ISSN: 2309-5288 (Print)
ISSN: 2309-6152 (Online)
CODEN: JCLMC4
Journal of Coastal Life Medicine

Clinicopathological Correlation of Eyelid Lesions

Received: 22 October 2022, **Revised:** 28 November 2022, **Accepted:** 30 December 2022

[1]Dr. Anjali Patil, [2]Dr. Prajakta Patil, [3]Dr. Avanish Kumar Singh
1Associate Professor, 2Senior Resident, 3Resident, Department of Ophthalmology, Krishna Institute of Medical Sciences (Deemed to be University) (KIMS), Karad, Maharashtra, India
Corresponding author: Dr. Avanish Kumar Singh, Resident, Department of Ophthalmology, Krishna Institute of Medical Sciences (Deemed to be University) (KIMS), Karad, Maharashtra, India Email: avanish.singh1@gmail.com

Key words
Chalazion, Sebaceous gland carcinoma, Eyelid

Abstract
Background: Eyelid lesions are quite common and most of the surgically excised ophthalmic specimens submitted for histopathologic evaluation. The present study assessed the clinicopathological correlation of eyelid lesions.
Materials & Methods: eighty two subjects having eyelid damage of both sexes were involved as well as parameters like site of lesions, gross characteristics, and histopathological diagnoses alongside histological observations, marginal tissue involvement among carcinogenic lesions were documented. Haematoxylin as well as eosin stained slides were made.
Results: Out of 82 patients, males were 52 and females were 30. Common benign lesions were seen in 56 cases. Chalazion was seen in 20, Nevus in 12, Papiloma in 10, Sebaceous cyst in 3, Wart in 4, Benign adnexal tumor in 3, Neurofibroma in 2 and Molluscum contagiosum in 2 cases. Malignant lesions were seen in 26 cases. Basal cell carcinoma was seen in 4, Sebaceous gland carcinoma in 10, Squamous cell carcinoma in 4, Lymphoma in 3, Melanoma in 3 and Adenocarcinoma in 2 cases. The difference was significant ($P< 0.05$).
Conclusion: The presence of various histological elements makes eyelids the origin of a wide range of lesions. Most common benign lesions was Chalazion and malignant lesion was Sebaceous gland carcinoma.

1. Introduction
In their everyday work, ophthalmologists encounter a broad range of eyelid abnormalities. A vast variety of pathologies are caused by the existence of various histological components, such as skin, appendages, muscle, as well as modified glands. The majority of surgically removed ocular samples referred for histopathologic assessment are acquired from this location, where eyelid abnormalities are very frequent. The eyelid's distinctive anatomical characteristics, which include the entire skin structure including its appendages, skeletal muscle, modified glands, as well as conjunctival mucous membrane, constitute the cause of the eyelid's various as well as different pathological diseases.[2] Carcinogenic lesions seem to be less frequent as compared to benign ones.
Sebaceous cancer has been found to occur more frequently across Asian nations than basal cell carcinoma, which has been demonstrated to have the greatest frequency of all cancers throughout the West.[3] The differences in the prevalence of several

ISSN: 2309-5288 (Print)
ISSN: 2309-6152 (Online)
CODEN: JCLMC4
Journal of Coastal Life Medicine

cancer subtypes observed in numerous publications have been linked to geographical diversity, hereditary variables, socioeconomic position, and easy availability to healthcare services. Aggressive eyelid infections can mimic both benign as well as histologically distinct forms of malignancy, which frequently causes a lag in diagnosis. Timely discovery, immediate treatment, as well as ongoing therapy for malignant tumours depend upon histopathological analysis.[4]

Establishing the right clinical diagnosis as well as developing the best management strategy are aided by knowing the incidence of various eyelid abnormalities in a specific geographic location. 5 Nonetheless, in instances having uncommon as well as unusual appearances, the ultimate diagnosis could be different from the preliminary one. The most of the material that is currently available on the epidemiology of eyelid abnormalities mostly concentrates on malignant masses without adequately illuminating the full range. 6 The clinicopathological association of eyelid abnormalities was evaluated in the current investigation.

2. Materials & Methods

The current research recruited eighty two subjects having eyelid abnormalities of both sexes.

