

Original Research

Assessment of malignant eyelid lesions

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ABSTRACT:

Background: Since malignant eyelid tumors are rare, it is difficult to make a correct diagnosis and to manage them appropriately. The present study was conducted to assess malignant eyelid lesions. **Materials & Methods:** 48 patients of malignant eyelid lesions of both genders were recorded. Parameters such as laterality of the lesion, upper or lower lid lesion, site of the lesion, histopathological type of the lesion, grade of tissue invasion at the time of presentation, the procedure performed for each case, the recurrence if any were recorded. **Results:** Out of 48 patients, 28 were males and 20 were females. In 11 cases of SCC, 28 cases of BCC and 9 cases of SGC, upper eyelid was seen in 5, 11 and 3 and in lower eyelid in 6, 17 and 6 cases respectively. The site was medial in 2, 2 and 1, middle in 4, 10 and 2, lateral in 3, 12 and 5 and entire lid in 2, 4 and 1 case respectively. Grade of tissue invasion was grade 1 in 6, 11 and 1, grade 2 in 4, 10 and 5 and grade 3 in 1, 7 and 3 cases respectively. The difference was significant ($P < 0.05$). **Conclusion:** One-fourth of the malignant eyelid lesions were caused by SCC, whereas two-thirds were caused by BCC. The majority of the cancerous growths were limited to the eyelid. Despite being less common, SGC was aggressive and invasive.

Keywords: malignant eyelid tumors, histopathology, basal cell, carcinoma

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INTRODUCTION

Since malignant eyelid tumors are rare, it is difficult to make a correct diagnosis and to manage them appropriately.¹ There are risks of misdiagnosing them as benign conditions such as chalazions, with the result that cosmetic or functional disorders of the eyelids or distant metastases may occur.² It is important to see beyond the clinical features of malignant eyelid tumors in order to make a correct diagnosis and select the appropriate treatment.³

Ten percent of skin malignancies occur at the eyelid level, while 90 percent occur in the head and neck. Numerous tumor forms and subtypes may develop as a result of the various tissues present at the eyelid level.^{4,5} Eyelids may be affected by malignant tumors that cause morbidity or even death, such as malignant melanoma, squamous cell carcinoma (SCC), sebaceous gland carcinoma (SGC), and basal cell carcinoma (BCC). In ophthalmology clinics, knowing the incidence rate of various eyelid tumor forms and how they appear clinically can be very beneficial.⁶ Although malignant eyelid tumor is a relatively rare

condition, it is commonly observed in elderly persons, and its prognosis is poor, especially that for SGC. It has often been indicated that malignant eyelid tumor is mistaken for chalazion in older patients.⁷ In chalazion surgery, if the tumor is solid and contains no material like rice gruel, if the tumor shows multiple recurrences, and if the tumor has little inflammation, it is considered that the tumor might be malignant.⁸ The present study was conducted to assess malignant eyelid lesions.

MATERIALS & METHODS

The study was carried out on 48 patients of malignant eyelid lesions of both genders. All gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. Parameters such as laterality of the lesion, upper or lower lid lesion, site of the lesion, histopathological type of the lesion, grade of tissue invasion at the time of presentation, the procedure performed for each case, the recurrence if any were recorded. Degree of tissue invasion was classified into three grades: Grade

1: the lesion is confined to the lid only. Grade 2: the lesion invades the globe or became fixed to the underlying periosteum. Grade 3: the lesion extends outside the orbit or has distant metastasis.

Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 48		
Gender	Male	Female
Number	28	20

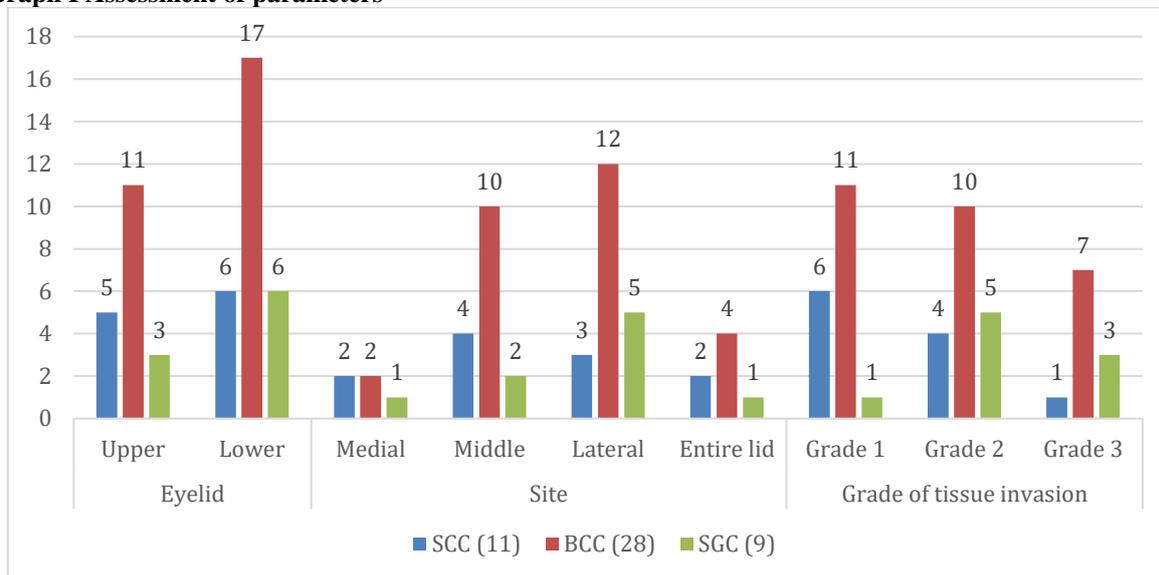
Table I shows that out of 48 patients, 28 were males and 20 were females.

Table II Assessment of parameters

Parameters	Variables	SCC (11)	BCC (28)	SGC (9)	P value
Eyelid	Upper	5	11	3	0.05
	Lower	6	17	6	
Site	Medial	2	2	1	0.04
	Middle	4	10	2	
	Lateral	3	12	5	
	Entire lid	2	4	1	
Grade of tissue invasion	Grade 1	6	11	1	0.13
	Grade 2	4	10	5	
	Grade 3	1	7	3	

Table II, graph I shows that in 11 cases of SCC, 28 cases of BCC and 9 cases of SGC, upper eyelid was seen in 5, 11 and 3 and in lower eyelid in 6, 17 and 6 cases respectively. The site was medial in 2, 2 and 1, middle in 4, 10 and 2, lateral in 3, 12 and 5 and entire lid in 2, 4 and 1 case respectively. Grade of tissue invasion was grade 1 in 6, 11 and 1, grade 2 in 4, 10 and 5 and grade 3 in 1, 7 and 3 cases respectively. The difference was significant (P< 0.05).

Graph I Assessment of parameters



DISCUSSION

Several studies have investigated the incidence, risk factors and clinical manifestations of eyelid tumors.⁹ The incidence of eyelid tumors is mostly a result of environmental factors including sunlight and ultra violet exposure and genetic factors including skin pigmentation. Therefore, the prevalence of these types of tumors shows a geographical variation.^{10,11} The present study was conducted to assess malignant eyelid lesions.

We found that out of 48 patients, 28 were males and 20 were females. Takamura et al¹² studied the records of the 38 cases of malignant eyelid tumor. Among the total of 38 cases, 15 cases (39.5%) were diagnosed as basal cell carcinoma, 11 cases (28.9%) as sebaceous gland carcinoma, and 4 cases (10.5%) as squamous cell carcinoma. In addition, three cases were malignant melanoma, two adenocarcinoma, one Merkel cell carcinoma, one malignant peripheral nerve sheath tumor, and one malignant lymphoma.

