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Self-Medication with Ophthalmic Drugs in Pharmacies in Togo



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ABSTRACT

Aim: To describe characteristics of the delivery of ophthalmic drugs in self-medication in pharmacies in Togo.

Patients and methods: We conducted a descriptive cross-sectional survey from August 1, 2021 to December 31, 2021 among people coming to a pharmacy for a request for ophthalmic medication without a medical prescription. The parameters studied were age, sex, self-medication habit, reasons for self-medication, therapeutic classes. **Results:** During the period, 903 respondents were included, of whom 57.1% were patients and 42.9% were referrals. The mean age was 33.05 ± 12.7 years with a sex ratio of 1.31 (512 M/391F). Self-medication was practiced for the first time by 24.5% of the respondents. The reasons for self-medication were requests for advice from a pharmacist (28.1%) and refills of old prescriptions (40.6%). In 82.2% of cases, the respondents were unaware of the dangers of self-medication. Eye drops were the most widely dispensed with 94.10% and ointments in 5.90% of cases. The therapeutic classes of ophthalmic products dispensed were dominated by antibiotics with 28.9% and antiglaucoma drugs with 22.04%. Gentamycin was the most delivered molecule in 60.3% in the antibiotic class, followed by timolol in 49.2% in the antiglaucoma class. **Conclusion:** To solve the real problem that arises from the results of this study such as antibacterial resistance, therapeutic failures, complications related to self-medication drugs and also the socioeconomic impact generated by this practice, a better awareness on the dangers of self-medication must be initiated among the population.



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INTRODUCTION

Self-medication is the act or process of medicating oneself especially without the advice of a physician. It has become a widespread phenomenon worldwide, accounting for about 5-10% of drug sales [1]. Several factors can contribute to the growth and spread of this habit, including economic, cultural and political factors [2]. In Togo, according to a study carried out in 2018, the prevalence rate of self-medication is estimated at 80.28% [3]. A Libreville according to self-medication is the first mode of recourse to care within the population [4]. Self-medication with ophthalmic drugs is nowadays a phenomenon that invades our populations. Self-medication with ophthalmic drugs is a real major public health issue that requires special attention. On a global scale, the prevalence of ophthalmic self-medication varies from 25.6% to 73.6% [5]. Several studies have been conducted on self-medication by certain types of drugs such as drugs intended for the oral, dermal, rectal routes, but few studies concern self-medication with ophthalmic drugs. The purpose of this study is to study the characteristics of self-medication by ophthalmic drugs in pharmacies in Togo.

MATERIAL AND METHODS

We conducted a cross-sectional survey in the 06 health regions of Togo, over the period from August 1st to December 31, 2021, a period of 05 months. Spread over the entire territory, 50 pharmacies were chosen at random. Included in our study were any person presenting to one of the pharmacies selected for the purchase of self-medicating ophthalmic drugs for themselves or for one of their relatives. All survey participants gave their informed consent.

The parameters studied were: age, sex, education, self-medication habit, reason for purchase, symptoms motivating self-medication, knowledge of the dangers of self-medication, therapeutic class and molecule served.

Data collection tool: We collected the data on a pre-established tested and validated survey form.

Data analysis: We performed statistical analysis using EpiInfo7.2 software. Chi 2 and Fisher tested the comparison of proportions.

This study was carried out in accordance with the principles of ethics and professional conduct and in accordance with the Declaration of Helsinki.

RESULT

During our study period, we included a total of 903 respondents in 47 pharmacies. Respondents were patients in 516 cases (57.1%) and relatives in 387 cases (42.9%). The average age of respondents was 33.05 ± 12.7 years with extremes of 10 and 84 years. The age group of [20-30] years was the most represented (Figure 1). There is a male predominance with a sex ratio of 1.31 (512 M/391F). High school education was found in 381 cases (43.1%). Of the 903 respondents, 415 (46%) rarely practiced self-medication. The reason for self-medication was the renewal of an old prescription in 367 cases (40.6%). The support for the purchase was a verbal request in 311 cases (34.4%) (Table 1). The most reported symptoms were pain with 96 cases (24.6%) and redness with 114 cases (23.9%). The dangers of self-medication were known by 161 respondents (17.8%). Eye drops were the most delivered in 850 cases (94.10%) and ointments in 53 cases (5.90%). The therapeutic classes most delivered were antibiotics with 259 cases (28.9%) and antiglaucomatous with 199 cases (22%) and steroids with 146 cases (16.2%). In the class of antibiotic, gentamycin was the most self-medicated in 156 cases (60.3%). Timolol was the most purchased molecule in the antiglaucomatous family in 98 cases (49.2%) (Table 2). According to self-medication habits, respondents who bought ophthalmic drugs for the first time bought antibiotics more, and those who often self-medicated bought more antiglaucomatous with a statistically significant difference ($p=0$).

