

Knowledge, Attitude and Practice of Glaucoma Patients towards Anti - Glaucoma Drug Therapy

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Abstract: Knowledge, attitude and practice of glaucoma patients were influenced according to age, gender, duration of glaucoma and regional variance. This study was carried out to understand the influences among the glaucoma patient in the north Indian population towards anti - glaucoma drug therapy. Aims of the study is to assess the knowledge, attitude and practice of glaucoma patient towards anti - glaucoma drug therapy in north Indian population. This prospective cross sectional study was carried out from December 2021 to mid of April 2022, among the glaucoma patients in a glaucoma clinic in Gurgaon. Data were collected using an interviewer with a validated questionnaire and were analysed in excel using chi - square and t - test. Results shows 57 patients were recruited for the study - 32 were males and 25 females. The mean age for the enrolled patient is 50.61+/15.61. Statistically it has been found that rural population has lower knowledge and practice as compared to urban population. Duration of glaucoma proved that higher the duration better is the practice, knowledge and attitude for drug therapy. We can come to conclusion that patients should be made aware about the necessity for glaucoma screening and educate the patients in the rural region for better knowledge and compliance

Keywords: glaucoma, knowledge, attitude, practice

1. Introduction

Glaucoma is a group of ocular disorder involving optic neuropathy characterized by changes in optic nerve head and loss of visual sensitivity and field. Glaucoma is sometimes called as "silent blinder" because many people are unaware that they have the disease and the loss of visual field often occurs over long time and may only be recognized when it is already quite advanced¹

A systematic review of World Health Organisation (WHO) surveys on blindness and low vision in 2002 showed that there are 37 million blind people worldwide, with 12.3% (4.4 million) attributable to glaucoma, second only to cataract (48%). Quigley et al. predicted that 11.1 million people will be blind because of primary glaucoma by 2020. The number of individuals who are blind is a fraction of those suffering from the disease, the authors estimated that the number of people with primary glaucoma's will be 80.5 million by 2020.²

Patients with glaucoma are predisposed to non - compliance because the disease is usually insidious and asymptomatic, the treatment is long - term, and there is a lack of subjective improvement following treatment. Furthermore, many patients with glaucoma are elderly. Their eye - drop administration techniques can be highly variable and unpredictable. Administering topical eye medications involves manipulating the small drug bottle and aiming it into the fornices of the eyes after lifting the head. This requires good hand and eye coordination, which may not be handled well by elderly patients.¹

Proper knowledge and practice for the glaucoma drug regime helps the patient to make a proper following to the treatment. In this study we are focussed to evaluate about the knowledge, the practice and the attitude of the patient towards drug therapy in management of glaucoma.

Objective of the study

- To evaluate the knowledge of glaucoma patient towards topical drug therapy in North India
- To evaluate the attitude of glaucoma patient towards topical drug therapy in North India
- To evaluate the practice of glaucoma patient towards topical drug therapy in North India

2. Methodology

This prospective crosssectional study is to evaluate the knowledge, attitude and practice of glaucoma patient with anti - glaucoma drug therapy within the north Indian population.

Patient were recruited from the glaucoma clinic, Noble eye care at Gurgaon from December 2021 to Mid of April 2022. In this 16 weeks of the crosssectional study individual patient interviews were then conducted using a predesigned validated suitable knowledge, attitude and practice - based questionnaire and answers were collected from the patient. Signed informed consent was collected from all patient before study enrolment. The demographic data of the patients include age, gender, duration of the disease and duration of instillation of eye drops and complete postal address to determine the regional variance.

The queries were designed to assess the knowledge, attitude, compliance, drug usage among the selected glaucoma patient.

Questionnaire

All the 57 patients recruited for the study included patient who were on their follow up visit or the patient who were under anti glaucoma drug therapy for about a month. The study was validated by the institutional ethics committee. The questionnaire was validated first, and a pilot was done to analyse the validation and the results of the study. The questionnaire was mainly used in the English format and the patient having doubt with any questions, the query is cleared

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by the investigator. A total set of fifteen questions, sub – classified into five questions for each group, the knowledge, attitude and practice. The questionnaire is filled up by the patient or the investigator depending on the patient convenience. The answers were noted in the questionnaire and later was filled in the excel sheet with proper coding.

Study participants

All the patients recruited for the study, was again sub classified to gender, age, duration for anti - glaucoma medication, duration for glaucoma diagnosed and the address with proper postal information were recorded to determine the variance of knowledge, attitude and practice of the patients according to age, gender, duration and regional differences.

