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A STUDY ON THE PRACTICE OF SELF-ADMINISTRATION OF TOPICAL STEROID EYE-DROPS IN KARIMNAGAR DISTRICT, INDIA

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ABSTRACT

Background: Self administration of various drugs is a relatively common phenomenon in India. While many over-the-counter drugs are safe for self-administration, there are several drugs that can have potentially harmful effects, if used without proper clinical evaluation and diagnosis by a qualified medical professional. Topical steroid eye drops are one such commonly abused medication, either prescribed by quacks or bought over-the-counter. **Methods and Materials**: This was a cross sectional study conducted over a period of three months at CAIMS, Karimnagar, India. Sample size included 300 patients of both sexes, aged between 18 and 60 years who visited hospital for 1st time at Ophthalmology outpatient clinic. Subjects were interviewed, and given to fill a questionnaire composed by the author. The questionnaire consisted of demographic data such as patient's age, gender and level of education and also details concerning the knowledge, attitude and practice on ocular eye drop usage. **Results**: It has been found that out of 300 patients included in our study, 115 patients reported using eye drops without proper consultation, of which 40 patients were using steroid eye drops.As per the study, the most common cause among the symptoms, for which steroid eye drops were used without consulting qualified doctor, is redness and itching of the eyes (65%), followed by pain in the eyes (15%), watering (10%), and trauma in the eyes (5%). Patients got steroid eye drops from medical shops (50%), prescribed by quacks (35%), suggested by relatives (10%). The usage was not was significantly associated with the education levels of the subjects ($p>0.05$). **Conclusion**: Misuse of topical steroid eye drops is rampant in the region of study. Lack of awareness about the contents and side effects of these medications among patients is alarming. This was much higher in rural and illiterate population. This deserves further bigger multi-centric studies to uncover magnitude of the problem on a largerscale. There is also urgent necessity for sensitization about this problem among patients, pharmacists and other health personnel.

INTRODUCTION

Self administration of various drugs is a relatively common phenomenon in India. While many over-the-counter drugs are safe for self-administration, there are several drugs that can have potentially harmful effects, if used without proper clinical evaluation and diagnosis by a qualified medical professional. Topical steroid eye drops are one such commonly abused medication, either prescribed by quacks or bought over-the-counter. In clinical practice of Ophthalmology, topical steroid drops are mainly used to control inflammation post operatively after ocular surgeries, allergic conditions like Vernal Keratoconjunctivitis, uveitis, among other conditions.[1][2] But like systemic steroids, topical steroid eye drops have side effects like raise in intraocular pressure, cataract formation, steroid induced glaucoma among others.[3] Also, it is dangerous to use topical steroids in certain conditions like Fungal keratitis, certain cases of Viral keratitis, etc. In most cases, patients may not even know the composition or ill effects of these drugs. The objective of this study is to evaluate knowledge, attitude and practice of eye drop usage in a semi-urban setup through structured questionnaire.

MATERIALS AND METHODS

This is a prospective, cross sectional study conducted over a period of three months at ChalmedaAnanda Rao Institute of Medical Sciences Hospital (CAIMS), Karimnagar, Telangana.

The sample size was calculated as 300. This was calculated assuming the usage of self-medication as 40% based on study by Kadri et al in Mangalore, at confidence limits of 95%. Sample includedpatients of both sexes, aged between 18 and 60 years who visited hospital for 1st time at Ophthalmology outpatient clinic.

Subjects were interviewed, and given to fill a questionnaire composed by the author. The questionnaire consisted of demographic data such as patient's age, gender and level of education and also details concerning the knowledge, attitude and practice on ocular eye drop usage. All participants were informed about the scope and purpose of the study and told that it was voluntary to participate, without any compensation, and that their medical assistance would not be compromised if they refused or decided to participate in the survey. The types of medication used were classified into the following groups: Antibiotics, steroids, combination of antibiotics and steroids and other drugs not included in the previous classifications.

When the patient used preparations that included two or more drugs, each of these associations was considered separately. When the interviewed subject failed to remember the drug used, first they were shown steroid medication easily available in the area to identify if they used any one of them; however, if they still failed to remember the drug, the answer was included under the category of "failed to remember".

Subjects were divided based on their education into following categories:

1. Illiterate 2. Primary education 3. Secondary education4. Graduation and above.

Based on age, subjects are divided into 2 groups:

1. 18-40, 2. 41-60

RESULTS

From this study, it has been found that out of 300 patients included in our study, 115 patients reported using eye drops without proper consultation. Among these, 40 patients were using steroid eye drops with or without antibiotics or other substances.

As per the study, the most common cause among the symptoms, for which steroid eye drops were used without consulting qualified doctor, was redness and itching of the eyes (65%). Other causes were pain in the eyes (15%), watering from the eyes (10%), and incidences of trauma in the eyes (5%). 5% of patients stated no apparent reason (Figure 1).

In most of the cases, patients got steroid eye drops from medical shops (50%). In some cases, they were prescribed by quacks (35%). Some were suggested by relatives (10%). Others were using drops prescribed for someone else in the house (5%) (Figure 2).

