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# Clinicopathological Evaluation Of Eyelid Lesions - A Clinical Study

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***ABSTRACT:Background: The present study was conducted to evaluate clinicopathological characteristics of eyelid lesions.***
***Materials & Methods: 104 patients with eyelid lesions of both genders were recruited. Clinical features, indication for biopsy, surgical findings, and pre-excision clinical diagnosis (PECD) were recorded. Histopathological assessment was performed.***

***Results: Common eye lid lesions were chalazion in 30, sweat gland hidrocystoma in 25, skin tag and wart in 15, epidermal and epidermal inclusion cyst in 9, eyelid nevus in 5, seborrheic keratosis in 3, xanthelasma in 2, molluscum contagiosum in 1, capillary hemangioma in 1, foreign body granuloma in 1 case, malignant melanoma in 3, squamous cell carcinoma in 6, sebaceous carcinoma in 2 and basal cell carcinoma in 1 case.. In 9 cases histopathological diagnosis was different from clinical diagnosis. It was found to be pilomatrixoma in 2 cases, steatocystoma in 2, hemangioendothelioma in 1, seborrheic keratosis in 3 and juvenile xanthogranuloma in 1 case. The difference was significant (P< 0.05).***

***Conclusion: Common lid lesions were chalazion, sweat gland hidrocystoma, skin tag and wart and epidermal and epidermal inclusion cyst. Most common malignant lesion was squamous cell carcinoma.***

***Key words: Chalazion, Eyelid, Pigmented***

## 1. INTRODUCTION

Wide varieties of lesions affecting the eyelid are encountered within routine ophthalmology practice. These lesions are numerous due to the unique anatomical features of the eyelid as the whole skin structures, appendages, muscle, modified glands, and conjunctival mucous membrane are represented in the eyelid.[1] Eyelid lesions can be divided into congenital, inflammatory, traumatic, or neoplastic (benign or malignant). Neoplastic lesions can be further classified according to their anatomical origin. A tentative clinical diagnosis based on the characteristic features is given then routinely confirmed by histopathological examination of the tissue specimen.[2] The concern is the off chance histopathologic investigation which identifies a diagnosis different than the suspected clinical diagnosis with some diagnoses coming with deleterious implications. Histopathologic evaluation enforces our clinical diagnostic skills and is extremely important in early detection of tumors, particularly in masquerade syndromes.[3]

The examination of an eyelid lesion begins with history. History should include chronicity, symptoms (tenderness, change in vision, discharge), and evolution of the lesion. Other pertinent points include a history of skin cancer, immunosuppression, fair skin or radiation therapy. Physical examination should include assessment of location, the appearance of the surface of the lesion and surrounding skin including adnexal structures. The clinician should be assessing for any ulceration with crusting or bleeding, irregular pigment, loss of normal eyelid architecture, pearly edges with central ulceration, fine telangiectasia or loss of cutaneous wrinkles.[4] Finally, a physical examination of the patient should include palpation of the edges and/or fixation to deeper tissues, and assessment of regional lymph nodes and the function of cranial nerves II-VII. Malignant eyelid tumors can lead to significant ocular and visual morbidity. They present in varied histologic types. An understanding of the clinical features of common malignant eyelid tumors can be helpful in earlier diagnosis and could lead to less ocular morbidity.[5] Malignant eyelid lesions often require a biopsy to confirm that diagnosis, and definitive treatment involves surgery and in rare cases adjuvant radiation therapy. The present study was conducted to evaluate clinicopathological characteristics of eyelid lesions.

## 2. MATERIALS & METHODS

The present study was conducted in the department of Pathology. It comprised of 104 patients with lesions of eyelid of both genders. All patients were informed regarding the study and their consent was obtained.

Particulars of the patients such as name, age, gender etc. was recorded. A thorough eye examination was performed. Clinical features, indication for biopsy, surgical findings, and pre-excision clinical diagnosis (PECD) were recorded. Histopathological assessment was performed in the Pathologic laboratory. Eyelid lesions were arranged according to the frequency of each histopathologically confirmed diagnosis. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

## 3. RESULTS

**Table I Distribution of patients**

| **Total- 104** | | |
|---|---|---|
| **Gender** | **Males** | **Females** |
| Number | 60 | 44 |

Table I shows that out of 104 patients, males were 60 and females were 44.

