

The Rivers State, Nigeria Eye Care Program-the First Few Steps Towards Achieving V2020

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SUMMARY

AIM: To outline the outcome of the first eye camp of the eye care program in Rivers state which was established only in 2008 to reduce the burden of blindness in the state as revealed by the Nigerian national blindness and visual impairment survey results released in 2008 as much as possible to the lowest before the year 2020.

METHODOLOGY: A descriptive analysis of the activities of the Prevention of blindness committee, Rivers established in 2008 by the Ministry of health, Rivers state, Nigeria.

An analysis of the first eye camp held at the Rumuigbo health center, Rumuigbo, Port Harcourt is also presented from the records made at the time of the camp. The activities were partly sponsored by the Ministry of Health, Rivers state. Data analysis was with the help of a statistician using SPSS version 11.

RESULTS: The recently released Nigerian National Survey on Blindness and Visual Impairment revealed that about 15,000 people are blind from cataract in Rivers state, Nigeria. Over a 3 day period to mark World Sight Day 2010, a total of 455 persons were screened for cataract surgery at the above venue. The mean age was 46.2 years (SD± 17.55) with an age range of 1 and half to 99 years. The male female ratio was 1:1. A total of 125 patients (27.5%) had cataract of which 83 were mature. Refractive error also affected 125 people (27.5%). Sixty-five people (14.3%) were suspected to have glaucoma while 13(2.9%) and 45 people (9.9%) presented with corneal opacities and allergic conjunctivitis respectively. Other conditions seen include conjunctival degenerations, inflammatory conditions, staphylococci etc.

Cataract surgery was performed on 51 people (40.8% of those with all diagnosed with cataract and 61.4% of those with mature cataract. Other conditions that could not be treated on location were referred to the teaching hospital and the state hospital nearby. The postoperative cases were also referred to the same hospitals for follow-up. Follow up showed that majority(n=38, 74.5 %) attained 6/24 to 6/60 VA range by the end of the first week with improvement to the 6/12 to 6/18 range by the end of the first month in 30 (58.8%) of the patients.

CONCLUSION: It is highly desirable for periodic eye

camp to take place in Rivers state as it was an eye opener that even within the township, most people who are avoidably blind are within easy reach of secondary and tertiary health facilities that can offer eye care. Satisfactory visual outcome was obtained in the majority of cases operated upon. Government is within their rights to fund subsequent programs adequately as their input is necessary for sustainability. This will help reduce the burden of the cataract blind in the state though it is not likely that V2020 will be achieved at the current rate.

KEYWORDS: cataract surgery, glaucoma, refractive error, prevention of blindness, Rivers state, Nigeria.

INTRODUCTION

Globally, cataract is responsible for 47% of blindness with more than 90% of cataract blind people living in developing countries, most of which are poor¹. The HPI-1 (human poverty index 1) value for Nigeria, according to the 2006 report,² is 40.6 and is ranked 76th among the 102 developing countries for which the index has been calculated³. Nigeria's rates for extreme poverty and poverty are 70.8% and 92.4% respectively. With such high rates of poverty and cataract from a national survey⁴ having been noted to be the commonest cause of severe visual impairment and blindness (45.3% and 43.0% respectively, surgery is likely beyond the reach of most Nigerians if they have to pay for it. While cataract mostly related to ageing cannot be prevented, cataract surgery with insertion of an intraocular lens has been shown to be highly effective and proven to be one of the most cost effective healthcare interventions.^{5,6} A large proportion of these people therefore remain blind from untreated cataract. This is because many of them, mostly women are poor and live in rural areas. For these people, cataract surgery remains mostly out of reach. Workers have therefore found an established link between poverty and poor eye health^{7,8}. She found out that people who are visually impaired due to untreated cataract were poorer than those with normal sight. Cataract surgery can sometimes cost as much as one year's pay in some areas⁸. Living in a rural area also marginalizes inhabitants with regard to healthcare and the ability to access eye care services because most are located in urban areas and are privately owned. Public funded government health centers capable of giving adequate eye care located in rural areas are rare.⁹ Also being female carries a higher

risk of being blind and lower odds of having surgery to remove the cataract in many developing countries^{10,11}.

