

Knowledge, Attitude and Practice Regarding Senile Cataract in Rural Patients Undergoing Cataract Surgery in North India

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Abstract:

Aims and Objectives: A large proportion of cataract patients in rural India are untreated. Evidence indicates lack of awareness and attitudinal barriers being present for this backlog. Hence the present study was designed to assess the knowledge, attitude and practice regarding cataract surgery amongst the rural patients who had attended a surgical eye camp facility.

Methodology: A structured, validated questionnaire was administered to patients diagnosed as cataract from an eye camp at Barsana, India. There were 13 items in the questionnaire assessing their awareness, perception, attitude and practice in regard to undergoing surgery for cataract. Chi-square test for independence was used for statistical analysis. Confidence intervals of the estimates are represented within the square parenthesis.

Results: A total of 294 participants were enrolled. Only 139 {47.3% [41.5, 53.2]} were aware of cataract. A wrong attribution of their diminished vision to various other factors was noted in 130/294 {44.2% [38.5, 50.1]} of the study participants. A significant proportion of females {59% [51.2, 67]} and illiterates {57.3% [50.7, 63.6]} were either unaware or attributed their low vision to wrong factors, than males {46.3% [38.5, 54.3]} and literates {38.2% [28.1, 49.4]} respectively ($P < 0.05$). A large proportion – 124/294 {42.2% [36.5, 48.1]} of the patients had no idea about the treatment of cataract ($P < 0.05$) and illiterates were more significantly unaware – 109/124 {88% [80.6, 92.8]} ($P < 0.05$).

Conclusion: The results of this study indicate that large number of patients in the rural area have poor insight in their eye condition and demonstrate incomplete and/or incorrect perceptions and practice regarding cataract and its treatment. Therefore they need to be sensitized and educated for achieving the goals of many cataract programs in the country.

Keywords: Awareness, Health, KAP, Cataract

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I. Introduction

India carries a significant proportion of world's blindness with nearly 6.7 million blind people in the country. [1] Of these, cataract is the main reason for avoidable blindness in the adult population. Studies conducted in various parts of the country have established that cataract is one of the reasons for pushing individuals to poverty and poor quality of life. [2] Estimates reveal that around 58% of the older population in north and 53% in south India were suffering from non-operated cataract. [3] One of the major reasons for such a high estimate of not undertaking any treatment is poor uptake of the health care facilities especially for people from rural parts of India. [4] Lack of awareness and attitudinal barriers regarding cataract surgery have also been the suggested causes amongst the rural Indian patients. [5] Hence, the present study was designed to assess the current status of awareness, attitude and practice regarding cataract amongst the rural patients diagnosed as having senile cataract.

II. Materials and Methods

Ethics and study participants: The study was conducted in January and February 2018 after obtaining approval from the institutional ethics committee and written consent from all the study participants. The study participants are those patients diagnosed as having cataract in the annual cataract surgery eye camp held in January-February 2018 in Barsana village in the district of Mathura, Uttar Pradesh, India. Patients who were unable to comprehend the questions and those with a past history of cataract surgery were excluded.

Study procedure: A structured questionnaire that was validated previously [6] and revalidated in a small sample of the same population was used for the study. The questionnaire carried 13 questions. The eligible

participants were administered this questionnaire. Demographic details such as age, sex and literacy status were also noted for each participant.

Statistical analysis: The responses were categorized and represented in proportions with 95% confidence intervals {[]}. Chi-square test was used for the analysis of significant difference in the proportions between literates and illiterates, male and female gender and individuals aged more than 60 years with younger aged. All the statistical analysis was done with GraphPad InStat 3.0, 1998, Graphpad software Inc. SanDiego, California, USA, www.graphpad.com.

III. Results

Demographic details: A total of 310 patients were approached for the study and 294 consented to participate. Of these 294 participants, 151 were male and 143 were female. The mean age of the participants was 63.3 years (SD - 9.3). The majority [220/294 (74.8%)] of the participants were illiterate while [74/294 (25.2%)] had completed at least their primary schooling.

Responses to the questionnaire: The overall response to each of the items in the questionnaire with their 95% confidence interval is demonstrated in Table 1 as below:

Table 1. Summary of the responses to the questionnaire (n=294)

