

# Journal of Advanced Medical and Dental Sciences Research

@Society of Scientific Research and Studies

Journal home page: [www.jamdsr.com](http://www.jamdsr.com)

doi: 10.21276/jamdsr

(e) ISSN Online: 2321-9599; (p) ISSN Print: 2348-6805

SJIF (Impact factor) 2017= 6.261;

Index Copernicus value 2016 = 76.77

## Original Article

### Awareness & Knowledge of Glaucoma in Rural Areas of Eastern Uttar Pradesh

Gursimran Kaur<sup>1</sup>, Alka Gupta<sup>2</sup>

<sup>1</sup>Assistant Professor, <sup>2</sup>Senior Resident, Dept of Ophthalmology, Hind Institute Of Medical Sciences, Safedabad, Barabanki Road, Lucknow, Uttar Pradesh, India

#### ABSTRACT:

**Background:** Glaucoma is a disease characterized by atrophy of the optic nerve and progressive loss of vision. The present study was conducted to assess the knowledge, awareness about glaucoma in study population. **Materials & methods:** The present study was conducted on 550 subjects of both genders. Socio-demographic characteristics, awareness of glaucoma, level of knowledge about glaucoma were recorded. **Results:** out of 568 subjects, males were 382 and females were 176. The difference was non-significant (P=0.1). Age group 20-30 years had 75 males and 35 females, 31-40 years had 80 males and 36 females, 41-50 years had 86 males and 40 females, 51-60 years had 70 males and 28 females and >60 years had 71 males and 37 females. The difference was non-significant (P=0.1). In age group 21-30 years, 15 males and 9 females had awareness, in 31-40 years, 20 males and 7 females had awareness, in 41-50 years, 19 males and 6 females had awareness, in 51-60 years, 12 males and 6 females had awareness, in >60 years, 9 males and 4 females had awareness. In age group 21-30 years, 9 males and 4 females had knowledge, in 31-40 years, 9 males and 3 females had knowledge, in 41-50 years, 6 males and 2 females had knowledge, in 51-60 years, 5 males and 2 females had knowledge, in >60 years, 3 males and 1 female had knowledge. **Conclusion:** Awareness and knowledge among rural people of Eastern UP is very poor. There is need to educate the people regarding signs and symptoms of glaucoma so that early detection and treatment is given to the needy.

**Key words:** Awareness, Glaucoma, Knowledge

Received: 18 January 2018

Revised: 07 February 2018

Accepted: 10 February 2018

**Corresponding author:** Dr. Alka Gupta, Senior Resident, Dept of Ophthalmology, Hind Institute of Medical Sciences, Safedabad, Barabanki Road, Lucknow, Uttar Pradesh, India

**This article may be cited as:** Kaur G, Gupta A. Awareness & Knowledge of Glaucoma in Rural Areas of Eastern Uttar Pradesh. J Adv Med Dent Scie Res 2018;6(3):24-27.

## INTRODUCTION

Glaucoma is a disease characterized by progressive atrophy of the optic nerve and subsequent loss of vision. It is an important public health problem, being the commonest cause of irreversible blindness in the world. The commonest form of this disease- open-angle glaucoma- usually has an insidious onset, which may explain why most glaucoma patients present late. The process of optic nerve damage is usually progressive and asymptomatic. Intraocular pressure is the only modifiable risk factor and other several risk factors have been identified.<sup>1</sup>

Glaucoma is a non-communicable, chronic eye disease which needs the principles of long-term care. The asymptomatic nature along with the irreversible blindness it causes makes glaucoma a public health challenge and the

second cause of avoidable blindness globally. Awareness, knowledge, and beliefs regarding diseases, as well as socio-cultural and religious practices, affect the treatment-seeking

behavior of people and the uptake of services. If glaucoma prevention services and treatment programs are available, an informed public is more likely to take advantage of it before significant functional disability or irreversible vision loss occurs.<sup>2</sup>

Glaucoma blindness imposes significant economic burden not only for individuals affected but also it increases healthcare cost, impairs quality of life, increases rehabilitation cost for the blind which all affects the economic growth of a nation. It also results a huge burden for the healthcare system and government's spending

toward health care. Yet, blindness from glaucoma is preventable if detected early and managed appropriately. Early detection and prompt treatment are only achieved by timely eye examinations.<sup>3</sup> The present study was conducted to assess the knowledge, awareness about glaucoma in study population.

**MATERIALS & METHODS**

The present study was conducted in the Department of Ophthalmology, HIMS, Safedabad. 568 patients of age more than 20 years were examined over a span of six months (July 2017 to December 2017).

