How “Drug-Aware” Are Glaucoma Patients?

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Introduction

- Despite many advances in management of ophthalmic diseases, ophthalmologists have not been able to find a way that obviates the eye drop usage.
- Multiple clinical trials have shown that with effective medical treatment for glaucoma, vision loss can be prevented. Despite the availability of effective topical (ocular) hypotensive agents, the reality is that many patients do not use these hypotensive drops as prescribed by physicians.
- Data from Pharmacy analysis, self-report techniques and medication monitoring has shown that non-adherence in patients with glaucoma ranges from 5%-90%. The majority of this studies relied largely on patient self-reported adherence or pharmacy claims data. These types of modalities have shortcomings in that they imply actual adherence behaviours and have been shown to be less accurate than the data contributed by electronic monitoring devices.
- Compliance is equally poor in glaucoma patients, and ultimately results in deterioration of the eye’s microvascular health and a risk of blindness. Adherence, persistence and correct administration are three key elements for a successful topical drug therapy for glaucoma patients.
- Specifically patients who are current users of glaucoma medications, therefore patients and family physicians need to be familiar with their stated purpose and their place in glaucoma therapy.
- This study was carried out to evaluate the knowledge, attitude regarding eye drop instillation and self-care practices pertaining to eye drops in diagnosed glaucoma patients.

Methodology

- Study design: Cross-sectional, Quantitative based study.
- Study Site: Glaucoma Service, Ophthalmology Outpatient department, Government Medical College and Hospital, Sector 32, Chandigarh. The patients were mainly residents of Chandigarh, Panchkula, Mohali and some parts of Punjab and Haryana.
- Sample Size: One hundred and consecutive patients of glaucoma, open angle or angle-closure glaucoma, on medication, were examined.
- Inclusion criteria: All the diagnosed glaucoma patients self-administering topical anti-glaucoma medications for at least 6 months.
- Exclusion criteria: Patients refusing consent for the study initiatives who were delirious and were taken care of by a caregiver. Patients suffering from Parkinson’s disease, Alzheimer’s disease and/or mental illness.

Statistical analysis

- IBM SPSS statistical software version 21 was used for statistical analysis.
- Socio demographic variables like age and gender, residence, education, were taken as explanatory parameters.
- Knowledge score, Attitude score, Practice score were taken as outcome parameters.
- Descriptive analysis of explanatory and outcome parameters was done. All the numerical variables were presented in Means and Standard deviations.
- The association between explanatory and outcome parameters was assessed by calculating Mean. Mean, Difference and their 95% C.I and p-value by Independent T- test or ANOVA test. Graphical representation of Analysis also presented in appropriate way.

Results

Knowledge segment of the study:

- 99% of the patients had the knowledge for which the medication was prescribed.
- Nearly 88% stated their eye drops under inappropriate conditions.

Attitude segment of the study:

- 47% of patients thought that missing a dose would not make much difference.
- Nearly 28% patients and their relatives for more than 40 days indicated inappropriate dosing.
- Approximately 30% of the patients believed that if they got relieved of the symptoms they could discontinue the medicine without discussing with the doctor, this finding was detrimental to the status of the disease.

Practice segment of the study:

- 40% of subjects did not wash their hands before using the eye drops and this could facilitate the spread of contamination.
- Nearly 15% did not bother to check the expiry date of the eye drops.
- Frequently, compliance rate 75% did not ask for alternative medication name from their doctor, in case the primary medication was not available. The possibility of a schemer replacing the prescribed drop for a wrong one cannot be ruled out.

Discussion

- This study demonstrates that a broad variation exists in the reported practices, even in the very basic prerequisites of instilling eye drops like washing of hands, checking the expiry date before the usage of eye drops (which has been overlooked by many of the studies available in literature).
- The 2 comparable parameters found in the literature are as below :
  - In our study approximately 56% of the participants claimed to never miss a dose; these results are consistent with Stone et al 9 who in his study observed 61% of the patients who never missed a dose. Not missing a dose is an extremely important step in checking adherence to anti-glaucoma instillations and is related with worsening of the disease.
  - Our study also demonstrates, 78% of the participants reported washing of hands which was similar to the study done by Ann et al 8 who reported that 61.9% subjects routinely washed their hands before instilling eye drops. This was also consistent with a report from Tsai et al 9 of 65% patients following the clean hands practice.

Conclusion

- The observations in our study are notable for importing the basic knowledge about eye drop and its administration technique, by the doctor not only at the first visit but in the subsequent visits in order to stressing the same on follow up visits. Addressing these basic problems would improve compliance, adherence, persistence and efficacy of anti-glaucoma therapy.

References