In Nigeria, the recent survey released in 2008 revealed that the prevalence of blindness in people of all ages was estimated to be 0.78%.⁴ This prevalence was significantly associated with age (increased with older age), gender (females had a higher prevalence), geopolitical zone (highest in the northeast zone of Nigeria) and literacy (worse in the illiterate) after adjusting for age and gender differences.⁴ However it did not differ by urban or rural place of residence.

Cataract surgery still remains the most cost effective surgical intervention due to the number of blind years that is saved the individual⁶ even when one is older. Later in life, sight is as much valued and important as at any other age and its loss is one of the things that is feared the most^{12,13}. So improving access to eye care services as well as its uptake is therefore very important. To do this the Nigerian national program for the prevention of blindness (NPPB) which is a government institution responsible for the coordination and implementation of eye care program in Nigeria, ensured that at state level, similar bodies are put in place to carry out prevention of blindness activities in a common goal towards achieving V2020 as a collective goal. Thus in December, 2008, the committee was set up by the Commissioner for health, Rivers state, Nigeria, with memberships drawn from the Ministry of Health, The Director of Public Health being the chairperson, local ophthalmologists, one of them being the coordinator. Other members include representatives of optometrists, ophthalmic nurses, the media, teachers, nongovernmental organizations, Colleges of health technology, Ministry of Education and a representative of Traditional Rulers.¹⁴

A 5 year plan was immediately drawn up in a stakeholders meeting held in the capital of the Rivers state from 2009 to 2013 with periodic evaluation and final evaluation to be carried out in 2014. The aim was to reduce prevalence of avoidable blindness and low vision through the provision of comprehensive eye care services which is efficient, accessible, affordable and sustainable to at least 50% of the population within a 5 year period as one of the conscious steps to be taken towards realizing V2020. The population being 5.2 million and the proportion of cataract blind in both eyes being 51.7%, the number blind from cataract is 14,670 people. To reduce this number to half within the period is daunting as there are only 15 fully qualified Ophthalmologists in the state along with 20 ophthalmic nurses, and about 100 optometrists as at the time of writing this report. The committee decided to start somewhere, after several advocacy meetings with top government officials and several media publicity campaigns with a cataract surgical camp, organized to commemorate the 2010 World Sight Day. Details of what transpired are here reported.

METHODOLOGY

A report of the activities of the Rivers state Prevention of Blindness Committee during the 2010 World Sight day celebrations in Port Harcourt, Rivers state, Nigeria. A cataract eye camp was held between the 11 and 13th of October, 2010 at the Rumuigbo primary health center, located in a suburb in Port Harcourt. This was preceded by a courtesy call on the Traditional ruler of Rumuigbo, Port Harcourt, HRM, Eze SN Wali, Eze Oha Aparara on Saturday 9th of October by members of the committee at his home to intimate him about the proposed camp which was to be held in his domain. A town crier was sent round to inform the citizens of the camp within the same period. There were 32 volunteers mostly drawn from members of the committee and the University of Port Harcourt teaching, Ophthalmology Department. Others came from the local School of nursing and Medical school and the State hospital (Braithwaite Memorial Hospital). All surgeries carried out on site at the health center were included in this report.

The demographics of the patients, the type of surgery, the power of intraocular lens used, the eye that was done, the outcome as measure with visual acuity (VA), one week postoperative, one month post operative were noted.

Data analysis was with the help of a statistician using SPSS version 11.

RESULTS

Thirty two eye care workers along with volunteer student nurses and medical students were on ground to assist within the 3 day period of the eye camp. There were 8 surgeons rostered through the 3 day period due to availability of only 2 operating microscopes. Out of the thousands that came for the period of the camp, 455 patients were screened for cataract in the nearby town hall as shown in figure 1, with 125 of them with operable cataract (27.5 %) refractive error was found in another 125 people (27.5%). Glaucoma was suspected in 65(14.3%) people with 20 people (4.4%) presenting with conjunctivitis, 45(9.9%) with allergic conditions. Thirteen people (2.9%) had corneal opacity, twelve(2.6%) presented with signs of inflammatory conditions of the eye. Retinal conditions affected 16(3.5%) subjects eg Age related macular degeneration (ARMD). Of the remaining 34 subjects, twenty four(5.3%) had presbyopia, two(0.4%) were normal while 8(1.8%) had other conditions eg anterior staphyloma, chalazia, vitreous haemorrhage, blepharochalasis, etc

The mean age of those who were screened was 46.5 years (SD \pm 17.55). With a range of one and half to 99 years. The male female ratio was 1:1 with 227 females and 228 females attending.

