· Case report ·

Overt conjunctival squamous cell carcinoma: a case report

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Abstract

• An otherwise healthy man, 37-year-old, presented to eye clinic with 5 months history of a painless but rapidly enlarging lesion in his right eye. Ocular examination showed a whitish pedunculated mass located at the temporal limbus in the interpalpebral region of his right eye. The mass was excised surgically and the histopathological examination revealed a well-differentiated squamous cell carcinoma. This case showed an unusual occurrence of conjunctival squamous cell carcinoma in a young healthy Asian patient residing in tropical climate. Chronic sunlight exposure is a major risk factor. Any ocular surface lesion must be carefully evaluated for proper diagnosis and treatment.

• KEYWORDS: conjunctival squamous cell carcinoma; ocular surface squamous neoplasia; tropical climate
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INTRODUCTION

Conjunctival squamous cell carcinoma is categorised as invasive tumour in the spectrum of OSSN [1]. Despite being a rare tumour, it potentially results in cosmetic disfigurement, visual loss and morbidity. Conjunctival squamous cell carcinoma is usually seen in older Caucasian men but may develop in younger age group in association with HIV infection [2,3]. In tropical climate region, this tumour could occur in a subject of younger age with a more aggressive clinical course [4,5]. HIV infection and chronic sunlight exposure have been identified as important risk factors in the tumour development [2,5-7].

CASE REPORT

A 37-year-old man, who worked as a construction worker, presented to eye clinic with a complaint of a mass in his right eye. He first noticed the lesion 5 months prior to the presentation as a small nodule which progressively increased in size. The lesion ultimately obscured the visual axis and resulted in painless decreased vision. There was also difficulty in closing eye lid due to location of the mass at interpalpebral fissure. There was no reported constitutional symptom associated with the ocular lesion.

Ocular examination showed a best-corrected visual acuity of 6/9 in the right eye and 6/6 in the left eye. There was a whitish dome-shaped elevated mass located at the temporal limbus in the interpalpebral zone of the right eye (Figure 1). The mass measured about 15mm and covered the entire temporal bulbar conjunctiva and lateral third of the cornea. Detailed inspection showed that the mass was pedunculated, resembling a cauliflower-like lesion, with its base attached to the limbus and its outer surface covered by whitish material resembling mixture of keratin and mucus. Prominent conjunctival feeder vessels were easily seen around the mass. Fundus examination was normal, with no evidence of intraocular extension of the mass on ultrasound biomicroscopy. Systemic examination was unremarkable and he was tested negative for HIV.

On suspicious of ocular surface malignancy we excised the mass with wide margin under local anaesthesia (Figure 2,3) followed by cryotherapy to the conjunctival margin of the excision. The mass was easily dissected with no tethering to the underlying sclera. Topical mitomycin C(MMC) 0. 4g/L q. i. d was started on postoperative day one for one week, then off for one week period, for a total of six cycles.

Histopathology examination of the ocular lesion revealed neoplastic squamous cells arranged in cords and nesting pattern. The cells displayed mildly pleomorphic nuclei with eosinophilic cytoplasm and prominent mitotic figure. Keratin pearls were present. The histopathology features was highly suggestive of a well differentiated squamous cell carcinoma of conjunctiva (Figure 4). Surgical margin was reported tumour-free.

The patient showed good recovery after surgery. Best-corrected visual acuity was 6/6 with no evidence of recurrence for six months. He was kept under regular follow-up as outpatient to monitor for recurrence.

