

Tumours of the Eyelid- A Histopathological Study of 86 Cases in a Tertiary Hospital.

Dr Ramya B S*, Dr. Dayananda S Biligi**, Dr Chinmayee J T***, Dr A r Raghupathi****

*Assistant professor, Department of pathology, Bangalore Medical College and Research Institute, Bangalore, Karnataka, India.

**Professor, Department of pathology, Bangalore Medical College and Research Institute, Bangalore, Karnataka, India.

***Assistant professor, Department of ophthalmology, Bangalore Medical College and Research Institute, Bangalore, Karnataka, India.

****Professor & HOD, Department of pathology, Bangalore Medical College and Research Institute, Bangalore, Karnataka, India.

Abstract- Background and aim

Eyelid oncology is of growing importance whose early diagnosis saves the visual system. Overview of eyelid tumours guides ophthalmologists to design for optimal therapy. We carried out the study to assess the incidence of eyelid neoplasms with respect to age, sex, location and histopathological type.

Materials and methods

Retrospectively we studied 86 cases of eyelid tumours from September 2008 to march 2011, carried out through histopathological confirmation.

Results

A total of 138 cases of ocular neoplasms were seen, among which eyelid tumours accounted the maximum with 86 cases (62.31%). The most common age group affected was between 51-60 yrs (23.25%). Benign tumours accounted for 45(52.3%) cases and malignant tumours were encountered in 41(47.7%) cases. Among the benign tumours capillary hemangioma was the commonest tumour with 14 cases. Sebaceous cell carcinoma was commonest malignant tumour seen in 17(47.7%) cases followed by basal cell carcinoma 11 cases(26.8%) and squamous cell carcinoma in 9(21.9%) cases. Few rare tumours like mucinous eccrine carcinoma, basal cell carcinoma with angiosarcoma, embryonal rhabdomyosarcoma and malignant melanoma of the eyelid were also seen.

Conclusion

Benign and malignant tumours were seen almost equally with sebaceous cell carcinoma been the most common malignant tumour similar to that seen various studies conducted in India, though basal cell carcinoma is the most common malignant eyelid tumour worldwide. This variation might be due to geographical and environmental factors.

Index Terms- Eyelid, malignant tumours, sebaceous cell carcinoma

I. INTRODUCTION

Eyelid tumours are by far the most common neoplasms encountered in clinical ophthalmic practice. They are

estimated to represent more than 90% of all ophthalmic tumours.¹ Because of different tissues at eyelid level, a variety of tumoral types and subtypes can arise, but most of them are carcinomas.² The classification and differentiation in type of eyelid tumour are beneficial to the histopathological diagnosis.³ Eyelid malignancies are completely treatable if detected early. The treatment depends on the invasiveness of the cancer which in turn depends on the type of malignancy.⁴ basal cell carcinoma has a better prognosis and sebaceous gland carcinoma has a higher mortality and therefore should be treated much more aggressively. Long-term follow-up is needed after treatment of malignant eyelid tumours.⁵

II. MATERIALS AND METHODS

We accomplished a retrospective analysis of 86 eyelid tumours by histopathological confirmation.

Standard protocol was followed for processing of ocular tissues. Routine Hematoxylin and Eosin staining was done. Special stains like Alcian blue, PAS & Reticulin stain were done wherever necessary.

We analysed the age and sex distribution of lesions, location and histopathological result of the tumours.