ALLERGIC CONDITIONS

Affected 45 subjects (9.9%) with more males (n=25)

than females (n=20) affected. They were given anti-allergic medications donated by distributors of ophthalmic preparations- Alcon (Summit Healthcare Pharm) and Dortemag ventures.

CORNEAL OPACITIES

Affected 13 people (2.9%) with 10 males affected and 3 females affected. They were referred to the nearest zone with corneal transplant services.

GLAUCOMA

Affected 65 (14.3%) subjects with 35 males and 30 females affected. They were referred to the secondary and tertiary healthcare providers in the neighborhood.

REFRACTIVE ERRORS

Refractive errors were found while screening 125 people (27.5%). No provision was made for glasses however as it was a purely cataract camp. They were referred to the secondary centers. Twenty four people who were found to be presbyopic were also referred.

CATARACT

More males presented with this condition (n=71) than females (n=54). Out of the 125 cataracts, 94 were senile in nature (75.2%), 21 were presenile (16.8%), 4 were congenital and 2 each were developmental, traumatic and post uveitic in etiology. Eighty three patients had mature cataracts of different etiology. Fifty one eyes(40.8% of those with all diagnosed with cataract and 61.4% of those with mature cataract) were operated upon with both extra capsular and small incision techniques as

day case and were given their first day postoperative check before being discharged to nearby hospitals with eye departments- the University of Port Harcourt teaching hospital, The Braithwaite memorial hospital (a secondary health center) and The Lens Eye group of clinics, Port Harcourt (a private hospital involved in charity work to which the author is affiliated). The 4 congenital cases presenting were referred to a tertiary institution for proper management as no general anesthesia facilities were available at the venue of the camp.

Out of those that had surgery (n=51) the numbers of female patients were 15(29.4%) while 33(64.7 %) were males. The surgeries were carried out on the RE in 17 and in the LE in 24 patients. The mean age for everybody who had surgery was 53.31 yrs. The mean age of the men who had surgery was 58.21 yrs while 48.93 yrs was the mean age of the females who had surgery.

OUTCOME OF CATARACT SURGERY

Standard power of intraocular lens (21D) was used as there were no facilities to carry out biometry. One week and one month postoperatively, the outcome as measured with Snellen visual acuity is as shown in figure 2. Majority(n=38, 74.5 %) fell in the 6/24 to 6/60 VA range by the end of the first week with improvement to the 6/12 to 6/18 range by the end of the first month in quite a number of the patients(n=30, 58.8 %) . Only 2 patients (3.9%) remained with less than 6/60 VA at the end of the 1st month after surgery. Only 9(17.6%) patients were able to attain the 6/6 to 6/9 VA range.

