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Original Article

Self-Medication Practice And Associated Factor Drug Study

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ABSTRACT

Aims: To determine the effect of self-medication ophthalmic drugs on patient's eye health. Settings and Design:This is a Prospective, hospital-basedcross-sectionalstudy. Patients who visited the Chaudhari Netralaya Retina and LaserCentre Eye Hospital for a general eye examination with ocular complaints after taking self-medication during the period from July 2023 to June 2024. Methods and Material: This study was conducted as a prospective observational study,where patients who visited the hospital for an eye examination were interviewed with several questions. Among 783 patients, 177 took self-medication ophthalmic drugs before seeing the ophthalmologist for an eye examination. Statistical Analysis: The statistical analysis was performed using SPSS software version 19.0. The results were presented in tables as frequency and percentages. Suitable statistical tests of significance were used to determine the results, and a p-value of less than 0.05 is considered significant. Results: The average age of participants was 42.14 ±19.94 years. The study examined various eye-related symptoms, with "Others" being the most common category (39.55%), followed by "Itching" (11.30%) and "Redness" (9.04%). Most individuals (84.75%) reported prior use of medication, primarily obtained from pharmacists (40.11%) or self-medication (22.03%). Subsequently, after comprehensive ophthalmic examination and treatment, all patients reported changes in prescribed medication according to the different durations. Conclusions: The study emphasizes the importance of professional medical advice as compared to self-medication drug for eye conditions.

Key Messages: Taking self-medication ophthalmic eye drops is themost common practice in adult patients. As an eyecare practitioner awareness should be needed to avoid taking steroid based self-medication due to its side effects.

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Introduction

WHO defines "self-medication as " the use of medicinal products by the consumer to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of medication prescribed by a physician for chronic or recurrent diseases or symptoms" without consultation with healthcare professionals.[1,2] In the previous study by Khalaileh et al, Patients commonly attempt to treat conditions that require ophthalmologic care by self-medicating with over-the-counter eye drops. Educational efforts to inform patients of the consequences of self-medication are necessary.[3]

'Over-the-counter' (OTC) drugs are those that are legally permitted to be sold by a pharmacist without the prescription of a Registered Medical Practitioner. In the Indian context, the phrase 'over the counter' and the abbreviation OTC are not commonly used, and the medicines are referred to as non-prescription drugs.[4]

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As long as there is no substantial restriction by decision-makers over pharmacies dispensing ophthalmic drops without a prescription, misuse will still be a public threat. To our knowledge, public awareness of the complications of ophthalmic drugs and the pattern of misuse has not been studied in our region. In the present study, we investigated patterns of obtaining unprescribed ocular medications among the people of Mumbai.

Subjects and Methods:

The cross-sectional study targeting the population aged 18 and above who had used topical eye drops over the counter, self-medication-based practice, and associated factorsamong adult patients attending ophthalmology clinics at Chaudhari Netralay Retina and Laser Centre, Nallasopara, Mumbai.

The study was approved by Researchthe Ethics Committee (ITMIHSCON/260325/3195) of ITM Institute of Health Science in Mumbai was conducted under the tenets of the Declaration of Helsinki for research involving human participants and in line with current legislation on clinical research. All participants completed a consent form for participation before the start of the study, after a verbal explanation about the study.

A total of 177 participants were recruited. The data were collected throughinterviews and an online questionnaire distributed among patients attending ophthalmology clinics between November 2023 to December 2024. In this study, we have included the patients who have ocular complaints and symptoms that do not improve even after the installation of self-medication.

We have excluded the patients who have not taken any self-medication. The questionnaire consists of a paragraph explaining the purpose of the study, the benefits of participation, the right to withdraw at any point, and requesting their voluntary participation by answering the questionnaire.

Statistical analysis:

The data were analyzed through the Statistical Package for the Social Sciences version 20 (SPSS Inc., Chicago, IL, USA) for Windows. The results were presented in tables as frequencies and percentages. Suitable statistical tests of significance were used to determine the results, and a p-value of less than 0.05 is considered significant.

Results:

A total number of 177 responses were received 60.45% were female and 39.55% were male with the mean age of 42.83±19.82 years old. We have divided the patients into different age groups, 12.43% of participants who have taken self-medication are children in that 36.36% were male and 72.72% were female. Their parents had used self-medication for various eye problems. 33.33% were young adults, 32.20% were adults, and 22.03% were geriatric population. (Tab.1)

The patients primarily visited the ophthalmologist with various complaints, in that Itching (11.30%), Redness (9.03%), Foreign body sensation (8.47%), Dryness (7.09%), watering (6.21%), eyestrain (5.64%) were seen.