Questionnaire items	Responses	Frequency {percentage [confidence intervals]}
Do you know the reason for your diminished vision?	No	25 {8.5 [5.7, 12.4]}
	Yes, with attribution to formation of cataract	139 {47.3 [41.5, 53.2]}
	Said yes, but there was an attribution to wrong factors	130 {44.2 [38.5, 50.1]}
Who told you that you had cataract?	Don't know	118 {40.1 [34.5, 46.1]}
	Proper source	158 {53.7 [47.9, 59.5]}
	Hear say	18 {6.1 [3.8, 9.7]}
What do you think is the reason for you to get cataract?	Don't know	175 {59.5 [53.7, 65.1]}
	Had insight – right reasoning	65 {22.1 [17.6, 27.4]}
	The reasoning was wrong	54 {18.4 [14.2, 23.4]}
What did you think was the treatment for cataract?	Don't know	124 {42.2 [36.5, 48.1]}
	Mentioned surgery	164 {55.8 [50, 61.5]}
	Wrong attribution	6 {2 [1, 4.6]}
When do you feel is the ideal time to undergo cataract surgery?	Don't know	100 {34 [28.7, 40]}
	Early	5 {1.7 [0.6, 4.2]}
	Late	172 {58.5 [52.6, 64.2]}
	On time	17 {5.8 [3.5, 9.3]}
How long should one follow restrictions after cataract surgery?	Don't know	76 {25.9 [21, 31]}
	Correct knowledge	78 {26.5 [21.7, 32]}
	Incorrect knowledge	140 {47.6 [41.8, 53.5]}
Will you be required to wear glasses after cataract surgery?	Don't know	33 {11.3 [8, 15.7]}
	Correct knowledge	247 {84.9 [80.1, 88.7]}
	Incorrect knowledge	11 {3.8 [2, 6.9]}
In which season would you like to get operated?	Don't know	19 {6.5 [4, 10.2]}
	Winter	115 {39.5 [33.9, 45.4]}
	Anytime	16 {5.5 [3.3, 9]}
	Not in summer	141 {48.5 [42.6, 54.3]}
Would you like an intraocular lens to be put inside your eye?	Don't know	133 {45.7 [40, 51.6]}
	Correct knowledge	77 {26.5 [21.6, 32]}
	Incorrect knowledge	2 {0.7 [0.1, 2.7]}
	As per doctors advice	4 {1.4 [0.4, 3.7]}
Did you do something to postpone the onset of cataract?	Nothing	269 {92 [88.3, 94.8]}
	Medical treatment	22 {7.5 [4.9, 11.3]}
	Home-based remedy	1 {0.3 [0, 2.2]}
Have you visited any other camp/hospital for cataract?	Yes	245 {83.9 [79.1, 87.8]}
	No	47 {16.1 [12.2, 20.9]}
Why did you not get operated till now?	Can't say	24 {8.7 [5.7, 12.8]}
	Waiting for this camp	150 {54.2 [48.1, 60.1]}
	Eye related factors	88 {31.8 [26.1, 37.5]}
	Ancillary factors	15 {5.4 [3.2, 9]}
What modification will you make in your daily routine after cataract surgery?	Don't know	91 {32 [26.3, 37.7]}
	Diet related	155 {53.4 [47.7, 59.1]}
	Activity related	115 {40.1 [34.4, 45.8]}
	Habits related	24 {8.5 [5.5, 11.5]}
	Eye protectives	29 {10.2 [7.2, 13.2]}

The details of the individual responses are grouped as follows:

1. Knowledge/awareness about cataract: Of the total 294 participants, only 139 {47.3 [41.5, 53.2]} were aware that they had cataract. A wrong attribution of their diminished vision to various other factors was noted in 130/294 {44.2% [38.5, 50.1]}. A significant proportion of females {59% [51.2, 67]} and illiterates {57.3% [50.7, 63.6]} were either unaware or attributed to wrong factors, than males {46.3% [38.5, 54.3]} and literates {38.2% [28.1, 49.4]} respectively ($P < 0.05$). Additionally, a significant number of male individuals {60.1% [52, 67.8]} came to know that they had cataract from a proper reliable source ($P < 0.05$). The majority of the individuals - 175/294 {59.5% [53.7, 65.1]} did not know the reason for acquiring cataract. No significant differences were observed for this response between the individuals of either sex, literacy state or elderly/younger age group. A significant proportion – 124/294 {42.2% [36.5, 48.1]} of the patients had no idea about the treatment of cataract ($P < 0.05$) and illiterates were more significantly unaware – 109/124 {88% [80.6, 92.8]} ($P < 0.05$). Surprisingly, 247/294 {84.9% [80.1, 88.7]} of the study participants correctly knew that they might have to wear spectacles post surgery. Also, most of the participants – 216/294 {73.5% [67, 83]} either did not know or incorrectly knew about the duration and type of restrictions that have to be followed after cataract surgery.

2. Attitude: A total of 172/294 {58.5% [52.6, 64.2]} study participants stated that they would like to be treated in the late stage of cataract maturation. A majority – 115/294 {39.55% [33.9, 45.4]} of the study participants, especially illiterates – 93/115 {80.9% [72.3, 87.4]} said that they would get operated during the winter season only. A total of 77/294 {26.5% [21.6, 32]} liked to get an intraocular lens implant inside their eye. Also, 150/294 {54.2% [48.1, 60.1]} study participants, especially illiterates – 115/150 {76.7% [68.9, 83]} did not get operated till then as they were waiting for an organization of a free camp with a repute of giving good surgical results.