3. Results

- A total 57 patients were enrolled in the study, from the glaucoma clinic in Gurgaon. There were 25 females (43.85%) and 32 males (56.14%) with mean age was 50.63 +_15.31 years (range: 21 - 80 years). The mean age for the female is 52.70 and the male is 47.42. The male to female ratio is 1.25: 1.
- The enrolled participants were again subclassified according to regional distribution which includes urban and rural. The total patients which were included in the urban were 34 (59.65%) and rural were 23 (40.35%). Out of which the total number for female and male in the urban and rural distribution were shown in Table2

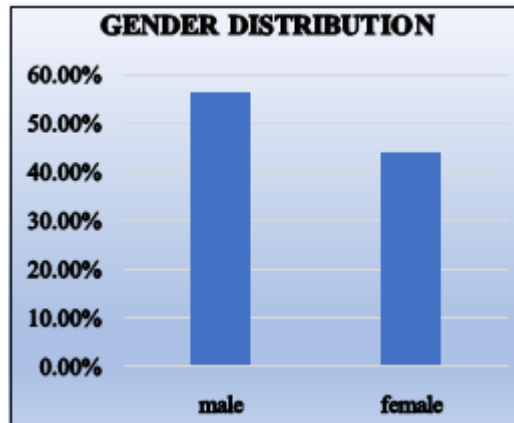


Figure 1

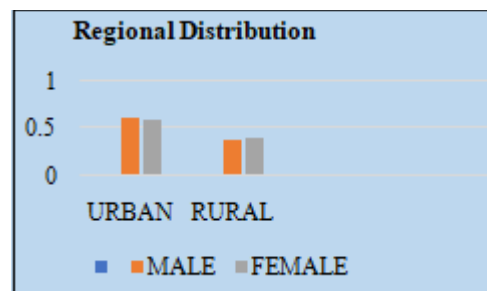


Figure 2

- The enrolled patients had undergone treatment for about a mean of 35.78months ± 30.19. Of which the range is from 1 month – 144months. Depending on the severity of the affect to the eyes most of the patient were given one drug regime along with multi - drug regime for long standing cases.

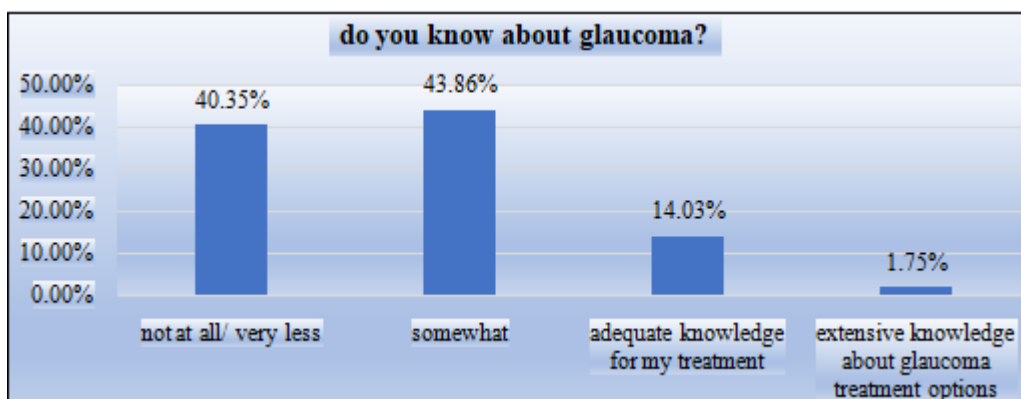


Figure 3

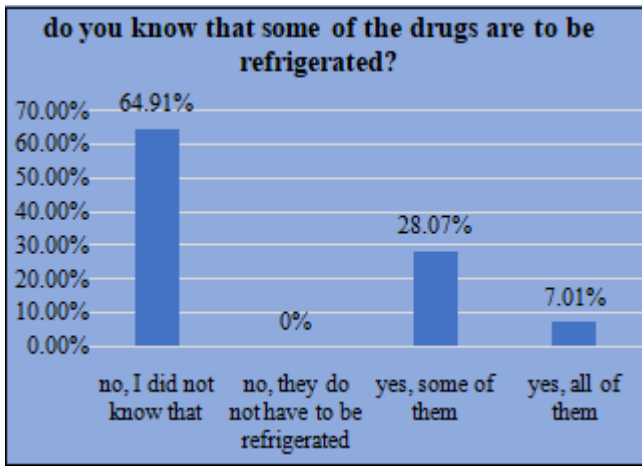


Figure 4

Noting to the overall positive response to the knowledge - based questions it has been found 65.61% and overall negative response is 34.39%. But noting to the response of the patients who had proper positive response to all the 5 questions accounts for about 8.77% and negative response 91.22%. so, it has been found that most of the patients doesn't had proper knowledge about the glaucoma and the proper way of drug storage.

