thus our results and those of certain authors indicate that socio-economic status is likely to be involved in this habit of self-medication [2] [4] [16]. The use of ophthalmological drugs without the advice of a professional can lead to serious ophthalmological complications. Thus we found 15.54% of complications all induced by corticosteroid therapy. Eye drops are considered mild or harmless, hence their misuse [11]. Corticosteroids were the most common pharmacological class, *i.e.* 45.26%. The desire for rapid relief is the most likely factor in the strong presence of corticosteroid therapy. And Dexamethasone/Neomycin was the most encountered in our sample, *i.e.* 22.94% followed by Olopatadine *i.e.* 19.75% Framycetin sulphate/Dexamethasone phosphate 7.81% indomethacin 6.68% gentamycin *i.e.* 6.06%. Pharmacists and their assistants play an important role in promoting self-medication all over the world [5]-[10]. In our sample, the initiative came from the pharmacy at 50.86%, relatives at 32.82% and the patient himself at 16.32%. by pharmacists decreases the practice of self-medication [5]. The majority of the molecule was obtained via the pharmacy at 58.12% and by the family at 19.3% and 19.57% used both prescribed drugs by an eye health professional and those recommended by pharmacists. More than half of the patients, 84.06%, had no knowledge of the products before self-medication and 58.15% declared that they were not satisfied with the practice.

When a person becomes ill, they may want to self-medicate first without seeking professional medical care [11] [17]. The reasons for this practice are varied. There are several contributing factors. Regarding our study, economic factors were the most mentioned, *i.e.* 66.79%, followed by difficult access to health services, *i.e.* 20.15%. Our results are in agreement with studies carried out in Ghana [5]. But parallel to those of Angeline S *et al.* among whom the availability of drugs in pharmacies (easy accessibility) was the most mentioned, *i.e.* 30.4%; only 11.7% cited economic reasons (high cost of products) [15]. For Kara-José the difficulties in obtaining medical care were the major reason for this practice [11]. In several jurisdictions economic factors have long been associated with self-medication [4]. Hence, in the study conducted by Thomas B *et al*, 76.8% of cases mentioned economic factors, in particular the high cost of drugs [8]. A.L. Gramajo *et al.* and S. Kyei *et al.* also mentioned the low economic level as the main factor of this practice [5] [6]. Thus our results and those of certain authors imply that socio-economic status is likely to be involved in this habit of self-medication [2] [4] [16]. For patients with a high socio-economic level, longer waiting times in health establishments, lack of confidence in medical services were the factors mentioned, as in previous studies [2].

4. Conclusion

Self-medication is a common practice in developing countries. Economic factors were the most often mentioned and pharmacies were the main access point for medications for this practice of ocular self-medication. Corticosteroids were the most common for self-medication in conjunctivitis. This poses a real risk on the one hand for the complications related to these drugs and on the other hand, the socio-economic impact generated by this practice.

Limitations of the Study

The limits of our study were the duration of the study, the difficulty of collecting information on the questionnaire due to the absence of a pretext.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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Survey

A. Sociodemographic Data

File number……Patient code ……

1-Age:……ans

2-Sex: ……. (1) F (2) M

3-Origin:…… (1) Bamako (2) Region (3) Outside Mali

4-Marital status: …….. (1) Married (2) Widowed
(3) Divorced(e) (4) Single

5-Level of school attendance: …… (1) primary, uneducated
(2) secondary; (3) superior.

6-Profession:…… (1) Pupil-Student (2) formal sector (3) informal sector

B. Interrogation

7-Previous treatment: …….. Yes

8-Self-medication: ……..Yes

9-Type of medicine used:…… (1) Eye drops (2) ointments
(3) gels (4) tablets

10-Name of molecule(s) used:……

11-Therapeutic class:……

(1) antibiotics, (2) antiallergics, (3) corticosteroids,
(4) nonsteroidal anti-inflammatory drugs (NSAIDs),
(5) vasoconstrictors, (6) saline solution (7) other substances…… ….

12-Knowledge of the product(s):……..

13-Circumstances in which the product was obtained:……

(1) Pharmacy (2) A friend (3) Neighbor
(4) Family (5) Prescription abuse (6) other…….

14-Clinical signs before self-medication:……

15-Clinical signs during self-medication:…….

16-The results obtained:…….

(1) satisfaction (2) lack of result
(3) worsening of symptoms (4) other……..

17-Diagnosis retained:……

C. Factors Motivating Self-Medication

18-Economic factors:…….

19-Cultural factors:……. …….

20-Access to health services:……..

21-Others:……