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SEBACEOUS GLAND CARCINOMA OF THE EYELIDS

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ABSTRACT

Objective: To analyze the clinical presentation and treatment response of Sebaceous Gland Carcinoma (SGC) of the eyelid in our working setup.

Material & Methods: It was a retrospective, non-comparative, observational case series study, conducted at the Department of Ophthalmology, Dow Medical College & Civil Hospital, Karachi and the Department of Ophthalmology Sindh Govt. Qatar Hospital Karachi, over a period of twenty three years from January 1985 to December 2008. In this study fifteen patients with histo-pathologically confirmed Sebaceous Gland Carcinoma (SGC) treated at different places were subjected to retrospective analysis. Clinical data of all patients including patients' history, clinical features, therapy, and outcome were collected from the hospital records.

Results: Nine men (60%) and 6 women (40%) with a mean age of 55 years (range: 41-80 years) were treated for SGC on pathological diagnosis by excision biopsy. Majority of the cases i.e. 11 (73.33%) involved the lower eye lid. The initial diagnosis had been correct in only 3 cases (20%) of the 15 cases with majority of the patients, 8 (53%) being mislabeled as having chalazion. The major age group involved was between 66-75 years with 33% of the cases. The tumor was generally 5-10 mm in size. All the 15 cases underwent primary surgical excision and were subsequently followed for a minimum of one year with no recurrence.

Conclusion: Early diagnosis and consequent surgical therapy of SGC of the eyelid leads to a better outcome and higher survival rates than generally assumed.

Keyword: Sebaceous, gland, eyelid, carcinoma.

INTRODUCTION

Sebaceous Gland Carcinoma (SGC) is a rare eyelid tumor. It is highly malignant with mortality second only to malignant melanoma[1,2]. The incidence is from 0.2% to 0.7% of all eyelid tumors and 1% to 5.5% of eyelid malignancies[3]. Although sebaceous glands are found throughout the body, SGC is found most frequently in the ocular region, which accounts for 75% of cases. The parotid gland is the most common site outside the ocular region, accounting for about 20% of cases[4].

SGC is more frequent in women than in men and affects an older population, usually in the 6th to 7th decade of life[5,6]. It has predilection for upper lids because of excessive number of meibomian glands[7,8]. SGC of the eyelid is frequently misdiagnosed clinically and histopathologically[9]. The clinical presentation is variable and masquerading to benign and inflammatory conditions[10]. The most common presentations are lid mass, blepharitis, blepharoconjunctivitis, meibomianitis, ocular cicatricial pemphigoid, chalazion and recurrent chalazion leading to easy misdiagnosis. Therefore malignancy should be suspected for any atypical unilateral or bilateral inflammatory eyelid disorder unresponsive to medical therapy. The tumor may spread regionally into the lacrimal secretory and excretory systems, to regional lymph nodes, and rarely disseminate hematogenously[11]. Complete surgical excision biopsy as early as possible must be planned to avoid dissemination. This leads to a better out come and high survival rates.

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MATERIAL AND METHODS

This retrospective study was conducted at the Department of Ophthalmology, Dow Medical College & Civil Hospital Karachi and the Department of Ophthalmology Sindh Govt. Qatar Hospital Karachi, covering a period of twenty three years from January 1985 to December 2008.

Fifteen patients with histo-pathologically confirmed SGC treated at different places were

subjected to retrospective analysis. Clinical data of all patients including patients' history, clinical features, therapy, and outcome were collected from the hospital records.

RESULTS

Fifteen patients were included in the study. Among them there were 9 men and 6 women. Patients' age at the time of presentation ranged from 41 to 80 years with mean age 55 years.

Medical history was reviewed from charts. There was no history of ocular or systemic surgery by any patient as well as any history of radiotherapy or chemotherapy. Also there was no history of trauma. However three patients were hypertensive and two were diabetic. Family histories were insignificant.

In our study, majority of the cases involved lower eye lid i.e. 11 (73.33%) and 4 cases (26.66%) were of upper eye lid. There were no cases that simultaneously involved both the lids with tumor.

