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A rare case of squamous cell carcinoma of the conjunctiva

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Abstract: Aim*: To present a rare case of squamous cell carcinoma of the conjunctiva*
Methods*: A 56 years old female presented to the Outpatient Department of Ophthalmology with complaints of a painless mass in her left eye since 3 months which was gradually progressive in size. The mass was excised with a 2 mm clear margin by the "no – touch" technique and sent for histopathological examination.*
Results*: On examination, a pale brown mass measuring 6x 9mm was seen on the nasal conjunctiva encroaching 3 mm of the cornea. Biopsy showed sheets of round to polygonal, pleomorphic cells with hyperchromatic nuclei and few epithelial pearls. Tumour tissue was seen infiltrating into the underlying fibromuscular connective tissue, suggestive of a well differentiated squamous cell carcinoma.*
Conclusion: *Conjunctival squamous cell carcinoma is a rare ocular malignancy which can be treated with excision, radiotherapy or cryotherapy. Frequent follow up to monitor recurrence is crucial.*

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I. Introduction

The incidence of invasive SCC varies from 0.02 to 3.5/100,000 population and is mostly unilateral and is seen in middle- to old-age groups. Approximately 75% occur in men, 75% are diagnosed in older patients, and 75% occur at the limbus. [(1)]The etiological agents implicated in SCC are increased ultraviolet light exposure, genetic defects as in xeroderma pigmentosum and immunosuppressive conditions such as HIV and human papillomavirus infections, smoking, eye injury, petroleum products, arsenic, Vitamin A deficiency. [(2)]

The definitive diagnosis is by histopathological examination of the lesion after a biopsy which is based on the presence of the universal cytological criteria which includes nuclear enlargement, hyperchromasia, irregular nuclear outline, coarse nuclear chromatin, and prominent nucleoli.[(3)]Squamous conjunctival carcinoma typically occurs on the bulbar conjunctiva, originating at the limbus, and often spreads onto the cornea.

Treatment modalities include surgery, radiotherapy and topical cytotoxic agents. The prognosis is generally good if the tumour is completely removed[(4)]

II. Case report

A 56 years old female presented to the Ophthalmology OutPatient Department with complaints of a mass in her left eye sincethree months.The mass was gradually progressive in nature and associated with a foreign body sensation.

Patient had no complaints of redness, discharge, diminution of vision in the affected eye. There was no significant medical, surgical, personal, family, or drug abuse history.

Examination of the left eye revealed a pale brown mass with irregular borders measuring 6x 9mm was seen on the nasal conjunctiva from 7 o clock to 11 o clock position adjacent to the limbus encroaching 3 mm of the cornea.Her visual acuity was 6/6 in both eyes; pupillary reactions, ocular movements, color vision, intraocular pressure, fundus examination, werenormal.The mass was excised with a 2 mm clear margin by the "no – touch" technique and sent for histopathological examination.Post operatively patient was started on antibiotic steroid eyedrops.

Histopathology revealed tumor tissue made up of irregular groups, sheets and masses of round to polygonal and pleomorphic cells having pleomorphic nuclei.Few epithelial pearls were seen. Tumor was seen infiltrating into the underlying fibromuscular connective tissue which shows a dense chronic inflammatory infiltrate in the form of lymphocytes, plasma cells and macrophages. These features were suggestive of a well differentiated squamous cell carcinoma.

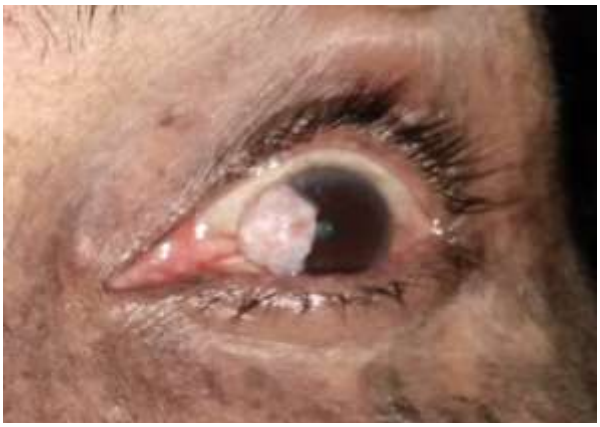

Fig.1: Initial presentation showing a 6 x 9 mm pale brown mass with irregular borders on nasal conjunctiva from 7 o'clock to 11 o'clock position encroaching 3mm of the cornea.