Variable		**Frequency**
Age	0-18	22(12.43)
	18-40	59(33.33)
	41-60	57(32.2)
	more than 60 years	39(22.03)
Gender	Male	70(39.55)
	Female	107(60.45)
Why did the patients visit (primary complaint) to the ophthalmologist?		
Allergy	1	0.564972
Decrease of Vision	3	1.694915
Redness	16	9.039548
Itching	20	11.29944
Pain	8	4.519774
Watering	11	6.214689
Swelling	9	5.084746
Dryness	14	7.909605
FB sensation	15	8.474576
Eyestrain	10	5.649718
Others	70	39.54802

Table 1: Demographic details and primary complaints about visiting the ophthalmologist.

The patients were installed the over-the-counter drugs before visiting to the ophthalmologist and most of the medicine suggested by Pharmacists (40.11%) and taken by self (22.03%), advised by general physician (16.38%), relatives (11.86%) and friends (9.60%) eyedrops such as lubricants (40.11%), Antibiotics (17.51%), Antibiotics with the combination of steroids (14.12%), Steroids (4.52%), Glaucoma medication (1.13%), and antihistamine drug (2.82%). (Tab.2)

Who suggested self-medication?	**Frequency**	**Percentage**
Self	39	22.03
Pharmacist	71	40.11
Friends	17	9.60
Relative	21	11.86
General Physician	29	16.38
What all drugs taken as self-medication by the patients?		
Drug names	**Frequency**	**Percentage**
Antibiotics	31	17.51
Steroids	8	4.52
Antibiotic and steroid combination	25	14.12
Lubricants	71	40.11
Antihistamine	5	2.82
Glaucoma	2	1.13
NSAID	3	1.69
Other	15	8.47
combination of drugs	17	9.60

Table 2: suggestion source and drug names of self-medication.

Patients were suffering from various eye related problems such as dryness (8.47%), swelling (10.73%), eyestrain and photophobia (24.85%), FB sensation (10.73%), Boil on eyelids (6.77%), Redness (1.12%), watering (0.56%), and other eye related complaints (22.03%) and due to that they have decided to take self-medication.

In that, 7.34% of patients felt an improvement in their eye related symptoms, 70.62% of patients felt there was not any improvement in eye related symptoms even after taking self-medication. And 22.03% of patients felt their symptoms got worse as compared to before because of the use of self-mediation.

In addition, most of the patients used the self-medication for 1 week (59.32%) as compared to more than 2 weeks (20.90%). The frequency of using self-medication in a day by the patients, once (84.74%), twice (9.60%), thrice (3.95%) and more than three times (1.69%). Most of the patients prefer using one eyedrop in a day. (Tab.3)

What was the eye problem behind taking self-medication?	Frequency	Percentage
Watering	1	0.564972
Redness	2	1.129944
FB Sensation	19	10.73446
Itching	6	3.389831
Pain	7	3.954802
Discharge	4	2.259887
Dryness	15	8.474576
Swelling	19	10.73446
Excessive mass over eye	9	5.084746
Boils on eyelids	12	6.779661
Eyestrain and Photophobia	44	24.85876
Other	39	22.0339
Is there any improvement in symptoms after taking self-medication?		
Yes	13	7.344633
No	125	70.62147
Worsen than before	39	22.0339
How many days have patients used self-medication?		
1 week	105	59.32203
2 weeks	35	19.77401
More than 2 weeks	37	20.90395
How many times have patients used self-medication in a day?		
Once	150	84.74576
Twice	17	9.60452
Thrice	7	3.954802
More than 3 times	3	1.694915

Table 3: eye problems for taking self-medication, how many days and frequency.

Reason for taking self-medicine	Frequency	Percentage
Economically weaker	49	27.68362
Unable to travel	31	17.51412
Unavailability of Doctors	19	10.73446
Other	78	44.0678
Is there any change in ophthalmologist prescribed medicine as compared to self-medication?		
Yes	142	80.22599
May be	30	16.94915
No	3	1.694915
Don't know	2	1.129944
What is the duration of medicine which is prescribed by ophthalmologist?		
1 week	89	50.28249
2 weeks	41	23.16384
More than 2 weeks	47	26.55367
Will you use self-medicine again?		
No	130	73.44633
May be	38	21.46893
Yes	9	5.084746

Table 4: Reason for taking self-medication, change in ophthalmologist prescribed medicine as compared with self-medication.