Ten of the carcinomas were found on the left eye while 5 involved the right eye. Tumors were graded as small (<10 mm) in 5 (33.33%) cases, of medium size (10–15 mm) in 8 (53.33%) cases, and large (>20 mm) in 2 (13.33%) cases as shown in Table 1. The presentation of the tumor was lid mass in 4 (26.66%) cases (Fig. 1), chalazion in 8 (53.33%) cases and blepharo-conjunctivitis in 3 (20%) cases. At the time of referral a correct initial diagnosis had been established in only three (20%) of 15 patients. The most frequent clinical misdiagnosis was chalazion (8 patients), followed by chronic blephro-conjunctivitis (3 patients), and squamous cell carcinoma (one patient). The diagnoses were made on histopathological examinations, based on specimens obtained by full thickness eyelid excision biopsy in all 15 cases.

In all 15 patients the primary treatment was mainly a surgical approach (Fig. 2). Surgery consisted of extensive excision with a tumor free margin of at least 3 mm. The surgical margin was evaluated histo-pathologically. Out of 15 cases 11 (73.33%) were directly repaired and in 4 cases skin graft from behind the ear lobe and mucous graft from the buccal cavity were used for the reconstruction of the lid. The patients were followed every week for 4 weeks, and then every three months for one year. Maximum follow up was from one to five years. The surgical results were

Table No.1: Total No. of cases 15

Eye Affected	No. of patients & %age
Left	10 (66.6%)
Right	5 (33.3%)
Lid affected	
Upper	4 (26.6%)
Lower	11 (73.3%)
Size of Tumor(m.m)	
5-10	5 (33%)
10-15	8 (53%)
20-25	2 (14%)

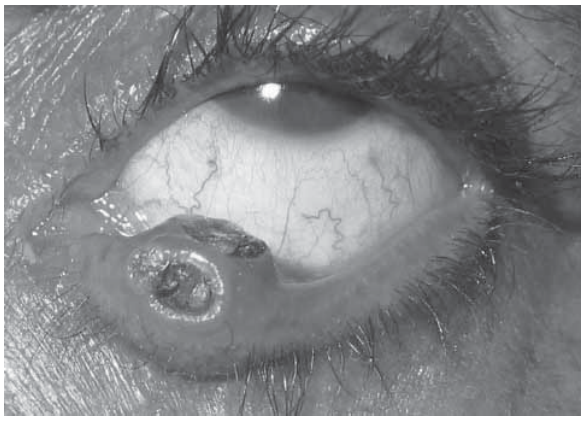

Fig.1: Left lower eyelid sebaceous gland carcinoma.

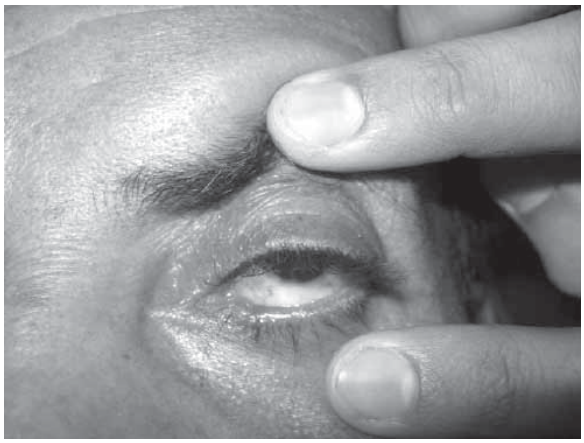

Fig. 2: Patient in Fig. 1, One week postoperative.

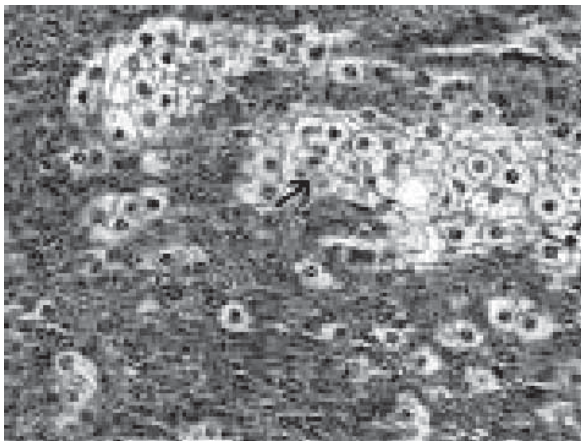

Fig. 3: H & E 40X Histopathological Microphotograph of SGC (Arrow pointing sebaceous Differentiation).

satisfactory and there was no recurrence seen during the follow ups.

