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ORIGINAL ARTICLE

Clinicopathological analysis of eyelid lesions

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ABSTRACT:
Background: The cutaneous and conjunctival portions of the eyelids contain a range of tissues. The present study was conducted to assess clinico- pathological analysis of eyelid lesions. **Materials & Methods:** 82 eyelid lesions excised surgically and subjected to histopathological examination of both genders. Parameters such as location i.e. upper or lower eyelid and laterality i.e. right eye or left eye were noted. The specimens were processed for paraffin sectioning and 5 microns thick sections were obtained and stained with hematoxylin and eosin stain. **Results:** Out of 82 cases, 38 were males and 44 females. Out of 82 cases, 40 were non- neoplastic, 36 were benign and 6 were malignant. Under non- neoplastic, 24 were seen in upper and 16 in lower eyelid. Under benign, 25 involved upper and 11 lower, under malignant, 3 involved upper and 3 lower eyelids. Under non- neoplastic lesions, right side was seen in 22, left in 10 and both in 8 cases. Under benign, right in 14, left in 10 and both in 12 cases, Under malignant, right in 1, left in 3 and both in 2 cases. The difference was significant (P< 0.05). Non- neoplastic lesions were epidermal cyst in 12, dermoid cyst in 4, chalazion in 6, molluscum contagiosum in 4, fibrous polyp in 6 and chronic non- specific inflammation in 8 cases. The difference was non- significant (P> 0.05). Benign lesions were benign adnexal tumor in 5, neurofibroma in 7, lipoma in 10, squamous papilloma in 8 and capillary hemangioma in 10 cases. The difference was non- significant (P> 0.05). Malignant lesions were basal cell carcinoma was seen in 1, sebaceous gland carcinoma in 2, squamous cell carcinoma in 2, and lymphoma in 1 case. The difference was non-significant (P> 0.05). **Conclusion:** Non- neoplastic lesions were epidermal cyst, dermoid cyst, chalazion, molluscum contagiosum, fibrous polyp and chronic non- specific inflammation. Benign lesions were benign adnexal tumor, neurofibroma, lipoma, squamous papilloma and capillary hemangioma.
Keywords: dermoid cyst, eyelids, squamous papilloma

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INTRODUCTION

The cutaneous and conjunctival portions of the eyelids contain a range of tissues. The eccrine sweat glands (Wolfring and Krause glands), apocrine glands (Moll glands), and sebaceous glands (Zeiss and Meibomian glands) are skin appendages of the eyelids.[1] These can develop into tumors, as can eyelash follicles and epidermal cells. Numerous disorders, both inflammatory and neoplastic, can affect the eyelids.[2] The patient may find an eyelid lump unsightly, and the attending primary care physicians may find it challenging to diagnose. The most common neoplasms in ophthalmology practice are eyelid tumors, which can range widely from benign to a few malignant.[3]

The prevalence of various eyelid malignancies shows a geographical variation which is believed to be the result of environmental factors including sunlight and ultraviolet exposure. Although many types of eyelid tumors can be diagnosed clinically some can be diagnosed only with pathological specimens.[4] The primary diagnostic method for tumor growths is still histopathology. Histology provides information on the precise nature and structure of the lesion as well as its propensity for malignancy.[5] Lesions ranging from inflammation to various neoplastic diseases are caused by different tissues of the visual system. Compared to other eye disorders, ocular malignant tumors are comparatively uncommon, but they still need to be diagnosed and treated right away. However, poor care brought on by people's ignorance might cause blindness and debility.[6] The present study was conducted to assess clinico- pathological analysis of eyelid lesions.

MATERIALS & METHODS

The study was carried out on 82 eyelid lesions excised surgically and subjected to histopathological examination of both genders. All patients gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. Parameters such as location i.e. upper or lower eyelid and laterality i.e. right eye or left eye were noted. The specimens were processed for paraffin sectioning and 5 microns thick sections were obtained and stained with hematoxylin and eosin stain. Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 82		
Gender	**Male**	**Female**
Number	38	44

Table I shows that out of 82 cases, 38 were males and 44 females.

