

# A study to assess the knowledge, attitude and practices about glaucoma among glaucoma patients at a peripheral referral centre

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## Abstract

**Background:** glaucoma is prevalent in about 67 million, and 6.6 million individuals are blind in the world due to it. Patient awareness regarding the nature of the disease and importance of adherence to therapy is need of the hour to prevent irreversible damage. This study evaluates the knowledge, attitude and practices about glaucoma among glaucoma patients. **Materials and Methods:** Cross-sectional, hospital-based study was conducted among 150 consecutive glaucoma patients presenting to the out-patient department at peripheral referral centre. The patients filled out a pre-tested proforma which would assess their knowledge, attitude and practices about glaucoma. The demographic and socio-economic details were also studied. **Results:** The study showed that 60% patients were aware of the disease, 20% could describe glaucoma, 70% were aware of the irreversible damage it causes, 26% were aware of the familial history of the disease, 80% understood the need for regular medications, 40% required the need for regular ophthalmologist visits, 66% were using the medications regularly, and 80% were on regular follow up. **Conclusion:** Prevention of Irreversible damage from glaucoma is possible with early detection and patient obedience which is possible by increasing awareness about glaucoma through health education.

**Key Words:** GLUCOMA, BLINDNESS, KAP, EYE DISEASE

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## INTRODUCTION

Glaucoma is the third most important cause of blindness in the world.<sup>1</sup> The global prevalence of glaucoma is about 67 million, and blinds 6.6 million people in the world.<sup>2</sup> The visual damage by glaucoma is irreversible and is preventable only with early detection and patient compliance. Hence increasing patient awareness of the nature of the disease and the adherence to therapy in need of the hour. Studies in the past have assessed the

knowledge, attitude and practices (KAP) about glaucoma amongst patients in OPD<sup>3,4</sup> or among healthcare workers.<sup>5,6</sup> However there exists only one study in India<sup>7</sup> and another in United Kingdom,<sup>8</sup> which has assessed the KAP amongst those diagnosed with glaucoma and on treatment for it. This study was done to assess the KAP about glaucoma amongst patients diagnosed with glaucoma.

## MATERIALS AND METHODS

This is a cross-sectional study was conducted in a peripheral referral centre enrolling 150 glaucoma patients presenting to the out-patient department at Department of Ophthalmology, Navodaya Medical College, Raichur from January 2017 to June 2017. Enrolled patients were diagnosed with glaucoma and were on treatment for it. Informed consent was procured and the patients were asked to fill a pre-tested standard proforma that contained questions by study investigators to assess their KAP about glaucoma. The demographic and socio- economic details were also accounted for. The data collected was statistically analyzed using SPSS version 22.

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## RESULTS

The results are summarized in Tables 1-4

**Table 1:** Socio-demographic data of the participants

| Socio-demographic details | N (%)   |
|---------------------------|---------|
| Age (years)               |         |
| <40                       | 32 (23) |
| 40-60                     | 58 (37) |
| 60-80                     | 60 (40) |
| >80                       | 0       |
| Sex                       |         |
| Male                      | 60 (40) |
| Female                    | 90(60)  |
| Residence                 |         |
| Urban                     | 40 (26) |
| Rural                     | 110(74) |

In our study , nearly 40% of them were between 60-80 years of age and 60% of them were female and 74% were residents of urban area.

**Table 2:** Distribution of participants based on their knowledge about glaucoma

| Study variable                                  | N (%)    |
|---|----------|
| Aware about diagnosis of Glaucoma               |          |
| Yes   | 100 (66) |
| No  | 50 (34)  |
| Aware about description of their disease        |          |
| Yes   | 30 (20)  |
| No  | 120( 80) |
| Aware about the familial nature of glaucoma     |          |
| Yes   | 40(26)   |
| No  | 110(74)  |
| Aware about the irreversible nature of glaucoma |          |
| Yes   | 105(70)  |
| No  | 45(30)   |

Our study revealed that 100 (66%) patients were aware of the disease they were suffering from, i.e., glaucoma, while on the other hand 50 (34%) patients were not aware of the same, in spite of being on anti-glaucoma medications. This shows lack of patient- doctor communication and ignorance on the part of the patients. Only 30 (20%) participants could describe their disease briefly in their own words. Most of the patients relied on Intra-ocular pressure as a measure of glaucoma control and majority were not aware there are other tests which could assess the progression of glaucoma. Majority of the patients i.e. 105 (70%) were aware of the irreversible nature of glaucoma and the need for anti glaucoma medication on long term to prevent the same. However, 30% were not aware of the same. A small number of 40 (26%) patients were aware of the familial nature of the disease, whereas 110(74%) were not aware of the same.

