

EYELID LESIONS STUDY AT A TERTIARY CARE HOSPITAL

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Abstract

Background: Eyelids are beautiful curtains provided by the nature to protect the eyeballs. Most of the pathologic processes that involve the eyelid are those that involve the skin. The aim is to study eyelid lesions histopathology and classify Eyelid lesions into Nonneoplastic & Neoplastic. **Materials and Methods:** This observational and descriptive study was conducted on 50 eyelid biopsies received in pathology department of AMCMET medical college over a period of 2.5 years. Statistical analysis on parameters like age, sex, location and histopathology type was done to derive at results and conclusion. **Result:** Out of 11,498 histopathological specimens, 50 cases of eyelid biopsy were received. 25 (50%) were male and 25 (50%) were female. Age of patients ranged from 2 months to 80 years. Maximum patients were observed in 2nd, 4th and 7th decade. Among cases, 28 were non neoplastic (56%), 12 were malignant tumors (24%) and 10 (20%) were benign tumors. Non neoplastic lesions were more common than neoplastic. From non neoplastic lesions epidermal cyst was more common. Among neoplastic lesions malignant lesions were common. Amongst the malignant eyelid lesions, prevalence of Basal Cell Carcinoma (BCC) (10 %) was most common followed by sebaceous cell carcinoma and Squamous Cell Carcinoma (SCC) (6%) each. From benign tumor, Nevus (8%) was most common. Upper eyelid (66 %) was most commonly involved. **Conclusion:** Early and confirmatory Histopathological diagnosis of eyelid lesions helps in proper management of patient.

INTRODUCTION

The eye is a unique organ with different histological structures incorporated in it.^[1] Numerous diseases affect the eye and ocular adnexa and in many cases prompt and careful communication with the ophthalmologist who submitted the specimens is essential if a meaningful diagnosis to be provided.^[2] Eyelids are beautiful curtains provided by the nature to protect the eyeballs.^[3] Most of the pathologic process that involve the eyelid are those that involve the skin.^[4] Eyelid lesions are commonly encountered during clinical practice. Diagnosis of these lesions requires an understanding of the anatomy of the lids along with history, clinical examination and appropriate investigation such as Histopathological examination in cases of suspected malignancy where a diagnosis cannot be made with accuracy on clinical backgrounds.

Eyelid lesions can be categorized as follows:

A) Non neoplastic- Inflammatory

B) Neoplastic –Benign and Malignant.^[5] Eyelid lesions represent 15% of face tumors and 5-10% from all cutaneoustumors.^[6] All excised eyelid lesions should be submitted for histopathological conformation.^[7,8] Tumors of the eyelid are common in people of both sexes and all age groups representing more than 90% of ophthalmic tumors. Most of the tumors are diagnosed clinically.^[9] Malignancies in the eyelid account for approximately 5-10% of all skin cancers.^[10,11] Prolonged exposure to ultraviolet light is the most important risk factor.^[12]

Aim of present study was to study eyelid lesions histopathology and classify Eyelid lesions into Nonneoplastic & Neoplastic.

MATERIALS AND METHODS

This observational and descriptive study was conducted on 50 eyelid biopsies received in pathology department of AMCMET medical college

over a period of 2.5 years. It was a single hospital-based study. Statistical analysis on various parameters like age, sex, location and histopathology type was done to derive at results and conclusion. Biopsies for the study were obtained by Ophthalmology departments after taking written consent from patient and send to the department of pathology in 10% Formalin and processed by routine paraffin embedding followed by hematoxylin and eosin staining for histopathological evaluation.

Inclusion Criteria

All ages of patient and all biopsies from eyelid-upper as well as lower eyelid which are clinically suspicious of lesions are included.

Exclusion Criteria

Inadequate biopsy material.

