

# Obstacles Facing by Patients to Undergo Cataract Surgeries - A Hospital Based Study in and Around Ananthapuramu.

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## ABSTRACT

**Background:** Cataract estimated to be the cause of blindness among 17.6 million people worldwide. A few studies have done in India about obstacles or barriers of patients to undergo cataract surgeries, so the present study has undertaken to know the reasons for not accepting cataract surgical services. **Methods:** Patients in the age group of above 45 years, vision <20/60 and presenting with features of cataract were included. BCVA (Best corrected Visual acuity) was measured using Snellen chart and Cataract was diagnosed using torch light and Direct Ophthalmoscopy. Patients knowledge about cataract, factors obstructing patients to undergo cataract surgeries, regarding service delivery, cost and affordability were assessed. **Results:** Out of 120 patients, 46 (38.3%) were aware that they have cataract. Among various obstacles, about 60% were able to manage daily work and worry about the cost of surgery. Obstacles including Busy with work, cans see clearly with other eye were seen in above 50% of patients. Out of 120 patients, 83 (69.1%) did not undergo cataract surgery because of insufficient family income, whereas 54 (45%) persons does not have accompany to attend for cataract surgery. **Conclusion:** Need of eye health campaigns, providing services like, free of cost, transport facilities and place of treatment, follow up services. Many Government Organizations and Hospitals are conducting free camps for cataract surgeries, other than these health education is necessary by explaining about the beneficiaries of cataract surgery and advise people to avail health benefits or free camps to undergo cataract surgery.

**Keywords:** Cataract Surgery, Obstacles, Services.

## INTRODUCTION

Cataract is defined as the development of any opacity in the lens or its capsule, which impairs the vision. The cataract can be congenital and developmental, where cataract occurs due to the formation of opaque lens fibers or can be acquired due to degenerative process where normal transparent lens fibers will be replaced by opaque fibers. Acquired cataract occurs due to various causes such as trauma, age related, metabolic, electric, corticosteroids, radiational etc.

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WHO estimates that globally, about 90% of the blinds live in developing countries, among them around 60% reside in Subsaharan Africa, China, India.<sup>[1]</sup> The Subsaharan Africa, India and other Asia and Islands have Regional Burden of Blindness (RBB) ratio greater than unity <sup>[2]</sup>, which indicates the burden of blindness should take into consideration, while fixing priorities on a global scale.

Cataract estimated to be the cause of blindness among 17.6 million people worldwide. <sup>[1]</sup> The percentage of blindness caused by cataract was estimated by various surveys includes ICMR Survey (1971-74) - 55%<sup>[3]</sup>, WHO - NPCB Survey (1986-89) - 80.10%<sup>[4]</sup>, NPCB Survey (2001-02) - 62.6%<sup>[5]</sup>, RAAB Survey (2006-07) - 72.2%.<sup>[6]</sup> Surveys have shown that there is a continuous rise in major causes of blindness, even though there is a change in trends of blindness.<sup>[3-6]</sup>

Definitive treatment for cataract is surgical removal of the lens. Many programmers have started to reduce cataract by the increasing number of surgeries, but in many places still surgical acceptance is low. A few studies have done in India about obstacles or barriers of patients to undergo cataract surgeries, so the present study has undertaken to know the reasons for not accepting cataract surgical services

The aim of the present study is to know the obstacles facing by patients to undergo cataract surgeries and their sociodemographic correlation.

## MATERIALS AND METHODS

A total of 120 patients was selected to do this study, which has done after institutional approval. This study is a prospective observational study done in the period from March 2013 to August 2013 at Department of Ophthalmology, Government General Hospital, Ananthapuramu.

Patients in the age group of above 45 years, vision <math><20/60</math> and presenting with complaints of cataract including blurred or reduced vision, glare, colored halos, black spots in front of eyes etc, were included in this study. BCVA (Best corrected Visual acuity) was measured using Snellen chart and Cataract was diagnosed using torch light and Direct Ophthalmoscopy.

The vision was assessed according to WHO, the definition of normal vision is where BCVA is  $\geq 20/60$  in the better eye, Visual impairment is BCVA  $<20/60$  but  $10/200$  in the better eye and blindness BCVA  $<10/200$  in the better eye were used.

