Original Article

Barriers of High Cataract Surgery Rate in Rural Area of Barisal Division

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Abstract

Background: Cataract is the leading cause of preventable blindness in the world. the most important component of vision 2020 to eliminate the cataract related blindness as a signatory of vision 2020 programme the government of Bangladesh takes many effective steps to increase cataract surgery rate CSR through national eye care operation plan but still there are some obstacles that desisted the rural people to undergo surgery for cataract
Aim of the study: To find out the reasons for the low cataract surgery rate among the cataract patients in rural area of Barisal division. **Methodology:** This cross-sectional study was conducted on the District Sadar Hospital, Jhalkathi from January 2016 to December 2016 over 200 patients out of 500 cataract patients who are selected for cataract surgery but did not under one the procedures finally not the medical ground. The causes of unwilling to undergo surgery was asked about by personal discussion through a structured questionnaire. All the relevant information was recorded in the data collection sheet and were analyzed and displayed for dissemination. **Results:** Out of 200 patients 91 patients did not undergo surgery due to fear about the surgical procedure, which followed by 43 patients who abstained from surgery due to fear of become total blind after surgery, 41 patients did not undergo surgery for not to bear the relevant expenditure the other reasons are no care giver for post-operative care and fear of complications (as experienced by persons, previously underwent surgery) which refrained 14 and 11 patients respectively from surgery. **Conclusion:** To increase the cataract surgery rate (CSR) in rural area among the under privileged people to achieve the goal of VISION 2020, it is necessary to conduct awareness program as well base hospitals should be equipped with effective instruments and skilled manpower.

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Introduction

Cataract is defined as any opacity of the human crystalline and or its capsule due to congenital or acquired cause which may or may not impair functional vision. This is the commonest cause of reversible blindness worldwide. According to World Health Organization (WHO) report there are 40 million people are blind globally, most of them are due to reversible such as cataract, uncorrected refractive error etc. To combat these sort of blindness WHO launched a global initiative VISION 2020 to eradicate the reversible blindness by the year 2020. One of the most important components of this program is to increase the cataract surgery rate (CSR). According to latest available survey, there are 7.5 million people are blind in Bangladesh and 80% of them are due to cataract[1]. Every year there is addition of new cataract persons renders the number to become huge. The most common cause of cataract is aging, as the life expectancy of Bangladeshi people is increasing, the number of patients with cataract also increasing. The

only modality of treatment of cataract is the surgical extraction of cataractous lens. As a signatory of VISION 2020 program, Bangladesh government takes a lot of initiative through National Eye Care operation plan to increase CSR. Despite of Governments effort, cataract surgery rate is not increased that much extent particularly in some rural areas. The main factors might be customs, belief, wrong conception, fear of complication about surgery. Understanding the causes of underuse of cataract surgical procedures in diverse regions is crucial because the causes may vary from region to region and it aids in addressing the causes of decreased cataract blindness burden. There is little information available regarding the relative effects of many potential obstacles to receiving cataract surgery in Bangladesh's rural areas.

This study aimed to find out the barriers of increase cataract surgery rate in rural areas of Bangladesh. This study finding might help the policy makers to take effective program to develop awareness program among underprivileged people to undergo cataract surgery in time.

Methods

This cross-sectional study was conducted at the Department of Ophthalmology in District Sadar Hospital, Jhalkathi, Bangladesh during the period of January 2016 to December 2016. The study population consisted of 200 patients with age-related cataracts who had declined to undergo surgery after being finally selected for the procedure at the hospital. Patients suffering from other intraocular or ocular surface disease, uncontrolled diabetes or hypertension or having history of ocular surgery or trauma in the previous six months were excluded from the study. A non-random purposive sampling technique was employed to select these patients. Data were collected through comprehensive history-taking, thorough clinical evaluations, and relevant investigations. A structured questionnaire was used to engage patients in informal discussions to ascertain the reasons behind their refusal for surgery. All pertinent findings were meticulously recorded using a pre-designed data collection sheet, and subsequent data analysis was performed, with results presented through appropriate figures and tables.

