



A CASE OF CONJUNCTIVAL INTRAEPITHELIAL NEOPLASIA WITH PIGMENTATION IN AN IMMUNOCOMPETENT FEMALE

Dr Arya Mol VS*

Senior Resident, Department of Ophthalmology, Lokmanya Tilak Municipal Medical College and General Hospital, Sion *Corresponding Author

Dr Sujit Murade

Associate Professor, Department of Ophthalmology, Lokmanya Tilak Municipal Medical College and General Hospital, Sion

Dr Chhaya Shinde

Professor, Department of Ophthalmology, Lokmanya Tilak Municipal Medical College and General Hospital, Sion

ABSTRACT

Conjunctival intraepithelial Neoplasia (CIN) is the most common conjunctival neoplasia. CIN is a slow growing tumor with varying degrees of intraepithelial neoplasia. (1) Here we report a case of conjunctival intraepithelial neoplasia in a 60 year old female.

KEYWORDS : Conjunctival Intraepithelial Neoplasia, Pigmentation, Wide Local Excision, Mitomycin

INTRODUCTION

Conjunctival intraepithelial neoplasia (CIN) is a non-invasive conjunctival neoplasia that comes under the spectrum of Ocular Surface Squamous Neoplasia. The basement membrane remains intact in CIN. (1) The etiology appears to be multifactorial, involving a variety of environmental factors like exposure to Ultraviolet light, Human papilloma virus, HIV, aging etc... (2) There are three major clinical variants of CIN: Gelatinous (most common), papilliform and leukoplakic. Here we report a rare clinical presentation of CIN.

Case Report

A 60 year old female with no known comorbidities presented with a mass lesion in left eye for 3 months. The patient noticed a brownish pigmented conjunctival mass extending to the nasal limbus in the left eye which progressed over time associated with foreign body sensation.

On examination the best corrected visual acuity of both eyes were 6/9. Right eye was normal. On slit lamp biomicroscopic examination a 2.5*2 mm vertical pigmented mass with irregular margin and white leukoplakic lesion over it, at 9 o'clock position with two feeder vessels was noted in the left eye. Mass was extending over the cornea up to 0.5mm (Figure 1)

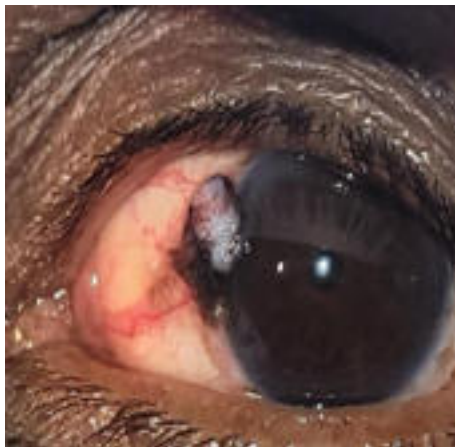


Figure 1- Clinical Photo of Left Eye.

IOP was 18 mmHg and fundus examination was normal. The left eye anterior segment optical coherence tomography showed sudden transition of normal to abnormal tissue. The left eye ultrasound biomicroscopy suggested echogenic nodular mass in the left nasal limbus.

The patient was systematically evaluated and was seronegative.

The left eye corneal lesion was treated with absolute alcohol to loosen epithelium. Wide local excision with margin of 4mm away from

clinical lesion was done. This was followed by double thaw freezing cryotherapy on margin of conjunctiva was done. Minimal touch technique was implemented to prevent seeding of neoplastic cells. Amniotic membrane graft was glued on bare sclera. Sample was sent with marked nasal temporal margins.

Histopathology was suggestive of conjunctival intraepithelial neoplasia (Grade 3) with severe dysplasia, IHC p40 positive (figure 2).

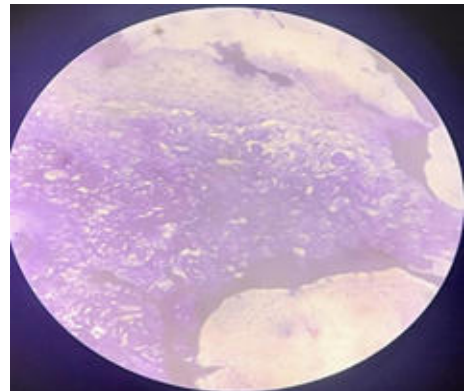


Figure 2- Histopathology Image Suggesting Grade 3 Conjunctival Intraepithelial Neoplasia with Severe Dysplasia.

Post surgery patient was started on 0.04% mitomycin C eye drop 4 times a day in the left eye for a week. On followup the patient tolerated the eyedrop. 2 more cycles of 0.04% mitomycin C was given under cover of low dose topical steroids.

At the end of 3 cycles of treatment the patient has clinically improved (Figure 3)

On 1 year follow up the affected area in the left eye was replaced with normal conjunctiva.



Figure 3- The Clinical Photo of the Left Eye After 1 Year Post Surgery.

DISCUSSION

Conjunctival intraepithelial neoplasia falls within the broad spectrum of ocular surface squamous neoplasia (OSSN), which encompasses neoplastic squamous abnormalities of the conjunctival, limbal and corneal epithelium, including squamous cell carcinoma .CIN originate from the ocular surface ectoderm.

Conjunctival intraepithelial neoplasia is a premalignant lesion with abnormal growth of atypical squamous epithelial cells of the conjunctiva. The epithelial basement membrane remains intact. (2)

The differential diagnosis includes conjunctival squamous papilloma, pterygium, pyogenic granuloma.

Also lobulated capillary proliferation with acute and chronic inflammation, sebaceous gland carcinoma, pinguecula, subepithelial solar elastosis can mimic CIN. (2,3)

CIN can be diagnosed clinically. Optical coherence tomography, high frequency ultrasound, Impression cytology, Confocal microscopy are some other modalities available for diagnosis. (4)

CIN can be managed medically using topical mitomycin C.

Mitomycin C is an antimetabolite that alkylates DNA and disrupts the production of RNA. Studies have reported its efficacy rate to range from 80% to 100%. It is equally effective and cost effective. MMC comes in either 0.02% or 0.04%. Interferon- α 2b (IFN α 2b) and 5-fluorouracil can be considered as alternatives. (4,5)

CIN lesions involving the limbus should be excised with at least a 3-4 mm uninvolved conjunctival margin. A large conjunctival margin is important since seemingly uninvolved tissue clinically may still contain dysplastic cells. Absolute alcohol can be applied and cryotherapy can be done at the marginal base. (5,6)

CONCLUSION

Suspicious Conjunctival lesions need careful examination with special attention to rule out neoplasia. The novelty of this case was the presence of pigmented CIN in an immunocompetent patient managed with surgically and with topical medications showed no signs of recurrence in 2 year follow-up. CIN requires wide local excision with minimal touch technique and use of 0.04% mitomycin eye drops. Intraoperative use of absolute alcohol and cryotherapy at margin base aided in preventing recurrence.

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