Original Article

Frequency of Eyelid Lesions presenting in Ophthalmology Department of a Tertiary Care Hospital

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ABSTRACT

Purpose: To find out frequency of eyelid lesions at a tertiary care hospital.

Study Design: Descriptive observational.

Place and Duration of Study: Jinnah Postgraduate Medical Centre Karachi, from March 2013 to December 2018.

Methods: Records of patients operated for eyelid lesions were reviewed. Tumors arising from eyelids, may or may not be extending to other tissues were included in study. Data included age, gender, type of lesion, site of lesion, Histopathologic diagnosis, management and follow up.

Result: A total of 150 patients with lid lesions were managed which included 50% benign and 50% malignant lesions. There were 77 (51.3%) males and 73 (48.7%) females. Age range was 3 to 85 years. The most commonly diagnosed lid lesion was squamous cell carcinoma (n = 45, 30%), 60% among malignant lesions. It was followed by epidermal inclusion cyst (n = 25, 16.7%), 33.33% of benign lesions. Patients with benign lesion were younger than 30 years while patients with malignant lesions were more than 50 years of age. Majority of the affected population was aged males, farmers and laborers, with history of prolong sunlight exposure. Among 150 lesions, 126 (84%) underwent excision biopsy and 24 (16%) underwent exenteration. Excision Biopsy was performed in all 75 (100%) benign lesions and 51 (68%) malignant lesions. Exenteration was performed in 24 (32%) malignant lesions.

Conclusion: Owing to a large percentage of malignant eyelid lesions, population at risk should be educated about eyelid tumors, its early diagnosis, treatment and follow up.

Key Words: Malignant; Benign; Lid Tumours; Squamous cell carcinoma; Basal Cell Carcinoma; Epidermal Inclusion Cysts.

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INTRODUCTION

Eyelids are composed of skin, mucous membrane and their adnexal and supporting structures. We can expect a variety of tumors of skin and mucosa in the eyelids.[1] Eyelid tumors are about 5% of all skin tumors and one of the most common sites for neoplastic lesions of head and neck.[2] Malignant eyelid tumors require a more invasive surgery in case of late diagnosis.[3] There is a certain proportion of malignant tumors which have potential to threaten life.[4,5] Sun exposure in older patients is one of the most common cause of malignant tumors of eyelid[6–9] with an estimate of 60 thousand malignant eyelid tumors diagnosed in the United States every year.[10,11]

Among benign eyelid lesions squamous papilloma, vascular tumours, nevi, cysts, and neural tumours are

commonly seen.[12] Among malignant lesions, basal cell carcinoma (BCC), squamous cell carcinoma (SCC), malignant melanoma (MM), and sebaceous gland carcinoma (SGC) are more common. The most common being the BCC.[13–15] Local data regarding eyelid lesions is scarce, this study may help ophthalmologists for early diagnosis and treatment plan.

METHOD

This study involved a retrospective review of patients who were operated for eyelid lesions at ophthalmology department of Jinnah postgraduate medical center Karachi from March 2013 to December 2018. Patients with lesions primarily arising from eyelids, may or may not be extending to other tissues were included in study. Data included age, gender, type of lesion, site of lesion, histopathologic diagnosis, management and follow-up.

RESULTS

A total of 150 patients with eyelid lesions were managed in Jinnah Postgraduate Medical Centre Karachi over a period of 6.9 years. There were 77 (51.3%) males and 73 (48.7%) females and age range was between 3 to 85 years. Most commonly involved age group was 51-85 years (n = 60, 40%) (Table 1).

Table 1: *Distribution of Cases by age and gender.*

Age (Year)	Male N (%)	Female N (%)	Total N (%)
03 – 30	21 (27.3)	28 (38.4)	49 (32.7)
31 – 50	23 (29.9)	18 (24.7)	41 (27.3)
51 – 85	33 (42.9)	27 (37.0)	60 (40.00)
Total	77 (51.3)	73 (48.7)	150 (100)

Seventy-five benign and an equal number of malignant tumours were included (Table 2).

