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CONJUNCTIVAL SQUAMOUS CELL CARCINOMA;

***DR. MUHAMMAD MUMTAZ CHAUDHRY**

Rawalpindi

DR. SHEHRYAR ALTAF

Islamabad

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***Correspondence Address:**

Dr. M. Mumtaz Chaudhry

Assistant Professor & Eye Consultant, Wah Medical College,
P.O.F. Wah Cantt, Rawalpindi

ABSTRACT...Objectives: To evaluate 20 patients with squamous cell carcinoma of the conjunctiva. To determine the clinical and pathological characteristics. **Design** Retrospective study. **Setting:** POF hospital & EDO eye hospital Wah.Cantt **Period:** From June 200 to July 2006. **Methods:** The patients presenting with squamous cell carcinoma of the conjunctiva were retrospectively evaluated. **Results:** Patients were usually male (80%), elderly (75% >60 years of age), with most lesions (90%) occurring at the limbus. Two patients (10%) suffered recurrence of the squamous cell of the conjunctiva within 2 to 4 months of resection. Corneal invasion was noted in two patients (10%) while there was intraocular and orbital invasion in two patients (10%). One patient (5%) required enucleation and one patient (5%) required exenteration. In situ carcinoma was noted in 18 patients (90%). **Conclusions:** Squamous cell carcinoma of the conjunctiva occurs in the sun exposed area of the conjunctiva at the limbus in the elderly men. Recurrence was noted in the younger patients and with larger lesions. Enucleation and exenteration is required in a small number of cases.

INTRODUCTION

Conjunctival squamous cell carcinoma is a rare, slow growing tumor of low grade malignancy which may arise de novo or from pre-existing conjunctival carcinoma in situ. The range of neoplasia from conjunctival dysplasia to carcinoma in situ and to conjunctival carcinoma is quite broad making the clinical diagnosis difficult one. In a study by Lee and Hirst¹. Overall clinical accuracy was only 33% in 288 patients. The macroscopic patterns of the tumor have been described as papillomatous, gelatinous and leukoplakic associated with feeder vessels^{2,3} located in the juxtalimbal position. Recurrences rate may be higher for severe grades of malignancy and with inadequate removal of margins of the tumor.⁶⁶⁶⁶

The incidence of squamous cell carcinoma of the conjunctiva varies from 0.02 to 3.5 % per 100000 of the population⁴. It occurs with increased frequency in patients exposed to sunlight and in patients with xeroderma pigmentosum and AIDS.

MATERIALS AND METHODS

The cases diagnosed as Conjunctival squamous cell carcinoma at POF hospital and EDO hospital during the period of June 2000 to July 2006 was retrospectively studied. The records were obtained from the Pathology department of POF hospital which receives the pathological specimen's from the above mentioned hospitals. Then the clinical data was retrieved from the

ophthalmology department of the POF and EDO hospitals.

All the specimens were reviewed by one pathologist. The tumors were assessed for the diagnosis of squamous cell carcinoma, extent of differentiation, keratinization, and stage of invasion and completeness of excision. The clinical data retrieved from the eye departments included the age and sex of the patients, the surgical treatment

done, the size of the lesion and the involvement of the margins and invasion of the globe or the orbit. Then the clinical and the pathological data were correlated and the results were compiled.

RESULTS

The patients with squamous cell carcinoma of the conjunctiva were mainly males (90%) with females (10%) comprising only a small portion of the total.

S#	age	Sex	Skin color	treatment	size	Margins	Appearance	Histopathology	Recurrence
1	68	M	Fair	Excision	4 mm	Clear	gelatinous	in situ	No
2	72	M	Fair	Excision	5 mm	Clear	gelatinous	in situ	No
3	60	M	Fair	Excision	4 mm	Clear	leukoplakic	in situ	No
4	75	M	Fair	Excision/Cryo	10 mm	involved	gelatinous	ca/ invasion cornea	No
5	62	M	Fair	Excision	5 mm	Clear	leukoplakic	in situ	No
6	65	M	Fair	Excision	6mm	Clear	gelatinous	in situ	No
7	70	M	Fair	Excision/Keratectomy	11mm	Clear	gelatinous	ca/ invasion cornea	No
8	55	F	Fair	Excision	7 mm	Clear	papillomatous	in situ	No
9	77	M	Fair	Excision/enucleation	14 mm	Clear	gelatinous	ca/ invasion cornea	No
10	80	M	Fair	Excision	8 mm	Involved	gelatinous	in situ	Yes
11	65	F	Dark	Excision/cryo	9 mm	involved	papillomatous	in situ	No
12	77	M	Fair	Excision	8mm	involved	gelatinous	in situ	Yes
13	68	M	Fair	Exenteration	diffuse	involved	papillomatous	ca/globe orbit	No
14	55	M	Dark	Excision/Keratectomy	8 mm	Clear	gelatinous	in situ	No
15	66	M	Fair	Excision/cryo	7mm	Clear	gelatinous	in situ	No
16	55	M	Fair	Excision	8mm	Clear	papillomatous	in situ	No
17	66	M	Fair	Excision/Cryo	10mm	involved	gelatinous	in situ	No
18	54	M	Fair	Excision	4 mm	Clear	papillomatous	in situ	No
19	67	M	Fair	Excision	5 mm	Clear	papillomatous	in situ	No
20	72	M	Dark	Excision	6 mm	Clear	gelatinous	in situ	No

The age group of the patients ranged from 45 years to 80 years with most of the patients in the elderly group (80%>60 years). Both of the eyes were involved in equal

number of patients. The limbus was the most common of the sites involved in nineteen of the patients (95%) with only one of the patients having the carcinoma

conjunctiva in the fornix (5%).