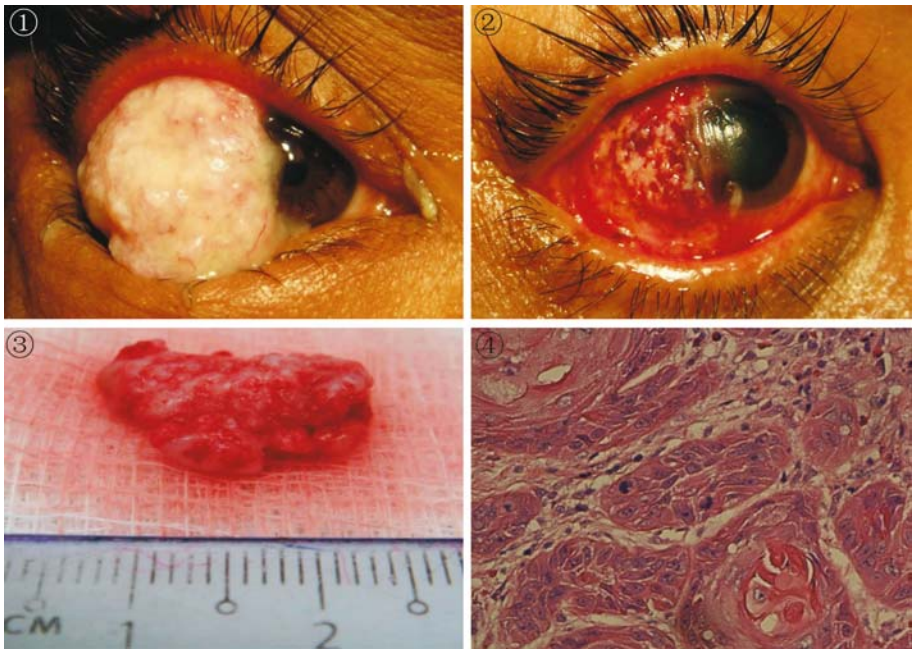

Figure 1 Conjunctival mass.

Figure 2 Scleral surface after tumour excision.

Figure 3 Excised conjunctival mass.

Figure 4 Histopathology showing keratin pearl & mitosis.

DISCUSSION

Conjunctival squamous cell carcinoma is a rare ocular surface malignancy associated with immunosuppression and chronic sunlight exposure. In practice, the morphological description of an ocular surface lesion has its diagnostic value but it is not always easy to differentiate malignant squamous cell carcinoma from a benign lesion based on clinical appearance alone. Traditionally the appearances of the conjunctival squamous cell carcinoma are described as either leukoplakia, gelatinous, papilliform or diffuse [1]. It is unusual for the tumour to appear as a pedunculated mass with keratinised surface. Based on the clinical appearance alone the tumour could be mistaken as conjunctival papilloma, which is relatively a more benign condition. As the treatment and prognosis for these two conditions are different, histopathology examination of excised tissue is mandatory in making diagnosis of ocular surface lesion.

HIV infection is associated with higher risk of developing conjunctival squamous cell carcinoma. Spitzer *et al* [8] reported that conjunctiva tumour could appear as the first clinical sign in patient with HIV infection. This association justified the HIV test in patient with ocular surface malignancy. Nevertheless a negative HIV test implied that chronic sunlight exposure, a recognised environmental risk factor, plays the greatest role in neoplastic transformation of the conjunctival cell in this case.

A combination of wide base surgical excision of the tumour, supplemental cryotherapy and use of anti-metabolite agents remains as the mainstay of treatment for conjunctival squamous cell carcinoma[1,5,9]. At time of surgical excision, we had given special attention to ensure minimal manipulation to the tumour in order to prevent seeding of malignant cell and thereby reduced the risk of tumour recurrence [10]. Supplemental cryotherapy to the conjunctival margin of the tumour was applied after the tumour excision to eradicate of residual tumour cells [11]. In this case, in view of large and rapidly growing tumour, postoperative topical MMC was used as adjunctive treatment to prevent cancer recurrence [9, 12].

In an analysis done by Tunc *et al* [13], they reported that visual prognosis for conjunctival squamous cell carcinoma was generally good after treatment and this is consistent with the good outcome demonstrated in this case. Absence of intraorbital invasion, small area of cornea involvement, negative surgical margin and good general health were important factors in determining good treatment outcome.

In conclusion, this case highlights the possibility of occurrence of conjunctival squamous cell carcinoma in a young and otherwise healthy subject in region with tropical climate. It is important for ophthalmologist to be vigilant in managing ocular surface lesion and any diagnosis should be ideally made with histopathology confirmation. We have shown that combination of surgical excision, cryotherapy and careful use of adjunctive anti-metabolite as treatment yield good clinical outcome in managing conjunctival squamous cell carcinoma.

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显性结膜鳞状细胞癌 1 例

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摘要

患者,男,37 岁,以“右眼肿块迅速增大,无痛感 5mo”就诊于我科。行眼科常规检查,发现一发白带蒂肿块位于右眼睑裂区角膜缘颞侧。遂行肿块切除术,手术成功。对切除肿块进行病理组织学检查,显示为分化良好的鳞状细胞癌。通过对此例居住在热带地区的亚裔患者发生的结膜鳞状细胞癌的诊治,认为长期的阳光照射是导致鳞状细胞癌发生的一个主要危险因素,提示我们对于任何眼表面病变都必须进行仔细的评估,进而正确诊断和治疗。

关键词:结膜鳞状细胞癌;眼表面鳞状细胞瘤;热带气候