

Ocular Surface Squamous Neoplasia - A Case Presentation

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Introduction: Ocular surface squamous neoplasia (OSSN) as proposed by Lee and Hirst in 1995 comprises a wide spectrum of dysplastic changes of the ocular surface epithelium.^{1,2} Risk factors include immunosuppression (HIV/AIDS), ocular surface HPV infections (subtypes 16 and 18), and exposure to UV light, etc.^{1,3}

Common symptoms are growth in the eye, redness, tearing, and foreign body sensation; however, in very advanced cases, necrotizing scleritis, associated with severe pain and visual loss. It is usually unilateral and in the interpalpebral limbal stem area. Signs are fleshy conjunctival lesions with a gelatinous, leukoplakic or papillary appearance which may be flat/raised/localized/diffuse, +/-feeder conjunctival vessels.¹⁻³ Excisional biopsy with histology gives the definitive diagnosis.^{1,3}

Case Presentation: A 43year old female with retroviral disease who presented with 4months history of growth in the left eye which had progressively increased in size with associated redness and foreign body sensation. General and systemic examinations were normal. Ocular examination revealed best corrected visual acuity of 6/9 in each eye. The conjunctiva on the left had a temporal gelatinous lesion with

irregular surface and borders with the presence of feeder vessels invading the cornea circumferentially. Other ocular findings were essentially normal.

She had an excisional biopsy under local anaesthesia with mitomycin C and amniotic membrane transplant and a soft bandage contact lens was placed over the cornea. Intraoperatively, fluorescein dye was applied to delineate diseased tissue from healthy tissue. Keratosclero conjunctivectomy was done using the "no-touch" technique, excising up to 4 mm tumor free margins using a crescent knife. Wet field cautery was applied to secure hemostasis. Cotton bud soaked in mitomycin C was applied over the bare sclera followed by copious saline irrigation. Amniotic membrane graft was applied over the cornea extending to the bare sclera. Soft bandage contact lens inserted. Topical steroids and antibiotics were applied and the eye was padded. On the 1st day post op, best corrected visual acuity was 6/24 in the left eye, she had periorbital edema, hyperemia, subconjunctival hemorrhage, cornea was clear and there was bandage contact lens in situ. She was placed on topical steroids, topical antibiotics, topical cyclosporine, systemic analgesics and systemic antibiotics. On the 10th day post op, best corrected visual acuity on the left eye was 6/18, and the bandage contact lens was in situ.

Histology report: Macroscopy: Four fragments of grey white tissue, altogether measuring 3x1.5x0.2cm. Microscopy: Histologic sections showed stratified squamous epithelium with several cell layers and areas of papillary projections with loss of polarity. The cells exhibited increased nuclear-cytoplasmic ratio with large vesicular nuclei, occasional prominent nucleoli and moderate amount of eosinophilic cytoplasm. Mitoses were frequent. The full thickness of the epithelium was involved. Histopathologic findings were consistent with the diagnosis of Carcinoma in-situ of the conjunctival squamous cell epithelium. She was referred to the oncology unit for further care, on topical preservative free cyclosporin and tears substitutes.

Conclusion: The role of excisional biopsy and histopathological correlation is important in the management of ocular tumors. Follow up and

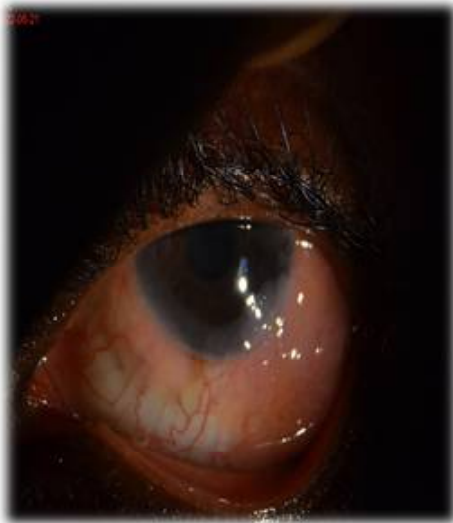


Figure 1: A photograph of the patient's preoperative left eye with 360° circum-limbal kerato-conjunctival mass with more affectionation at the bulbar and forniceal conjunctiva infero-temporally with complete extensive limbal stem cell involvement.



Figure 3: The patient's left eye 10 days postoperative findings are the bandaged contact lens in-situ, healing limbal stem cell, ropy discharge attributable to iatrogenic ocular surface disease and antibiotic-steroid ointment.



Figure 2: Intraoperative application of the mitomycin C with the cotton bud after limbal quadrant after quadrant conjunctivectomy with 4 mm clearance from the corneal limbus. The role of the intraoperative fluorescein dye in minimizing corneal epithelial tissue damage and delineation of the tumour cells from the normal conjunctival tissue is important.

