Ocular surface squamous neoplasia: A retrospective review from tertiary eye care centres in Malaysia

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ABSTRACT

Introduction: Ocular surface squamous neoplasia (OSSN) is a spectrum of diseases encompassing from mild, moderate and severe dysplasia to invasive squamous cell carcinoma of the ocular surface. The purpose of this study is to review the clinical-demographic profile, histopathological features, and recurrence in patients with OSSN. **Materials and Methods:** This is a retrospective cohort study design involved patients with proven histopathological report of either corneal-conjunctival intraepithelial neoplasia (CIN) or squamous cell carcinoma (SCC) from January 2016 to December 2021 at two Tertiary Eye Centres in Malaysia. The patients' demographics, symptoms, clinical characteristics, histopathology, treatments, and outcomes were reviewed. **Results:** A total of 62 eyes involving 59 patients with proven OSSN were studied. Majority of the cases were male (76.3%), with a mean age of 65. 2 ± 11.81 years. About 32.2% worked as a farmer. Sun exposure and smoking are the predominant risk factors observed in this study. Histopathological examination revealed 69.4% were CIN, while 30.6% were SCC. Majority of the cases were treated surgically with adjunctive cryotherapy and topical MMC postoperatively. There were 5 cases (8.1%) of tumor recurrence after 1 year post excisional biopsy. Two cases of recurrence were treated with topical MMC and had completed resolution. Another 3 cases required surgical excision after chemo- reduction with topical MMC. Tumor pigmentation showed the significant risk factor that influences the recurrence of the tumors ($p = 0.026$). **Conclusion:** CIN is more common than SCC, which affects the male population in Malaysia with a background history of sun exposure and smoking. The recurrence rate was reduced with the use of topical Mitomycin C as an adjunctive treatment postoperatively. Nevertheless, the presence of tumour pigmentation may be associated with the recurrence of OSSN.

Keywords: Cornea, Conjunctiva, Intra-epithelial neoplasia, Ocular surface squamous neoplasia, squamous cell carcinoma