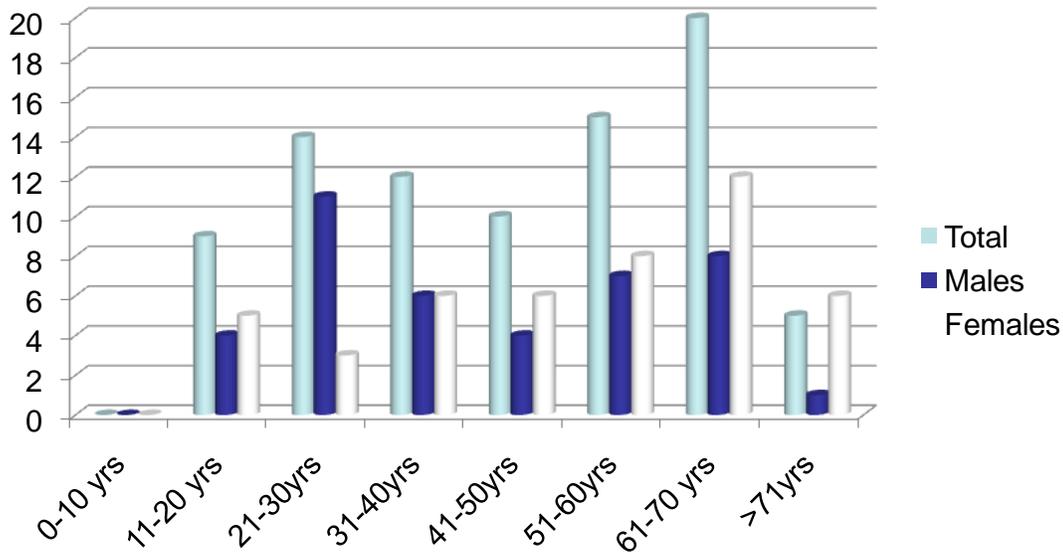
III. RESULTS

During two and a half period, a total of 86 cases of eyelid tumours with histopathological confirmation were analysed retrospectively, out of which 45(52.3%) cases were benign and 41(47.7%) cases were malignant.

Males had a slight preponderance with a male to female ratio of 1.09:1. Both benign and malignant tumours were seen more on the upper lid.

No cases were seen below 10 yrs and most common age group affected was between 51-60 years(23.25%) (Table 1)

Table 1: AGE AND SEX DISTRIBUTION



Among the benign tumors, capillary haemangioma was the commonest lesion accounting for 14 cases(31.1%) followed by naevus 9 cases, seborrhic keratosis 6 cases, lipoma 4 cases,

cutaneous myxoma 3 cases, cavernous haemangioma 2 cases, clear cell hidradennoma 2 cases and others.(Table 2).

Table 2: BENIGN TUMORS

DIAGNOSIS	NUMBER	PERCENTAGE
CAPILLARY HEMANGIOMA	14	31.1%
NEVUS	09	20.0%
SEBORRHC KERATOSIS	06	13.4%
LIPOMA	04	8.9%
CUTANEOUS MYXOMA	03	6.8%
SQUAMOUS PAILLOMA	02	4.4%
CAVERNOUS HEMANGIOMA	02	4.4%
CLEAR CELL HIDRADENOMA	02	4.4%
KERATOACANTHOMA	01	2.2%
SCHWANNOMA	01	2.2%
EPITHELIOD HEMANGIOENDOTHELIOMA	01	2.2%
TOTAL	45	100%

Among the malignant ones, sebaceous cell carcinoma was the most common which was seen in 17(41.4%) cases, followed by basal cell carcinoma 11(26.8%), squamous cell carcinoma 9 cases(21.9%) and single cases of mucinous eccrine carcinoma,

basal cell carcinoma with angiosarcoma, embryonal rhabdomyosarcoma and malignant melanoma(Table 3).

Table 3: MALIGNANT TUMORS

DIAGNOSIS	UPPER LID	LOWER LID	TOTAL NUMBER	PERCENTAGE
SEBACEOUS CELL CARCINOMA	12	05	17	41.4%
BASAL CELL CARCINOMA	04	07	11	26.8%
SQUAMOUS CELL CARCINOMA	04	05	09	21.9%
MUCINOUS ECCRINE CARCINOMA	1	-	1	2.4%

BASAL CELL CARCINOMA WITH ANGIOSARCOMA	1	-	1	2.4%
EMBRYONAL RHABDOMYOSARCOMA	1	-	1	2.4%
MALIGNANT MELANOMA	1	-	1	2.4%
TOTAL	24	17	41	100%

Median age at diagnosis of malignant lesion was 62 years.

Sebaceous cell carcinoma was found most commonly on upper eyelid accounting for 12cases out of 17 cases(70.6%), showed a female preponderance, 88% of cases presenting after 60 years. while basal cell carcinoma(63.6%) and squamous cell carcinoma(55.5%) were found commonly on lower lid.