**Table 3:** Distribution of participants based on their attitude towards glaucoma

| Study variable   | N (%)   |
|--|---------|
| Felt the need for regular doses of medications   |         |
| Yes  | 120(80) |
| No   | 30(20)  |
| Felt the need for regular visits to an Ophthalmologist even if the intraocular pressures were controlled |         |
| Yes  | 60 (40) |
| No   | 90(60)  |

About 120 (80%) patients understood the need for regular medications, the grave consequences associated with discontinuing the medications and its association with progression of the disease. Only 60 (40%) patients understood the need for regular Ophthalmologist visits despite good intra ocular pressure control, while 90 (60%) felt it was not important to follow-up if the pressures are controlled.

**Table 4:** Distribution of participants based on their practices towards glaucoma

| Study Variable   | N (%)    |
|--|----------|
| Compliance with usage of anti-glaucoma medications                   |          |
| Yes  | 100 (66) |
| No   | 50(34)   |
| Compliance towards timing of instillation of anti-glaucoma eye drops |          |
| Yes  | 120(80)  |
| No   | 30(20)   |
| Compliance towards regular follow up visits                          |          |
| Yes  | 140(93)  |
| No   | 10(7)    |

Majority i.e. 100 (66%) were using the anti- glaucoma medications regularly and about two-thirds 120 (34%) adhered to regular timings of instillation also. About i.e. 140 (93%) patients were on regular follow up irrespective of their intra-ocular pressures being well controlled. Amongst the 50 (34%) patients who were not compliant to therapy, 38% reported difficulty in remembering the timing of their medications, 37% cited affordability of the medications as a problem, while the rest stated that too many eye drops confused them or that they had no time to take their medications.

## DISCUSSION

Glaucoma is a major cause for irreversible loss of vision.<sup>9</sup> This damage can only be prevented by timely intervention and requires a combined effort by both the doctor and the patient. Strict adherence to therapy and regular follow with ophthalmologist by the patient are of utmost importance. Failure to do so leads to progression of the disease and results in irreversible optic nerve head damage.<sup>10</sup> Hence awareness amongst patients of glaucoma is the need of the hour. This can be achieved by good doctor-patient communication bringing about patient education and awareness of the disease. Our results can be compared with similar study done in North India by Tripathi S *et al*<sup>7</sup> where 73.3% patients were aware that they were suffering from glaucoma and more than half the patients were aware of the irreversible nature of the disease. Only 64 (32%) patients had brought along their family members for glaucoma screening while 136 (68%) did not do so. Our results are comparable to the study in UK by Deokule *et al*,<sup>8</sup> where they reported that 77% participants were compliant to therapy. Tripathi *et al*<sup>7</sup> in their study reported that 58% were non-compliant to therapy; while in a study done in Oman by Khandekar *et al*<sup>11</sup>, 75.2% non-compliance was reported. To improve the compliance, medication reminders by way of text messages can be implemented. We compared the socio-demographic details of the patients with their level of KAP towards glaucoma. Patients living in urban areas, educated groups and the higher socio- economic classes

had better understanding about glaucoma with had a positive attitude towards the disease and had better compliance to therapy and were regular with their follow-ups. The better access to sources of information such as the Internet, books, television etc. could also be a contributing factor to it. Proficient health care facilities and access to health care personnel could also play a role. The sources of information were sought from the study participants to which majority i.e. 60% had learnt about the disease from their treating doctor, followed by 30% from friends and family members who suffered from glaucoma, and the rest through media. Tripathi *et al* found a similar result<sup>7</sup> in their study in North India where the compliance to anti-glaucoma medication was significantly lower among the lower socio- economic strata and the lower educated group. We infer from the results of our study that there is significant benefit in educating the patients regarding glaucoma and the importance of regular therapy and follow up which can be achieved with good doctor-patient interaction. The importance of family screening should be emphasized to every patient and the family members screening must be addressed. Norell in 1979<sup>12</sup>, Rendell in 2000<sup>13</sup> and Okeke in 2009<sup>14</sup> reported that improving knowledge about glaucoma through patient education helped to significantly improve compliance to therapy.

## CONCLUSION

Glaucoma as an important cause of preventable blindness can be prevented only if there is a high level of awareness among the masses. This is can be achieved with health education and integration of all levels of health care. If the glaucoma suspects are detected at the primary health care level, screened and managed well at the secondary level and if complicated cases are referred to the tertiary hospital, this serious condition can be prevented.

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