



SPECTRUM OF EYELID TUMOURS - AN INSTITUTIONAL HISTOPATHOLOGICAL STUDY

Pathology

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ABSTRACT

Eyelids consists of standard pilosebaceous units and skin appendages of eyelids. According to their tissue or cell of origin, Eyelid tumours are classified as benign or malignant. Retrospective study was carried out in the department of pathology in M&J Western Regional institute of Ophthalmology, Ahmedabad. A total of 87 eyelid tumours were identified over a period of 2 years. In each case, age, gender, site of eyelid and final histopathological diagnosis were observed. Highest incidence of eyelid tumours was observed in the age group of 61-70years and 41-50years (21.8%) whereas lowest incidence in age group 11-20years (4.5%). Male were found to be more affected than female (50% >49.4%). Left upper lids (75.4%) were more commonly involved. Malignant tumours (65.5%) were common than benign (34.4%). Among benign, Melanocytic nevus (23.3%) had highest prevalence and among malignant, Sebaceous gland carcinoma (28.7%) was highest. Histopathological examination thus has a vital role in establishing correct diagnosis, for further management and prognosis assessment.

KEYWORDS

Eyelids, tumours, intradermal nevus, sebaceous gland carcinoma.

INTRODUCTION:

Eyelids serves as a protection to the delicate eyeball structures. They are divided into cutaneous and conjunctival portions. It consists of standard pilosebaceous units and skin appendages of eyelids including glands of Zeis and moll, Meibomian glands along with rich vascular and nerve supply. According to their tissue, cell and nature of origin, Eyelid tumours are classified as benign or malignant. This study aims to assess the histomorphological spectrum of various eyelid tumours, determine their frequency, age, sex and site distribution among our study population and compare them with the other studies.

MATERIALS AND METHODS:

The current study under taken is a retrospective observational study carried out in Histopathology department, M & J Western Regional Institute of Ophthalmology, Civil Hospital, B.J. Medical college, Ahmedabad. A total of 87 cases were studied. Study was carried out over a period of 2 years between July 2019 and July 2021. Clinical records of the patient were collected from electronic database maintained in the department. After receiving specimens thorough gross observation was done and findings were noted. Specimens were fixed in 10% neutral buffered formalin and gross examination was done the following day after 24 hours of fixation. Automated tissue processors were used to process the tissues and embedded in paraffin blocks. Approximately 4mm sections were made with microtome and they were stained with Haematoxylin and eosin in Automated Stainer. Sections were examined and microscopic findings were evaluated.

OBSERVATION:

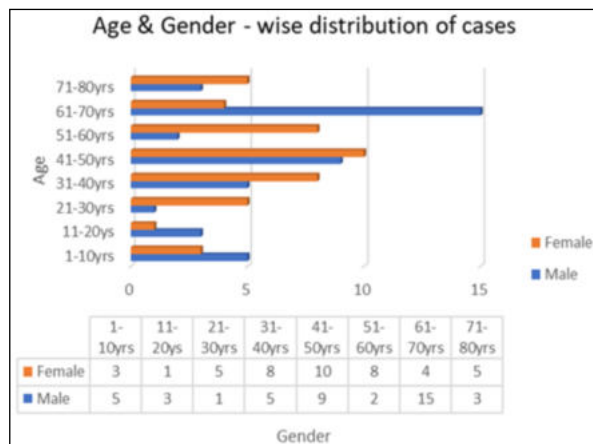


Figure (1)- Age & Gender Distribution

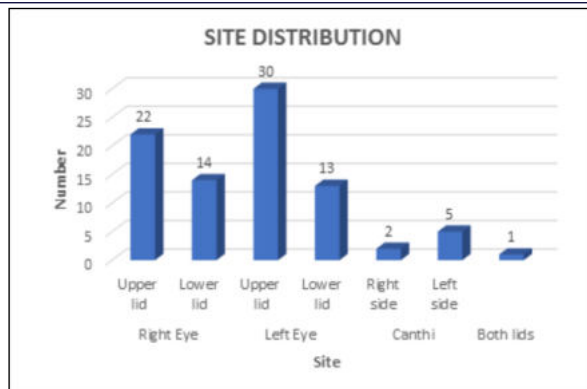


Figure (2) – Site Distribution

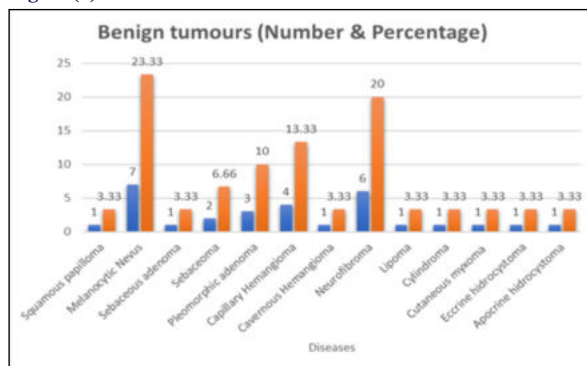


Figure (3) – Benign Tumours -Diagnosis Total Number & Percentage

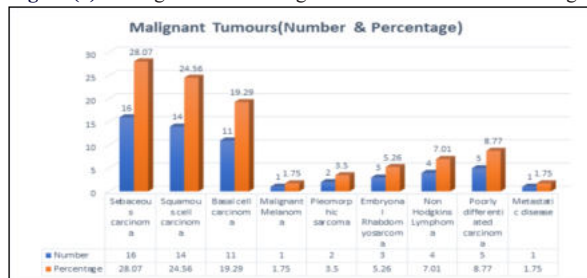


Figure (4) – Malignant Tumours -Diagnosis Total Number & Percentage

DISCUSSION:

In view of various histological structures associated with eyelids, various spectrum of pathologies was noted in the study. The observations and results of the present study was compared with observations of other similar studies and findings were noted.

There is almost equal incidence of cases among males and females – 50.6% and 49.4% respectively (Fig.1). Highest incidence of eyelid tumours was observed in the age groups of 61-70years and 41-50years (21.8%) whereas lowest incidence noted in age group of 11-20years (4.5%) Mean age of presentation was 45.5 years. Left eyelids (75.4%) were involved more than the right eyelids (41.3%) among which Upper eyelids were more frequently involved than the lower ones (Fig.2).

Malignant tumours (65.5%) were more common than the benign tumours (34.4%). Among the benign tumours, the most common tumour was Melanocytic nevus (17.6%) followed by Neurofibroma (20%) (Fig3). The commonest among malignancy encountered in the current study were sebaceous gland carcinoma (29.7%) and the next common malignancies were Squamous cell carcinoma (17%) and Basal cell carcinoma (14.8%) respectively (Fig.4). Majority of the benign eyelid lesions occurred in relatively younger age(31-40years) and Malignant tumours were common in elderly age group(71-80years).

There are wide racial and geographical variations reported in the incidence of the eyelid tumours all across the globe. Majority of the studies have shown that prevalence rate of benign tumours outnumbered malignant tumours which was converse in our study also keeping in mind that the present study is solely focused on tumours. (Table.1)

Table.1 Prevalence Of Benign And Malignant Eyelid Tumours By Different Studies

EYELID TUMOUR S (%)	Paul S et al ⁽⁸⁾	Mary HO et al ⁽¹²⁾	Huang YY et al ⁽¹¹⁾	Ramya BS et al ⁽¹⁰⁾	Sushma TA et al ⁽³⁾	Present study
BENIGN	75.9	86	95	52.3	92.76	65.5
MALIGNANT	25.1	14	5	47.7	7.24	35.4

Melanocytic Nevus was the most common benign tumour came across in the present study which was similar to few other studies^(1,9,10). The other common benign tumours noted were Neurofibroma and Capillary hemangioma^(2,6). Sebaceoma was noted in 2 patients with monomorphic basaloid cells, minimal or absent mitotic activity and lack of peripheral palisading and retraction clefts. Skin adnexal tumours such as Cylindroma, eccrine and apocrine hidrocystomas were also noted in the present study.⁽¹⁴⁾

Among the malignant tumours, Sebaceous gland carcinoma was the most common malignancy encountered in the present study. Sebaceous gland carcinoma showed sheets or lobules separated by fibrovascular stroma in which pagetoid tumour growth is more commonly observed (Fig.5).

In contrast to Sebaceous carcinoma, Basal Cell Carcinoma is commonest cancer of eyelid reported in western literature⁽³⁾. 80-90% of all eyelid cancers. Our study revealed BCC as the third commonest tumour accounting for 14.8% cases followed by Squamous cell carcinoma (17%). However, studies from various Asian and Indian authors revealed Sebaceous gland carcinoma as the common malignancy which correlated with our study^(1,3,5). This difference explains that geographical factors, genetic and racial factors plays a vital role in cancer development⁽⁴⁾. Among histopathological type, Nodular variant of BCC(Fig.6) and Moderately differentiated SCC was predominantly found⁽⁷⁾. One case of Xeroderma pigmentosa developing SCC was noted in a 10-year-old boy in the present study. Studies done by Gundogan FC et al and Al-Fakhy et al revealed incidence of tumours like Embryonal Rhabdomyosarcoma and Malignant melanoma (Fig.7&8) which were also noted in the present study^(9,13) the latter being relatively uncommon in the lids. Poorly differentiated carcinomas were noted in 8.77% of the total malignant cases which also correlated with few other studies. Extra-nodal lymphomas presenting in eyes are again a relatively rare entity which was noted in the present study diagnosed as NHLs in 7.01% of the malignancies (Fig.9) which also was observed in a study conducted by

Chowdry Z et al.^(15,16)

One case of Metastatic disease was noted involving Right lower lid of a 46-year-old female with Invasive Ductal carcinoma of Breast.