All the cataract patients who didn't undergo cataract surgeries in either of the eyes were explained the study. A structured questionnaire regarding obstacles or barriers faced by patients to undergo cataract surgeries based on various literatures were framed and asked patients to answer yes or no. Patients were personally advised to answer for these questionnaire. All the data regarding sociodemographic profile, including age, sex, occupation, education, socioeconomic status, residence were collected. Vision and stage of cataract (immature, mature, hypermature cataract) was noted. Answers to structured Questionnaire such as patients' knowledge about cataract, factors obstructing patients to undergo cataract surgeries, regarding service delivery, cost and affordability were assessed.

Details regarding this study were entered into a excel spread sheet and analyzed. Statistical analysis was analyzed and presented in the form of percentages, histogram.

## RESULTS

A total of 120 patients in the age group above 45 years were studied who presented with vision  $\leq 20/60$  and cataract in either of the eye. Among 120 patients, 68 were females and 52 were males. Mean age of studied group was  $62.3 \pm 2.5$  years. Vision  $<20/60$  predominantly seen among the study population. Out of 120 patients, 64 were  $<20/60$  vision, 39 were  $20/60$  and 17 were  $10/200$  to  $<10/200$  [Table 1].

Among 120 patients, Obstacles relating to service delivery, cost and affordability was assessed [Figure 1]. Out of 120 patients, 83 (69.1%) were didn't undergo cataract surgery because of insufficient family income, whereas 54 (45%) persons does not have accompany to attend for cataract surgery.

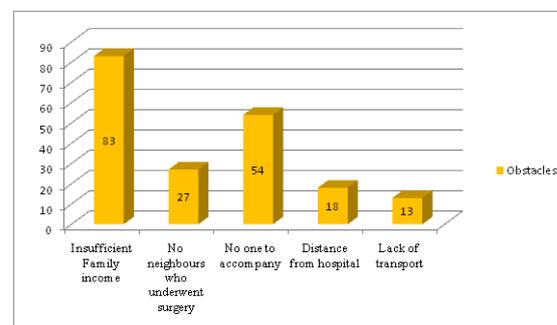
**Table 1: Sociodemographic profile of studied population.**

Characteristics	No. of Patients	Percentage
<b>Literacy</b>		
Literate	47	39.1%
Illiterate	73	60.8%
<b>Occupation</b>		
Employed	36	30%
Unemployed	84	70%
<b>Residence</b>		
Rural	59	49.1%
Urban	61	50.8%
<b>Vision</b>		
$20/60$	39	32.5%
$<20/60$	64	53.3%
$10/200$ to $<10/200$	17	14.1%
<b>Stage of Cataract</b>		
Immature Cataract	48	40%
Mature Cataract	63	52.5%
Hypermature Cataract	9	7.5%

Out of 120 patients, 46 (38.3%) were aware that they have cataracts, which is the reason for visual impairment. Obstacles facing by the patients to undergo cataract surgery was assessed. Among various obstacles, about 60% were able to manage daily work and worry about the cost of surgery. Obstacles including Busy with work, cans see clearly with other eye were seen in above 50% of patients [Table 2].

**Table 2: Distribution of various obstacles facing by patients.**

Obstacles	No. of Patients	Percentage
Able to manage daily work	73	60.8%
Busy with work	64	53.3%
Can see clearly with other eye	61	50.8%
Fear of surgery	36	30%
Old age	45	37.5%
Worry about cost of surgery	70	58.3%
Being a female	36	30%
Fear of that surgery could lead to loss of eyesight	43	35.8%
Fear that surgery could lead to death	47	39.1%



**Figure 1: Representing the Obstacles relating to service delivery, cost and affordability.**

## DISCUSSION

Cataract is most common cause of blindness, which is a treatable condition. Clinically, the term cataract refers to an opacification of sufficient severity to impair the vision. Treatment of cataract essentially consists of its surgical removal.

Definitive treatment of cataract is an extraction of lens with or without implantation of Intraocular Lens (IOL). Before surgery need to find and avoid the primary, cause responsible for cataract. Medical treatment usefulness is little for improving vision includes prescribing corrective glasses, arrangement of illumination, mydriatics. Now-a-days most of the cataract surgeries are being performed by ECCE (Extracapsular Cataract Extraction) with PCIOL (Posterior Chamber Intraocular Lens) technique.