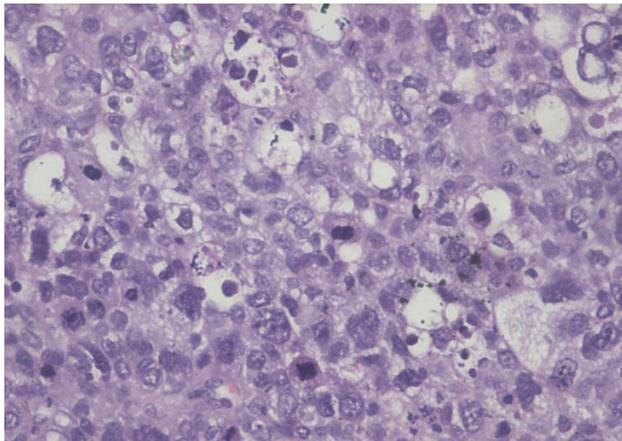


Figure 1: SEBACEOUS CELL CARCINOMA

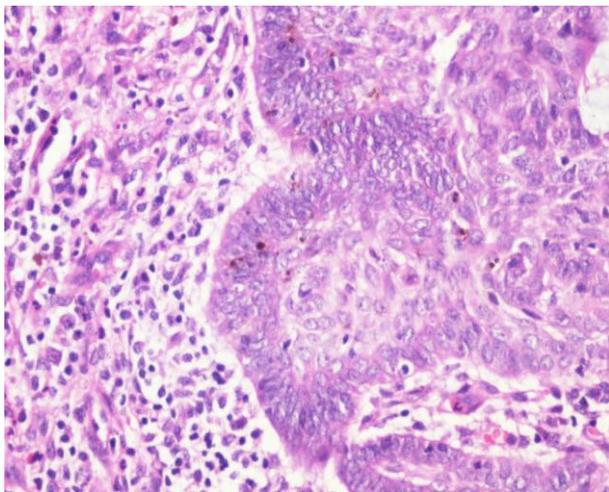


Figure 2: BASAL CELL CARCINOMA

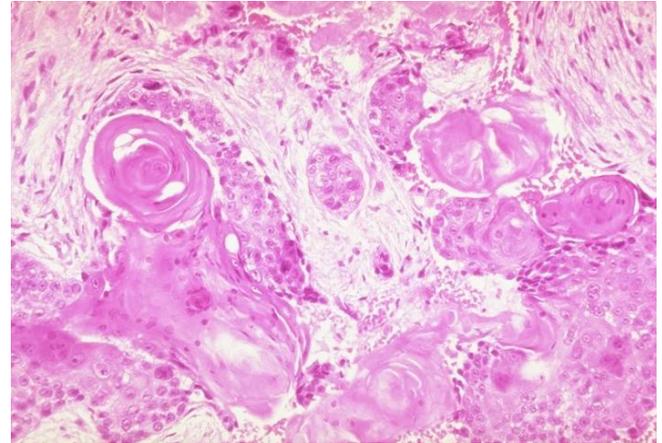


Figure 3: SQUAMOUS CELL CARCINOMA

IV. DISCUSSION

Malignancies of the eyelid are predominantly cancers of the skin. As with other skin tumours, malignant lesions of the eyelid increases with age.¹

Mihaela- cristiana caloi et al² studied 471 cases of eyelid tumours and found 114 pseudotumours, 102 benign tumours and 225 cases of malignant tumours.

Fouzia farat et al⁶ studied 288 cases of eyelid lesions and found 105 cases(44.11%) of benign, 87(36.99%) cases malignant, 39(16.39%) cases of non neoplastic tumour like lesions and 7(2.94%) cases were pre-malignant lesions.

Deprez et al⁷ studied 5504 cases over a period of 19 years and found 84% of benign tumours and rest malignant. The majority of eyelid lesions were benign eyelid tumors while malignant eyelid tumors contributed 10.8% of the total eyelid lesions.⁸

Of the eyelid lesions 24.1% were malignant and 75.9% were benign.⁹

In the present study, for all the eyelid tumours we analysed, benign tumours were 45 cases representing 52.3% and 41 malignant tumours representing 47.7%.

Among the benign tumours, squamous papilloma(84 cases) were the commonest followed by seborrheic keratosis(11 cases), nevus (5 cases) and capillary haemangioma(2 cases).²

Fouzia Farhat et al⁵ found epidermal inclusion cyst(26.6%) to be the commonest of benign tumors followed by dermoid cyst(21.90%).