Assessment of Attitude

Attitude based questions are also categorised to five questions and of which question 6 (, question 7, question 8 had given 100% positive response to their response towards the treatment of glaucoma.

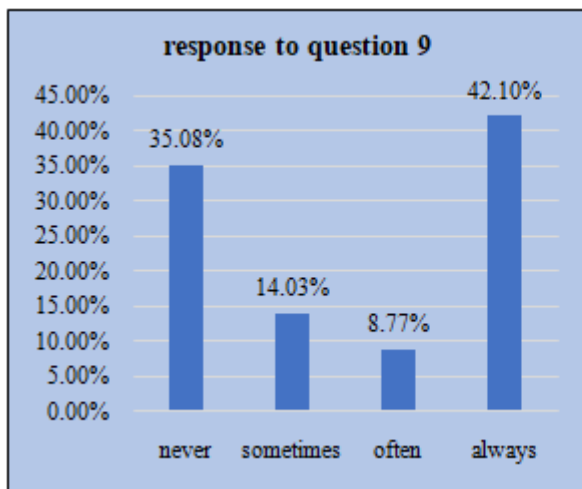


Figure 5

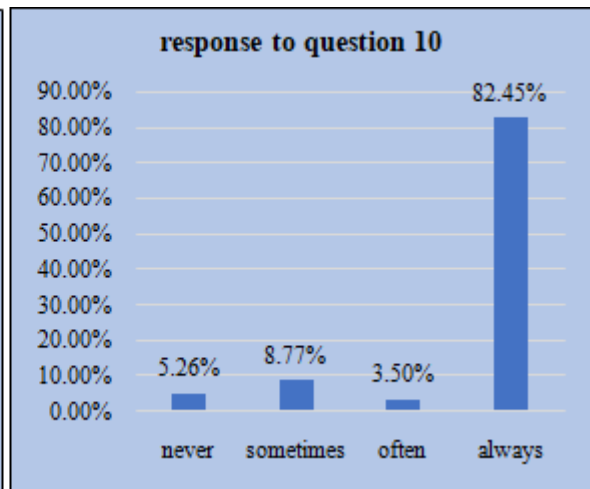


Figure 6

Noting to the overall positive response of attitude - based questions it has been found about 84.91% and negative question is 15.08%.

Assessment of Practice

Practice based questions were also categorised in the similar way to knowledge and attitude - based question. Response to question 12, question 13 and question 15 gave 100% positive response.

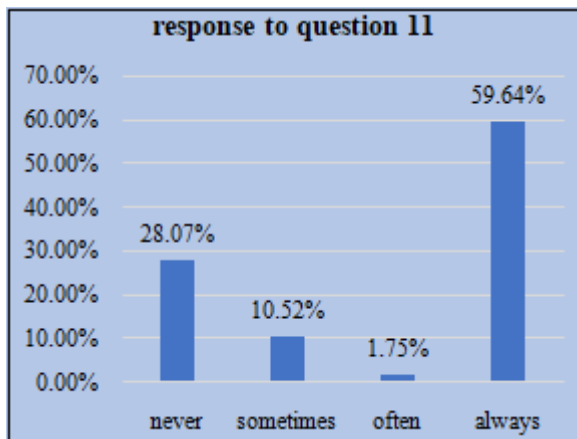


Figure 7

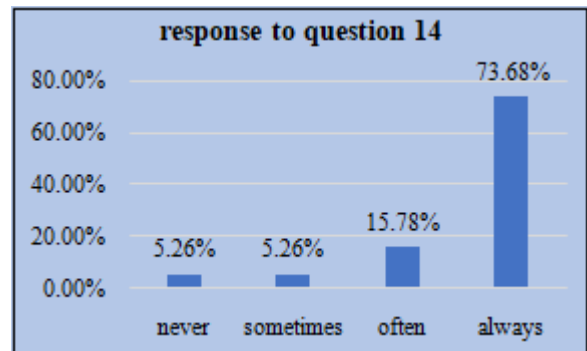


Figure 8

Noting to overall positive response it accounts for about 86.32% and negative response is about 13.68%. The gender variation for positive response to male 35.08% and female is 26.31%. The negative response towards practice among male accounts for about 21.05% and female 17.54%.