3. Practice: A vast majority – 269/294 {92% [88.3, 94.8]} of the study participants did not take any measures to postpone the onset of cataract. Of those who took some measures, a significant proportion of male individuals {77.3% [54.2, 91.3]} stated that they took some medical treatment that they believed would prevent cataract. When questioned about the types of modifications the patients would undertake in their daily routine after the surgery, many individuals – 155/294 {37.4% [32.8, 42.3]} said that they would undertake diet-related measures, while 115/294 {27.8% [23.6, 32.4]} would consider a change in their daily activity.

IV. Discussion

Of the many diseases in the elderly, cataract is one of the commonest problems and it poses a sizeable disability on the individual. The blindness that ensues imparts a limitation, which is not just physical, but also has psychosocial and economic impact on their lives. Cataract is the most common cause of preventable blindness accounting for nearly 67% of the total disease load of blindness in the community. [7] One would assume that a person suffering from such disability would want to get rid of the condition as soon as possible. Sadly, this is not to be seen in many parts of the world especially in rural India. The impediments in achieving a good cataract surgery rate in many Indian states appear to be coming from the rural areas. In many areas, the barriers are mainly constituted by limited facilities, both in terms of availability of cataract surgery centers with sufficient infrastructure and also availability of skilled manpower like ophthalmologists and ophthalmic paramedical personnel. However, in areas, which provide access to eye care facilities, the main impediments are constituted by poor uptake rate of such facilities. [5] A study similar to ours but done in the past in Haryana, [6] a state with literacy rate of around 55%, elicited a few similar characteristics of unawareness regarding the cataract and its treatment. In the earlier study, [6] patients with cataracts, pseudophakia as well as aphakia were included. However, in the present study, we have included only the nascent population that has not undergone any previous eye surgery. We believed that any exposure to the eye care system during any previous cataract surgery would have exposed them to knowledge and awareness about cataract and its management. This would have biased their opinion in the current questionnaire study. Also, the interview of each subject was conducted in seclusion from all others so as not to sensitize the others regarding any answers to the questions being asked. Hence, the degree of awareness prevalent in the rural population is brought out in its unbiased state in the current study. Dismal awareness parameters that were noted are as follows: i.) No knowledge that cataract is to be anticipated as a part of ageing process (59.5%); ii.) No knowledge that cataract is treated by an eye surgery (42.2%) and iii) preference to delay the treatment of cataract up until the late stages (58.5%). This does not augur good news for all the crusaders in the vision 2020 program.

Many preventive programs have been initiated throughout the world to enable earlier identification of cataract and to offer appropriate management. For these programs to be successful, people should be correctly aware, free of any misconceptions. For example, a recent door-to-door study of a district in Maharashtra had estimated that despite many strategies such as increasing the cataract surgical coverage, the awareness remains

similar over many years. [8] Even studies from other parts of the world had similar figures. [9-12] Patients were not willing to undergo surgical correction for cataract treatment. [11, 13] However, the condition seems to have improved and none such reason has featured in the present study upon asking the subjects about their reason to delay their cataract treatment. Another major barrier is the seasonal preference of the majority (88%) of the Indian rural population to get operated mostly in winter or in rainy season. This trend leaves the 4-6 months of summer and early part of rainy season unproductive from the point of view of reducing the cataract load in the community. Our personal experience with the mindset of rural people tells that they are afraid of probable higher post-surgery infection rate during summers, are inconvenienced by the heat and prohibition of over-head shower after surgery; and resort to farming activities in the first few months after onset of rainy season. Consequently, the resources are strained during winters to handle the rush of patients willing for the cataract surgery. Only educating and encouraging the people to get operated in summers also and not be fearful of any adverse effects as was shown by a previous experience in a rural area of West Bengal [14] can effectively negate this trend. All these and many other problems are compounded by high rates of illiteracy in rural areas, which is found more in women compared to men. As an ethical measure, our team educated all the participants in correct knowledge, attitude and practice regarding all the questionnaire items after their cataract surgery was over.

The findings of the study necessitate a multidisciplinary approach wherein despite the easy availability of centers offering care to prevent cataract-related blindness under the national program, private practitioners, both government and non-governmental organizations should take steps to improve the awareness of cataract especially in the rural masses. The study is limited by the fact that it was conducted in patients from a single camp, economic impact was not assessed and no follow-up of the study participants was done.

V. Conclusion

To conclude, the results of this study indicate that a that large number of patients in the rural area have poor insight in their eye condition and demonstrate incomplete and/or incorrect perceptions and practice regarding cataract and its treatment. Therefore they need to be sensitized and educated for achieving the goals of many cataract programs in the country.

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Conflict of interest:

The authors declare that there is no conflict of interest.

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