DISCUSSION

In our study, 29.5% of respondents often practiced self-medication. Marquez et al. [2] and Gupta N et al. [6] found that 25.6% and 18.2% respectively often practiced self-medication. Kyei et al. [7] found a prevalence of 25.2%. These results show that the prevalence of self-medication varies from one country to another. The support of purchase were verbal requests in at 34.4%. Hounsa et al. [8] had found 27.8% of verbal requests. The risk in verbal requests is confusion between drugs names and in dosage forms. The reason for self-medication was the renewal of an old prescription in 367 cases (40.6%). For Carvalho et al. [9] difficulties in accessing health facilities were the most reported reasons, and according to Kyei et al. [10] as well as Gramajo et al. [11] the low economic level was the main reason of self-medication. For patients with a high socio-economic level the longer wait time in health facilities, lack of confidence in medical services were the factors incriminated [12]. The most reported symptoms were pain with 96 cases (24.6%) and redness with 114 cases (23.9%). Shallam A

et al. [13] had reported redness and itching in 51.8% and 20.7%, respectively. This is consistent because redness, pain and itching are the main ocular symptoms in consultation. The use of ophthalmic drugs without professional advice can lead to serious ophthalmological complications, in our study only 17.8% of respondents were aware of the dangers of self-medication. These results are similar to those of Hounsa et al. [8] who found that only 21.7% of their respondents knew about the dangers of self-medication. Eye drops were the most dispensed dosage form in 94.1% of cases. This regular use of eye drops could be explained by the fact that eye drops are considered mild or harmless by pharmacists and the majority of the population [2]. Antibiotics were the most dispensed therapeutic class with 28.9% followed by antiglaucomatous with 22% and steroids with 16.2%. According to Ajayi et al. [14] antibiotics were the most represented with 38.4% followed by antihistamines with 11.3% and corticosteroids with 7.2%. Our results raise the issue of adverse effects of self-medication ophthalmic drugs. The self-medication of antibiotics can facilitate the emergence of resistant bacterial strains. For antiglaucomatous drugs, the insidious worsening of the disease related to the absence of ophthalmologic visits. For steroids the most serious consequences are the aggravation of keratitis that can lead to blindness, and complications such as ocular hypertonia and steroid-induced cataracts.

As part of a request for advice from a pharmacist, the latter must have a perfect knowledge of the drugs he dispenses in the context of self-medication. Our results and those of previously cited studies state that pharmacists and their assistants play an important role in controlling self-medication worldwide [2,6]. It has also been noted that the referral of patients by pharmacists reduces the practice of self-medication [13]. For Rajani et al. [15], 47.1% of cases received in pharmacies were sent by the pharmacist to an ophthalmologist and this was the reason for its low prevalence.

CONCLUSION

To solve the actual problem of self-medication drugs such as antibacterial resistance, therapeutic failures, and socio-economic impact, better awareness of the dangers of self-medication must be initiated among populations.

CONFLICT OF INTEREST: the authors do not declare any conflict of interest in relation to this manuscript.

AUTHORS' CONTRIBUTION: All authors contributed equally to the study design, conduct, statistical analysis, writing the article, and validating its final version.