Information like name, age, sex etc. was documented. Parameters like site of the lesions, gross characteristics, as well as histopathological diagnoses with detailed histological observations, marginal tissue involvement among carcinogenic lesions were recorded. Haematoxylin and eosin stained slides were made. Results were tabulated as well as evaluated statistically. P value under 0.05 was considered remarkable.

3. Results

Table I Distribution of patients

Total- 82		
Gender	**Male**	**Female**
Number	52	30

Table I shows that out of 82 patients, males were 52 and females were 30.

Table II Assessment of eyelid lesions

Parameters	Variables	Number	P value
Benign (56)	Chalazion	20	0.01
	Nevus	12	
	Papiloma	10	
	Sebaceous cyst	3	
	Wart	4	
	Benign adnexal tumor	3	
	Neurofibroma	2	
	Molluscum contagiosum	2	
Malignant (26)	Basal cell carcinoma	4	0.05

ISSN: 2309-5288 (Print)
ISSN: 2309-6152 (Online)
CODEN: JCLMC4
Journal of Coastal Life Medicine

	Sebaceous gland carcinoma	10	
	Squamous cell carcinoma	4	
	Lymphoma	3	
	Melanoma	3	
	Adenocarcinoma	2	

Table II, graph I shows that common benign lesions were seen in 56 cases. Chalazion was seen in 20, Nevus in 12, Papiloma in 10, Sebaceous cyst in 3, Wart in 4, Benign adnexal tumor in 3, Neurofibroma in 2 and Molluscum contagiosum in 2 cases.

Malignant lesions were seen in 26 cases. Basal cell carcinoma was seen in 4, Sebaceous gland carcinoma in 10, Squamous cell carcinoma in 4, Lymphoma in 3, Melanoma in 3 and Adenocarcinoma in 2 cases. The difference was significant (P< 0.05).

Graph I Assessment of eyelid lesions

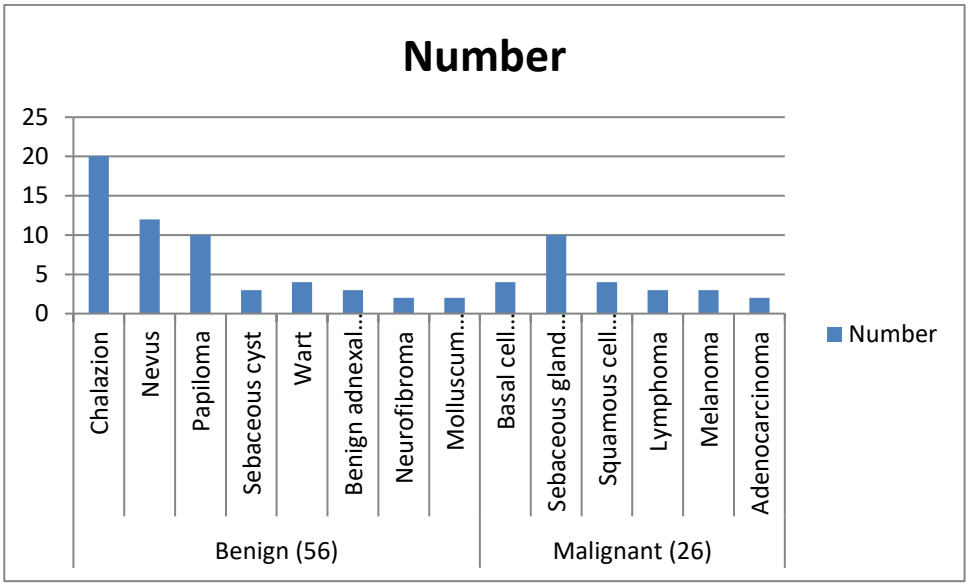

Table III Clinically misdiagnosed lesions and their final histopathological diagnosis

Histopathological diagnosis	Clinical diagnosis	P value
Chalazion (20)	Sebaceous gland carcinoma (12)	0.04
	Tubercular nodule (8)	
Nevus (12)	Papilloma (7)	0.01
	Cystic lesion (3)	
	Hemangioma (2)	
Papilloma (10)	Seborrheic horn (6)	0.03
	Cyst (3)	

ISSN: 2309-5288 (Print)
ISSN: 2309-6152 (Online)
CODEN: JCLMC4
Journal of Coastal Life Medicine

