CASE REPORT

A Case of Conjunctival & Corneal Intraepithelial Neoplasia (CCIN) : *Carcinoma in situ of the Conjunctiva & Cornea*

Dr. Mohammed Haneef MS, **Dr. Manoj Venugopal** MS, **Dr. Mallika O.U.** MS, **Dr. Mini P.A.** MS, **Dr. Padmasree K.M.** MS, **Dr. Anuja Sathar** MS

Introduction

When the cytological features of malignancy are present but the malignant cells are confined to epithelium without invasion across the basement membrane, it is called as carcinoma in situ or intraepithelial neoplasia. CCIN is an uncommon, benign, slowly progressive unilateral disease with low malignant potential.Risk factors are ultraviolet light exposure, HPV infection and Acquired Immunodeficiency Syndrome.

Case Report

A 78 year old man presented with a raised gelatinous growth at the superior limbus of left eye of 28 years

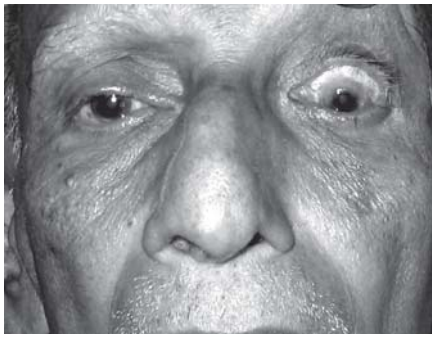

Fig. 1. Raised gelatinous growth at superior limbus of left eye

duration which was slowly progressive in nature. As it was asymptomatic the patient did not seek any medical advice. (Fig 1)

Dept. of Ophthalmology, Medical College, Alappuzha

On Examination

There was a raised pinkish white gelatinous mass with tufts of vessels on its surface, at the superior limbus extending 4 mm on its conjunctival as well as the corneal side for more than 180 degrees of the limbus (Fig 2)

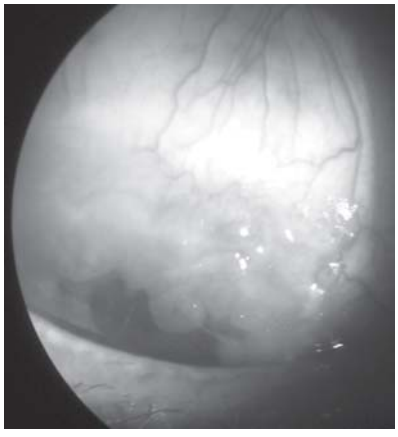

Fig. 2. Raised pinkish white gelatinous mass with tufts of vessels on its surface at superior limbus

Initial Management

Initially 2mm x2mm of the growth was excised (Fig 3) and sent for histopathological examination: HPE revealed epithelial dysplastic changes.One month later, the entire lesion was excised with adjoining 4 mm of normal conjunctiva while on the corneal side it was completely shaved off. HPE showed strips of squamous epithelial tissue with severe dysplasia and carcinoma

in situ changes with attempted epithelial pearl formation.

Fig. 3. Appearance of limbus after excision of lesion

Subsequent management

After receiving the HPE report the patient was put on topical Mitomycin C 0.2 mg/ml eye drops twice daily for 15 days.

Follow up

The patient was closely followed up for any recurrence. No recurrence was noted till date with 8 months of follow up (Fig 4).

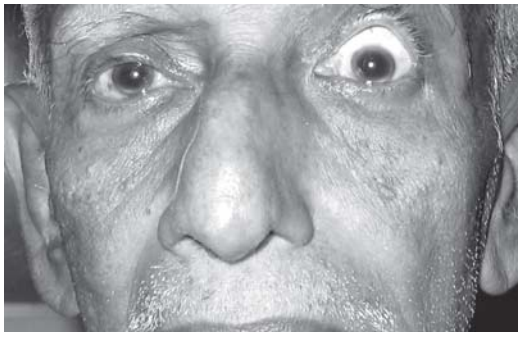

Fig. 4. Follow up photograph 8 months after excision demonstrating absence of recurrence

Discussion

Carcinoma in situ is rare in the eye compared to other parts of the body.

It may present as Leukoplakia, Papilloma,or as complication of Pterygium or Pinguecula. Impression cytology may be useful in diagnosis.

As the basal membrane of the epithelium remains intact and the sub epithelial tissue is not invaded, simple shaving off the lesion is sufficient and there is no need for deep dissection.Only infrequently the lesion becomes invasive.

If the CCIN is localized, excision with cryotherapy is curative while the diffuse form CCIN is difficult to treat as the borders of the lesion are poorly defined, making a complete excision impossible. Recurrence rate would be high, and may be treated with other modalities like topical mitomycin, 5- fluorouracil & interferon alpha-2b as alternatives or as adjuncts to surgery.

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Squamous conjunctival neoplasia (SCN) is most commonly found in older white males (76%). The average age of patients affected by SCN is 56. This tumor, said to make up 14% of all primary ocular and orbital tumors is related to sun exposure. Sunlight, particularly ultraviolet-B (UV-B) radiation can cause DNA damage, mutations, and cancerous cells.Â Squamous carcinoma and dysplasia of the conjunctiva and cornea: an analysis of 101 cases. High-Frequency Ultrasonographic Evaluation of Conjunctival Intraepithelial Neoplasia and Squamous Cell Carcinoma â€“ Download the PDF Here. Tags: Conjunctival Tumors, Intraepithelial Neoplasia, Squamous Carcinoma. Eye Cancer Resources. And dyskeratosis; Bowenâ€™s disease; Conjunctival intraepithelial neoplasia (CIN); Conjunctival squamous dysplasia; Intraepithelial epithelioma Defined by abnormal malignant appearing epithelial cells...Â The lesion most commonly develops on exposed areas of the bulbar conjunctiva, at the nasal or temporal corneoscleral limbus. Risk factors include male sex, advanced age, cigarette smoking, light complexion, prolonged sunlight exposure, and conjunctival infection by human papillomaviruses 16 and 18. In patients with AIDS, these lesions may undergo rapid growth. Immunosuppressed states seem to have a higher degree of squamous neoplasia (Lee et al. 1994). Histology. We describe two cases of conjunctival-cornea intraepithelial neoplasia (CIN), treated with topical IFN alfa 2b. The traditional treatment for CIN is surgical excision usually with adjunctive cryotherapy. However, residual tumour may remain, which can lead to recurrence rates of more than 50%. 5-Fluorouracil, mitomicyn C and interferon Î± 2b are new pharmacological agents that have proved their efficacy in the treatment of CIN. As side effects are common, we present IFN Î± 2b as a single therapeutic agent as an effective and optimal treatment for presumed recurrent corneal and conjunctival intraepithelial neoplasia.