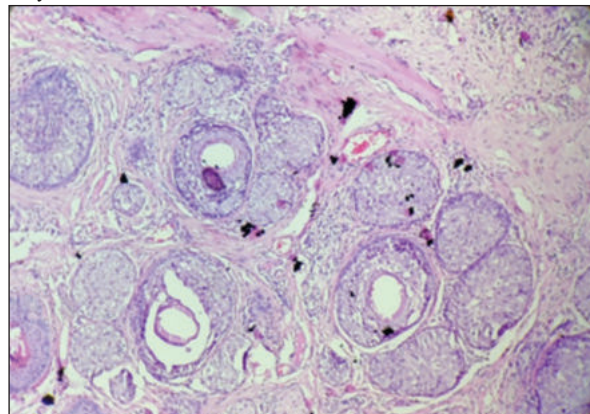


Figure (5) – SEBACEOUS GLAND CARCINOMA - Moderately Differentiated, Grade II, Tumour Cells Arranged In Lobular Pattern.

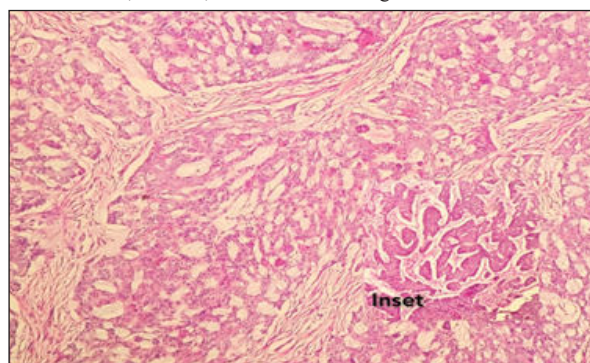


Figure (6)- BASAL CELL CARCINOMA – Large Basaloid Lobules With Peripheral Palisading Of Nucleus (Inset)

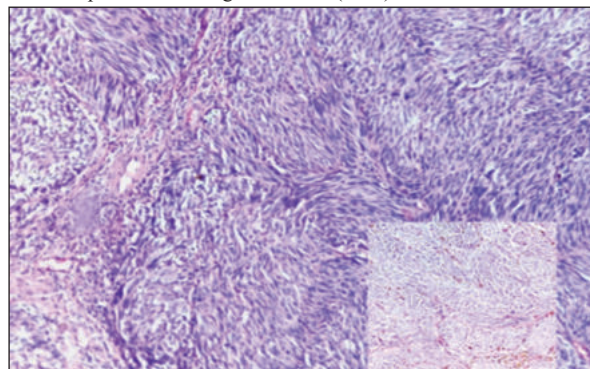


Figure (7)-MALIGNANT MELANOMA– Showing Complex Asymmetrical Growth Pattern Of Spindle Shaped Tumour Cells- In Fascicles With High Grade Nuclear Features, In The Inset Showing Presence Of Melanin.

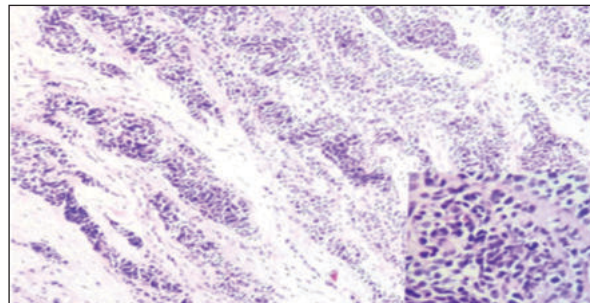


Figure (8)-EMBRYONAL RHABDOMYOSARCOMA – Showing Primitive Mesenchymal Cells With Rhabdomyoblastic Differentiated Noted In The Inset.

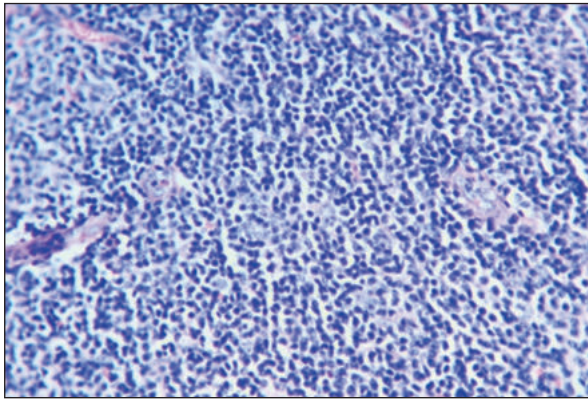


Figure (9) – Non Hodgkins Lymphoma

CONCLUSION:

The incidence of eyelid tumours in this study population was different from the population of other similar studies coinciding with the geographical factors. Prevalence of Intradermal Nevus was highest among benign tumours and Sebaceous gland carcinoma in malignant tumours in the present study. Histopathology plays a major role in the management and prognosis and considering the possibility of benign conditions mimicking malignancy and vice-versa and involvement of the margins in malignant lesions after excision with the tendency of increased recurrence rate and metastasis, it is important to submit the entire tissues of all the eyelid lesions for histopathological examination for further clinical management.

Declaration of Conflict of Interest: The authors declare that they have no conflicts of interest.

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