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Original Research Article

Knowledge, attitude and practice assessment in glaucoma patients at a tertiary eye-care centre in South India: A questionnaire-based study

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ABSTRACT

Aim: To assess knowledge, attitude and practice of glaucoma patients and to analyse the quality of life using GQL-15 questionnaire.

Materials and Methods: 70 patients with glaucoma who attended our tertiary eye care centre from November 2022 to April 2023 were included in the study. The patients were counselled regarding the nature of the disease, anti-glaucoma medications, their dose and frequency of instillation in their first visit. The patients were assessed using KAP and GQL-15 questionnaire in the next visit. Trained optometrists of our hospital administered the questions in the local language.

Results: Out of 70 patients who were enrolled in the study, 52 (74.28%) of patients were found to have adequate knowledge related to nature of the disease, drug, dose, frequency and method of instillation of anti-glaucoma medications and the remaining eighteen (25.71%) were found to have inadequate knowledge. A positive attitude towards usage of eye drops was noticed in 46 (65.71%) of patients and the remaining 24 (34.28%) showed negative attitude. 49 (70%) of patients were found to follow safe practice and remaining 21 (30%) followed negative practice. 45 (64.28%) of patients showed low GQL score based on GQL-15 questionnaire in their second visit, while 25(35.71%) of them showed high HQL score.

Conclusion: This study intends to highlight that awareness and adequate knowledge regarding glaucoma can help patients in adhering to the treatment and may help in reducing the disease and eventually blindness burden due to this sight threatening disease.

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1. Introduction

Glaucoma is one of the leading causes of irreversible blindness globally¹ with 11 million of these patients from India.^{2,3} The asymptomatic nature of the disease and lack of awareness may result in delayed presentation and subsequent blindness in vulnerable population.^{4,5} Many patients present with advanced stages of glaucoma where there is little scope to restore useful vision. Increasing awareness about glaucoma is crucial to ensure

the early diagnosis and management of the disease, which will help in preventing the blindness and may help in reducing the financial burden. Several studies have evaluated the socioeconomic aspect of the glaucoma.^{6,7} The questionnaires related to knowledge and practice patterns, socioeconomic indicators will assist in assessing the risk factors, treatment options and prognosis. Many studies have been conducted to ascertain the prevalent knowledge, attitude and practice patterns among the patients and noted a significant gap. The early diagnosis of glaucoma is primarily determined by the health-seeking behaviour of the population and their knowledge and

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attitude towards the disease. The indicators of Quality of life along with the validated questionnaires have provided valuable information regarding the therapeutic options and compliance to the treatment.^{8,9} Determining the limitations from the patient's perspective can help in formulating strategies and strengthening existing programs to decrease the blindness burden due to glaucoma.

2. Materials and Methods

The study population included 70 known cases of glaucoma who presented to our hospital from November 2022 to April 2023. The study design was approved by the Institutional Review Board and the it was conducted in accordance with the principles of Declaration of Helsinki. A detailed comprehensive ophthalmic examination was performed on every patient. In the next visit they were given a specifically designed Knowledge, Attitude and Practice (KAP) questionnaire. The survey was performed by trained optometrists who had adequate knowledge about questionnaire. The questionnaire was provided in local language and assistance was provided for the needy patients. The questions were designed in three domains, the first being knowledge which comprised of 12 closed (yes or no) questions related to awareness about the glaucoma and the anti -glaucoma drugs (name, frequency of instillation) prescribed to them. The technique of administration and affordability was also questioned. The second domain- attitude included of 7 questions. The third domain- tested their practice patterns and technique of usage of eye-drops with the help of 4 closed questions and 7 descriptive questions. Every question was given a score of 1 if yes and 2 if no. After assessing the response from each patient, the data was expressed in percentage. Knowledge domain was expressed as adequate and inadequate, attitude was expressed as positive and negative and practice was expressed as safe and unsafe according to the data. Informed consent was obtained from every participant before enrolling them into the study. The patient's other ocular comorbidities like mature cataract, diabetic retinopathy or any other retinal pathologies like retinal vein occlusion, macular degeneration, and anterior ischemic optic neuropathy were excluded from the study. The patients were counselled to undergo education and awareness sessions following questionnaire, which emphasized the need for regular follow-up.