Table II Distribution of the eyelid lesions

Parameters	Variables	Non neoplastic	Benign	Malignant	P value
Lid	Upper	24	25	3	0.12
	Lower	16	11	3	0.05
Eye	Right	22	14	1	0.01
	Left	10	10	3	0.85
	Both	8	12	2	0.04

Table II, graph I shows that out of 82 cases, 40 were non- neoplastic, 36 were benign and 6 were malignant. Under non- neoplastic, 24 were seen in upper and 16 in lower eyelid. Under benign, 25 involved upper and 11 lower, under malignant, 3 involved upper and 3 lower eyelids. Under non- neoplastic lesions, right side was seen in 22, left in 10 and both in 8 cases. Under benign, right in 14, left in 10 and both in 12 cases, Under malignant, right in 1, left in 3 and both in 2 cases. The difference was significant (P< 0.05).

Graph I Distribution of the eyelid lesions

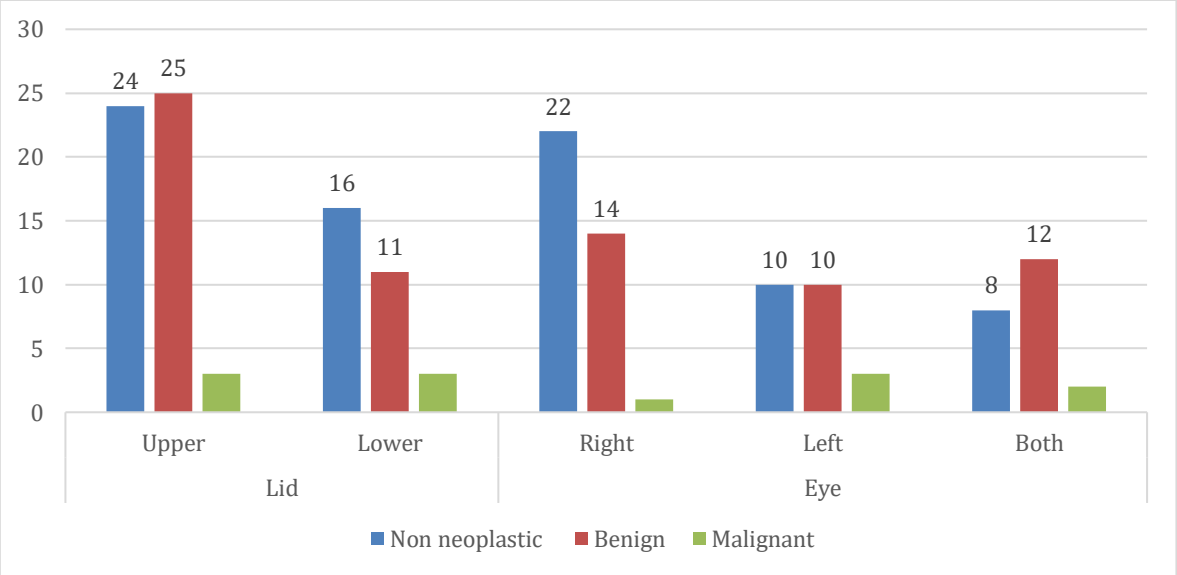

Table III Distribution of non- neoplastic lesions

Non- neoplastic lesions	Number	P value
Epidermal cyst	12	0.72
Dermoid cyst	4	
Chalazion	6	
Molluscum contagiosum	4	
Fibrous polyp	6	
Chronic non- specific inflammation	8	

Table III shows that non- neoplastic lesions were epidermal cyst in 12, dermoid cyst in 4, chalazion in 6, molluscum contagiosum in 4, fibrous polyp in 6 and chronic non- specific inflammation in 8 cases. The difference was non- significant (P> 0.05).

Table IV Spectrum of benign lesions

Benign lesions	Number	P value
Benign adnexal tumor	5	0.14
Neurofibroma	7	
Lipoma	10	
Squamous Papilloma	8	

Capillary hemangioma	10	

Table IV shows that benign lesions were benign adnexal tumor in 5, neurofibroma in 7, lipoma in 10, squamous papilloma in 8 and capillary hemangioma in 10 cases. The difference was non- significant (P> 0.05).

Table V Spectrum of malignant lesions

Malignant lesions	Number	P value
Basal cell carcinoma	1	0.68
Sebaceous gland carcinoma	2	
Squamous cell carcinoma	2	
Lymphoma	1	

Table V shows that malignant lesions were basal cell carcinoma was seen in 1, sebaceous gland carcinoma in 2, squamous cell carcinoma in 2, and lymphoma in 1 case. The difference was non- significant (P> 0.05).

