

# Squamous Cell carcinoma (Moderately Differentiated) of Conjunctiva – A Rare Case in a Five Year Retrospective Study.

Harpal Singh<sup>1</sup>, Ramesh Kumar Kundal<sup>2</sup>, Rajinder Singh<sup>3</sup>, Bhavleen Kaur<sup>4</sup>, Jasneet Kaur<sup>4</sup>, Puneet Garg<sup>4</sup>

<sup>1</sup>Associate Professor, Department of Pathology, Govt. Medical College, Patiala.

<sup>2</sup>Professor and Head, Department of Pathology, Govt. Medical College, Patiala.

<sup>3</sup>Assistant Professor, Department of Ophthalmology, Govt. Medical College, Patiala and Rajindra Hospital, Patiala.

<sup>4</sup>Junior Residents, Department of Pathology, Govt. Medical College Patiala.

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## ABSTRACT

Worldwide squamous cell carcinoma (SCC) of the conjunctiva is a rare malignancy; however, it is reported to be the most common malignant tumour of the ocular surface. Its incidence varies between 0.02 and 3.5/100,000. We report a case of squamous cell carcinoma of conjunctiva presented with triangular pedunculated mass of left eye of 75 years old female. It is diagnosed on FNAC and confirmed on histopathological examination after excision. On analyzing the data of FNA done (19150) and biopsies received (23158) in 5 years in the department of pathology, we found only five cases of eye region came for FNA while 25 biopsies of eye region received and diagnosed rightly. Out of all these cases, this is the only case of squamous cell carcinoma of conjunctiva in this study. Incidence of SCC of conjunctiva in our retrospective study of data of total pathological biopsies received found to be 4.3/100000.

**Keywords:** Squamous cell carcinoma, Ocular surface squamous neoplasia, Fine needle aspiration cytology.

## INTRODUCTION

Squamous cell carcinoma of conjunctiva regarded as a low grade and rarely occurring malignancy. Recurrence rates are generally higher for more severe grades of OSSN and are also related to adequacy of margins at initial excision.<sup>[1-3]</sup> Seventy percent cases presented with a mass or growth.<sup>[4]</sup> Similarly we also found it is a rare neoplasm diagnosed on FNAC and confirmed on histopathology treated fully after surgical excision and local medication later on without any complication.

### **Name & Address of Corresponding Author**

Dr. Harpal Singh,  
Associate Professor, Dept of Pathology,  
Govt. Medical College Patiala, India  
E-mail: drharpalseemar@gmail.com

## CASE REPORT

A 75 year old woman presented with a painless triangular pedunculated mass protruding excessive watering from the affected eye since two years [Figure 1]. She had a habit of cooking from dung-cake on conventional chulla as previously seen in rural Punjab. The mass was firm in consistency,

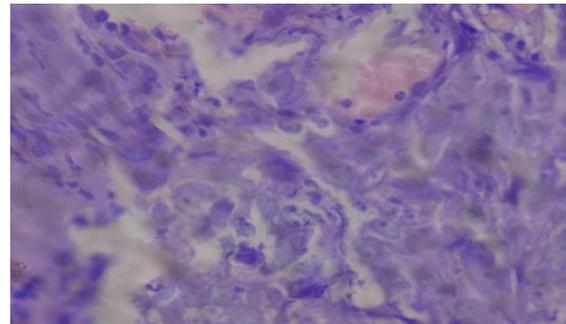
coming out from upper eyelid, non-tender, mobile, adherent to conjunctiva. Routine hematological investigations like Hb, TLC, DLC, PBF and ESR are normal. Biochemical findings like- fasting blood sugar level, blood urea, serum creatinine and lipid profile are within normal range. Urine examination also reveals normal value. On cytological examination after FNA it is diagnosed as moderately squamous cell carcinoma, which confirmed on excision biopsy later on.

**Cytological Findings on FNAC:** Multiple smears prepared after FNA showed high cellularity. Groups of round to oval malignant looking epithelial cells arranged in papillaroid pattern and also lying singly [Figure 2]. Individual cells exhibits vesicular nuclei, open chromatin and prominent nucleoli with scanty to moderate amount of cytoplasm.

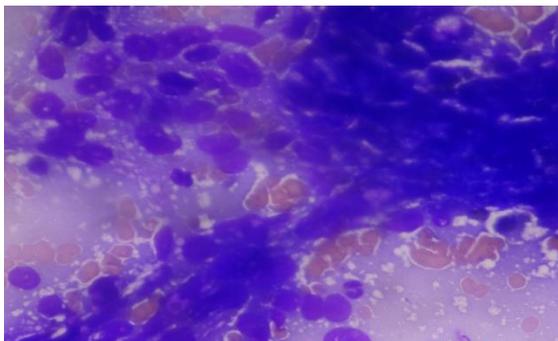
**Gross Examination:** After excision biopsy received in the department of pathology show 2×2×2 cms size white globular mass with almost 1/3rd brownish part. Cut surface is white with friable brown part.