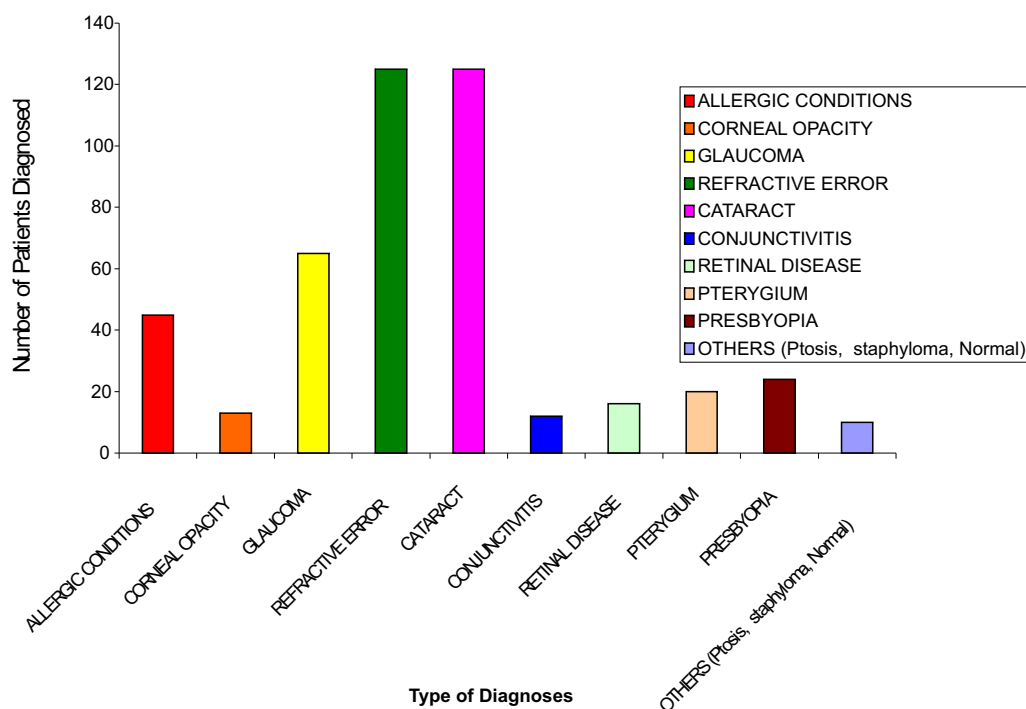


Figure 1: Pattern of Diagnoses of Patients at Rumuigbo Eye Camp during World Sight Day 2010

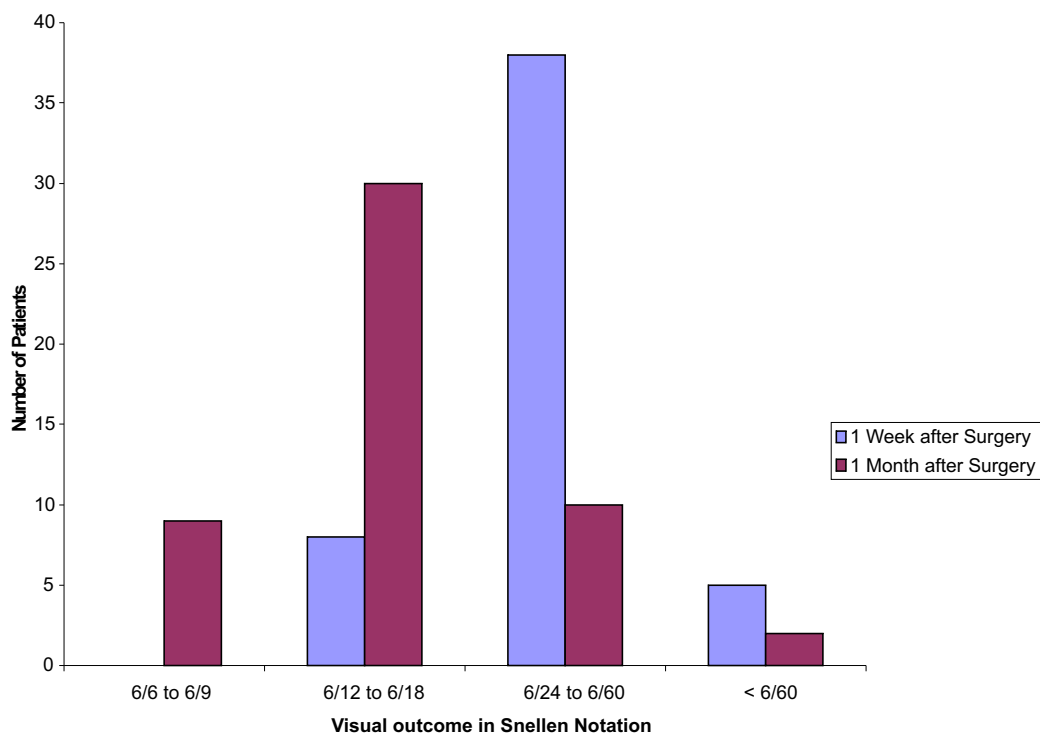


Figure 2: Visual Outcome of Cataract Surgery on World Sight Day 2010 at Rumuigbo Port Harcourt Eye Camp

DISCUSSION

Eye camps in this region have been noted anecdotally to enjoy better patronage in terms of the volume of surgeries that take place per period than established eye care centers particularly government owned. Studies may however be necessary to establish this fact. A publication has however stated that eye camps have threatened the sustainability of permanent eye hospital services¹⁵. This may be attributed to the fact that protocol (which is prevalent in these established centers) are usually dispensed with, making the service more accessible. Also they are often free to the patient, which often brings them in large numbers from other distant areas to the camp venue necessitating the use of crowd control crews. This camp was advertised to be free and formalities and protocol was dispensed with as much as possible with most beneficiaries having their surgery the same day it was diagnosed after thorough evaluation and preparation. This hardly ever happens in the hospitals. Materials were sterilized ahead of time to ease having to sterilize essential items on a daily basis.

