Clinical Study and Histopathological Analysis of Malignant Eyelid Tumors in Albania

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Abstract

Objective: Our aim is to analyze the histopathological characteristic of patients with malignant eyelid tumors .

Materials and methods: This is a retrospective study performed at the Department of Ophthalmology at the University Hospital "Mother Teresa" in Tirana. We reviewed the data of patients with eyelid tumor from May 2011 to May 2014. Only patients with malignant eyelid tumors were included in this study.

Results: The mean age of the patients in our study was 48.7 ± 15.4 years old. The 156 malignant eyelid tumors included 99 basal cell carcinoma (BCC = 63.4%), 16 sebaceous gland carcinoma (SGC = 10.1%), 23 squamous cell carcinoma (SCC = 14.7%), 16 malignant melanoma (MM = 10.1%), and 3 other tumors (Other = 1.7%).

The mean interval of recurrence was 20 month. Recurrence developed in 8 cases (5.1%). The recurrence rate of BCC (4/8, 50%) was significant lower than others tumors SGC (1/8, 12.5%), SCC (1/8, 12.5%), MM (1/8, 12.5%) with a significant $p<0.001$).

Conclusion: Basal cell carcinoma was the most common malignant eyelid tumor in this study. The recurrence of basal cell carcinoma was higher than other type of malignant eyelid tumors.

Introduction:

The eyelid tumors are estimated to represent the 90% of all ophthalmic tumors (Lee, Au Eong, Saw, Chan, & Lee, 2000). The eyelid tumor pathology is mostly based on different types of skin cancer (basal cell carcinoma, squamous carcinoma, accessory glands carcinomas and malignant melanoma) and 10% of skin cancers arise from eyelid (Myers & Gurwood, 2001). Eyelid malignancies are treatable if detected early and depends on the invasiveness of the tumor and the type of malignancy (Mamtani, Jahagirdar, Thakre, Kale, & Kulkarni, 2007).
Basal cell carcinoma (BBC) is detected by tissue destruction, but rarely metastasize (Saari, Paavilainen, Tuominen, & Collan, 2001). Squamous cell carcinoma (SCC) is more aggressive and invasive. Follow-up is needed after treatment of malignant eyelid tumors (Wang et al., 2003).
The aim of our study was to analyze the histopathological characteristic of patients with malignant eyelid tumors.

Materials and methods:

This retrospective study was conducted at the Department of Ophthalmology at the University Hospital "Mother Teresa" in Tirana from May 2011 to May 2014. Data were recorded for each patient including general information, exact site of lesion, disease course, incidence of tumor recurrence and time between treatment and recurrence.

Data collected was analyzed using SPSS. A value less than 0.001 was considered statistically significant.

Results:

A total of 156 patients presented in our study which 96 (61.5%) were male and 60 (38.5%) were female. The mean age of the patients was 48.7 ± 15.4 years old. The tumor was localized in the lower lid in 108 patients (69.3%), and in 48 patients (30.7%) was localized in the upper lid, where we find a $p<0.001$. 89 (57.1%) of tumors were found in the left eye.

From 156 patients with malignant eyelid tumors, was found that 99 (63.4%) of the patients were diagnosed with BBC, 12 (10.1% with SGC, 23 (14.7%) with SCC, 16 (10.1) with MM and 3(1.7%) with other type of tumors not in this four classification.

67.3% of patients were over 61 years old, were 60 patients were diagnosed with BBC, 10 patents with SGC, 12 with SSC and 8 with MM. A significant p-value was found ($p<0.001$) between the age of patients with BBC and the age of patient with MM.

Regarding the site of the tumor, BCC lesions presented on the lower eyelids in 82/99 patients (82.8%), SGC in 2/16 patients (12.5%), SCC in 16/23 patients (69.6%), MM in 11/16 patients (68.7%) and Other in 3/3 patients (100%).

