

Prevalence of Visually Significant Cataract and Factors Influencing Cataract Surgery Uptake in a High-Volume Hospital-Based Eye Care Outreach

Momoh RO¹, Osaguona VB¹, Okeigbemen VW¹, Alikah A², Azeta BI³, Ese-Onakewhor JN¹, Otabor-Olubor OJ¹, Kayoma DH¹, Obasuyi OC², Oronsaye DA¹, Osho FE¹, Iyiriario IA¹, Ohanaka IA¹

¹Department of Ophthalmology, University of Benin Teaching Hospital, Benin, Edo State

²Department of Ophthalmology, Irrua Specialist Teaching Hospital, Irrua, Edo State

³St. Teresa Hospital and Laser Centre, Benin City, Edo State.

Corresponding author: Momoh RO,

Email: rita.momoh@uniben.edu.ng

Background: Cost and distance are major barriers to the uptake of cataract surgery.^{1,2} Free cataract surgical outreaches are interventions to overcome these barriers and improve cataract surgical uptake and reduce the burden of cataract blindness.³ This study is an appraisal of a free hospital-based screening and cataract surgery outreach in Edo State to determine the proportions of patients with visually significant or operable cataracts and factors influencing uptake of cataract surgery when surgery is free to the patient.

Methods: An evaluation of the findings of a 12-day free eye screening and cataract surgical outreach in the University of Benin Teaching Hospital in November 2021. The outreach, sponsored by a group called "Friends of Prof Osinbajo" was well publicized and offered free glasses and free cataract surgeries for beneficiaries across the south-south zone of Nigeria. Visually significant cataract (VSC) was defined as "any case of lens opacity with best corrected visual acuity of 6/60 or worse where the primary cause of vision impairment or blindness is believed to be due to cataract". Final selection for surgery was made by senior resident doctors and consultants after slit lamp examination with a fundus lens (+78D/90D) where necessary. Main outcomes were the prevalence of VSC and the determinants of uptake of free cataract surgery. Data analysis was a descriptive summary with a bivariate

analysis for determinants of uptake of free cataract surgery.

Results: A total of 3,283 participants were screened, 1,961 (59.7%) were females, with a male to female ratio of 1:1.5. The mean age of participants was 52.5 ± 17.6 SD years and the age range was from 2 to 102 years. A majority (80.7%) were over 40 years and 2,202 (68.4%) resided in the rural areas.

The proportions of the patients with lens opacities, visually significant cataracts and visually significant cataracts who had surgery among the participants that were screened is presented in Figure 1. There were more males, 235 (56.4%) who had surgery than females, with a male to female ratio of 1.3:1. The predicting factors for undergoing cataract surgery were male sex, older age (51- 90 years), and rural residence (Table 1).

The common reasons for not undergoing cataract surgery were uncontrolled systemic comorbidities (24, 17.3%), glaucoma/ uncontrolled intra-ocular pressures (70, 50.1%), complicated cataracts (15, 10.9%) and miscellaneous factors (29, 21%). Sixty-one (14.6 %) of the operated eyes were second eye surgeries.

Discussion: Almost a quarter of those with visually significant cataracts could not take up surgery due to social and clinical factors. Male sex, older age and rural residence were significantly associated with higher uptake of cataract surgery. Gender-related inequalities are associated with access to cataract surgery with women having less access for economic and social reasons.⁴ Clinical factors which affected uptake are associated with the risk of perioperative complications.^{5,6} Aina et al⁷ (Ibadan) reported that about 40% of patients experienced delays in accessing cataract surgery due to systemic hypertension. Provision should be made for spillover surgeries for those affected.

Conclusion: A fifth of participants who attended this free eye-care outreach had visually significant cataracts. Male sex, older age and rural residence were associated with a higher uptake of cataract surgery. Uncontrolled systemic co-morbidities and advanced glaucoma/ uncontrolled intraocular pressures were common reasons for attrition in the numbers who had surgery. This information may guide our expectations in outreaches.

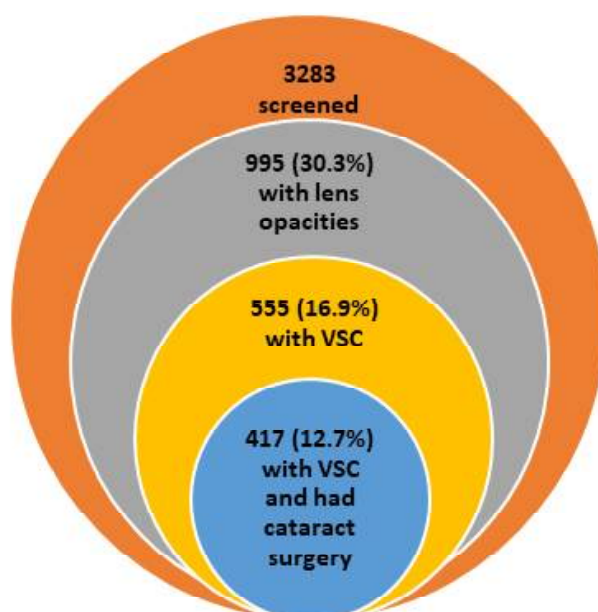


Figure 1: Proportions of patients with lens opacities, visually significant cataracts and visually significant cataracts who had surgery among participants screened.