DISCUSSION

Eyelid lesions are quite common and most of the surgically excised ophthalmic specimens submitted for histopathologic evaluation are obtained from this site.[7] Numerous and diverse pathologic lesions in the eyelids are due to their unique anatomical features as the whole skin structures with its appendages, skeletal muscle, modified glands, and conjunctival mucous membrane are represented in the eyelid.[8] Benign lesions are more common than malignant lesions. Basal cell carcinoma has been shown to have the highest incidence among malignancies in the West but a higher incidence of sebaceous carcinoma is documented in Asian countries.[9]

We found that out of 82 cases, 38 were males and 44 females. We found that out of 82 cases, 40 were non-neoplastic, 36 were benign and 6 were malignant. Under non- neoplastic, 24 were seen in upper and 16 in lower eyelid. Under benign, 25 involved upper and 11 lower, under malignant, 3 involved upper and 3 lower eyelids. Under non- neoplastic lesions, right side was seen in 22, left in 10 and both in 8 cases. Under benign, right in 14, left in 10 and both in 12 cases, Under malignant, right in 1, left in 3 and both in 2 cases. Srikant et al[10] carried out to know the histopathological diagnosis of various ocular lesions. Ocular lesions from 81 patients were analyzed. Basal cell carcinoma (BCC) was the most common neoplastic disorder. Nevus was the most common non-neoplastic disorder. Among the 81 cases, 47 were male and 34 were female patients with the highest number of cases in the age group of 41-50 years. Conclusion: The most common ocular malignancy was BCC and nevus was the non-neoplastic disorder.

We found that non- neoplastic lesions were epidermal cyst in 12, dermoid cyst in 4, chalazion in 6, molluscum contagiosum in 4, fibrous polyp in 6 and chronic non- specific inflammation in 8 cases. Benign lesions were benign adnexal tumor in 5, neurofibroma in 7, lipoma in 10, squamous papilloma in 8 and capillary hemangioma in 10 cases. Hussain I et al[11] analysed the demography, mode of presentation, gross morphology, histopathological diagnosis and subsequent course of malignant eyelid tumours. Of the total, 122 (54.1%) patients were male and 102 (45.9%) were female. Mean age of all patients was 59.3 +/- 14.2 years. Among the patients, 73 (32.9%) had the involvement of the lower lid; 57 (25.7%) the upper lid; 18 (8.11%) the medial canthus; 2 (0.9%) the lateral canthus; and 72 (32.4%) had more than one region involved. On histopathology, basal cell carcinoma was the most common (n= 131; 59%), followed by squamous cell carcinoma in 70 (31.5%), sebaceous gland carcinoma in 15 (6.8%), malignant melanoma in 3 (1.3%) and undifferentiated carcinoma in 3 (1.3%) cases. Of the total tumours, 164 (73.87%) did not spread, and 58 (26.13%) spread either locally or distantly.

We observed that Malignant lesions were basal cell carcinoma was seen in 1, sebaceous gland carcinoma in 2, squamous cell carcinoma in 2, and lymphoma in 1 case. Kale SM et al[12] found that mean age of presentation for all the malignancies was 59 years. The median age of presentation was 65 years for basal call carcinoma (BCC), 58 years for sebaceous gland carcinoma (SGC), 55 years for squamous cell carcinoma (SCC) and 45 years for malignant melanoma. There was slight female preponderance as 56.28% of the patients were females. The most common location of the tumour was lower lid (58.2%) for all the malignancies. BCC was the most common malignancy (48.2%) followed by SGC (31.2%) and SCC (13.7%). Mean duration of symptoms was 9 months (range 3-21 months). The most common presenting complaint was mass with ulceration across all histological subtypes. Other associated complaints included itching, discharge from eye, pain and ptosis. The mean size of tumour at diagnosis was 2.34 ± 0.4 cm for BCC, 2.19 ± 0.6 cm for SGC and 1.99 ± 0.7 cm for SCC. The mean rate of growth of BCC was 1.39 cm/year. The corresponding values for SGC and SCC were 3.63 and 4.89 cm/year, respectively. The rate of follow-up was 89% at 3 months, 71% at 6 months, 62% at 1 year and 31% at 5 years. Recurrence rate was 1.9% for BCC and 12.7% for SGC. Surgical methods used included wedge excision and primary closure, excision and skin grafting, and tarso-conjunctival flap.

The shortcoming of the study is small sample size.

CONCLUSION

Authors found that non- neoplastic lesions were epidermal cyst, dermoid cyst, chalazion, molluscum contagiosum, fibrous polyp and chronic non- specific

inflammation. Benign lesions were benign adnexal tumor, neurofibroma, lipoma, squamous papilloma and capillary hemangioma.

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