The cornea was involved in two of the patients (10%) while one (5%) patient had intraocular invasion and one (5%) had involvement of the orbit. The size of the lesion varied as mentioned in the table from 4 mm to 14 mm with smaller lesions limited to the conjunctiva and the larger lesions extending onto the cornea or invading the globe. Two (10%) of the patients had a previous history of carcinoma in situ or invasive carcinoma of the conjunctiva for which excision of the carcinoma had been done.

The clinical appearance was noted to be gelatinous in twelve patients (60%) papillomatous appearance in six patients (30%) and leukoplakic appearance in two patients (10%). The duration of the symptoms was < 3 weeks in two patients; <6 weeks in 10 patients and <6 months in 8 patients. The color of the skin was fair in 18 patients (90%) and dark coloured in 2 patients (10%). Two (10%) of the patients who required enucleation and exenteration had enlarged lymph nodes indication lymphatic metastasis. The treatment given to the patients by the ophthalmologist was excision of the lesion in 12(60%) of the eyes, excision and cryo-therapy to 4(20%) of the eyes, excision and keratectomy to 2(10%) of the eyes, enucleation to 1(5%) of the eye and exenteration to 1(5%) of the eyes. The histopathology report of the conjunctiva examined by the pathologist revealed that carcinoma in situ was seen in fifteen (75%) of the specimens and invasive carcinomas of the conjunctiva in five (25%) of the specimens. The involvement of margins in the excised tissues was present in fifteen (75%) of them.

DISCUSSION

Our series have confirmed that Conjunctival squamous cell carcinoma is not a disease of the western world but is also encountered in our patients. The carcinoma has been known to occur in the elderly males (90%) and the

commonest site being the limbus (90%) as has been shown in other studies¹ 155st of the patients in our study were fair colored according to our standards. Most of our patients presented with a mass or growth at the limbus (90%) with two patients (10%) presenting as a diffuse thickening of the conjunctiva. The clinical diagnosis was correct in 80% of the cases in contrast to 30%⁴ and 35%⁵ in other studies which maybe due to the advanced stage of the disease. Recurrence of the disease occurred in two (10%) of the patients in comparison to 27% in the study by McKelvin et al⁶. The likely predictors of the recurrence of the Conjunctival squamous cell carcinoma in our study were the larger size of the lesion and the involvement of the margins at the time of excision. In the previous studies it has been shown that the increased age and the involvement of the margins are the main causes of the recurrence. The macroscopic appearance of the Conjunctival squamous cell carcinoma most commonly seen in our study was the gelatinous mass near the limbus in 60% of the cases while it has been shown to be leukoplakic in study by McKelvin⁶. Although the intraocular invasion of the globe has been reported in the range of 2- 8 % in recent studies^{7,8}. It was found in 5% of our patients. Corneal invasion was seen in 10% of the patients. The orbital invasion was found in 5% of the patients in contrast to 15% in other studies^{9,10}.

Squamous cell carcinoma of the conjunctiva is part of a spectrum of diseases ranging from in situ carcinoma to invasive carcinoma. The clinical diagnosis is high in cases of larger lesions with no masquerade clinical features. The histopathology of the specimens is essentially important not only in the diagnosis but also in the management of the patient.

CONCLUSIONS

Squamous cell carcinoma is the disease of the elderly males.

The most common location of the lesion is the limbus.

The incidence of recurrence is the highest in the larger lesions with involvement of margins at excision biopsy. Enucleation and exenteration is seldom required in advanced disease

REFERENCES

1. Lee GA, Hirst LW. **Ocular surface squamous neoplasia.** Surv Ophthalmol 1995; 39:429-50.
2. Erie JC, Campbell RJ, Liesegang TJ. **Conjunctival and corneal intraepithelial and invasive neoplasia.** Ophthalmology 1986;93:176-83.
3. Pizarello LD, Jakobiec FA. **Bowens disease of the conjunctiva: a misnomer In: JakobiecFA,ed. Ocular and adnexal tumors.** Birmingham AL: Aesculapius, 1978:553-571.
4. Yang J, Foster CS. **Squamous cell carcinoma of the conjunctiva.** Int Ophthalmol Clin1997;37:73-85.
5. Lee GA, Hirst LW. **Retrospective study of ocular surface neoplasia.** Aust NZ J Ophthalmol 1997;25:269-76.
6. McKelvin PA, Daniell M, McNab A. **Squamous cell carcinoma of the conjunctiva;** a series of 26 cases. Br J Ophthalmol2002; 86:168-73.
7. Illif WJ, Marback R , GreanWR. **Invasive squamous cell carcinoma of the conjunctiva.** Arch Ophthalmol1975; 93:119-22.
8. Shields JA, Shields CL, Gunduz K, et al. **Intraocular invasion of conjunctival squamous cell carcinoma in five patients. The 1998 Pan American Lecture.** Ophthalmol Plastic Reconstruct Surg1999; 15:153-60.
9. Tunc M, Char DH, Crawford B, et al. **Intraepithelial and invasive squamous cell carcinoma of the conjunctiva ; analysis of 60 cases.** Br J Ophthalmol199; 83:98-103.
10. Johnson TE, TabbaraKF, Weaterhead RG, et al. **Secondary squamous cell carcinoma of the orbit.** Arch Ophthalmol 1997; 115:75-8.

