

Barriers of Cataract surgery among camp screened patients of Sunsari and Morang district of Eastern Nepal

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Abstract: *Background:* Cataract is the leading cause of blindness in developing countries like Nepal. To meet the objective of VISION 2020, the study of the barriers that delay surgical uptake becomes important. This study has been done to assess the socio-demographic characteristics and barriers of cataract surgery among the patients referred for surgery among the eye camp screened patients. *Methods:* The descriptive cross-sectional study was done. A total of 278 samples were selected randomly among 478 non-acceptors of surgery till the last of November 2018. Face to face interview was done by the trained data collector, the socio-demographic characteristics, quality of life and visual status and reason for not coming for surgery were assessed through a semi-structured questionnaire. The sample size was 278 but the analysis was done for 71 due to not found the person during interview and non-response. *Result:* Among 71 respondents, 45% were female and 55% male who did not come for surgery. Mostly 68% were farmers, 23% had no work, and 10% unskilled labor. Sixty - two percent were illiterate, 61% had single type family and 85% belongs to upper lower class, 93% had heard of cataract, 48% don't know about the cause of cataract, only 7% know that surgery is the treatment of cataract, and only about one-fifth of the respondents had complete information regarding free services provided by camp. About 85% of the respondents were aware that their vision becomes more deteriorate if not undergone through surgery. All of them stated that they had difficulties in daily activities as well as in vision due to cataracts. The main barrier of not coming for surgery were no one to accompanies, presence of systematic disease, had no time, non-affordability, fear of losing sight, and no proper orientation and others i.e. 26%, 24%, 17%, 14%, 13%, 10% & 5% respectively. *Conclusion:* The main barrier of not coming for surgery was no one to accompanies, presence of systematic disease, had no time, non-affordability, fear of losing sight, and no proper orientation. There is a need to conduct massive and proper counseling to community people, family members & individuals on eye diseases among eye camp patients to increase eye care services.

Keywords: Barriers, eye surgery, Nepal

Introduction

Globally, it is estimated that approximately 1.3 billion people live with some form of distance or near vision impairment [1]. Cataract remains the leading cause of blindness except for developed countries in spite of the progress made in surgical techniques in many countries during the last ten years [2].

The prevalence of blindness in Nepal was decreased from 0.84% [3] to 0.35% [4] in 2012. The major causes of avoidable blindness included cataract (62.2%), posterior segment diseases

(16.5%), glaucoma (5.9%), corneal scar other than trachoma (5.2%) and uncorrected aphakia (3.4%) [4]. The cataract still is the leading cause of blindness in Nepal. Studies in India have shown that despite the rapid increase in the availability of quality services resulting in an increased awareness of the benefits of cataract surgery, surgical uptake is still low in the rural segments of the society owing to substantial socioeconomic barriers to accepting surgery [5]. Under the Nepal Netra Jyoti Sangh, Eastern Regional Eye Care Program having two eye hospital Sagarmatha

Choudhary Eye Hospital and Biratnagar Eye Hospital with its 22 eye care center providing quality services to eastern Nepal and neighboring country India, Bhutan and Bangladesh. The hospital is well known for high volume, high quality, and affordable services [6].

The outreach department of BEH providing regular eye camp where screening of eye has been done and referred to the base hospital for cataract and other treatment. The provision of effective and accessible eye care services is key for effectively controlling visual impairment including blindness [7]. Barriers to access cataract surgery differ by region and include, gender, fear of surgery, status of visual disability, educational level, visual needs, distance from the care provider, cost and lack of an escort [8].

Biratnagar Eye Hospital (BEH) from its beginning, since 2006 started an eye screening program at the community level. The objective of the program is to serve community who is unable to come themselves at hospital to take their treatment. It provides its services mainly to those who are poor and marginalized and not able to come directly to hospital.

Biratnagar Eye Hospital has community outreach department that provides comprehensive eye and ear camp programs regularly. Comprehensive eye camp conducted at Sunsari and Morang district from April to July 2018 total 43 eye camp has been conducted and after analyzing the data total OPD was 3588, total referred to base hospital were 997 and among the cataract referral patients, only 529 (53%) come for surgery at base hospital in six month period.