Fig 2: Intraoperatively before and after excision of conjunctival mass using the "no-touch" technique.

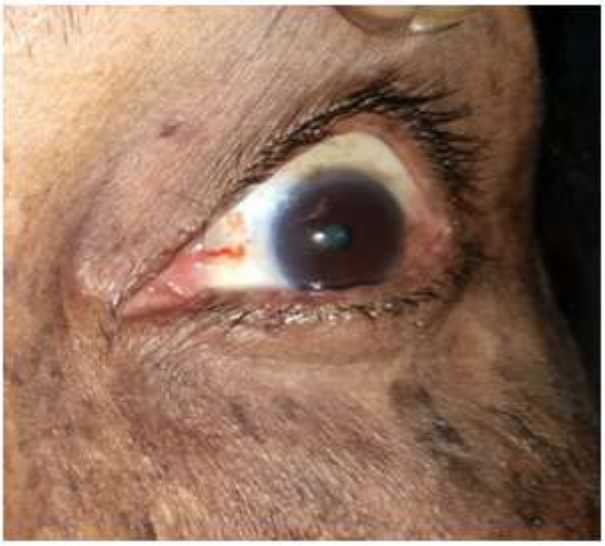

Fig 3: Clinical appearance 1 week after excision of mass. Note that the conjunctiva and the cornea are completely free of the mass.

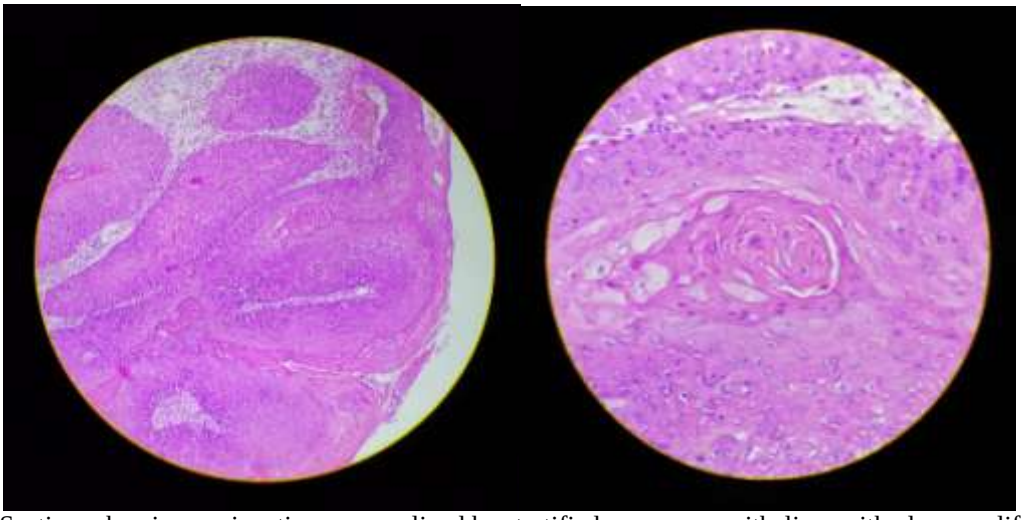

Fig 4: Sections showing conjunctiva mucosa lined by stratified squamous epithelium with ulceroproliferative growth composed of dyplastic squamous cells forming papillae. Focal areas show squamous pearls. Foci of invasion noted in the stroma.

III. Discussion:

SCC of the conjunctiva is part of the spectrum of OSSN incorporating CIN, CIS, and invasive tumour. Although the clinical diagnosis of in situ disease is high (86%), invasive carcinoma is much less often recognised (35%). Conjunctival SCC occurs in sun damaged ocular surface, usually at the limbus in elderly men.Recurrence of OSSN is common with significantly increased risk for older patients, lesions of large diameter, high proliferation index (Ki-67 score), and positive surgical margins.[(5)]

Previous reports reveal high recurrence rates after simple surgical excision around 24% to 50%. Invasive disease may cause intraocular and orbital involvement then exenteration may be needed.Reconstruction of the conjunctiva may be required, using grafts of nearby tissue for reconstruction. [(6)]

IV. Conclusion:

Conjunctival squamous cell carcinoma is a rare ocular malignancy which can be treated with excision, radiotherapy or cryotherapy. High degree of suspicion and immediate treatment are the keys to success in eliminating the disease.

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