The large turnout of over 3000 people was due to the advertisement of the eye camp on communication networks two weeks prior to the event. This enabled adequate arrangements to be made by families and caregivers to bring their blind relations to the venue in good time.

Therefore there were some issues in terms of coping with the crowd as not everybody could be attended to by the end of the 3 day period, most had to be turned back. The surgeons also could not cope with the number of

operable cataracts that was discovered (n=125) because there were just 2 microscopes available, though there were up to 3-4 surgeons present each day leaving them underutilized on a daily basis. Only an average of 17 surgeries per day was therefore performed by these surgeons, though the first day was a little slower being the first day. This was due to activities like the opening ceremony, evaluation, setting up the theater etc which was necessary that first day.

The focus of surgery was mainly on cataract because it is the most cost effective of the interventions in ophthalmic care.⁶ in terms of restoring a previously blind person back to be a bread winner. Other benefits include increasing life expectancy¹⁶ More men were noted to have had surgery compared with women during the eye camp. This was probably because, more men than women attended the camp. Gender inequality in access to eye care services have been observed by different workers, less access to information, , greater barriers to traveling to services, greater resignation to the fate of blindness and confinement to domestic roles are some of the factors that are responsible^{10,11}.

After their surgery, they were directed to both secondary and tertiary hospitals including nearby private hospitals where specialists were available for their follow up and rehabilitation. The visual outcome was encouraging with about 96.1 % achieving VA in the range of 6/60 or better within a month of surgery. This is comparable to other eye camps held in India¹⁷ and South Africa¹⁸ where a VA 6/60 or better were attained in 87.9% and 92.4% respectively of patients within 6 weeks of surgery.

Those who were corneal blind . Eye banks are not as functional in Nigeria when compared with other countries. It is possible that the idea of donating 'eye's still a little out of the ordinary for them.^{19,20} shown. However the eye bank in Lagos, Nigeria is now poised to deliver corneas to those who require it according to a recent communication from its management in 2010. None the less they were referred to the few places in the country that have such facilities.

Patients with allergy were counseled and given eye drops and referred to the appropriate physician if necessary.

Uncorrected Refractive errors is another cause of avoidable blindness¹⁹ and unfortunately could not be addressed due to lack of proper funding to purchase needed lenses, frames and other consumables. This was disappointing to the patients and will require to be addressed in future eye camps. Simple glasses have been shown to convert someone from being blind to a sighted individual^{21,22}. They are also relatively inexpensive if bought in large quantities.

The financial backing we had was also very low in comparison to the work that we encountered and set out to do. Otherwise arrangements for more equipment would have been made which would have made the community feel the impact more. However, despite this, many of the beneficiaries of the surgeries were very grateful at the end of the follow up period as many of them were blind in both eyes and now could move around and earn their daily bread now. Prior to the camp they were housebound and had to depend on others to feed. Some who were relatively young and needed to go to school could not go and so they ended up staying at home or in the village while their sighted mates continued without them. After they recovered from the surgery some went back to re enroll in school or to learn a trade in order to earn their daily bread.

However those with other conditions that needed lifelong treatment and follow up like glaucoma could not be helped in a camp situation and were referred to nearby secondary and tertiary hospital for evaluation and treatment which includes life long follow up which was impossible in a camp setting. At best, follow-up can only be given within the period the camp is on. Once the camp is over, patients who were not properly directed or got the information wrong, end up getting lost with no one to treat them. As much as possible information was given to the patients on where to go and what to expect. Unfortunately during this camp, due to poor funding, there was no printed information pamphlet to hand out to the patients. Once there is better funding, such matters will be addressed.

CONCLUSION

Eye camps^{19,20} have been shown to positively change the lives of patients who otherwise would have remained blind for the rest of their lives as shown by our statistics of the uptake of surgery. The outcome was also encouraging as over 96.1% of patients attained best VA of 6/60 or better one month after surgery and is comparable to other series where similar surgery has been done.

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