

## SQUAMOUS CELL CARCINOMA OF THE CONJUNCTIVA: ANALYSIS OF FIFTEEN CASES

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**Background:** To document various clinical presentations and management options of conjunctival squamous cell carcinoma (CSCC) in patients attending ophthalmic out patients department (OPD) of a tertiary care centre. This case series was carried out in the Department of Ophthalmology Civil Hospital and, Dow University of Health Sciences, Karachi and were reviewed from June 2004 to December 2007. **Methods:** Socio-demographic data and clinical features of patients with biopsy proven conjunctival squamous cell carcinoma were recorded and analysed. All patients underwent complete ophthalmic examination by a fellow ophthalmologist and clinical findings were recorded on a prescribed Performa. Data was analysed in terms of frequency, means and median by SPSS for windows V.15. **Results:** Seventy-two percent of the patients were male and 28% were female, more than 80% of patients were in the age group of seventy years and above. Eighteen percent of patients developed intraocular invasion and the eyes had to be enucleated. **Conclusion:** CSCC occurs in sun damaged ocular surface usually at limbus, elderly men are more commonly involve, recurrence is a feature of disease and high risk in older individual. In our treatment we used various therapies, excision with clear margin, topical mitomycin C adjunctive cryotherapy and amniotic graft.

**Keywords:** Conjunctival squamous cell carcinoma, elderly men, clinical presentations, recurrence, management options

### INTRODUCTION

Squamous Cell Carcinoma of Conjunctiva is a rare disease with a worldwide prevalence.<sup>1</sup> Incidence is 0.02–3.5 per 100,000.<sup>2</sup> It is seen more common in Australia affecting older peoples<sup>3</sup>. The disease is associated with exposure to ultraviolet light (sun light) specially to Caucasian individuals.<sup>3</sup> Squamous Cell Carcinoma has strong association with human papilloma virus.<sup>4</sup>

Clinically the tumour most commonly arises in interpalpebral area of perilimbal conjunctiva. Growth pattern of this rare tumour is nodular, gelatinous, flat superficial and leucoplakic.<sup>5</sup> Sometime tumour might mimic benign conjunctival degeneration like pingecula and pterygium.<sup>6</sup>

In this case series we will document risk factors and clinical presentations of biopsy proven cases of conjunctival squamous cell carcinoma.

### PATIENTS AND METHODS

This study was conducted at the department of Ophthalmology Civil Hospital & Dow University Health Sciences, Karachi from June 2004 to December 2007. The patients were seen in Eye OPD of Civil Hospital, Karachi and suspected patients were admitted. Socio demographic data was recorded on a prescribed performa. These patients underwent complete ophthalmic examination and systemic examination by an internist as well. Only those patients with biopsy proven conjunctival squamous cell carcinoma were included in the study.

### RESULTS

Fifteen patients had biopsy proven conjunctival squamous cell carcinoma. Right eye was involved in 10 (66.7%) patients and left eye in 5 (33.3%) patients (Table-1). There was male predominance with 12 (80% males) and 3 (20%) females (Table-2). Age was 63–87 years with a Mean±SD of age 71.87±6.664 years. Two (13.3%) patients intraocular invasion as well, and two patients (13.3%) had visceral malignancy.

Conjunctival lesion was located on temporal limbus in 12 (80%) patients while at the nasal limbus in 3 (20%) patients. Squamous cell carcinoma was elevated focal mulberry like mass with vascularity in 10 (66.6%), flat appearance in four (26.7%) patients and one (6.7%) was diffuse lesion. In Five (33.3%) patients the lesion was vascularised with secondary pigmentation. Management was planned according to the severity and local invasion. In our department we managed these cases conservatively and referred those patients with visceral involvement to the oncologist. Our management plan included (Table-4)

**Table-1: Laterality of the lesion**

Eye involved	Frequency	Percentage
Right	10	66.7
Left	5	33.3
<b>Total</b>	<b>15</b>	<b>100.0</b>

**Table-2: Gender distribution**

Gender	Numbers	Percentage
Male	12	80.0
Female	3	20.0
<b>Total</b>	<b>15</b>	<b>100.0</b>

**Table-3: Morphology of conjunctival squamous cell carcinoma**

Morphology	cases	Percentage
Focal mulberry like mass with vascularity	10	66.6
Flat appearance	4	26.7
Diffuse lesion	1	6.7
<b>Total</b>	<b>15</b>	<b>100</b>

**Table-4: Treatment of conjunctival squamous cell carcinoma**

Treatment Options	cases	Percentage
Excision alone	4	26.67
Excision plus Cryotherapy	3	20.00
Excision Plus Amniotic graft	2	13.33
Topical Cytotoxic Agent (Mitomycin C)	4	26.67
Enucleation	2	13.33
<b>Total</b>	<b>15</b>	<b>100.00</b>

## DISCUSSION

Conjunctival Squamous Cell Carcinoma is more common in male and elderly patients, but may occur earlier in patients of xeroderma pigmentosa and AIDS. In Pakistan AIDS is an uncommon disease and in this series we can not find this association. Poor referral system and Low literacy rate in this region probability reflected in high incidence of metastasis and intraocular invasion.<sup>7</sup> Two patients developed visceral malignancy at the time of diagnosis. Male predominance was due to male working outside in sunlight. Mean age of presentation in our series is 71.87 years as compared 54.9 years<sup>8</sup> and 44.7 years<sup>9</sup> in two different series. This difference might be due to inclusion of cases with xeroderma pigmentosa and a high prevalence of AIDS in Tanzania. In a large series of 60 cases Tunc and Char<sup>10</sup> reported 8% visceral malignancies, 37% Scleral involvement, 13% intraocular involvement and orbital invasion in 11% cases with invasive squamous cell carcinoma. In our series we are able to document only two cases (13%) of intraocular invasion and two cases (13%) of visceral involvement. We adopted management plan as described elsewhere.<sup>11-14</sup> Long term complications would require a long term follow up.

## CONCLUSION

Conjunctival squamous carcinoma occurs in sun damaged ocular surface usually at limbus, elderly men are more commonly involve, recurrence is a feature of disease and high risk in older individual. In our treatment we used various therapies, excision with clear margin, topical mitomycin C adjunctive cryotherapy and amniotic graft.

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