**Table II Assessment of eye lid lesions**

| **Lesions** | **Number** | **P value** |
|---|---|---|
| Chalazion | 30 | 0.01 |
| Sweat gland hidrocystoma | 25 | |
| Skin tag and wart | 15 | |
| Epidermal and epidermal inclusion cyst | 9 | |
| Eyelid nevus | 5 | |
| Seborrheic keratosis | 3 | |
| Xanthelasma | 2 | |

| | | |
|---|---|---|
| Molluscum contagiosum | 1 | |
| Capillary hemangioma | 1 | |
| Foreign body granuloma | 1 | |
| Malignant melanoma | 3 | |
| Squamous cell carcinoma | 6 | |
| Sebaceous carcinoma | 2 | |
| Basal cell carcinoma | 1 | |

Table II, graph I shows that common eye lid lesions were chalazion in 30, sweat gland hidrocystoma in 25, skin tag and wart in 15, epidermal and epidermal inclusion cyst in 9, eyelid nevus in 5, seborrheic keratosis in 3, xanthelasma in 2, molluscum contagiosum in 1, capillary hemangioma in 1, foreign body granuloma in 1 case, malignant melanoma in 3, squamous cell carcinoma in 6, sebaceous carcinoma in 2 and basal cell carcinoma in 1 case. The difference was significant (P< 0.05).

**Graph I Assessment of lesions of eye lid**

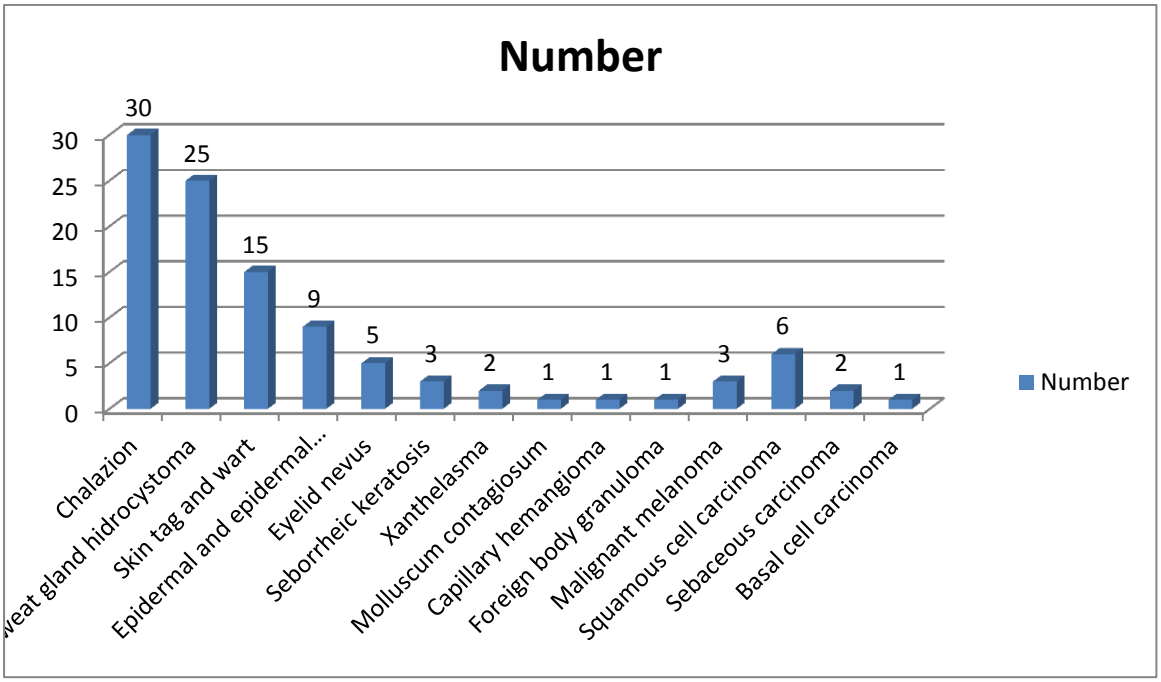
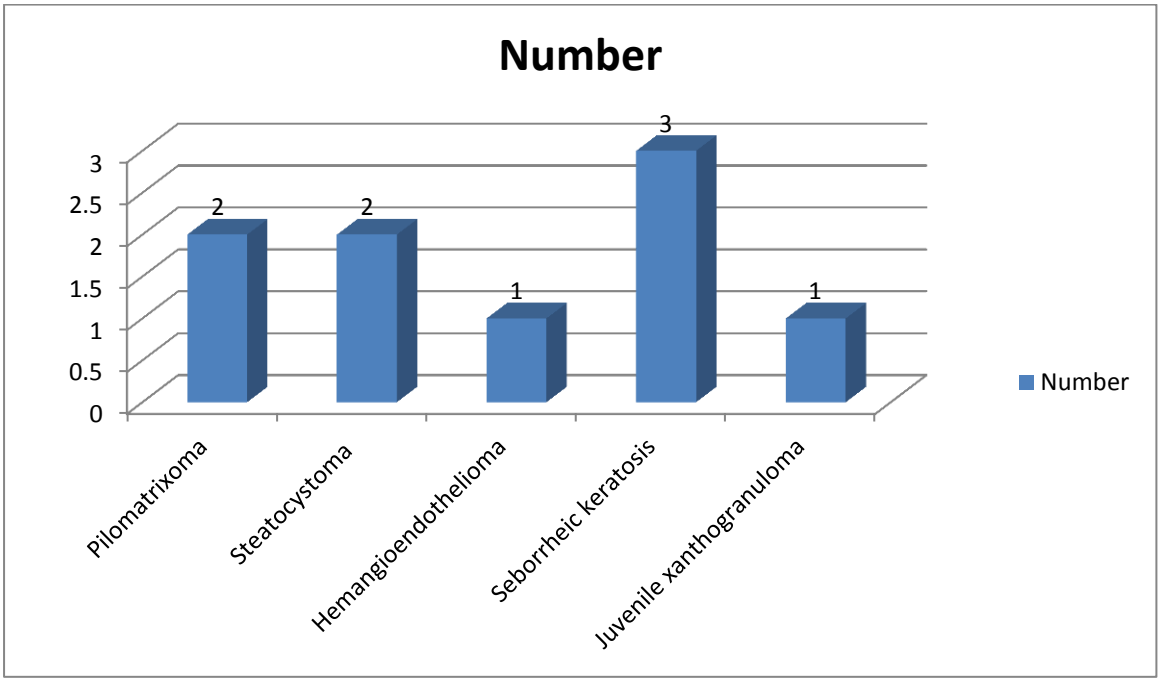