In the present study, the mean age of studied group was  $62.3 \pm 2.5$  years. Vision  $<20/60$  predominantly seen among the study population. Out of 120 patients, 64 (53.3%) were  $<20/60$  vision, 39 (32.5%) were  $20/60$  and 17 (14.1%) were  $10/200$  to  $<10/200$ . Among 120 patients, predominantly observed was mature cataract (52.5%) followed by immature cataract (40%) and hypermature cataract (7%).

Out of 120 patients, 46 (38.3%) were aware that they have cataracts, which is the reason for visual impairment in this study. Sapkota YD et al<sup>[7]</sup> documented that in Nepal, when compared to this study higher percentage of individuals knew that they have cataract (57.8%).

As per this study among various obstacles, about 60% were able to manage daily work and worry about the cost of surgery. Obstacles including Busy with work, can't see clearly with other eye were seen in above 50% of patients.

Upreet Dhaliwal et al<sup>[8]</sup> observed that barriers for cataract surgery among patients included could manage daily work (71%), cataract does not mature (68%), could see clearly with the other eye (64%), too busy (57%), female gender (37%), fear of surgery (34%), fear of surgery causing blindness (33%) or death (13%), old age (33%), it is God's will (29%) and worry about the cost of surgery (27%).

Barriers to uptake cataract surgery in relation to service delivery, cost, and affordability reported by Upreet Dhaliwal et al<sup>[8]</sup> were insufficient family income (76%), not knowing another person who had undergone cataract surgery (26%), no one to accompany (20%), distance from hospital (20%) or from a main road (9%) and lack of transport (7%).

Sapkota YD et al<sup>[7]</sup> reported that Out of 303 selected cataract individuals, barrier for undergoing cataract surgery includes fear for surgery 31.1%, lack of attendant and geographical distance 32.8%, Financial 24.1% and Other clinical reason were found to be 12% as a reason for not seeking available surgical service.

A study conducted in mid Western Nepal<sup>[9]</sup> has reported the factors responsible for not accepting cataract surgical services which included economical

in 48% and logistical in 44.8% followed by fear of surgery 33.3% and lack of time 18.8%.

Many studies were documented that there is a rise in the prevalence of blindness due to cataract and the cataract surgery coverage in many communities is not adequate.<sup>[10-11]</sup> Cataract surgery rate (number of cataract surgeries per million population per year) and cataract surgical coverage have to assess in every community to decrease the attitudinal barriers among patients who resist to undergo cataract surgeries. Himalaya eye hospital, Pokhara<sup>[12]</sup> reported that the cataract surgical rate was below 1500 and the cataract surgical coverage was estimated as 59.5%.

A Few studies observed that the reasons being for not accepting cataract surgical services were fear of cost, poverty, non availability of information.<sup>[13,14]</sup> There is a change in trends of barriers to the uptake of cataract surgery from sex related, lack of transport, difficult to access, cost etc to bad selection and poor service provision.<sup>[15]</sup>

WHO launched a global initiative 'Vision 2020: The Right to Sight' in Geneva on Feb 18, 1999<sup>[16]</sup> in a broad coalition with a "Task Force of International Non-Government Organizations (NGOs) to combat the gigantic problem of blindness in the world. One of the aim of its is to eliminate avoidable blindness due to cataract by the year 2020 by performing cataract extraction with intraocular lens (IOL) implantation.

From this study, we conclude that most of the patients were facing obstacles to undergo cataract surgery includes the ability to manage daily work, cost of surgery, insufficient family income, busy with works, no one to accompany. Need of eye health campaigns, providing services like, free of cost, transport facilities and place of treatment, follow up services. Many Government Organizations and Hospitals are conducting free camps for cataract surgeries.

By assessing Cataract Surgery Rate in the communities and by notifying the obstacles facing by patients, plan has to implement to increase the rate of cataract surgeries. Health education is necessary by explaining about the beneficiaries of cataract surgery and advise people to avail health benefits or free camps to undergo cataract surgery.

## CONCLUSION

Need of eye health campaigns, providing services like, free of cost, transport facilities and place of treatment, follow up services. Many Government Organizations and Hospitals are conducting free camps for cataract surgeries, other than these health education is necessary by explaining about the beneficiaries of cataract surgery and advise people to avail health benefits or free camps to undergo cataract surgery.

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