This study try to find out the reason for not coming for surgeries in spite of free surgeries and bed charges provided to camp patients. Nepal has developed a comprehensive national network of eye hospitals but the surgical coverage for the treatment of cataract blind is still low [9]. There is ample evidence that comprehensive eye care services need to become an integral part of primary health care and health systems development [7].

Material and Methods

The descriptive cross-sectional study design was used, the study area was Sunsari and Morang

district of 31 places. The sample size was calculated 278 assuming 50% visiting the hospital for surgery. A simple random sampling technique was used to collect the data. The list was prepared by selecting a name list randomly and the interview was done by trained data collectors at the house of respondents.

Both qualitative and quantitative methods were used for data collection. Among 278 sample size 6 (2%) were non-response, 173 (62%) were not found during first visit, data collected 105 (38%) among them 34 (32%) had done surgery during that period at BEH and other hospital and analysis was done for 71 patients. Pre-testing of the tool was used and modification was made, orientation was given to the data collector for validity and reliability of the data.

Ethical clearance obtained from the IRC of Biratnagar Eye Hospital and written consent was taken during the interview. The study duration was from April-Dec 2018. The community eye camps organized by this base hospital to screen patients in their villages consisted of six staff 1 Ophthalmic Assistant for screening, 1 optometrist for refraction, eye health worker for counseling, primary eye health worker for vision examination, optical helper for optical dispensing and a driver. There is a counselor available to provide counseling, information, education, and communication (IEC) services to patients in these camps. Different research showed the importance of counselor for IEC.

Results

Among the respondents 55% were male and the majority of them were Hinduism follower i.e. 87%. About two-third i.e. 67% were farmer, 23% no work and 10% unskilled labor, 62% were illiterate, 61% belongs to single-family type, 85% belong to upper lower socio-economic status. The median age of the respondents was 68 ± 13 SD (Table-1).

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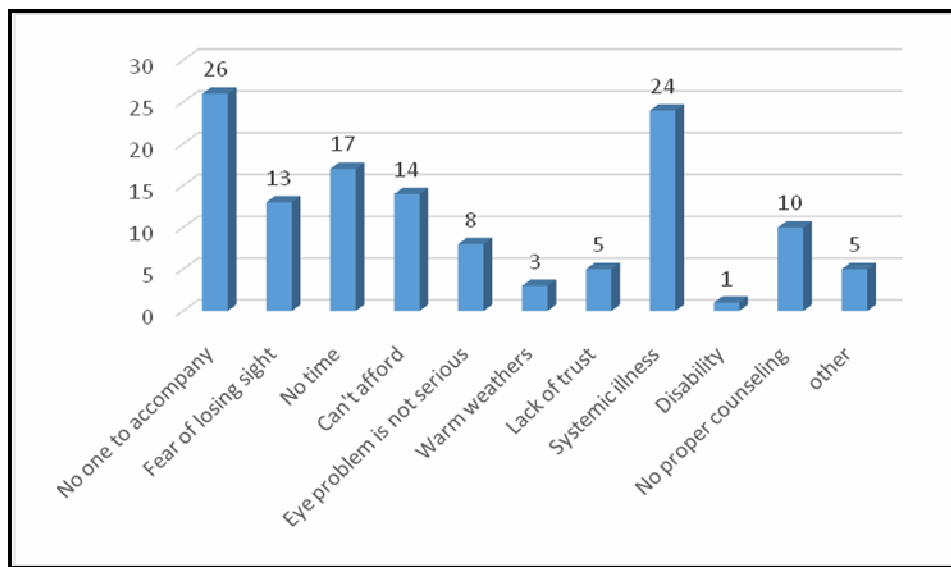
Table-1: Socio demographic characteristics		
Socio demographic variables	Frequency	Percent
Gender		
Female	32	45.1
Male	39	54.9
Religion		
Hindu	62	87.3
Muslim	7	9.9
Christian	2	2.8
Occupation		
No work	16	22.5
Unskilled labor	7	10
Farmer	48	67.5
Education		
Illiterate	44	62
Literate	27	38
Family Type		
Single	43	60.6
Joint	28	39.4
Socio economic status		
Upper lower	60	85
Lower	11	15
Median Age/SD	68±13	
Total	71	100

Knowledge regarding eye diseases: About 93% of respondents had heard about cataracts, 48% did not know about the cause of cataract whereas 35% had stated that due to old age. More than three fourth of the respondents stated that cataract can treat i.e. 76% overall only 7% stated that cataract can treat through surgery whereas 69% through medicine and remaining respondents had no idea about the treatment of cataract treatment i.e. 24%. While asking regarding camp free services, only 21% had complete information, 56% had improper information and 22% said don't know. About two-thirds of the respondents i.e. 65% stated that they become blind and 20% stated that more vision-related problems arise if not undergone through cataract surgery. While asking what problem do you have at present 48% said low vision, 20% said problem to see the far object, 7% said pain and vision problem, 6% said the difficult in daily activities, 4% said cataract and 15% said others (Table-2).