Table 1: Predictors of participants undergoing cataract surgery

Variable	Reference category	OR (95%CI)	P value
Sex			
Male	Female	2.427(1.662-3.544)	<0.0001*
Age category (years)*			
≤ 10	31-40	0(0-)	0.998
11-20		0.413(0.093-1.833)	0.245
21-30		0.198(0.023-1.723)	0.142
41-50		1.2(0.466-3.09)	0.706
51-60		3.154(1.301-7.643)	0.011
61-70		6.007(2.505-14.405)	<0.0001*
71-80		7.168(2.881-17.836)	<0.0001*
81-90		6.681(1.842-24.232)	0.004*
>90		0(0-)	0.999
Educational Level			
Primary	Non-Formal	1.185(0.784-1.793)	0.421
Secondary		0.752(0.462-1.223)	0.251
Tertiary		0.755(0.443-1.286)	0.301
Marital status			
Married	Single	0.453(0.203-1.012)	0.054
Divorced		0.424(0.098-1.837)	0.251
Widowed		0.789(0.311-2.003)	0.618
ISCO Occupational Classification			
Level II	Level I	0.881(0.568-1.365)	0.570
Level III		0.966(0.632-1.476)	0.872
Level IV		0.866(0.171-4.388)	0.862
Residence			
Rural	Urban	2.782(2.01-3.852)	< 0.0001*

References

1. Ukponmwan C, Afekhide O, Uhumwangho O. Reducing the barriers to the uptake of cataract surgical services in a tertiary hospital. *Orient J Med* 2011;22.
2. Obasuyi OC, Uhumwangho OM, Ukponmwan CU. Overcoming the Barriers to Cataract Surgical Uptake in a Tertiary Hospital. How Patients Do It. *Niger J Ophthalmol* 2021;29:139.
3. Mailu EW, Virendrakumar B, Bechange S, Jolley E, Schmidt E. Factors associated with the uptake of cataract surgery and interventions to improve uptake in low- and middle income countries: A systematic review. *PLoS One* 2020;15.
4. Gilbert CE, Lepvrier-Chomette N. Gender Inequalities in Surgery for Bilateral Cataract among Children in Low-Income Countries: A Systematic Review. *Ophthalmology*. 2016;123(6):1245-1251.
5. Lundström M, Barry P, Henry Y, Rosen P, Stenevi U. Visual outcome of cataract surgery; Study from the European Registry of Quality Outcomes for Cataract and Refractive Surgery. *J Cataract Refract Surg*. 2013; 39:673-679.
6. Behera BK, Satish K, Jena SK, Hussain M, Samal S. Prevalence of Hypertension And Diabetes Mellitus Among People Seeking Cataract Surgery In Rural South India. *The Internet Journal of Epidemiology*. 2012; 10.
7. Aina AS, Ogundipe A, Ayorinde OO. Systemic co-morbidities as a barrier to uptake of cataract surgery in Ibadan, Nigeria. *J Clin Med Kazakhstan* 2020; 4:41–44.

Complication Profile following Pterygium Surgery at Outreaches in Benin City: A Short-Term Report

Momoh RO, Ohanaka IA, Ukponmwan CU, Oduware GU, Ukponmwan R, Popoola I, Eghonghon AO, Abubakar B, Achonye O, Omoruyi O.

Department of Ophthalmology, University of Benin Teaching Hospital, Benin-City, Edo State, Nigeria

Corresponding author: Momoh RO,

Email: rita.momoh@uniben.edu

Background: Complications following pterygium surgery are varied and recurrence is common¹⁻³. Mitomycin C used as an adjuvant therapy has been proven to reduce recurrence⁴⁻⁷. The aim of this study is to give a preliminary report of the complication profile, especially of recurrence in a cohort of patients recruited from outreach camps who had pterygium excision.

Patients and Methods: A cross-sectional study of patients who had pterygium excision at two free eye care outreaches conducted four months apart in the same tertiary hospital. Each patient had a complete ophthalmic evaluation with grading of the pterygium and type, noted as primary or recurrent. The bare sclera technique was used with application of Mitomycin C (0.04%). Surgeries were done over a total period of 4 days and patients are on a follow-up protocol for 12 months. A preliminary report at 3 months is here analyzed and reported. Patients with less than 3 months of follow up were excluded.

Results: 59 out of 65 patients who had surgical excision were studied. Their mean age was 46.39 ± 12.02SD years and age range was 22 to 75 years. Eight (13.6%) patients had grade I, 21 (35.6%) grade II, 20 (33.9%) grade III and 10 (16.9%) had grade IV pterygium. Three (5.1%) had recurrent pterygium while the others were the primary type. Post-operative complications were seen in 27 (45.8%) patients which included persistent epithelial defect in 6 (10.2%) patients, dry eye symptoms in 8 (13.6%), granuloma in 2 (3.4 %), steroid -induced ocular hypertension in 6 (10.2%), recurrence in 6(10.2 %) patients and 1(1.7%) case of sclera melting.

Discussion: The profile of complications seen is similar to that reported from studies in the sub-region and elsewhere.²⁻⁷ The recurrence rate seen in this study is similar to that reported (14%) by Waziri and Ukponmwan⁶ but most recurrence occurred between the 4th and 6th month in their 12-month review. However, an earlier study by Ukponmwan and Osahon⁷ reported a lower rate of 5.6% with use of intra-operative mitomycin 0.04%. A 10% recurrence at 3 months post-surgery is significant to note while we continue to monitor these patients for the long-term findings to make more valid inferences. The bare sclera technique is associated with 24 - 89% recurrence but this has been shown to decrease significantly with use of adjunctive therapies ranging from application