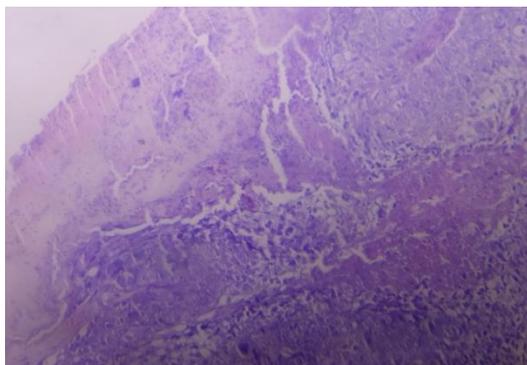
**Figure 1:** Protruding mass from conjunctiva.



**Figure 4:** Microphotograph of [Figure 3] under 40x



**Figure 2:** Cytologically show groups of malignant epithelial cells( MGG Stain).



**Figure 3:** Microphotograph groups of malignant looking epithelial cells (under 10x H&E Stain).

**Histopathological Findings:**

Multiple sections studied show groups, clusters and sheets of malignant looking basaloid epithelial cells, showing vesicular nuclei, open chromatin and prominent nucleoli with scanty to moderate amount of cytoplasm. At certain foci, necrosis is also evident with small spots of homogeneous pinkish material along with peripheral nuclei i.e. formation of small keratin pearls. Histopathological features are suggestive of Squamous cell carcinoma (moderately differentiated)- conjunctiva [Figure 3 & 4].

In this study previous five years record of pathology has been searched for biopsy and fine needle aspiration cytology of the eye region and data was compiled as shown in [Table 1].

**DISCUSSION**

Ocular surface squamous neoplasia is mostly unilateral and is seen in middle-aged and older patients. Rarely, it is bilateral in immunosuppressed patients. It often presents with redness and ocular irritation. Vision is usually unaffected unless it encroaches the centre of cornea. The tumour appears as fleshy or nodular, sessile minimally elevated lesion with surface keratin, feeder vessels, and secondary inflammation.<sup>[2-5]</sup> Macroscopic patterns of SCC have been described as gelatinous, velvety or papilliform, leukoplakic,<sup>[6,7]</sup> nodular and diffuse.<sup>[8]</sup>

**Table 1:** Five years data of eye lesions on biopsy and FNAC.

Sr. No.	Year	No. of Biopsies received	No. of FNAs Done	No. of Lesions of Eye On biopsy	Lesions of Eye diagnosed on FNAC
1	2011	3779	2972	4(benign and infected)	0
2	2012	4395	3566	3 (do)	0
3	2013	4657	4214	3 (do)	0
4	2014	5282	4361	10 ( all other lesions were either benign or infected except this reported case)	5
5	2015	5045	4037	5( same as sr. no. 1,2&3)	0
Total		23158	19150	25	5

In conjunctival SCC, the abnormal cells extend through the basement membrane into the conjunctival stroma, whereas in intra-epithelial neoplasia the malignant cells are confined to the

surface epithelium. SCC has the potential to penetrate the corneoscleral lamella into the anterior chamber of the eye or can breach the orbital septum

to invade the soft tissues of the orbit, sinuses, and the brain.<sup>[9,10]</sup>

Complete but gentle surgical excision using a technique without touching the tumour called the “no-touch” technique is the treatment of choice.<sup>[2,9-11]</sup>

Reported recurrence rate of OSSN is 15-52%. Lee and Hirst reported a 17% recurrence after excision of conjunctival dysplasia, 40% after excision of CIN and 30% for SCC of the conjunctiva.<sup>[4]</sup>

Plaque brachytherapy is used to control gross or microscopic residual tumours. More extensive orbital invasion requires orbital exenteration.<sup>[3,12]</sup> Conjunctival intraepithelial neoplasia and mild forms of SCC and can be treated with topical mitomycin C 0.02-0.04% quid, 4 days-a-week for 4 weeks works best.<sup>[2-4]</sup>

Associated local complications include conjunctival hyperemia, punctate corneal erosions, and inadvertent prolonged use may lead to sclera melt. Interferon alpha 2b is currently most accepted and favourable form of treatment for OSSN. It is less toxic with fewer complications compared to topical mitomycin C. Their beneficial role includes immunomodulation, anti-proliferative, and anti-viral. The reported success rate is 83% with topical interferon 1 million IU administered 4 times daily for 6-12 months.<sup>[13-15]</sup>

Ocular surface squamous neoplasia has a good prognosis. With the modern techniques, the local recurrence rate is about 5% and regional metastasis of 2%.<sup>[2,3]</sup> Prognosis is worse in mucoepidermoid or spindle cell variants and in immunosuppressed patients.<sup>[2]</sup>

In our study of previous five years, we found SCC of conjunctiva is very rare. During this period of study only one case is diagnosed fully on FNAC and histopathologically. This only reported case was fully treated with excision and local medicine and without any complication on follow up as per information furnished by the eye surgeon.

## CONCLUSION

Medical literature regarding OSSN studied as discussed above, this is a rare neoplasm most commonly occurred in elderly peoples, commonly found unilaterally with wide variety of presentation. Well formed mass can easily be diagnosed on FNAC and treated surgically with some local medicine without any complication.

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