All were informed regarding the study and written consent was obtained. Ethical clearance was taken from institutional ethical committee.

Subject’s information such as name, age, gender etc. was recorded. Socio-demographic characteristics, awareness of glaucoma, level of knowledge about glaucoma were recorded. OPD based questionnaire which was marked by personal interview. The questions were asked in vernacular language (Hindi) as translated by ophthalmologist. ‘Awareness’ was counted even if the patient had heard of the disease glaucoma. ‘Knowledge’ was assessed based on questions answered by the subject in the questionnaire.

Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

**RESULTS**

**Table I** Distribution of subjects

Total- 568		
Males	Females	P value
382	176	0.1

Table I shows that out of 568 subjects, males were 382 and females were 176. The difference was non- significant (P- 0.1).

**Table II** Age wise distribution of subjects

Age group	Males	Females	P value
20-30	75	35	0.01
31-40	80	36	
41-50	86	40	
51-60	70	28	
>60	71	37	

Table II shows that age group 20-30 years had 75 males and 35 females, 31-40 years had 80 males and 36 females, 41-50 years had 86 males and 40 females, 51-60 years had 70 males and 28 females and >60 years had 71 males and 37 females. The difference was non- significant (P- 0.1).

**Table III:** Awareness assessment

Age Group	Males		Females	
	Aware	Not aware	Aware	Not aware
21-30	15	60	9	26
31-40	20	60	7	29
41-50	19	67	6	34
51-60	12	58	6	22
>60	9	62	4	33
<b>Total</b>	75	307	32	144

Table III shows that in age group 21-30 years, 15 males and 9 females had awareness, in 31-40 years, 20 males and 7 females had awareness, in 41-50 years, 19 males and 6 females had awareness, in 51-60 years, 12 males and 6 females had awareness, in >60 years, 9 males and 4 females had awareness.

**Table IV:** Knowledge of glaucoma in examined population

Age Group	Males		Females	
	Has knowledge	Has no knowledge	Has knowledge	Has no knowledge
21-30	9	66	4	31
31-40	9	71	3	33
41-50	6	80	2	38
51-60	5	65	2	26
>60	3	68	1	36
<b>Total</b>	32	350	12	164

Table IV shows that in age group 21-30 years, 9 males and 4 females had knowledge, in 31-40 years, 9 males and 3 females had knowledge, in 41-50 years, 6 males and 2 females had knowledge, in 51-60 years, 5 males and 2 females had knowledge, in >60 years, 3 males and 1 female had knowledge.

**Table V** Questionnaire regarding knowledge and awareness

Q. 1	Glaucoma is a blinding eye disease?
Q. 2	Glaucoma occurs without symptoms?
Q. 3	Associated with high eye pressure?
Q. 4	Runs in Family?
Q. 5	Hypertension as risk factor?
Q. 6	Diabetes as risk factor?

Table V shows questionnaire used in study such as glaucoma is a blinding eye disease, glaucoma occurs without symptoms, associated with high eye pressure, runs in family, hypertension as risk factor and diabetes as risk factor.

## DISCUSSION

Open-angle glaucoma is painless and does not have acute attacks, thus the lack of clear symptoms make screening via regular eye check-ups important. The only signs are gradually progressive visual field loss, and optic nerve changes. About 10% of people with closed angles present with acute angle closure characterized by sudden ocular pain, seeing halos around lights, red eye, very high intraocular pressure (>30 mmHg), nausea and vomiting, suddenly decreased vision, and a fixed, mid-dilated pupil. It is also associated with an oval pupil in some cases.<sup>4</sup> The present study was conducted to assess the knowledge, awareness about glaucoma in study population.

In present study, out of 568 subjects, males were 382 and females were 176. This is in agreement with Abeba et al.<sup>5</sup> We found that age group 20-30 years had 75 males and 35 females, 31-40 years had 80 males and 36 females, 41-50 years had 86 males and 40 females, 51-60 years had 70 males and 28 females and >60 years had 71 males and 37 females. This is similar to Micheline et al.<sup>6</sup>

We observed that 307 males and 144 had never heard of glaucoma. Visual impairment due to ophthalmological diseases has a negative impact on physical and mental health and is a global concern. In the USA, visual disability ranks among the top ten disabilities. Visually impaired people are at higher risk than the healthy population for accidents, social withdrawal, and depression. With population aging, the number of people with visual impairment and blindness is rapidly growing, as many eye diseases are more prevalent among the elderly. Cataract, glaucoma, age-related macular degeneration, and diabetic retinopathy are the most common causes of visual impairment.<sup>7</sup>

Of the several causes for glaucoma, ocular hypertension (increased pressure within the eye) is the most important risk factor in most glaucomas, but in some populations, only 50% of people with primary open-angle glaucoma actually have elevated ocular pressure. We observed that 350 males and 164 females had no knowledge of glaucoma.