RESULTS

Out of total 11,498 histopathological specimen, 50 cases of eyelid biopsy were received. 25 (50%)

patients were male and 25 (50%) were female. In present study the age of patients ranged from 2 months to 80 years. Maximum number of patients was observed in 2nd, 4th and 7th decade. Non-Neoplastic lesions were most common. 28 cases were non neoplastic (56%), 12 cases were malignant tumors (24%) and 10 cases (20%) were benign tumors. Among non-neoplastic lesions epidermal cyst was more common. (22%) Among neoplastic lesions malignant lesions were common and of that Basal Cell Carcinoma (BCC) (10 %) was most common followed by Sebaceous cell carcinoma and Squamous Cell Carcinoma (SCC) (6%) each. From benign tumor, Nevus (8%) was most common. Upper eyelid (66 %) was most commonly involved. Out of total 50 cases studied, 25 (50%) patients were male and 25 (50%) were female with male to female ratio being 1:1. In present study the age of patients ranged from 2 months to 80 years with mean age of 42.75 (± 2 SD) and median age of 40 years. Maximum number of patients was observed in 2nd, 4th and 7th decade.

Table 1: Distribution of Cases According to Age Group and Gender

Age group (in years)	Gender				Total	
	Male		Female		NO	%
	No	%	No	%		
≤10	1	2.00%	2	4.00%	3	6.00%
11 TO 20	5	10.00%	3	6.00%	8	16%
21 TO 30	4	8.00%	3	6.00%	7	14%
31 TO 40	3	6.00%	5	10.00%	8	16%
41 TO 50	1	2.00%	4	8.00%	5	10%
51 TO 60	4	8.00%	2	4.00%	6	12%
61 TO 70	5	10.00%	3	6.00%	8	16%
71 TO 80	2	4.00%	3	6.00%	5	10%
TOTAL	25	50.00%	25	50.00%	50	100%

Table 2: Histological Spectrum of Eyelid Lesions in present Study

Benign lesions			
Sr no	Lesions	No of cases	%
1	Hemangioma	3	6%
2	Epidermalcyst	11	22%
3	Molluscumcontagiosum	1	2%
4	Dermoidcyst	2	4%
5	Granulomapyogenicum	1	2%
6	Compoundnevus	1	2%
7	Dermalnevus	3	6%
8	Chalazion	4	8%
9	Inflammation	4	8%
10	Sebaceouscyst	2	4%
11	Simplecyst	1	2%
12	Skintag	1	2%
13	Calcinosiscutis	1	2%
14	Sudoriferouscyst	1	2%
15	Solitaryfibroustumor	1	2%
16	Xantheslasma	1	2%
Total		38	76%
Malignant lesions			
1	Basalcellcarcinoma	5	10%
2	Sebaceouscellcarcinoma	3	6%
3	Squamouscellcarcinoma	3	6%
4	Merkelcellcarcinoma	1	2%
Total		12	24%

In the present study most common eyelid lesion was found to Epidermal cyst with 11cases (22%).

Table 3: Distribution of cases according to type of lesion

Type of lesion	Number	%	Male	Female
Non-neoplastic	28	56%	14	14
Malignant	12	24%	5	7
Benign	10	20%	6	4
Total	50	100%	25	25

28 cases (56%) were non-neoplastic lesions. Out of which epidermal cyst was more common. 10 cases (20%) were benign and out of which Nevus was most common.

Table 4: Comparison of Distribution of Eyelid Lesions in Various Published Studies and Present Study