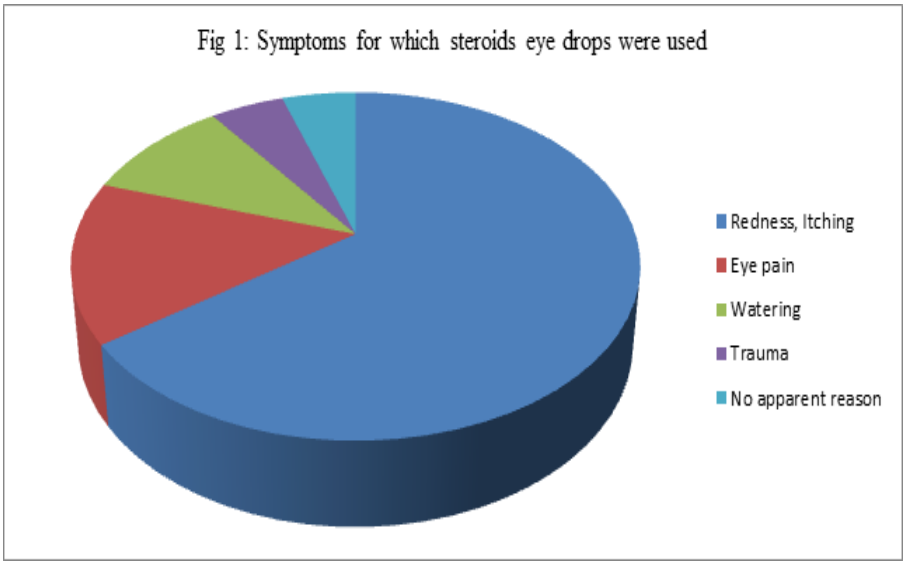
More than 60% of the patients have not symptomatically benefitted from these eye drops. About 10% of patients reported worsening of symptoms after using them. 95% of the patients weren't aware of steroid as content in their medication. 99.5% of the patients weren't aware of their side effects.

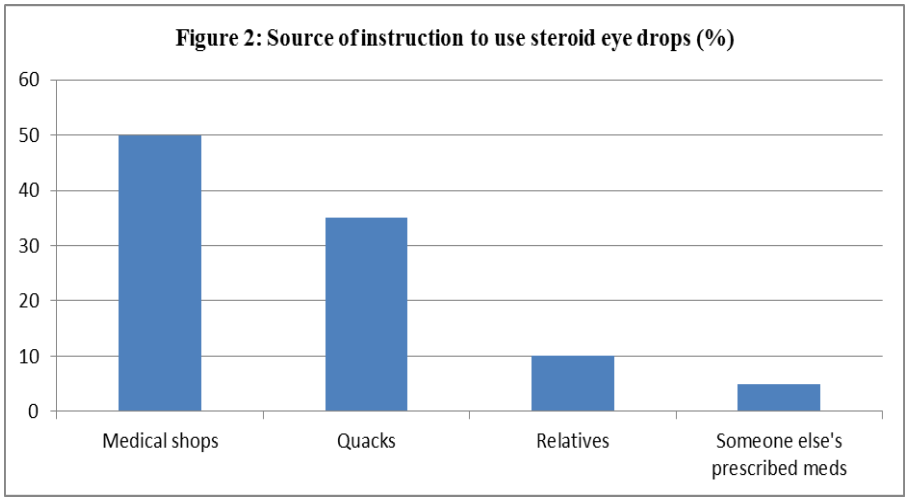
40% of patients who were using steroid eye drops were in 18-40 group whereas 60% were in 41-60 group. Based on education, 30% of them were in Illiterate group, 25% were in primary education group, 35% in secondary education group, and 10% in graduate group (Table 1). There was no significant association of usage of steroid drops with the education status (p-0.12).

This suggests the magnitude of problem, which is lack of awareness about potential complications associated with topical steroid eye drops, especially among patients from lower education group.

Table 1: Grouping of subjects using steroid eye drops without proper prescription, based on education.

	Illiterate	Primary	Secondary	Graduate
No. of subjects	12	10	14	4
Percentage	30%	25%	35%	10%





DISCUSSION

In a study in Mangalore by Kadri et al.,[5] it was found that out of 327 patients included in the study from OPD, 116 (35.47%) used eye drops on their own, without consulting any qualified eye specialist for this purpose. A total of 115 (99.1%) of the patients were not aware about what the eye drops were 59.4% of the patients misusing eye drops who had basic school education, 19.8% were illiterates, and the rest (20.8%) were graduates and above. Improvement in the symptoms was seen in 63.8% of patients (compared to<40% in present study), and 9.5% had worsening of their symptoms(similar to present study). In 86.3% of the patients, easy accessibility was the chief motivation behind this self-medication; other motivating factors were time-saving (12.7%) and reduction in expenses (1%).

In another study from Bangkok by Tayanithi et al.[6], on self-medication with over the counter (OTC) ophthalmic preparations, the most common factor for which such usage was "dust in the eye" (55%). The second most common cause for using such eye drops was itching, irritation, and tears from the eyes.

Blindness from the misuse of the OTC eye drops has also been reported.[9] The said study reported that four patients became blind because of self-use of ocular decongestant in angle closure glaucoma. These drugs may augment existing mydriasis or may precipitate it, if used in excessive amount. It has been inferred that all patients when diagnosed as a case of "narrow-angle glaucoma" should strongly be advised by the treating ophthalmologist that in future throughout his life, the patient should not indulge in any ocular self-medication so as to prevent any unwanted blindness in future.

CONCLUSION

Our study shows that there is a lack of knowledge regarding self- medication with eye drops among the population of Karimnagar. It is also deduced from statistical analysis that the misuse of topical ocular steroids is significant, with redness and itching being the most common reason.The misuse was seen in subjects of all educational levels. It has been found that many people are neither aware of steroid as a content in their medicationnor its potential complications.

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