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Tables and figure legend

Table1: Features of self-medication

	Frequency	Percentage
Education (N=903)		
Illiterate	69	7.6%
Primary school	113	12.5%
High school	389	43.1%
College	332	36.8%
Self-medication behavior(N=903)		
First time	222	24.6%
Rarely	415	46.0%
Often	266	29.5%
Reason of self-medication (N=903)		
Renewal of old prescription	367	40.6%
Request for advice from a pharmacist	254	28.1%
Advice from a relative	123	13.6%
Recurrence of previously treated symptoms	122	13.5%
Others	37	4.1%
Support of purchase (N=903)		
Verbal request	311	34.4%
Request pharmacist's advice	249	27.6%
Product packaging	240	26.6%
Paper	74	8.2%
Others	29	3.2%
Ocular symptoms (N=390)		
Pain	96	24.6%
Redness	114	29.3%
Itching	46	11.8%
Pimple on eyelid	4	1.0%
Watering	4	1.0%
Discharge	46	11.8%
Eyelid inflammation	32	8.2%
Foreign body	44	11.3%
Blurred vision	4	1.0%

Table 2: Therapeutic classes and main molecules delivered.

	Frequency	Percentage
Therapeutic classes (N=903)		
Antibiotics	259	28.7%
Antiglaucoma	199	22.0%
Steroid	146	16.2%
Antiseptic	90	10.0%
Non-steroid anti-inflammatory	76	8.4%
Antihistamines	59	6.5%
Vasoconstrictors	33	3.7%
Miscellaneous	24	2.7%
Tear substitutes	14	1.6%
Corneal healing	2	0.2%
Homeopathic	1	0.1%
Antibiotics(N=259)		
Gentamycin	156	60.2%
Rifamycin	43	16.6%
Norfloxacin	26	10.0%
Fusidic Acid	16	6.2%
Tobramycin	9	3.5%
Moxifloxacin	4	1.5%
Chloretracycline	4	1.5%
Gatifloxacin	1	0.4%
Antiglaucoma (N=199)		
Timolol	98	49.20%
Latanoprost	60	30.20%
Dorzolamide	17	8.50%
Carteolol	13	6.50%
Travoprost	5	2.50%
Brimonidine	2	0.50%
Pilocarpine	2	1.00%
Betaxolol	1	0.50%
Bimatoprost	1	0.50%

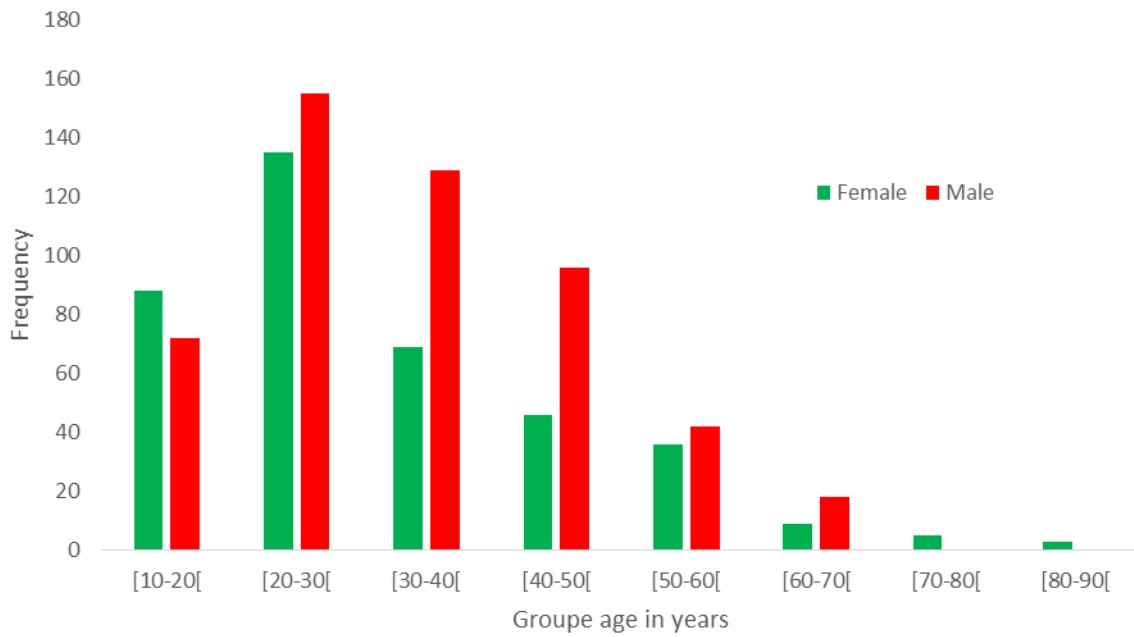


Figure 1: Responders repartition according to group age and sex