3. Results

Our study documented that 52 (74.28%) of patients were found to have adequate knowledge regarding the disease, drug, dose, frequency and proper method of instillation of anti-glaucoma medications and remaining eighteen (25.71%) were found to have inadequate knowledge (Table 1). In the second domain, 46 (75.71%) of patients

were found to have a positive attitude towards usage of eye drops and the remaining 24 (34.28%) showed negative attitude (Table 2). In the third domain safe practice was followed by 49 (70%) of patients and remaining 21 (30%) followed negative practice (Table 3). 45 (64.28%) of patients showed low GQL score based on GQL-15 questionnaire in their second visit, while 25(35.71%) of them showed high HQL score (Table 4).

Table 1: Knowledge, attitude and practice scores- knowledge

S. N	Score	Knowledge	Subjects	Percentage
1	>15	Adequate	52	74.28%
2	<15	Inadequate	18	25.71%

Table 2: Knowledge, attitude and practice scores- attitude

S. No	Score	Attitude	Subjects	Percentage
1	>15	Positive	46	65.71%
2	<15	Negative	24	34.28%

Table 3: Knowledge, attitude and practice scores- practice

S. No	Score	Practice	Subjects	Percentage
1	>15	Safe	49	70%
2	<15	Unsafe	21	30%

Table 4: Glaucoma quality of life score (GQL- 15)

S. No.	Score	GQL	Subjects	Percentage
1	<35	Low QOL	45	64.28%
2	>35	High QOL	25	35.71%

4. Discussion

Adequate health education to improve the knowledge, awareness and practice among the vulnerable population is imperative to prevent the disease burden and complications of the disease. Our study assessed the knowledge, attitude and practice (KAP) patterns related to the disease, eye drops and GQL-15 questionnaire after counselling and general instructions regarding the disease, progression and available treatment options, methods usage of eye drops in local language in their first visit. Various studies have evaluated the efficacy of awareness and dissemination of information in glaucoma patients. A study conducted by Dandona R et al.,¹⁰ assessed the glaucoma awareness in an urban population in Southern India and found out that it was very poor. Another study conducted by Krishnaiah S et al.,¹¹ concluded that 61.1% of the individuals were not aware of the disease glaucoma. This study highlighted the direct relationship between the access to health care services, awareness, and socioeconomic status and literacy.

Many studies have been conducted to evaluate the impact of the disease on patient's quality of life using GQL-15 quality of life questionnaire. A study conducted by Severn P et al. assessed the strengths and weaknesses of several quality questionnaires. The GQL-15 questionnaire is 15 item, 4 domain tool. However, the questionnaire ignores other aspects such as general health, mental health. Another study conducted by Spaeth G⁸ concluded that assessment is significant in treating the patients in the management of glaucoma. This study highlighted the importance of meaningful improvement in awareness, knowledge and practice in the management of glaucoma. Rewri et al¹² validated a better understanding about the disease among the patients with better educational qualifications. Many studies have demonstrated the poor awareness regarding glaucoma in Indian population. Severn P et al¹³ and Schacknow PN et al¹⁴ have conducted a study on QOL assessment and concluded that vision specific and glaucoma specific tools are much better than generic tools in assessing the quality of life of patients who are affected by glaucoma. Many studies have been performed to evaluate the association between the incidence of ocular surface disorders and usage of anti glaucoma medications with preservatives. Skalicky et al¹⁵ evaluated the association between ocular surface disorders and quality of life. They noticed an increased OSDI (ocular surface disease index) in patients with advanced glaucoma. Our study highlights the importance of counselling in managing glaucoma. The smaller sample size, lack of a comparative pre and post KAP questionnaire are limitations of our study.

5. Conclusion

The asymptomatic nature of glaucoma, and the poor knowledge regarding the disease are the most common risk factors in patients with glaucoma. Our study emphasizes the importance of dissemination of information and awareness in improving patient compliance that can help in reducing the financial burden due to the complications of the disease. This may have a significant impact in reducing the burden of blindness globally. A holistic approach is likely to have a significant impact by ensuring better quality of life in patients affected by glaucoma.

6. Source of Funding

Nil.

7. Conflicts of Interest

None.

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