Studies	Giri Punja et al, ^[13]	Garima et al, ^[14]	Bhavya Mohan et al, ^[15]	Rathod Aet al, ^[16]	Krishnamurthy H Et al, ^[17]	Mary Ho et al, ^[18]	Yasser h. Al-Faky, ^[19]	Present study
Total cases	219	230	414	100	235	198	222	50
Mean age	-	-	43.4	37.02	-	54	-	42.75
M:F	1:1	1.37:1	1:1.3	1:1.1	1:1.5	1:1.6	1:1.5	1:1
Most commonest tumor	Benign	Benign	Benign	-	Benign	Benign	-	Malignant
Most common non-neoplastic lesion	Dermoid cyst	Epidermal cyst	Epidermal cyst	Epidermal cyst	Epidermal cyst	Epidermal cyst	Epidermal cyst	Epidermal cyst
Most common benign tumor	Intradermal nevus	Nevus	Intradermal nevus	Nevus	Nevus	Intradermal nevus	Sweat Glands Hidrocystoma	Nevus
Most common malignant tumor	Sebaceous Cell Carcinoma	Squamous Cell Carcinoma	Squamous Cell Carcinoma	Basal cell carcinoma and Squamous Cell Carcinoma	Sebaceous Cell carcinoma	Basal cell carcinoma	-	Basal cell carcinoma

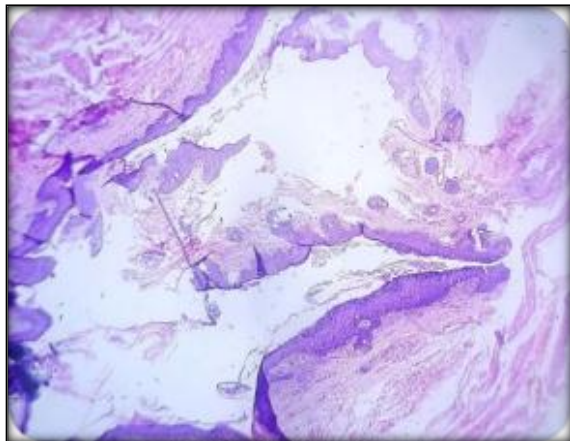


Figure 1: Epidermal cyst: (H & E 10x): Cyst lining composed of stratified squamous epithelium and it contains abundant keratin flakes.

Figure 2: Chalazion (H& E 10X).Fibroconnective tissue shows mild inflammatory infiltrate with foreign body giant cell

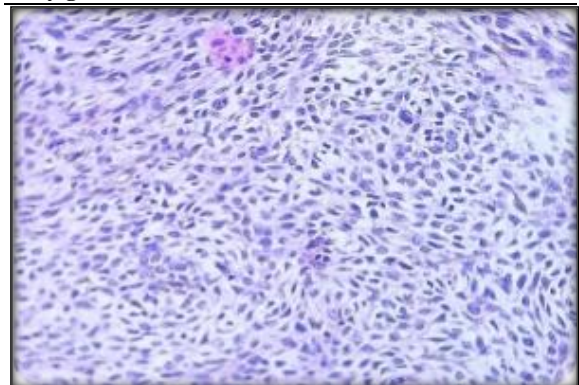


Figure 3: Basal cell carcinoma (H & E 40 x). Cells show ovoid or spindly dark nuclei and mitosis.

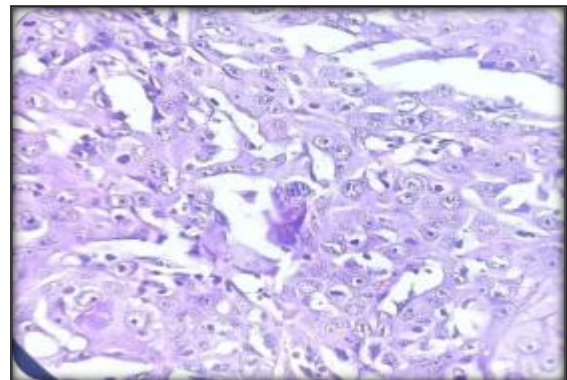
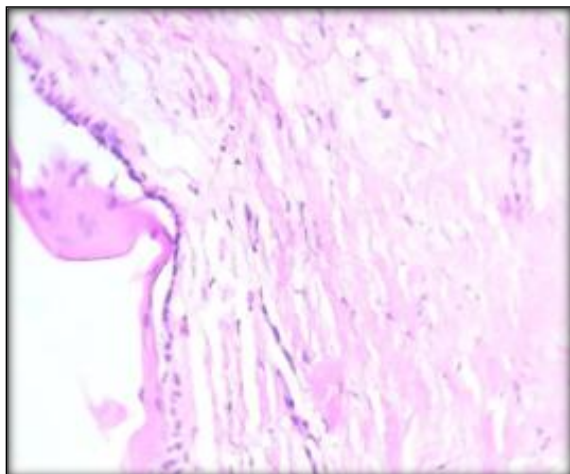