The ages of patients ranged from 45 to 92 years (mean, 72.0 +/- 12.4 years). Most of the cases were treated by complete resection of the tumors and eyelid reconstruction. Radiation or cryotherapy were added when required. The prognosis of the cases with basal cell carcinoma and squamous cell carcinoma was good, and that of the other tumors was relatively poor. During the same period, in Caucasians, basal cell carcinoma constituted about 80%-90% of the malignant eyelid tumors, whereas in Japan and Asian countries, basal cell carcinoma, sebaceous gland carcinoma, and squamous cell carcinoma each constituted about 20%-40%.

We found that in 11 cases of SCC, 28 cases of BCC and 9 cases of SGC, upper eyelid was seen in 5, 11 and 3 and in lower eyelid in 6, 17 and 6 cases respectively. The site was medial in 2, 2 and 1, middle in 4, 10 and 2, lateral in 3, 12 and 5 and entire lid in 2, 4 and 1 case respectively. Grade of tissue invasion was grade 1 in 6, 11 and 1, grade 2 in 4, 10 and 5 and grade 3 in 1, 7 and 3 cases respectively. Sihota R et al¹³ in their study a total of 313 lid tumors had been seen, of which 178 were malignant and 135 benign. Among the malignant tumors, there was an almost equal incidence of sebaceous cell carcinomas (32.58%), basal cell carcinomas (29.77%), and squamous cell carcinomas (28.08%). The sex distribution was equal for both sebaceous cell and basal cell carcinomas. Males were relatively more often affected with squamous cell carcinoma (60%). Analysis of 58 cases of sebaceous cell carcinoma showed that 34 patients (58.6%) had a nodule or a mass on the lid that did not involve the skin or conjunctiva. Sixteen (27.6%) were initially diagnosed as having chalazia. Conjunctival ulceration in association with a lid mass was present in 10 patients (17.2%) and a fungating conjunctival/marginal mass was seen in 13 (22.4%); regional lymph nodes were involved in only 10 (17.2%). Of the basal cell carcinomas, 24 (45.3%) were slowly growing ulcers on the skin with raised margins, 15 (28.3%) were nodules adherent to the skin, eight (15.1%) were infiltrative/fungating masses with recurrent episodes of bleeding, and 12 (22.6%) were pigmented. Recurrent lesions, all located at the medial canthus, were seen in four (7.5%) of the cases. Squamous cell carcinomas presented as a large, fungating, and infiltrative mass in 21 patients (62%), ulceration of the skin with rolled out edges in 12 (24%), and a lid nodule adherent to the skin in seven (14%).

Cook BE¹⁴ determined the epidemiologic and clinical characteristics of patients with malignant eyelid tumors in an incidence cohort. The incidence cohort included 174 patients who each had 1 tumor; men and women were equally affected, and all patients were white. Tumors developed most commonly on the lower eyelid (n = 85; 48.9%) and in the medial canthal region (n = 48; 27.6%) but involved the right and left sides with equal frequency. Of the 174 tumors, 158 were basal cell carcinomas (90.8%), 15

were squamous cell carcinomas (8.6%), and 1 (0.6%) was a malignant melanoma. The age- and gender-adjusted incidence rates for basal cell carcinoma, squamous cell carcinoma, and malignant melanoma were 14.35, 1.37, and 0.08 per 100,000 individuals per year, respectively. No cases of sebaceous gland carcinoma were identified. The 5- and 10-year recurrence rates for all tumors on the eyelid were 2% and 3%, respectively. The probability of an unrelated malignancy developing elsewhere in the body was approximately 9% at 5 years and 15% at 10 years. The shortcoming of the study is small sample size.

CONCLUSION

Authors found that one-fourth of the malignant eyelid lesions were caused by SCC, whereas two-thirds were caused by BCC. The majority of the cancerous growths were limited to the eyelid. Despite being less common, SGC was aggressive and invasive.

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