

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

of Beta-irradiation, Mitomycin-c, 5-Fluorouracil, intra-lesional Bevacizumab, Argon Laser, conjunctival autograft or other flap rotation procedures as PERFECT (Pterygium extended removal followed by extended conjunctival transplantation) to amniotic membrane transplant (AMT) procedures with or without tissue glue.⁷⁻¹¹. The choice of adjunctive therapy will depend a lot on factors such as availability of materials needed, manpower, skills and setting of the surgeon^{4,12}. In Sub-Saharan Africa, bare sclera technique with adjunctive MMC in recommended doses of 0.4mg/ml remain popular because of these factors.

Conclusion: The bare sclera technique with mitomycin-c is easy and useful in an outreach setting. At 3-months of follow-up, the complications are varied ranging from benign to severe. The recurrence rate of 10% at 3 months is remarkable and long-term analysis is awaited.

Keywords: *Outreach, pterygium, Excision, Bare sclera, Mitomycin-C, Complications, Recurrence.*

References

1. Kodavoor SK, Preethi V, Dandapani R. Profile of complications in pterygium surgery - A retrospective analysis. *Indian J Ophthalmol.* 2021;69:1697-1701.
2. Youngson RM. Recurrence of pterygium after excision *Br J Ophthalmol* 1972; 56:120-125.
3. Abiose A. Treatment of pterygium in Lagos, Nigeria. *E Afr Med J* 1997;54:327-331.
4. Singh SK. Pterygium: Epidemiology, prevention and treatment. *Community Eye Health.* 2017; 30: S5 – S6
5. R.aiskup F, Solomon A, Landau D, IIsar M, Frucht-Pery J. Mitomycin C for pterygium: Long term evaluation. *Br J Ophthalmol* 2004; 88:1425-1428.
6. Waziri-Erameh MJ, Ukponwan KU. Evaluation of the effectiveness of intraoperative mitomycin C in pterygium surgery for African eyes. *Sahel Med J* 2007; 10:132-136.
7. Ukponmwan CU, Osahon AI. Effect of Intraoperative Mitomycin C on the Re-currence rate of Pterygium in Nigerians. *W Afr J Pharm Drug Res* 2002; 18:17-20.
8. Simsek T, Gunlap I, Atilla H. Comparative efficacy of beta irradiation and mitomycin-C in primary and recurrent pterygium. *Eur J Ophthalmol.* 2001;11:126–132.
9. Okoye O, Oguego NC, Chuka Okosa CM, Ghanta M. Short Term Results of Pterygium Surgery with Adjunctive Amniotic Membrane Graft. *Nig J of Clin Pract* 2013; 16: 356-359.
10. Hirst LW. Prospective study of Primary Pterygium Surgery using Pterygium Extended Removal Followed by Extended Conjunctival Transplantation. *Ophthalmology.* 2008; 115:1663–1672.
11. Chand T, Chauhan A, Gaur S, A comparative study of graft stability, complication profiles and patient comfort among sutureless glue-free and sutured conjunctivo limbal autograft in pterygium surgery of Western Rajasthan. *Indian J Clin Exp Ophthalmol* 2020; 6:457-462.
12. Mohammed I. Treatment of pterygium. *Ann Afr Med* 2011; 10:197-203.