Results

Table-1: Age distribution of the study subjects

Age group	Frequency	Percentage
45-50 years	23	11.5
50-55 years	61	30.5
55-60 years	82	41.0
60-65 years	27	13.5
>65 years	7	3.5
Mean (±SD)	**64.23±9.87(SD)**	

One third of the patients (30.5%) were in 50-55 years age group while 41.0% patients were in 55-60 years age group. The mean age of the patients was 64.23 years (table 1).

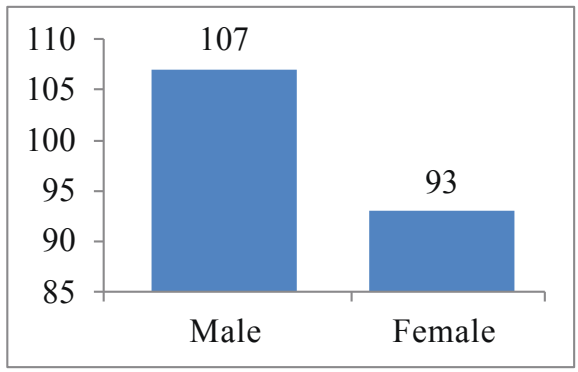

Figure-1: Bar diagram showing gender distribution study subjects

There were 107 male patients, constituting 53.5% of the total sample, while there were 93 female patients, accounting for 46.5% of the overall population (figure 1).

Table-2: Distribution of presenting visual acuity among study subjects

Visual acuity	No. of patients	Percentage
Perception of Light	30	15.0
Hand movement	43	21.5
Counting finger	104	52.0
6/60 or better	23	11.5

Among these patients, the majority (52.0%), exhibited a visual acuity level categorized as "Counting finger." The next most common category of visual acuity was "Hand movement," accounting for 21.5% of the total sample. In contrast, 15.0% of the patients had a "Perception of Light," indicating a very low level of visual perception, often associated with severe vision impairment. Finally, 11.5% of the patients exhibited a visual acuity of "6/60 or better".

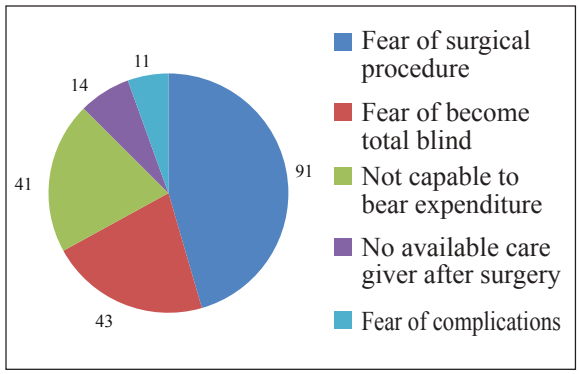

Figure-2: Pie chart showing distribution of reasons for not undergoing surgery among study subjects.

The most prevalent factor among the patients was the "fear of the surgical procedure" itself (45.5%). Additionally, 21.5% of patients cited "fear of becoming totally blind" as a significant concern. Furthermore, 20.5% of patients indicated that they were "not capable of bearing the expenditure" associated with the surgery. A smaller percentage, 7%, reported "no available care given after surgery" as a factor. Lastly, 5.5% of patients cited "fear of complications" as a factor influencing their decision, emphasizing concerns about potential adverse outcomes (figure 2).