The most common benign lesions were seborrheic keratosis (19.7%), followed by lipogranuloma (13.7%), intradermal nevus (12.2%), and hidrocystoma and fibroepithelial polyps (each with 8.6%).⁹

In our study it was capillary haemangioma(14 cases) to be the most commonest benign tumours followed by nevus(9 cases).

Wang JK et al⁵ studied 127 malignant eyelid tumours, found 79 basal cell carcinoma(62.2%), 30 sebaceous cell carcinoma(23.6%), 11 squamous cell carcinoma(8.7%), 5 malignant melanoma(3.9%), one kaposi's sarcoma(0.8%) and one metastatic carcinoma(0.8%). All malignant lesions were more common in the lower lid than the upper lid. The mean age at diagnosis for all malignant tumours was 62.6 years.

Basal cell carcinoma was the most frequent malignant neoplasm and represented 82.2% from all malignant eyelid tumors. The maximum incidence of lesions was in 5th and 6th decade and the common location was the lower lid.²

The most common eyelid malignancy was basal cell carcinoma (71.8%), followed by squamous cell carcinoma (9.7%), melanoma (9.2%), and sebaceous cell carcinoma (7.3%).⁹

The most common primary malignancy was basal cell carcinoma(84%) followed by sebaceous adenocarcinoma(10.2%) and squamous cell carcinoma(3.4%).¹

Basal cell carcinoma was the frequent malignant tumor(86%) followed by squamous cell carcinoma(7%) and sebaceous carcinoma(3%).⁷

Basal cell carcinoma is the most common malignant eyelid tumor in whites. The lower eyelid and medial canthus are the most frequent sites of origin.¹⁰

Fouzia Farhat et al⁶ also found basal cell carcinoma with 49 cases(56.32%) to be the commonest followed by squamous cell carcinoma in 18 cases(20.69%), sebaceous cell carcinoma in 13 cases(14.94%) along with few rare tumors.

Squamous cell carcinoma was the most frequently encountered malignant tumor of the eyelid seen in this series.¹¹

Sebaceous gland carcinoma was the commonest (40.5 per cent) finding, followed by squamous cell carcinoma (27 per cent), basal cell carcinoma (24.3 per cent), basosquamous carcinoma (5.4 per cent) and malignant melanoma (2.7 per cent).¹²

Although basal cell carcinoma is the most common eyelid cancer in Taiwan, sebaceous gland carcinoma is also common.⁵

Malignant tumors of the eyelid other than basal cell and squamous cell carcinoma are uncommon and usually occur in elderly white persons. Primary eyelid tumors of any type are rare in blacks. The risk of a non-basal cell and non-squamous cell malignant neoplasm of the eyelid in Florida is 6.4 times greater for whites than for blacks. A variety of B-cell lymphomas can be manifested as primary eyelid tumors.¹³

Basal cell carcinoma was the most common malignant eyelid tumour in north-west Pakistan, followed by squamous cell carcinoma. In contrast, the sebaceous gland carcinoma was the least common in the study population.¹⁴

In the present study it was the sebaceous cell carcinoma which was the commonest malignant tumour with its incidence more on the upper lid.

A racial difference in the incidence of basal cell carcinoma, sebaceous gland carcinoma, and squamous cell carcinoma can be considered in making a diagnosis.¹⁵

V. CONCLUSION

Eyelid is a heterogeneous tissue, hence we tend to see a variety of tumoral types & subtypes, both benign & malignant.

Though basal cell carcinoma is the most common tumour of the eyelid worldwide, sebaceous cell carcinoma was the commonest malignant tumour in the present study co- relating with the other Indian studies. This emphasises the environmental & geographic factors in the occurrence of malignant eyelid tumours.

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AUTHORS

First Author – Dr Ramya B S, MBBS, MD, Assistant professor, Department of pathology, BMC&RI. Email: dramyashekar@gmail.com

Second Author – Dr. Dayananda S Biligi, MBBS, MD, Professor, Department of pathology, BMC&RI. Email: drdayabmc41@ymail.com

Third Author – Dr Chinmayee J T, MBBS, MS, Assistant professor, Department of ophthalmology, BMC&RI.

Fourth Author – Dr A R Raghupathi, MBBS, MD, Professor & HOD, Department of pathology, BMC&RI.

Correspondence Author – Dr RAMYA B S, Email: drramyashekar@gmail.com, Contact number: 9480303156