Table 2: *Distribution of Cases by type and gender.*

Type	Male (%)	Female (%)	Total (%)
Benign	37 (49.3)	38 (50.7)	75 (50)
Malignant	40 (53.3)	35 (46.7)	75 (50)
Total	77 (51.3)	73 (48.7)	150 (100)

The most commonly diagnosed lid lesion was squamous cell carcinoma (n = 45, 30%), 60% among malignant lesions. Majority of the affected population was aged males, farmers and laborers, with history of prolong sunlight exposure. Squamous cell carcinoma was followed by epidermal inclusion cyst (n = 25, 16.7%), 33.33% among benign lesions. Patients with benign lesion were younger than 30 years while patients with malignant lesions were more than 50 years of age (Table 3, 4).

Table 3: *Distribution of benign lesions by Histopathologic diagnosis.*

Histopathologic Diagnosis	Frequency	Percentage
Epidermal Inclusion Cysts	25	33.33
Neurofibroma	09	12
Compound Nevus	09	12
Trichelemmal Cyst	04	5.33
Chronic Non Specific Inflammation	04	5.33
Intradermal Naevus	03	04
Junctional Naevus	02	2.67
Pilomatrixoma	02	2.67
Seborrheic Keratosis	02	2.67
Hamartomatous Lesion	02	2.67
Xanthelesma	02	2.67
Hydrocystoma	02	2.67
Heamangioma	02	2.67
Epidermal Naevus	02	2.67
Dermal Naevus	01	1.33
Squamous Cell Papilloma	01	1.33
Lipoma	01	1.33
Pyogenic Granuloma	01	1.33
Cyst of Mole	01	1.33
Total	75	100

Table 4: *Distribution of malignant lesions by Histopathologic diagnosis.*

Histopathologic Diagnosis	Frequency	Percentage
Squamous cell carcinoma	45	60.0
Basal cell carcinoma	13	17.33
Spindle Cell Tumors	08	10.67
Sebaceous Carcinoma	08	10.67
Carcinoma in situ	01	1.33
Total	75	100

Among 150 lesions, 126 (84%) underwent excision biopsy and 24 (16%) underwent exenteration. Excision Biopsy was performed in all 75 (100%) benign lesions and 51 (68%) malignant lesions. Exenteration was performed in 24 (32%) malignant lesions.

Order of site of involvement was lower lid, upper lid, medial canthus and lateral canthus.

DISCUSSION

Frequency of eyelid tumours is different in different studies. Benign tumours of eyelids were more common than malignant in a study by Thiago et al.[16] Basal cell carcinoma is the most common, followed by squamous cell carcinoma, sebaceous cell carcinoma, Merkel cell carcinoma, and melanoma.[17]

In this study, the most common benign tumours were epidermal inclusion cysts (33.3%) and neurofibroma (12%). Other researchers have reported different order of frequencies. Yu SS has reported that Eyelid tumors were mostly epithelial in origin. Benign tumors were significantly more common than malignant tumors with an obvious female predominance.[18] Another study found that Caucasian had higher percentage of BCC as compared to the Asians.[19] In our study the most common malignant tumors were Squamous cell carcinoma (60%) and Basal cell carcinoma (17.3%).

Factors which affect frequency of different type of eyelids tumours include age, gender, geographical region, exposure to sunlight, ethnicity and genetic factors. In our study age of the patients ranged between 3 to 85 years and we found our 60% of patient with malignant eyelid tumours with more than 50 years of age. This shows that increase of age had a strong relation with malignancy and age is an important risk factor for malignant tumors. This is supported by other studies.[20] Most of our patients diagnosed with squamous cell carcinoma were labourer and farmer by occupation, which justified prolonged sun exposure as a strong risk factor.

In our study CT scan, MRI and excision biopsy were the mainstay of diagnosis and management.

CONCLUSION

The leading eyelid lesions were squamous cell carcinoma followed by epidermal inclusion cyst. Diagnosed patients should be educated about risk of recurrence and encouraged for regular follow up whilepopulation at risk should be educated about risks and their preventive measures.

Conflict of Interest: Authors declared no conflict of interest.

Ethical Approval

The study was approved by the Institutional review board/Ethical review board (**F.2-81/2019-GENL/35483/JPMC).**

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Authors' Designation and Contribution

Alyscia Miriam Cheema; Professor: *Manuscript Review.*

Wejai Kumar; Consultant Ophthalmologist: *Statistical Analysis, Manuscript Preparation.*

Nasar Qamar Khan; Consultant Ophthalmologist: L*iterature search, Manuscript editing.*

Rabia Khawar Chaudhry; Consultant Ophthalmologist: *Concepts, Design.*

Mehboob Dad; Post Graduate Trainee: *Data acquisition, Data analysis.*