Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 9, Issue, 12, pp.62561-62564, December, 2017

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

ISSN: 0975-833X

RESEARCH ARTICLE

BARRIERS FOR UPTAKE OF CATARACT SURGERY IN RURAL HOSPITAL

[1]Dr. Nitu Khadse, [2]Dr. Ajab C Dhabarde, [3]Dr. Atul Gawande, [4]Dr. Pradnya Gawai and *,[5]Dr. Sahas Bendle

[1]Assistant Professor, Department of Ophthalmology, Mahatma Gandhi Institute of Medical Sciences (MGIMS), Sewagram, Wardha, Maharashtra, Pin code: 442102
[2]Associate Professor, Department of Ophthalmology, Mahatma Gandhi Institute of Medical Sciences (MGIMS), Sewagram, Wardha, Maharashtra, Pin code: 442102
[3]Consultant Ophthalmology, Sudha, Netralaya
[4]JR Ophthalmology, MGIMS
[5]Public Health Expert, DMIMS, Wardha

ARTICLE INFO

Article History:
Received 18th September, 2017
Received in revised form
09th October, 2017
Accepted 27th November, 2017
Published online 27th December, 2017

Key words:
Barriers,
Cataract,
Lack of money,
Socio-economic factors.

ABSTRACT

Background: This study was done to find socio-economic factors influencing the utilization of cataract surgery and to identify reasons for delayed uptake of cataract surgery.
Material and Methods: The study was prospective, cross-sectional study over period of December 2012 to October 2014. All the cases of lens induced glaucoma were interviewed and the socio-demographic history was noted in a proforma which included age, gender, rural or urban residence, literacy, occupation and socio-economic status. History of cataract surgery in the other eye was asked. Distance travelled to the hospital and the reasons for delay in presenting was also noted.
Results: Majority of the patients were from rural area 84 subjects (73.04%) and (68.7%) in our study were illiterate. The predominant reason for delayed cataract surgery utilization given by patients was lack of money in 43 patients (37.39%).In our study we found that rural background, distance from the hospital, illiteracy, occupational compulsions, socio-economic status and good vision in fellow eye all were influential factors for delayed utilization of services.
Conclusion: Lack of awareness and lack of money in rural population is a major factor for delayed uptake of cataract surgery. Spread of awareness regarding cataract and its implications among the rural community in the form of health education, better quality information and communication and also expansion of outreach programs to different communities is needed.

Citation: Dr. Nitu Khadse, Dr. Ajab C Dhabarde, Dr. Atul Gawande, Dr. Pradnya Gawai and Dr. Sahas Bendle, 2017. "Barriers for uptake of cataract surgery in rural hospital", *International Journal of Current Research*, 9, (12), 62561-62564.

INTRODUCTION

Cataract in India is the most important cause of preventable blindness accounting for 63.7% (Government of India, 2002). There are 20 million cataract blind people estimated in the world and the numbers are increasing despite of 7 million cataract sight restoring surgery performed per year (WHO Fact sheet No.214 Blindness, 2000). In the developing country, like India financial, cultural and psychosocial barriers to accessing surgical services still exist which influence the decision making of the people for getting operated for cataract. There is an increasing backlog of cataract due to the population explosion, increased life expectancy and low productivity in terms of utilization of the available surgical services. Despite rapid increase in the availability of quality services, surgical uptake is poor in our country especially in rural areas. Due to ignorance and poverty this condition is quite common in India, such patients usually approach the ophthalmologist very late when considerable damage has already been done to the eye. Delay in presentation for treatment of cataract may lead to complication like Lens induced glaucoma, which is most important cause of irreversible vision loss. This study was done to find socioeconomic factors influencing the utilization of cataract surgery and to identify reasons for delayed uptake of cataract surgery.

Corresponding author: **Dr. Sahas Bendle,**
Public Health Expert, DMIMS, Wardha

MATERIALS AND METHODS

All the consecutive patients diagnosed as Lens induced glaucoma admitted in eye ward during period of December 2012 to October 2014 were enrolled and examined. After obtaining informed consent all the cases of lens induced glaucoma were interviewed and the socio-demographic history was noted in proforma which included age, gender, rural or

urban residence, literacy, occupation and socio-economic status. Socio-economic status was determined as per the B.G. Prasad's method for social classification of family (Kulkarni *et al*., 2013). The duration and progression of diminution of vision of one or both eyes, onset of pain, redness, watering in the affected eye, history of cataract surgery in the other eye was asked. Distance traveled to the hospital, knowledge about cataract and the reason for delay in presentation was noted. Each subject underwent a comprehensive ocular examination which included visual acuity, Slit lamp examination, grading of cataract, schiotz tonometry, gonioscopy, Lacrimal syringing, posterior segment evaluation and B-Scan where fundus was not visible to rule out posterior segment pathology. After complete evaluation, patients were inquired about reasons for delayed presentation to hospital for seeking treatment.