A study by Ogbanaya et al<sup>8</sup> in their study showed that out of 402 respondents, 228 (56.7%) women and 174 (43.3%) men were interviewed. The mean age of respondents was 31.7 ± 11.9 years; 82.8% of the respondents had secondary

education or less; 53% were married; and 38.1% were farmers. Only 21.1% of the respondents were aware of glaucoma. Gender, education, and positive family history were significantly associated with awareness. Only 6.3% of the respondents had good knowledge about the disease. A large proportion of respondents (62.1%) exhibited a positive attitude towards glaucoma screening; however, only 5% had ever undergone glaucoma screening. Authors concluded that glaucoma awareness and knowledge were poor in this rural community, but a high proportion of respondents had a positive attitude towards glaucoma screening.

Glaucoma is an ocular condition that does not normally cause systemic symptoms, having no strong impact on a patient's perception about general health and categories that examine this. In a Brazilian study, glaucoma patients scored less than controls in all the SF-36 domains, with significant differences in all but three categories (general health, vitality, and role-emotional).<sup>9</sup>

Destaye et al<sup>10</sup> in their study found that seven hundred one adults age 35 and above years were participated with a response rate of 99.3%. The male to female ratio was 1:1.6 with median age of 48 years with interquartile range of 20. The proportion of awareness was 35. Good knowledge was demonstrated in 49.6% of glaucoma aware participants. Education primary, secondary, college and above and having eye examination were positively associated with awareness of glaucoma whereas older age was inversely related. The study has indicated higher level of awareness and knowledge about glaucoma in urban communities than previous studies. It has also identified educational status, eye examination at least once in life are related with better awareness and knowledge. Author suggested that awareness and knowledge should be enhanced through public oriented glaucoma education via mass media and incorporating eye check up as a routine in older people.

## CONCLUSION

Awareness and knowledge in the rural population of Eastern U.P. is very poor. There is need to educate the people regarding signs and symptoms of glaucoma so that early detection and treatment is given to the needy. Overall awareness was found to be 18.14% and knowledge of the disease was just 7.74%.

## REFERENCES

1. Van Gestel A, Webers CA, Beckers HJ. The relationship between visual field loss in glaucoma and health-related quality-of-life. *Eye (London, England)*. 2010; 24:1759–69.
2. Do S, Hans L. Report of the rapid assessment for avoidable blindness in Cambodia. National Program for eye health. 2007.
3. Keziah NM, Nguavese HO, Doosuur M, Dalton NG. The role of the mass media in creating awareness about eye diseases. *J Med Res Pract*. 2014; 3(2):76–80.
4. Abeba TG. Raising public awareness of glaucoma in Ethiopia. *Community Eye Health J*. 2012; 1-5.
5. Michaeline AI, Mustapha BH, Patience OA, Olalekan WA, Esther OA, Alebiosu CC. Awareness of and attitude towards glaucoma among an adult rural population of Osun state, Southwest Nigeria. *Middle East Afr J Ophthalmol* 2014; 21(2):165–9.
6. Chen X, Chen Y, Sun X. Notable role of glaucoma club on patients' knowledge of glaucoma. *Clin Exp Ophthalmol*. 2009; 37:590–4.
7. Kenneth BO, Seth BT, Ankrah LM, Emmanuel AO. Prevalence of glaucoma in an eye clinic in Ghana. *Russ Open Med J*. 2013; 1: 2-8.
8. Ogbanye, Mowatt G, Hernandez R, Siddiqui MA, Cook J, Lourenco T. The clinical effectiveness and cost-effectiveness of screening for open angle glaucoma: a systematic review and economic evaluation. *Health Technol Assess*. 2007; 1–10.
9. Ng WS, Agarwal PK, Sidiki S, McKay L, Townend J, Azuara-Blanco A. The effect of socio-economic deprivation on severity of glaucoma at presentation. *Br J Ophthalmol*. 2010; 94:85–7.
10. Dastaye et al. Combined cataract and trabeculectomy surgery for advanced glaucoma in East Africa; visual and intra-ocular pressure outcomes. *Eye* 2010; 24:573–7.

**Source of support:** Nil

**Conflict of interest:** None declared

This work is licensed under CC BY: ***Creative Commons Attribution 3.0 License.***