Discussion

Cataract is regarded as leading cause of blindness in the world. In the developing country like Bangladesh, different government and non- government organizations are doing cataract surgery. Though the cataract surgery rate is increased from previous years, it is yet to improve to achieve the goal of VISION 2020. This is partly because of low demand-caused by barriers related to awareness, bad services, cost, and distance-and partly because of deficiencies in the supply of services. Other barriers, which largely reflected a lack of understanding of cataract and its current management, or fear of surgery, were quoted in just over one fifth of participants. This represents an opportunity for health education, which will need to take account of the very high levels of illiteracy found among individuals with operable cataract. Cataract blindness is more common in poor, rural, and illiterate patients than in urban and educated individuals. Studies in Nepal, India, and Nigeria show that people are not aware of the benefits of cataract surgery[2-4]. This can be achieved by members of the patients' own communities, who speak their language and understand their beliefs. Primary health-care workers should be able to provide this service. In practice, however, the priority for most primary health-care programmes in poor communities is improving child survival. They focus on nutrition, immunization, ante-natal care, and early treatment of acute infections. This means that primary health-care workers are rarely in contact with elderly patients with chronic painless loss of vision. An alternative approach is to train community workers who have the specific task of identifying cataract patients, and facilitating their referral to hospital. They may be health workers, or people who have themselves had cataract surgery. This can be done by going house to house, or by organizing screening eye camps. One study showed that using previously operated cataract patients was the most cost-effective means of identifying and motivating people in need of cataract surgery [5]. Whatever approach is used, close co-operation between the community and the eye care provider is essential[6]. The use of the mass media, particularly radio, to promote cataract

surgery, has been effective in some countries.

Cost is a barrier, and it was the most frequently encountered obstacle in Nigeria and Nepal[2,3]. The costs of surgery include not only the price of the operation, and the cost of transport to and from the clinic, but also lost income for the career and the patient. Patients who are willing to attend for surgery may be unable to persuade relatives to accompany them[3]. However, despite the provision of free transport and treatment, some patients are still unwilling to undergo surgery, which suggests that poverty may be used as a simple and acceptable explanation when the real barriers are more complex[3]. About 80% of the cost of a cataract operation is related to fixed costs-that is, staff salaries, building depreciation and maintenance, training, etc. These costs are difficult to reduce. However, where there is unused capacity, they will not increase even if the workload grows. This means that the more cataract surgery is performed, the lower the unit cost of each operation. Many eye clinics in poor countries are stuck in a vicious cycle of low surgical volume, leading to a high price for cataract surgery, which deters patients, leading to an even lower number of operations. The remaining 20% of the cost is related to consumables, such as eye drops, IOL, and disposable supplies. The cost of these can be minimized through local manufacture and bulk purchase[7].

In Barishal division, population is scattered, distances are great, and travel is difficult. In these circumstances it may be necessary to bring surgery closer to the patient, rather than expecting patients to come to the surgeon. The patients who are most remote from eye clinics are usually a long way from any functioning health facility. Alternatively, they may be in 'precarious situations', such as refugee camps, or conflict zones, where it is difficult to establish a permanent eye surgical centre. In these circumstances, it may be necessary for the surgical team to go to the patients, and to use whatever facilities exist-however inadequate they may be. Eye camps have some disadvantages. The surgical outcomes are not as good as surgery performed in a state surgical unit. Cost recovery is difficult. If there are any existing eye care facilities, the sudden arrival of an external surgical team may undermine the local eye workers. Follow-up and treatment of postoperative complications may be impossible. Although these are serious problems, mobile eye surgical teams may be the only way of reaching some patients, who would otherwise remain blind. If local eye workers are involved in the planning and follow-up, their work will be enhanced rather than undermined. An experienced team of surgeons and nurses, who are used to operating in difficult circumstances, can achieve acceptable surgical results, with a minimal risk of postoperative complications. Although no evidence exists for cataract surgery, a randomised trial has shown that trichiasis surgery may be carried out as safely in the patient's own village as at a health centre, and that performing the operation in the village enhanced the acceptability of surgery[8].

Conclusion

Barriers to increase cataract surgery vary according to local conditions and customs. Conversations with patients, village leaders, and women's groups may confirm the existence of barriers. Program planning to increase cataract surgical rates will need to determine the barriers in each area, whether relating to costs, distance, cultural/social factors, anxiety/fear or other barriers, and find creative ways to overcome them.

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