Table-2 Knowledge regarding eye diseases		
Knowledge	Frequency	Percent
Heard about Cataract		
No	5	7
Yes	66	93
Cause of cataract		
Old age	25	35.2
Don't know	34	47.9
Others	12	16.9
Treatment of cataract		
Medicine use	49	69
Surgery	5	7
Don't know	17	24
Camp free service		
Complete	15	21
Incomplete	40	56
Don't know	16	22
If no operation done what will happen		
Become blind	46	64.8
Problem in seeing	14	19.7
Don't know	2	2.8
Others	9	12.7
What problem do you have at present		
Low vision	34	47.9
Far object not seen	14	19.7
Difficult in daily activities	4	5.6
Pain and vision problem	5	7.0
cataract	3	4.2
Others (Itching, watering)	11	15.5
Total	71	100

Reason of not coming for surgery: While asking reason of not coming for surgery, about 26% said no one to accompany, 24% said systemic illness, 17% said no time, 14% said can't afford, 13% fear of losing sight, 10% said no proper counseling, 8% said eye problem is not serious problem, 5% lack of trust, 3% warm weathers 1% disability and 5% others (Fig-1).

Fig-1: Reason of not coming for surgery



Discussion

Regarding demographic characteristics a comparable number of male and female who did not come for surgery, mostly Hindus, and sixty-seven percent were farmer, 62% were illiterate 85% belongs to upper lower socio economic status. Similar findings was seen in the study done in Delhi, India showed that more than half the patients were illiterate and over 3/4th were unemployed [10].

In this study, 93% had heard of cataract and 52% know about the cause of cataracts, but the treatment of cataracts only 7% said that the surgery is the treatment most 69% said medicine use and 24% said don't know. The study done at the Gandaki zone showed that 57.8 % of people knew about the cataract and they also think their vision impairment is due to cataract [11]. The awareness level was very low it shows that the counseling was not given properly. Previous studies from other parts of the country too have reported “need not felt important,” “no one to accompany,” and “no information” as prominent barriers and have argued in favor of increased IEC activities to generate demand for services while at the same time alienating misconceptions [12-13].

In this study, the main barriers of not coming for surgery was no one to accompany 26% similarly the study done at Gandaki zone showed 33% lack

of attendant and geography [11]. The study done at the Mid-western region of Nepal showed that the major reasons given for not accepting surgery were economic 48% and logistical 44.8% constraints followed by fear of surgery 33.3% and lack of time 18.8% [9]. In this study 17% said no time, 14% can't afford, that might be due to the indirect cost of the surgery. In this study, 13% said fear of surgery which is lower than the study done at Gandaki Zone where fear for surgery 31.1%, Financial 24.1 % and Other clinical reasons were found to be 12 % as a reason for not seeking available surgical service [11].

The study done at India showed that the most common reason quoted for not seeking cataract surgical services were “bad roads/ difficult terrain” and “poor health status” 17.9%, followed by “no money for the hospital stay and food expenses” 15.7%; and “fear of surgery” 12.1%.

In this study 10% said no proper counseling while intense counseling and an offer of logistical support in the form of free transport increases the surgical coverage by 46% [9]. In the absence of standard operational guidelines or policy from the government on the organization of eye camps or large-scale community eye screening initiatives, such avoidable barriers continue to persist [14].

Conclusion

Proper counseling is needed to patients along with their family members as the main barriers of the cataract surgery was no one to accompany, proper awareness on eye diseases is also needed as there was less awareness mainly cause and treatment of cataract among camp patients and community as a whole. Proper follow up should be done for those who had the systemic disease. The study has certain limitations as the sample

size was small, to minimize the bias we have selected participants randomly but the respondents were not found due to the wrong address and other reason.

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