RESULTS

Majority of cases were in age group of 60-69 years. Delayed presentation was more in female patients as compared to males (Table 1).

Table 1. Age and sex Distribution

Age (years)	Male	Female	Total
40-49	2(33.34%)	4(66.66%)	6(100%)
50-59	4(36.36%)	7(63.64%)	11(100%)
60-69	15(31.90%)	32(68.10%)	47(100%)
70-79	18(43.90%)	23(56.10%)	41(100%)
>80	4(40%)	6(60%)	10(100%)
Total	43	72	115

Majority of the study subjects presented from rural area. 84 subjects (73.04%) were from rural area and 31 subjects (26.96%) from urban area (Table 2).

Table 2. Distribution of patients according to residence

Residence	No. of Cases	Percentage %
Rural	84	73.04
Urban	31	26.96
Total	115	100

Majority of the patients 88 (76.52%) came from distance ≤ 50 kilometers from hospital. And 27 patients (23.48%) came from distance more than 50 kilometers from hospital (Table 3).

Table 3. Distribution of patients according to distance from hospital

Distance(km)	No. of Cases	Percentage %
≤50 km	88	76.52
>50 km	27	23.48
Total	115	100

Iliteracy was noted as one of the barriers for delayed utilization of the services available. Majority of the study subjects in our study were illiterate. 79 subjects (68.7%) were illiterate. Only 4 subjects (3.48%) were educated above high school and rest 32 (27.82%) were educated below high school (Figure 1).

Table 4. Distribution of patients according to occupation

Occupation	No. of Cases	Percentage %
Farmer	23	20
Laborer	38	33.04
Not working	54	46.96
Total	115	100

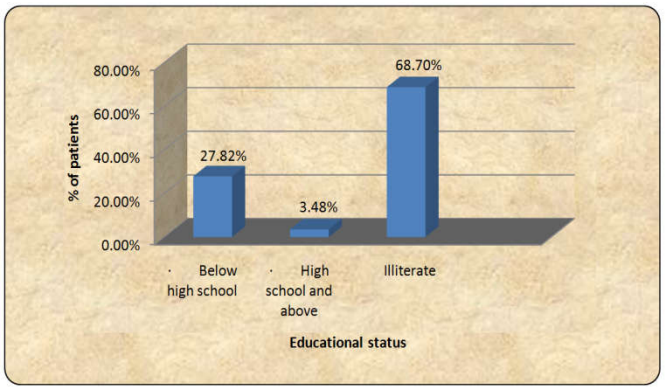

Figure 1. Distribution of patients according to literacy

Majority of the patients who presented were farmers (20%) or laborers (33.04%) and 54 subjects (46.96%) were idle i.e. were dependent on family members. All the subject from the working groups were daily wage workers (Table 4).

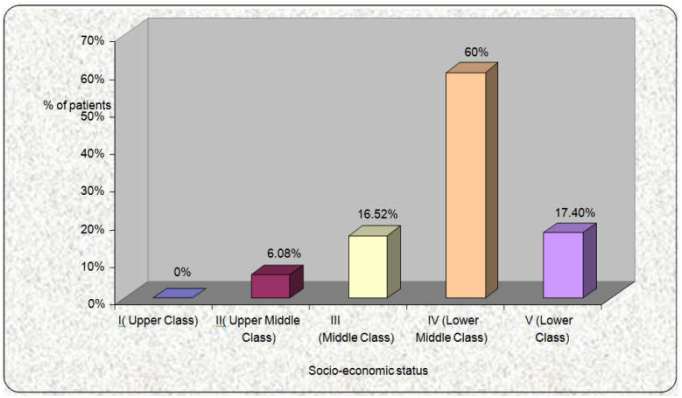

Figure 2. Distribution of cases (Patients) according to socio economic class

In our study none of the subjects belonged to socioeconomic class I. Majority of the subjects 69 (60%) belonged to socioeconomic class IV, followed by 20 subjects (17.4%) from socioeconomic class V (Figure 2).

Reasons for delayed utilization of cataract surgery

54.78% cases had immature cataract, 37.40% were pseudophakic, 6.08% cases had mature cataract and one eye (0.87%) was aphakic and normal crystalline lens was present in one eye (0.87%) (Table 5).

Table 5. Lens status in fellow eye

Lens status	Fellow eye	
	No.	Percentage %
Clear Lens	01	0.87
Immature Cataract	63	54.78
Mature Cataract	07	6.08
Hypermature Cataract	00	0
Pseudophakia	43	37.40
Aphakia	01	0.87
Total	115	100%

Best corrected visual acuity in the fellow eye of 6/6-6/12 was recorded in 9 eyes (7.83%), 70 eyes (60.87%) had visual acuity in between 6/18 to 6/60 while the remaining 36 eyes (31.30%) had visual acuity of less than 6/60 (Table 6).