Figure 4: Moderately differentiated squamous cell carcinoma. Cells show pleomorphic, hyperchromatic and vesicular nuclei with prominent nucleoli.

DISCUSSION

The mean age of patient in present study is 42.75 years. Out of total 50 cases, 25 (50%) were male and 25 (50%) were female with M:F (male: female) ratio being 1:1. The similar findings were observed in study conducted by Giri Punja et al,^[13] and Rathod et al.^[16] The studies conducted by Mary Ho et al,^[18] Bhavya Mohan et al,^[15] Yasserh. Al-Faky et al,^[19] and Krishnamurthy Hetal,^[17] showed slight female preponderance. The study conducted by Garima et al^[14] showed male preponderance.

In the present study Malignant tumors were more common (24%) than Benign tumors (20%). Whereas Benign tumors were the most common neoplasm found in the studies conducted by Giri Punja et al,^[13] Rathod et al,^[16] Mary Ho et al,^[18] Bhavya Mohan et al,^[15] Yasser h.Al-Faky et al,^[19] Krishnamurthy H et al,^[17] and Garima et al,^[14] which were 87.67%, 61%, 85.5%, 37.7%, 16.2%, 91.9% and 36.03% respectively.

In the present study, the most common non-neoplastic lesion was found to be Epidermal cyst which were 22%. Our findings were similar to the studies conducted by Bhavya Mohan et al,^[15] Mary Ho et al,^[18] Rathod A et al,^[16] Yasser h. Al-Faky et al,^[19] Krishnamurthy H et al,^[17] and Garima et al,^[14] which were 14.3%, 8.2%, 07%, 10.3%, 30.5% and 11.30% respectively. The study conducted by Giri Punja,^[13] showed Dermoid cyst which was 31.5% as most common non-neoplastic lesion.

The most common benign tumor was Nevus (8%) in present study. Nevus was also found to be the commonest benign tumor in studies conducted by Giri Punja et al,^[13] (11.8%), Bhavya Mohan et al,^[15] (13.7%), Mary Ho et al (26.5%),^[18] Rathod A et al (17%),^[16] Krishnamurthy Hetal (17.5%),^[17] and Garima et al (12.17%).^[14] While the study conducted by Yasser h. Al-Faky et al,^[19] showed most common benign tumor to be Sweat gland hidrocystoma which was 29.3%. The author suggested dry climate in the central province in Saudi Arabia, causing excessive stimulation of the sweat gland, thus playing a role in having higher frequency of hidrocystoma in the study.

Basal cell carcinoma was the most common malignant tumor (10%) in the present study which is comparable to Mary Ho et al (42.9%).^[18] Sebaceous cell carcinoma was found to be most common malignant tumor in the study conducted by Bhavya Mohan et al (2.4%),^[15] Giri Punja et al (5.9%),^[13] and Krishnamurthy H et al (31.6%).^[17] In the study conducted by Garima et al,^[14] Squamous cell carcinoma (34.28%) was the commonest malignant tumor. In the study conducted by Rathod et al,^[16] Basal cell carcinoma and Sebaceous cell carcinoma were the most common malignant tumor which were 41% each.

CONCLUSION

There are variable numbers of eyelid lesions which present as swelling clinically and have variable prognosis. The eyelid lesions cause disfigurement of eye and impair the vision, hence early diagnosis is required to save the vision and for cosmetic purpose. Early and confirmatory Histopathological diagnosis of eyelid lesions helps in proper management of patient.

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