

## Knowledge and Awareness about Cataract and Its Associated Risk Factors: An Institutional Based Study

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### ABSTRACT

**Background:** Cataract presents as blurred and reduced vision, cloudy vision, glare, visualization of haloes around the light and unable to see in dim light. The aim of the present study was to assess the knowledge and awareness about cataract amongst the subjects reporting to the OPD. Through this study we aim to educate the subjects about cataract and make them aware about the management options available.

**Materials and Methods:** The present cross-sectional survey was done enrolling 200 subjects reporting to the Department of Ophthalmology, Santosh Medical College & Hospital, Ghaziabad, Uttar Pradesh, India. A verbal consent was obtained from all the subjects. All the subjects were made to fill a structured proforma in their vernacular language. In the first part of the questionnaire the demography was noted, and the subjects were asked about familiarization with cataract. If they were aware, then they were given the second part of the questionnaire. The second part of the questionnaire assessed their knowledge, risk factors and management options available for cataract.

**Results:** The present study enrolled 200 subjects with the mean age of 37.98 +/- 2.85 years. There were 52% males and 48% females in the study. Majority of the subjects i.e. 34% were aged more than 50 years. There were 62% subjects who thought that lens opacities lead to cataract. According to 20% it was a growth on eye. There were 52% subjects who thought that exposure to UV radiation was not a risk factor for cataract.

**Conclusion:** Cataract is one of the commonest ocular conditions. A vast majority of subjects with advanced age suffer from cataract. Combination of two or more risk factors leads to the development of cataract amongst an individual.

**KEYWORDS:** Age, Cataract, Ophthalmology, Risk.

### INTRODUCTION

Cataract by definition is known as opacification of the lens. It generally presents as blurred and reduced vision, cloudy vision, glare, visualization of haloes around the light and unable to see in dim light.<sup>1</sup> different risk factors have been determined that influence cataract development. Few of the common factors are advancing age, sunlight exposure, trauma, steroid use, smoking and genetics.<sup>2</sup> Combination of two or more risk factors leads to the development of cataract amongst an individual.

If cataract is left unmanaged and untreated, it can lead to blindness.<sup>3,4</sup> According to a World Health Organization survey, unmanaged cataract lead for 25% of the visual impairment burden globally. The accepted treatment for cataract management is surgical removal of the opacified lens along with implantation of the artificial lens.<sup>5-7</sup> Studies have shown that with the cataract services are underutilized. One of the prime reasons reported for underutilization of cataract surgical services include the

lack of knowledge and awareness about cataract and the surgical management options.<sup>8,9</sup> Study conducted by Battle et al. showed that lack of cataract awareness and its management options available and the cost of treatment are the two main reasons for the lack of uptake of cataract surgical services in Latin America.<sup>9</sup> The aim of the present study was to assess the knowledge and awareness about cataract amongst the subjects reporting to the OPD. Through this study we aim to educate the subjects about cataract and make them aware about the management options available.

**MATERIALS AND METHODS**

The present cross-sectional survey was done enrolling 200 subjects reporting to the Department of Ophthalmology, Santosh Medical College & Hospital, Ghaziabad, Uttar Pradesh, India. The study was approved by the institutional ethical board and all the subjects were informed about the study. A verbal consent was obtained from all the subjects. All the subjects were made to fill a structured proforma in their vernacular language. The questionnaire was based on the Knowledge, attitude and practice guidelines provided by the WHO. The demographic details, knowledge about cataract and its presenting symptoms were noted in a

proforma. The subjects were also assessed about their knowledge about the risk factors associated with cataract. In the first part of the questionnaire the demography was noted, and the subjects were asked about familiarization with cataract. If they were aware, then they were given the second part of the questionnaire. The second part of the questionnaire assessed their knowledge, risk factors and management options available for cataract. All the subjects were made aware about cataract and they were also taught about the associated risk factors. All the data was expressed as percentage and arranged in a tabulated form and analyzed using SPSS software.

**RESULTS**

The present study enrolled 200 subjects with the mean age of 37.98 +/- 2.85 years. Table 1 shows the demographic characteristics of the study. There were 52% males and 48% females in the study. Majority of the subjects i.e. 34% were aged more than 50 years. 29% subjects were between 21-30 years of age. there were 20% between 31-40 years of age. There were 75% subjects with normal lens. Cataract was seen amongst 14% subjects. 54% subjects were unemployed and 46% were employed.

