Case Report

Clinical case of conjunctival intraepithelial neoplasia presented as pterygium

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Abstract

Conjunctival intraepithelial neoplasia is rare neoplasia resembling pterygium. It is important to understand Conjunctival intraepithelial neoplasia because it casues disfigurement and it can progress to invasive squamous cell carcinoma. The following case report describes its clinical presentation, histopathological findings and management of patient.
Keywords: Cornea, Conjunctival intraepithelial neoplasia, Pterygium, Carcinoma in situ.

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INTRODUCTION

The most common conjunctival mass causing corneal blindness in countries with dry, hot climate is pterygium. Lesions which may clinically resemble a pterygium include benign and malignant tumor like squamous cell and basal cell carcinoma. Ocular surface squamous neoplasia was first described by Lee and Hirst[1]. Intraepithelial neoplasia also termed as Bowen's disease, conjuctival dysplasia dyskeratosis[2]. This usually unilateral tumor frequently occurs in men with history of extensive solar exposure, more than 95% arise at limbus in interpalpabral zone. The following case report describes its clinical presentation, histopathological findings and management of patient.

CASE REPORT

A 25 year old male presented with history of slow growing painless mass and foreign body sensation in right eye for 3 months. Patient had a history of excessive sun exposure as he has to travel long distance by two wheeler for his job. He gave no history of ocular trauma or surgery, no history of using spectacles, no history of any toxin exposure. No history of any systemic illeness. No history of any addiction. Family history not significant. On examination the visual acuity in his both eyes 6/6. On slit lamp examination revealed a fleshy white nodular mass 3 O'Clock at limbus. This measured 8 mm in diameter enchroaching over cornea. Rest of anterior segment was normal. Extraocular movements were normal. Intraocular pressure in (RE) 17.3 mmHg and in (LE) 17.3 mmHg. Fundus examination was normal. General and systemic examination was normal. There was no localised or generalised Lymphadenopathy. Laboratory investigations preoperatively revealed a normal complete blood count. Serology was negative for Retrovirus, Hepatitis B and Hepatitis C. Urine routine and microbiology, Blood sugar and Electrocardiogram normal.

Figure 1: Gross photograph of conjunctiva with Lesion

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The mass was excised and conjunctival autograft done under local anaesthesia and sent for histopathological examination. Histopathological evaluation revealed abnormalities in maturation small cells with eosinophilic cytoplasm and moderately chromatic nucleus (spindle) and larger cells with large vescicular nucleus and prominent nucleolus (Epidermoid). Basement membrane integrity was maintained. Subepithelial tissue showed moderate mononuclear cell infiltration. On these findings diagnosis of conjunctival intraepithelial neoplasia was made[7,8].

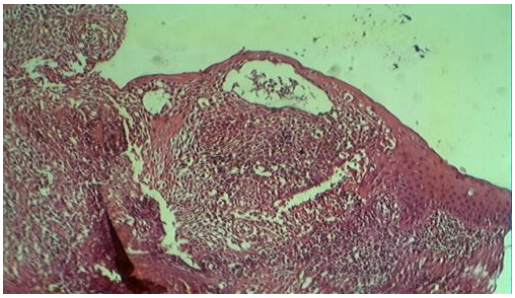

Figure 2: Photomicrograph showing conjunctival intraepithelial neoplasia with intact basement membrane (HandE stain X10

DISCUSSION

In this report, we describe a 25 year old patient suffering from slow-growing conjunctival mass composed of a intraepithelial neoplasia which is very rare. The incidence of carcinoma in situ (CIN) is estimated to be 1.9 per 1,00,000 population per year[4]. It is dysplasia of ocular surface epithelium that has not yet invaded the substantia propria of conjunctiva or bowman layer of cornea.. These lesions of conjunctiva are often associated with either pinguecula or a pterygium, and can be regarded as a premalignant[5]. It is important to understand that CIN causes disfigurement and rarely can progress to squamous cell carcinoma. They have high rate of recurrence, which ranges from 20% to 40% [6]. Important risk factor for intraepithelial neoplasia is UV radiation, heavy smoking, previous exposure to petroleum derivative and Human papilloma virus (HPV 16 and 18) and Human immunodeficiency virus (HIV). The management of these lesions consists of alcohol assisted de-epithelialization of CIN, complete removal of tumor, cryotherapy of margins and tissue closure. During the excision it is important to incorporate a surrounding area of apparently uninvolved conjunctival epithelium to secure adequate surgical margins. This is important factor in predicting recurrence. Topical 5-flurouracil and mitomycin C drops can be used as primary or as adjuvant to surgery in CIN treatment[2].

CONCLUSION

Subconjunctiva intraepithelial neoplasia is a non-invasive neoplasia and potential to metastasis is rare. The need for curative removal of epithelial tumors and exact histopathological work-up of conjunctival masses is highlighted in order to identify a malignant potential and to counsel the patient accordingly despite its low virulence, CIN has been difficult to cure[2,3]. Persons who are exposed to UV radiation are advised to wear dark glasses. Screening of persons who are exposed to chemicals like petroleum fumes should be done. and serological tests for HIV and polymerase chain reaction (PCR) for HPV should be done.

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