	Nevus (1)	
Sebaceous cyst (3)	Sebaceous cyst (2)	0.05
	Cyst of Zeis (1)	
Wart (4)	Wart (4)	1
Benign adnexal tumor (3)	Chalazion (2)	
	Sebaceous cyst (1)	
Neurofibroma (2)	Neurofibroma (2)	1
Molluscum contagiosum (2)	Lid abscess (1)	0.52
	Sebaceous gland carcinoma (1)	

Table III shows that histopathological diagnosis was chalazion in 20 cases whereas it was diagnosed clinically as sebaceous gland carcinoma in 12 cases and tubercular nodule in 8. Histologically, Nevus was diagnosed in 12 whereas clinically it was papilloma in 7, cystic lesion (3) and hemangioma (2). Papilloma (10) was diagnosed as seborrheic horn (6), cyst (3) and nevus (1). Sebaceous cyst (3) was diagnosed as sebaceous cyst (2) and cyst of Zeis (1). Wart (4) was correctly diagnosed as Wart (4). Benign adnexal tumor (3) as Chalazion (2) and sebaceous cyst (1). Neurofibroma (2) as Neurofibroma (2). Molluscum contagiosum (2) as lid abscess (1) and sebaceous gland carcinoma (1). The difference was significant (P< 0.05).

Table IV Clinically misdiagnosed lesions and their final histopathological diagnosis

Histopathological diagnosis	Clinical diagnosis	P value
Basal cell carcinoma (4)	Squamous cell carcinoma (2)	0.04
	Basal cell carcinoma (2)	
Sebaceous gland carcinoma (10)	Squamous cell carcinoma (6)	0.02
	Basal cell carcinoma (2)	
	sebaceous cyst (2)	
Squamous cell carcinoma (4)	Squamous cell carcinoma (3)	0.05
	Lymphoma (1)	
Lymphoma (3)	Granuloma (2)	0.91
	Sebaceous gland carcinoma (1)	
Melanoma (3)	Sebaceous gland carcinoma (2)	0.82
	Melanoma (1)	
Adenocarcinoma (2)	Sebaceous gland carcinoma (2)	1

Table IV shows that basal cell carcinoma (4) was diagnosed as squamous cell carcinoma (2) and basal cell carcinoma (2). Sebaceous gland carcinoma (10) as squamous cell carcinoma (6), basal cell carcinoma (2) and sebaceous cyst (2).

Squamous cell carcinoma (4) as squamous cell carcinoma (3) and lymphoma (1). Lymphoma (3) as granuloma (2) and

ISSN: 2309-5288 (Print)
ISSN: 2309-6152 (Online)
CODEN: JCLMC4
Journal of Coastal Life Medicine

sebaceous gland carcinoma (1). Melanoma (3) as sebaceous gland carcinoma (2) and melanoma (1). Adenocarcinoma (2) was diagnosed as sebaceous gland carcinoma (2). The difference was significant (P< 0.05).

4. Discussion

Malignant eyelid infections can mimic both benign as well as histologically distinct forms of malignancy, which frequently causes a lag in diagnosis. 7 Early discovery, timely cure, as well as subsequent therapy for carcinogenic tumours depend upon histopathological analysis.[8] [9] The present study assessed the clinicopathological correlation of eyelid lesions. We found that out of 82 patients, males were 52 and females were 30. Sayami G et al.10 examined seven hundred and one histological diagnoses, accounting for 86.6 percent, 2.6 percent, as well as 10.8 percent of the total, with a predominance among women. These diagnoses included benign, precursor, as well as malignant lesions. The prevalent benign diseases were squamous papillomas, chalazion, hemangioma, dermoid cyst, epidermal cyst, as well as melanocytic nevus. The most prevalent malignant disease, representing 31.2 percent of cases, was an epidermal neoplasm.

The preponderance of carcinogenic diseases occurring in those over sixty years were basal cell carcinoma, sebaceous carcinoma, as well as squamous cell carcinoma, having basal cell carcinoma as well as squamous cell carcinoma preferring the upper eyelid while sebaceous carcinoma preferred the lower eyelid.