The predominant reason for delayed cataract surgery utilization given by patients was lack of money in 43 patients (37.39%).

Table 6. Best corrected visual acuity in the fellow eye

Visual acuity	No. of eyes	Percentage %
6/6-6/12	9	7.83
6/18-6/60	70	60.87
<6/60	36	31.30
Total	115	100.00

The another reasons given were adequate vision in the fellow eye in 26 patients (22.60%), no escort in 9 patients (7.83%), fear of surgery in 8 patients (6.95%), ignorance was noted in 7 patients (6.09%) and 7 patients (6.09%) gave reason that they could manage their routine work, reason of long distance to hospital due to lack of transportation was given by 5 patients (4.35%), 4 patients (3.48%) presented late as they were busy in their work, poor geriatric care was seen in 3 patients (2.61%), 2 patients (1.74%) waited for cataract to mature, one patient (0.87%) gave reason of prolonged systemic illness for the delayed utilization of cataract surgery (Table 7).

Table 7. Reasons for delayed utilization of cataract surgery

Reasons for delayed utilization of cataract surgery	No of patients	Percentage (%)
Adequate Vision in other eye	26	22.60
Busy in work	4	3.48
Cataract not mature	2	1.74
Could Manage Routine Work	7	6.09
Fear of Surgery	8	6.95
Ignorance	7	6.09
Illness	1	0.87
Lack of Money	43	37.39
Long Distance	5	4.35
No Escort	9	7.83
Poor Geriatric Care	3	2.61
Total	115	100.0

DISCUSSION

Delay in cataract surgery is due to various conditions like we found in our study that rural background, distance from the hospital, illiteracy, occupational compulsions, socioeconomic status and good vision in fellow eye all were influential factors for delayed utilization of services, which may be considered as predisposing factors for development of lens induced glaucoma. Lens-induced glaucoma (LIG) is common in developing countries owing to the delay in cataract removal. Identification of these barriers and appropriate modification of eye care programme to improve surgical coverage is necessary. In our study majority of the patients were from rural area 84 subjects (73.04%) (Table 2). Rural background plays a significant role in the delayed utilization of the services. Prasanna and Rotti in their study reported that utilization of cataract surgery was greater in urban area compared with rural areas (Prasanna and Rotti, 2007). Similar findings were seen in other studies (Nirmalan *et al*., 2004; Vaidyanathan *et al*., 1999). Delayed cataract surgery in rural area may be due to the fact that the service providers are concentrated in major cities and towns so this has led to inadequate service provision to the rural poor (Vaidyanathan *et al*., 1999). It is observed that large proportions of people in a rural population who require eye care are currently not utilizing existing eye care services. In our study 76.52 % subjects came from within 50 kilometers from the hospital and 23.48 % came from distance more than 50 kilometers from the hospital (Table 3). Fewer amounts of patients reported from long distance. People living at longer distance from hospital often delay their treatment due to lack of transportation or due to no accompanying person. Ubah *et al*., found, distance and lack of companion to the surgery venue as one of the cause for delay in cataract surgery (Ubah *et al*., 2013). Majority of the subjects 79 (68.7%) were illiterate. (Table 4, Figure 1) and most of the subjects belonged to socioeconomic class IV and socioeconomic class V. (Figure 2) We observed that delayed cataract surgery uptake was common in illiterate due to lack of awareness; several other studies also had similar findings (Prasanna and Rotti, 2007; Vaidyanathan *et al*., 1999; Brilliant *et al*., 1991).