There were various reasons for patients using self-medication such as economically weaker (27.68%), unable to travel to meet an ophthalmologist (17.51%), and availability of doctors (10.73%). However, 80.22% of patients found change in drugs which was prescribed by an ophthalmologist as compared to self-medication.

Almost 50.28% of patients' ophthalmologist suggested taking medication only for one week and 73.44% of patients reported they will not be going to use the self-medication again. After getting the medication from the ophthalmologist all the patients were reported they have got an improvement in their eye related symptoms.

Discussion:

As per our knowledge this is the first study regarding self-medication practice in ophthalmology in the region. Although we could not be able to find which drug was taken for what condition as self-medication. We found that a greater number of female young adult individuals were taken self-medication.

In this study we have a 12.43% percentage of population have less than 18 years of age. and we have collected data from their parents or guardian about using self-medication. However, we found that the 41-60 years old age group (32.20%) percentage of the population were more prone to use of self-medication eyedrops. Previous study done by Lipi et. al. in central India they have done questionnaire-based study on practice of ophthalmic self-medication among patients, they have taken the age group of more than 18 years old.

And more than 60 years old geriatric population were more prone to use self-medication. [5] In our study patients are taking self-medication without consulting the ophthalmologist due to eyestrain and photophobia (24.85%), FB sensation and swelling (10.73%), and dryness (8.45%). In another study, patients were taking self-medication for itching of eyes (41%), burning sensation (39%) and watering (38%). [5] another study done by kadri et. al. they found that redness is the most complaint. [6] Tayanithi et. al. also reported the ocular allergy, and itching was the most common symptoms of taking self-medication. [7]

Of study, for taking self-medication most of them getting reference suggested by Pharmacist (40.11%), personal decision (22.03%), general physician (16.38%), and relatives (11.86%). Shallam et. al. in 2017 [8] reported that most of the patients getting availability of drugs from pharmacy, relatives and close friends, because of unable to travel to the practitioners due to busy schedule. Gupta et al. [9] from north India also found that 56.5% of population taking eyedrops from pharmacy. Adimassu et al 10 study was done in Ethiopia, ophthalmic self-medication taken by the advice of Pharmacy house (72.2%) followed by leftover medication (17.40%).

In our study, 40.11% of patients were taking lubricants, 17.51% of participants taking the antibiotics, and 14.12% of patients were taking combination of antibiotics and steroids, and 4.52% of patients were taking steroids. I our study we could not be able to get the data about the side effects of steroid drugs. The patients who had used the steroids came with complaints of pain, itching, redness and blurring of vision in the eyes. Razeghinejad et al.[11] explained the self-mediated steroid-related complication, most common causes are drug induced ocular hypertension and glaucoma.

Another study explained about the use of topical antibiotics without prescription; this imposes a public threat to ocular antibiotic sensitivity it can cause to bacterial microbial keratitis.[12] The study performed at a tertiary hospital in Riyadh, steroid-induced glaucoma represented 5% of secondary glaucoma.[13]

In this study, 27.68% of patients were taking self-medication because of economic weakness, 17.51% were unable to travel to the ophthalmologist for the eye care. Ophthalmic patients who traveled a far distance to get eye health services were more likely to practice self-medication than those who traveled near distance. This might be due to the inaccessibility of the eye-care center around. In addition to this, it might be due to the financial constraint that participants might not afford transportation cost to come to the eye health center and may prefer to buy ophthalmic medicine from a nearby pharmacy.[10]

Conclusion:

This study concludes that there is a low level of knowledge of steroids related complication and patients using high rates of self-medication such as topical steroids and antibiotics eye drops. Optometrists and ophthalmologists should work together and raise awareness through campaigns or social awareness programs about steroid related complications and antimicrobial resistance.

The source of getting ophthalmic self-medication is from friends or family experience of ocular illness, pharmacy, leftover eye medication from home. In addition, the most common reason for using self-medication is due to high cost and unable to travel longer distances. The policymakers and regulatory body better to scale-up health insurance coverage, nearby accessible eye care services help to provide the awareness of healthcare.

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