**Table 1: Demographic characteristics of the study**

Demographics		Frequency
Gender	Male	104(52%)
	Female	96(48%)
Age	21-30	58(29%)
	31-40	40(20%)
	41-50	32(16%)
	>50	68(34%)
State of lens	Normal	150(75%)
	Cataract	28(14%)
	Pseudophakes	22(11%)
Employment status	Employed	92(46%)
	unemployed	108(54%)

**Table 2: Knowledge about cataract amongst the subjects**

Knowledge		Frequency
What is cataract	Lens opacities	124(62%)
	Increased intraocular pressure	122(61%)
	Growth on eye	40(20%)
Frequent associated symptoms	Blurred vision	100(50%)
	Pain	76(38%)
	Itching	20(10%)
Can it lead to blindness	Yes	148(74%)
	No	52(26%)
Management options for cataract	Surgical	88(44%)
	Non-surgical	112(56%)

**Table 3: Knowledge about the risk factors**

Knowledge	Frequency
UV exposure	Yes 96(48%)
	No 104(52%)
Age	Yes 156(78%)
	No 44(22%)
Diabetes	Yes 56(28%)
	No 144(72%)
Trauma	Yes 96(48%)
	No 104(52%)
Steroid use	Yes 46(23%)
	No 154(77%)
Smoking	Yes 50(25%)
	No 150(75%)
Hereditary	Yes 68(34%)
	No 132(66%)

Table 2 shows the knowledge about cataract amongst the subjects. There were 62% subjects who thought that lens opacities lead to cataract. According to 20% it was a growth on eye. Increased intraocular pressure leads to cataract according to 61% subjects. Blurred vision was the most frequently associated symptom as per 50% subjects. Pain was a symptom according to 38% subjects. Itching was a symptom according to 10% subjects. Cataract could lead to blindness as per 74% subjects. According to 44% subjects only surgical treatment option was available for cataract and as per 56% non-surgical management therapy was also there.

Table 3 demonstrates the knowledge about risk factors amongst the subjects. There were 52% subjects who thought that exposure to UV radiation was not a risk factor for cataract. Advancing age was regarded as a risk factor by majority of the subjects. Diabetes was not regarded as a risk factor by 28% subjects. 75% subjects thought that smoking was a risk factor for cataract. There were 34% subjects who believed that hereditary had no role to play in cataract causation. Steroid use was not regarded as a risk factor by 77% subjects.

## DISCUSSION

Cataract is one of the commonest causes of blindness around the world, and most of the cataracts are related to age.<sup>10</sup> In developing countries like Australia cataract surgery is the most frequently performed ophthalmic procedure.<sup>11</sup> With regard to increasing population and advancing age the burden of cataract in increasing on the societies especially in the developing nations as it occurs at an earlier age and healthcare services are limited.<sup>12</sup> Even if cataract Surgeries are frequently performed and are an effective cure, studies to establish the causative factors and pathophysiology to delay or avert the progress of cataract is a prime challenge in the 21st century.<sup>13</sup> Studies determining the risk factors for cataract development<sup>14-20</sup> are widely performed to

illuminate the risk factors. These studies have found some modifiable and preventable risk factors that when targeted can reduce the occurrence of the condition. Some of the risk factors identified are smoking for nuclear cataract,<sup>20-22</sup> exposure to UV-B radiation of sunlight for cortical cataract causation,<sup>10</sup> and diabetes and steroid use for posterior subcapsular cataract.<sup>10,18</sup> Certain studies revealed the protective action of vitamin supplements, but no significant advantages of antioxidants have been revealed by some. According to present study, there were 62% subjects who thought that lens opacities lead to cataract. According to 20% it was a growth on eye. Increased intraocular pressure leads to cataract according to 61% subjects. Blurred vision was the most frequently associated symptom as per 50% subjects. Pain was a symptom according to 38% subjects. Itching was a symptom according to 10% subjects. Cataract could lead to blindness as per 74% subjects. As per the studies performed by Lau et al.<sup>23</sup> and Katibeh et al.<sup>24</sup> there were around 90% of the participants who were familiar with cataract. This was majorly due to proper education. There were 79.60% of the subjects who had either high or tertiary level education. Studies clearly demonstrated a relationship between educational level and knowledge about cataract. According to Lau et al statistically significant relation was seen between level of education and awareness about cataract and glaucoma.<sup>23</sup> In our study, according to 44% subjects only surgical treatment option was available for cataract and as per 56% non-surgical management therapy was also there. According to studies done by Khandekar and Al-Harby<sup>25</sup> and Katibeh et al.<sup>24</sup> reported the opposite. There were around 50.00% of the participants who knew of surgery as the management option for cataract. Majority of the subjects knew cataract can cause blindness. According to our study, there were 52% subjects who thought that exposure to UV radiation was not a risk factor for

cataract. Advancing age was regarded as a risk factor by majority of the subjects. Diabetes was not regarded as a risk factor by 28% subjects. 75% subjects thought that smoking was a risk factor for cataract. There were 34% subjects who believed that hereditary had no role to play in cataract causation. Steroid use was not regarded as a risk factor by 77% subjects. In a study done by Mehari et al.<sup>26</sup> lack of awareness of the available effective treatment is one of the commonest reasons for delayed cataract surgery. According to a study performed in Nigeria unawareness about cataract was a major cause of blindness<sup>27</sup>.

## CONCLUSION

Cataract is one of the commonest ocular conditions. A vast majority of subjects with advanced age suffer from cataract. Combination of two or more risk factors leads to the development of cataract amongst an individual. As per our study, there was not much knowledge and awareness regarding cataract amongst the subjects.

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