Similarly, Snellingen *et al*., also found that low socioeconomic status was a barrier to utilization of cataract surgery (Snellingen *et al*., 1998). In our study, 33.04% were laborers, 20% were farmers, all were daily wage workers and 46.96% were dependent on the family members (Table 4, Figure 1) It was observed that there was delay due to occupational compulsion because of harvesting, or other reasons and in persons who were dependent on family members for money. Patients having immature cataract or pseudophakia in other eye formed a major bulk of our study. (Table 5) majority of cases had fairly good vision in the fellow eye (Table 6) As a result of having fairly useful vision in the other eye, most of the patients neglected the other eye till they developed complication in the affected eye. In general role of rural background, distance from the hospital, illiteracy, occupation, poor socioeconomic status and good vision in fellow eye in delayed utilization of the cataract surgery has also been shown by various studies (Sarkar *et al*., 2010; Mehari *et al*., 2013). The predominant reason for delayed cataract surgery utilization given by patients was lack of money in 43 patients (37.39%). Cost was noted as one of the major barrier in delay in presentation for cataract surgery in other studies also (Snellingen *et al*., 1998; Gyasi *et al*., 2007). The another reasons given were adequate vision in the fellow eye (22.60%), no escort (7.83%), fear of surgery (6.95%), ignorance (6.09%), able to manage their routine work (6.09%), long distance to hospital due to lack of transportation (4.35%), busy in work (3.48%), poor geriatric care (2.61%), cataract not mature (1.74%) (Table 7). The different reasons for delay in cataract surgery uptake found in our study are similar to various studies mentione. Gyasi *et al*., found poverty, lack of escorts and fear as major factors preventing the cataract surgical uptake (Gyasi *et al*., 2007). Sinha *et al*., identified barriers like able to manage daily work, better vision in the fellow eye and cost as the greatest cause of delay of cataract operation (Sinha *et al*., 2014). Bettadapura *et al*., found "No one to accompany" and "Waiting for maturity" as main barriers in bilateral cataract blind cases (Bettadapura *et al*., 2013). It is found that people's use of health services is influenced by range of psychological, social, cultural and economic factors. It was observed that many of the reasons specified for poor services use are largely a consequence of poverty, lack of awareness, illiteracy, occupational compulsions, poor socioeconomic status and good vision in fellow eye and patients attitude; which may be considered as predisposing factors for development of lens induced glaucoma.

Conclusion

It can be concluded that lack of awareness and lack of money in rural population is a major barrier for early uptake of cataract surgery, inspite of the advances in cataract surgery

techniques. Reasonable good vision in fellow eye is responsible for the negligence on the part of patient to uptake cataract surgery. Thus proper health education, early screening and appropriately timed surgery can prevent vision threatening complication like lens induced glaucoma and limit morbidity in an otherwise uneventful cataract surgery. It is to be stressed upon spread of awareness regarding cataract and its implications among the rural community in the form of health education, better quality information and communication and also expansion of outreach programs to different communities is needed.

REFERENCES

Bettadapura GS, Datti NP, Donthi K, B.G. R, Ramaswamy SB, T. S. 2013. Barriers to the uptake of cataract surgery in a rural population of south Karnataka, India. *IJCRR*, 5(12): 77-82.

Brilliant GE, Lepkowski JM, Zurita B. and Thulasiraj RD. 1991. Social determinants of cataract surgery utilization in south India. The Operations Research Group. *Arch Ophthalmol*., 109(4):584-9.

Government of India, National Survey on Blindness and Visual Outcome after Cataract Surgery, 2001-2002, vol.77, National Programme for Control of Blindness, Ministry of Health, Government of India, New Delhi, India, 2002.

Gyasi M, Amoaku W. and Asamany D. 2007. Barriers to cataract surgical uptake in the upper East region of ghana. *Ghana Med J*., 41(4):167-70.

Kulkarni AP, Baride JP, Doke PP and Mulay, PY. 2013. Textbook of Community Medicine, 4th ed. Vora Medical Publication, Mumbai: 31-32.

Mehari ZA, Zewedu RT. and Gulilat FB. 2013. Barriers to cataract surgical uptake incentral ethiopia. *Middle East Afr J Ophthalmol*., 20(3):229-33.

Nirmalan PK, Katz J, Robin AL, Krishnadas R, Ramakrishnan R, Thulasiraj RD. and Tielsch J. 2004. Utilisation of eye care services in rural south India: the Aravind Comprehensive Eye Survey. *Br J Ophthalmol*., 88(10): 1237-41.

Prasanna T. and Rotti SB. 2007. Role of socio-economic factors in cataract surgery utilization in JIPMER Pondicherry. *Indian J Community Med*., 32(1):51-3.

Sarkar S, Mardin C. and Hennig A. 2010. Profile of the glaucomas and intervention in a large eye care centre in south-east Nepal. *Nepal J Ophthalmol*., 2(1):3-9.

Sinha U, Chanchlani M, Singh S.P. and Chanchlani R. 2014. "Barriers Responsible for Delayed Utilization of Cataract Surgery: An Eye Camp Study from Central India". *J of Evolution of Med and Dent Sci*., 3(11):2873-2878.

Snellingen T, Shrestha BR, Gharti MP, Shrestha JK, Upadhyay MP. and Pokhrel, RP. 1998. Socioeconomic barriers to cataract surgery in Nepal: the South Asian cataract management study. *Br J Ophthalmol*., 82(12):1424-8.

Ubah JN, Isawumi MA, Adeoti CO. Barriers to Uptake of Cataract Surgery: An Eye Camp Account. Research in Ophthalmology. 2013; 2(1):1-3.

Vaidyanathan K, Limburg H, Foster A, Pandey RM. Changing trends in barriers to cataract surgery in India. Bull World Health Organ. 1999; 77(2):104-9.

WHO Fact sheet No.214 Blindness: Vision 2020-control of major blinding disease and disorder.

****