BCC lesion and MM lesion were mostly localized in the left eye in 52.5% of patients with BCC and in 68.7% of patients with MM. In contrast, patients with SGC, SCC and Other were localized in the right eye (56.3% in patients with SGC, 73.9% of patients with SCC and in 66.7% of the patients with Other type of tumor) with a $p<0.05$.

The mean recurrence time was 20 months after the surgery. The difference in recurrence was statistically significant between BBC and SGC ($p=0.003$); BBC and SCC ($P=0.002$); SGC and MM ($p=0.006$); but we didn't find any difference between the recurrence in the patient with BCC ($P=0.203$), SCG ($p=0.421$), SCC ($p=0.450$) and MM ($p=0.142$).

The recurrence was seen in 5.1 % of the patients, were 50% in patients with BBC , 12.5% in patients with SGC, SCC and MM with a $p<0.001$. We didn't find any case of recurrence in patients with other type of malignant eyelid tumors.

The prevalence of the recurrence in patients with SGC 1/16 (25 %) and MM 1/16 (25%) was higher than in patients with BCC 4/99 (4.1%), SCC 1/23 (4.3%) .

Table 1. Clinical and histopathologic data on patients with malignant eyelid tumor

Histopathologic type	BCC	SGC	SCC	MM	Other	Total
Nr. (%)	99 (63.4)	16 (10.1)	23 (14.7)	16 (10.1)	3 (1.7)	156
Recurrence Nr (%)	4 (50)	1 (12.5)	1 (12.5)	1 (12.5)	0	8 (5.1)
Mean time recurrence (month)	18	22	23	17	0	20
Location						
Upper lid	17 (17.2)	14 (89.5)	7 (30.4)	5 (31.3)	0	48 (30.7)
Lower Lid	82 (82.8)	2 (12.5)	16 (69.6)	11 (68.7)	3 (100)	108 (69.3)
Eye						
Right eye	47 (47.4)	9 (56.3)	17 (73.9)	5 (31.3)	2 (66.7)	67 (42.9)
Left eye	52 (52.5)	7 (43.7)	6 (26.1)	11 (68.7)	1 (33.3)	89 (57.1)
Age						
<60	35 (35.4)	6 (37.5)	11 (47.8)	8 (50)	3(100)	51 (32.6)
≥61	64 (64.6)	10 (62.5)	12 (52.2)	8 (50)	0	105 (67.3)

BCC: Basal cell carcinoma; SGC: Sebaceous gland carcinoma; SCC: Squamous cell carcinoma; MM: Malignant melanoma

Conclusion:

Malignancies of the eyelid are mostly cancers of the skin. Malignant lesions of the eyelid increases with age(Lee et al., 2000). In our study 67.3% of patients with malignant lesions of the eyelid was more than 61 years old.

The most common eyelid malignancy was basal cell carcinoma (63.4%), followed by squamous cell carcinoma (14.7%), melanoma (10.1%), sebaceous cell carcinoma (10.1%) and other type of carcinoma (1.7%).

Basal cell carcinoma was the most frequent malignant neoplasm and represented 63. 4% from all malignant eyelid tumors. Other studies has shown BCC as the most frequent malignant eyelid tumor (Margo & Mulla, 1998).

In our study, BCC affected the lower eyelid more frequently than the upper eyelid; other study has been shown the predominance of BCC in various studies (Mamalis, White, Pedersen, Holds, & Anderson, 1989). The sun exposure and whites people has been shown as risk factor for BCC (Wong, Strange, & Lear, 2003).

SGC is most common in the upper eyelid in our study, this is as we expected, because most SGC lesions originate from meibomion glands of the tarsus, which are abundant in the upper eyelid (Shields, Demirci, Marr, Eagle, & Shields, 2004).

The recurrence rate of BCC was 50% in our series. The mean time to recurrence was 18 months for BCC, 22 months for SGC, 23 months for SCC and 17 months for MM. This suggest that SGC and SCC should be followed up for a longer period.

In summery we can say that the he results indicate that histologic type is the most important prognostic indicator for recurrence of malignant eyelid tumors.

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