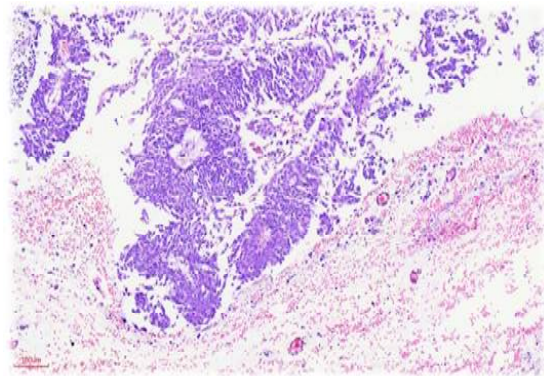


Figure 4: A micrograph of the excised tissue with several cell layers and areas of pillary projections with loss of polarity and frequent cellular mitoses with the involvement of the full thickness of the conjunctival epithelium.

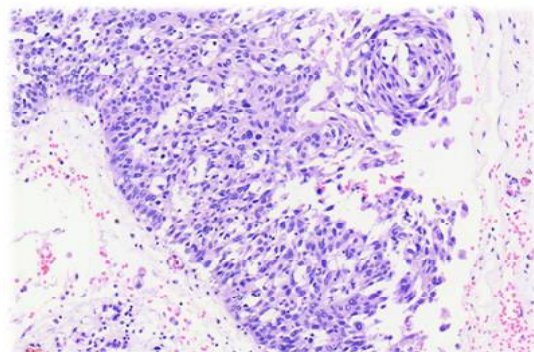


Figure 5: A micrograph of the excised tissue with cells exhibiting increased nuclear-cytoplasmic ratio with large vesicular nuclei, occasional prominent nucleoli and moderate amount of eosinophilic cytoplasm.

rehabilitation for severe ocular surface disease is crucial.

Keywords: Ocular surface squamous neoplasia, Human immunodeficiency virus.

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Three-Month Postoperative Visual Outcomes of Cataract Patients at Eye Foundation Community Hospital, Ogun State

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Background: Cataract remains the principal cause of blindness globally¹. The Nigerian National Blindness survey identified cataracts as the commonest cause of severe visual impairment (SVI) and blindness.² World Health Organization (WHO) recommends that the postoperative visual outcome of cataract surgery cases should be 6/18 or better in at least 80% of the cases and best corrected (or pinhole) should be 90% or more.³ Many population-based studies done in developing countries in the 1990s showed that postoperative visual acuity (VA) was worse than

6/18 in 40-75% of patients.⁴⁻⁷ More recently hospital-based postoperative VA is in the region of 60-70% of patients with 6/18 or better.⁸⁻⁹ We aimed to determine the visual outcome of cataract surgeries postoperatively on the first day, one and three months.

Methods: All patients 18 years and above operated on for cataract surgery without comorbidity were included in the study. This retrospective case series was carried out over a 3-month period from June 1st, 2019 to August 31st, 2019. Types of surgery done were manual small incision cataract surgery (MSICS) and phacoemulsification. Visual outcome was assessed on the first day, first month, and the third-month post operatively. Snellen's visual acuity was converted to log MAR. P value < 0.05 is determined as statistically significant.

Results: Two hundred and fifty patients were included in this study. The mean age of patients who had surgery was 66.9 years ± 10.6 years. Two hundred and ten patients (84%) had Manual Small incision Cataract surgery (SICS), and 30 (12%) had modern phacoemulsification of cataracts. Table 1 & Figure 1 show comparison between pre- and post-operative VA.

Discussion: The mean age of patients who had surgery in our study was 66.9 years ± 10.6 years. This is comparative with the mean of 66.4 years reported by Bulus *et al.*¹⁰

Our study reported lower preoperative VA compared to the study by Sumathi *et al.*¹¹, who reported preoperative VA < 6/60 accounted for 72.9% while higher than 50.7% reported by Udoh *et al.*¹² Most studies show that in developing countries, the majority of patients present to the hospital with blindness in at least one eye.^{12,13}

At 4 weeks postop, 93.2% of patients had best corrected (with pinhole) visual acuity of 6/18 or better. (p= 0.192 respectively). These are comparative albeit lower than 98.1% and 94.5% reported by Chethana *et al.*¹³ and Udoh *et al.* respectively.¹² While at 3 months, 92.4% had best corrected (with pinhole) visual acuity of 6/18 or better. (p= 0.038 respectively).

Conclusion: In this study, there was an appreciable improvement in the visual outcome following cataract surgery in line with WHO recommendations. It is important to audit cataract surgical outcome and train young