We observed that common benign lesions were seen in 56 cases. Chalazion was seen in 20, Nevus in 12, Papilloma in 10, Sebaceous cyst in 3, Wart in 4, Benign adnexal tumor in 3, Neurofibroma in 2 and Molluscum contagiosum in 2 cases. Malignant lesions were seen in 26 cases. Basal cell carcinoma was evident in four, Sebaceous gland carcinoma in 10, Squamous cell carcinoma in 4, Lymphoma in three, Melanoma in 3 and Adenocarcinoma in 2 cases. Banerjee P et al[11] found that there were a total of 994 cases.

They identified one hundred and eighty five aggressive tumours as well as eight hundred and nine benign ones. The 4th decade witnessed many benign diseases, but the late 5th decade witnessed many cancerous ones. In both categories, the upper lid represented the most frequent location. Chalazion had been the most prevalent benign disease. The most prevalent benign malignancy had been a dermal nevus, and the most prevalent contagious condition had been Molluscum contagiosum. The most common carcinogenic condition had been SGC, which was preceded by basal cell carcinoma. 11 cancer instances received false benign diagnoses. The most frequently misinterpreted diseases in each category were molluscum as well as squamous cell carcinoma, while chalazion as well as SGC seemed to have the greatest diagnostic accuracy. We observed significant difference in histopathological and clinical diagnosis of benign and malignant lesions. Kavak et al[12] in their study on Turkish drivers noted the occurrence of malignant eyelid lesions to be more common on the side related to driving because of increased sun exposure on that side.

ISSN: 2309-5288 (Print)
ISSN: 2309-6152 (Online)
CODEN: JCLMC4
Journal of Coastal Life Medicine

The drawback of the research is smaller sample size.

5. Conclusion

Authors found that the presence of various histological elements makes eyelids the origin of a wide range of lesions. Most common benign lesions was Chalazion and malignant lesion was Sebaceous gland carcinoma.

References

[1] Toshida H, Mamada N, Fujimaki T, Funaki T, Ebihara N, MurakamiA, et al. Incidence of benign and malignant eyelid tumors in Japan. Int J Ophthalmic Pathol 2012;1:2.

[2] Deprez M, Uffer S. Clinicopathological features of eyelid skin tumors. A retrospective study of 5504 cases and review of literature. Am J Dermatopathol 2009;31:256-62.

[3] Yu SS, Zhao Y, Zhao H, Lin JY, Tang X. A retrospective study of 2228 cases with eyelid tumors. Int J Ophthalmol 2018;11:1835-41.

[4] Asproudis I, SotiropoulosG,Gartzios C,RaggosV,Papoudou-BaiA, Ntountas I, et al. Eyelid tumors at the university eye clinic of Ioannina, Greece: A 30-year retrospective study. Middle East Afr J Ophthalmol 2015;22:230-2.

[5] Jahagirdar SS, Thakre TP, Kale SM, Kulkarni H, Mamtani M. A clinicopathological study of eyelid malignancies from central India. Indian J Ophthalmol 2007;55:109-12.

[6] Kumar R. Clinicopathologic study of malignant eyelid tumors. Clin Exp Optom 2010;93:224–7.

[7] Kale SM, Patil SB, Khare N, Math M, Jain A, Jaiswal S. Clinicopathological analysis of eyelid malignancies-A review of 85 cases. Indian J Plast Surg 2012;45:22–8.

[8] Hussain I, Khan FM, Alam M, Khan BS. Clinicopathological analysis of malignant eyelid tumours in North-West Pakistan. J Pak Med Assoc 2013;63:25-7.

[9] Abdi U, Tyagi N, Maheshwari V, Gogi R, Tyagi SP. Tumours of eyelid: A Clinicopathologic study. J Indian Med Assoc 1996;94:405-9

[10] Sayami G. Study of histomorphological spectrum of eyelid lesions. Journal of Pathology of Nepal. 2021 Mar 20;11(1):1790-802.

[11] Banerjee P, Koka K, Alam MS, Subramanian N, Biswas J, Krishnakumar S, et al. The spectrum and clinicopathological correlation of eyelid lesions: Twenty years' experience at a tertiary eye care center in South India. Indian J Ophthalmol 2022;70:43-50.

[12] Kavak A, Parlak AH, Yesildal N, Aydogan I, Anul H. Preliminary study among truck drivers in Turkey: Effects of ultraviolet light on some skin entities. J Dermatol 2008;35:146-50.