The surgery was followed by histopathological examination of the biopsy. Most of the time histo-pathological picture was pathognomonic of SGC. The photomicrographs of a patient (Fig. 3) showed two cell populations. The smaller basaloid cells showing brisk mitosis and moderate nuclear and cytological atypia. The larger clear cells (arrow) with abundant foamy cytoplasm showing sebaceous differentiation.

DISCUSSION

The SGC is a rare eyelid tumor. Fuchs[12] described it more than a century ago; subsequent reports have been few and usually limited to single case. In 1956, Straatsma[13] published the first extensive series, which was able to clarify the natural history and the prognosis of SGC of the eyelid. Since then several other studies have appeared[14-18]. Also comprehensive reviews are available[19-20].

Most of the larger series were derived from eye pathology laboratories that had limited clinical information. The analysis reported here represents, to our knowledge, the largest clinical experience with SGC of the eyelids in the Pakistan ophthalmology literature.

SGC is an uncommon skin tumor which accounts for less than 1% of malignancies of the skin[21]. It is of sufficient importance to ophthalmologists as they occur more frequently on the eyelids, where it comprises 4.7% of malignant epithelial tumours[7]. The incidence on the eyelid is subject to considerable geographical variation. Among white people the tumor is rare and, according to reports from the USA, represents between 0.2% to 1.2% of all lid lesions and between 1.13% to 3.2% of all malignant lid neoplasms[22–24]. In China and other Asian countries, the incidence appears to be much higher; one study from Shanghai gave an incidence of 32.7% of all eyelid malignancies[25].

SGC is seen around 5th - 6th decade, more often in females[4] and occurs more frequently in the upper lid due to its abundant distribution of sebaceous gland[6,7,8]. SGC of the eyelid in younger patients is apparently a rare event and, frequently appears to be associated with prior radiotherapy[26-28]. However there was no such patient in our series. We found that 60% of our cases occurred in males, a finding inconsistent with most other reports[27]. The reason for this predilection for males is unknown. In our series left eye was involved in 10 (67%) cases while right eye involved in 5 (33%) cases. The tumor originates in the upper lid more often than in the lower lid. The ratio varies from 1.3 to 3.0 in the published series[4,16-17,25,32]. In our series, the ratio of lowe to upper lid was 2.75: 1. This again is inconsistence with other studies[30]. In our patients most of the patient has no related systemic associations, a finding similar to other studies[29-31].

The clinical diagnosis of SGC may be difficult, partly because it is rarely encountered and partly because of its propensity to simulate other eyelid lesions as well as varied presentation[33-35]. Typically, there is an insidious onset of a painless firm eyelid mass. Any recurrent Chalazion especially with loss of eye lashes or unilateral chronic blepharitis or superior limbic keratoconjunctivitis should raise the suspicion and warrant biopsy[6]. Number of factors have been associated with prognosis including size of the tumour, lid involvement, extent of infiltration and intraepithelial spread.

Various modalities of treatment are mentioned in literature. The best is by wide surgical excision with the margins extending well beyond the palpable tumor because of the diffusely infiltrating character of neoplasm[8]. In our case series most of the time tumor was completely or partially well defined, therefore surgical excision with complete normal tissue margin was treatment of our choice. The adequacy of the excision may be estimated by frozen section monitored on Moh's surgical technique if facilities are available[13]. Radiotherapy can be considered only for those patients who are too ill for surgery or have refused surgery. However these two modalities were not used in our series. After the surgical excision of tumor, lid reconstruction is also equally important[36, 37]. Generally, these patients respond well to the surgical excision. However, the prognosis is poor if the diagnosis is made later than 6 months and if the tumor size is more than 1.5 cm. The reconstruction of the lower lid depends upon the amount of lid defect and accordingly various procedures can be utilized for the repair. Because of early diagnosis and wide surgical excision no recurrence and metastasis has been found during a period of one to five years follow up.

CONCLUSION

Any unusual inflammatory eyelid disorder in an elderly patient, whether unilateral or bilateral should be evaluated as a potential malignant condition. Early wide surgical excisional biopsy and regular followups are advised which lead to a better outcome and higher survival rates.

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