Gender variation in knowledge has been found that female with proper knowledge accounts for about 3.50% and with improper knowledge 40.35%. Male with positive response 5.26% and negative response 50.87%.

Gender variation in attitude includes male positive response is 33.33% and female positive response is 14.03% and male

negative response includes 22.80% and female negative response includes 29.82%.

Analysis of the data using t - test to determine impact of age on knowledge ($p= 0.15$), attitude ($p=0.48$) and practice ($p=0.26$) has found to be not statistically significant with age.

Impact of duration of glaucoma on knowledge ($p= 0.000094$), attitude ($p<0.00001$) and practice ($p<0.00001$) and has found to be statistically significant with the duration of the glaucoma

Analysis of the data using chi - square to determine the impact of gender on knowledge ($p= 0.85$), attitude ($p=0.70$) and practice ($p= 0.84$) which is not significant with gender

Regional variance to determine the impact of knowledge ($p= 0.000066$), attitude ($p=0.38$) and practice ($p=0.035$) and has found that there is statistically significant difference for the knowledge and practice of the patients in urban and rural population as the practice and knowledge is better in urban population and there is no statistical significant difference in attitude with the regional variance

4. Discussion

The study examined the knowledge, attitude and practice of glaucoma patients who were undergoing anti glaucoma drug therapy for a period longer than 1 month. It has also investigated the influence by socio - demographic factors on KAP including age, gender and place of stay. Additionally, the association of KAP with treatment duration was evaluated.

The KAP questionnaire was developed to assess the knowledge of patients about their disease (symptoms, cause, prognosis, and complication), attitude towards treatment and actual treatment practices. In view of patients from different socio - economic and educational background, the questions were kept simple, easy to understand and direct. The initial process of validating the questionnaire that the results from the questionnaire were accurate.

Our study has shown in the north Indian population full knowledge about glaucoma was seen in minority of the populations, however correct attitude and practice was followed by 80% of the patients.

The study also matches with another study which has proved that the people belonging to rural area don't have proper knowledge about glaucoma Kim et al⁸ and Hoevenaars et al⁵. In present scenario, it has been found that knowledge and practice of rural population were varied in compared to urban population, as the rural residents were less educated and therefore had less awareness of health and disease specific knowledge. This problem is compounded by the fact that there is lack of access to health care set ups particularly ones where glaucoma may be treated.

This study shows that the majority of the patients have proper attitude towards drug therapy. Attitude has no significant relation with age, gender and regional

difference.^{20, 7, 21}. In fact, however the study found that more males (33%) had a correct attitude towards anti - glaucoma therapy as compared to females (14%). This too could be a result of better education and awareness among the male population. Patients taking anti glaucoma therapy for a longer duration had a better attitude towards therapy and this may be the result of improving awareness of the disease consequences with time.

For the practice domain, it has been found that there is significant difference in the rural group as compared to urban group which is similar to the results of other studies^{6, 19, 20, 21, 22}. But there is no significant of gender and age towards proper practice of anti - glaucoma drug therapy. Duration of anti - glaucoma therapy has an impact on practice and this may be due to the result of improving awareness of the disease consequences with time.

The limitation of our study is that we had confined to a single glaucoma clinic in an urban setting and it has not been done in any community health care or any camp or awareness programme.

5. Conclusion

The current study shows that there is no impact of age and gender with the level of knowledge, proper practice and attitude towards anti - glaucoma therapy. However, it has found that longer the duration of anti - glaucoma drug therapy better is the knowledge, attitude and practice of the patients. The results from our study has found that the rural population lacks in terms of knowledge and practice as compared to urban but has found no significant differences in terms of attitude. By providing the proper instillation and usage of drug therapy or drug storage by the practising practitioners may help the patient to give them a proper practice. The patient must be made aware about the hereditary link of glaucoma and the necessity about yearly eye and health check - up.

From the current study, it has been found that awareness, conducting programmes or showing videos or through playcards it will be a way to guide the rural population about the knowledge for glaucoma. Without proper knowledge the practice of patients towards drug therapy will always be non - compliant. So, there is a greater necessity for creating education programme amongst the general population about glaucoma, to stop creating further silent blindness to the people.

Though there are many eye camps conducted by government for comprehensive eye care, the public awareness of potentially blinding condition like glaucoma remains low. Effective health education may influence individuals to undergo screening for eye diseases. This may lead to early detection of glaucoma and prevention of blindness. Educating the public on the consequences of delayed treatment of glaucoma will be an important factor in promotion of preventive ophthalmic care. It is understood that health education sessions must be conducted in a language which the target individual understands.

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