**Table III Histopathological diagnosis of lesions**

| **Lesions** | **Number** | **P value** |
|---|---|---|
| Pilomatrixoma | 2 | 0.05 |
| Steatocystoma | 2 | |
| Hemangioendothelioma | 1 | |
| Seborrheic keratosis | 3 | |
| Juvenile xanthogranuloma | 1 | |

Table III, graph II shows that in 9 cases histopathological diagnosis was different from clinical diagnosis. It was found to be pilomatrixoma in 2 cases, steatocystoma in 2, hemangioendothelioma in 1, seborrheic keratosis in 3 and juvenile xanthogranuloma in 1 case. The difference was significant (P< 0.05).

**Graph II Histopathological diagnosis of lesions**




## 4. DISCUSSION

Among tumors encountered by ophthalmologist the most common neoplasms are those of the eyelid. Benign lesions of the eyelid represent upwards of 80 percent of eyelid neoplasms, while malignant tumors account for the remaining, with basal cell cancer the most frequent malignant tumor. It can be helpful to categorize eyelid lesions into inflammatory, infectious and neoplastic. Chalazion presents as chronic, localized swelling of the eyelid and typically affects the meibomian glands or glands of Zeis.[6] Data on the frequencies is difficult to come by, but in one recent review chalazia represented nearly half of all eyelid lesions encountered in an ophthalmology practice. Epidermal inclusion cysts present as elevated, smooth and progressively growing cysts that arise from entrapment of epidermal tissue in the dermis. Rupture with release of keratin can cause an inflammatory foreign-body reaction.[7] The present study was conducted to evaluate clinicopathological characteristics of eyelid lesions.

We found that out of 104 patients, males were 60 and females were 44. Seborrheic keratosis is an acquired benign condition affecting elderly patients. Classically the lesions have a greasy and stuck-on appearance with varying degrees of pigmentation. Molluscum contagiosum presents as pale, waxy and nodular cysts, classically with central umbilication.[8] The patient is typically young, although there is increased incidence with more exuberant cases seen in AIDS patients due to reduced T cell count. They form secondary to infection from a DNA poxvirus and can present as a follicular conjunctivitis or lid nodules. The lid lesions may be misdiagnosed as a number of other eyelid lesions including basal cell carcinoma, papilloma, chalazion and sebaceous cyst.[9]

We observed that common lesions were chalazion in 30 individuals, sweat gland hidrocystoma in 25, skin tag and wart in 15, epidermal and epidermal inclusion cyst in 9, eyelid nevus in 5, seborrheic keratosis in 3, xanthelasma in 2, molluscum contagiosum in 1, capillary hemangioma in 1, foreign body granuloma in 1 case, malignant melanoma in 3, squamous cell carcinoma in 6, sebaceous carcinoma in 2 and basal cell carcinoma in 1 case. Al- Faky et al[10] in their study a total of 222 biopsies were evaluated from 181 patients (male

39.2% and female 60.8%). The age of the patient at the time of biopsy ranged from 2 to 87 years old. The most common benign eyelid lesion encountered in our practice was sweat gland hidrocystoma followed by chalazion, skin tag, epidermal cyst, nevus, seborrheic keratosis, xanthelasma, and molluscum contagiosum respectively. Histopathological studies confirmed the clinical diagnosis in 95.9% (213/222) of specimens and was different from the clinical diagnosis in 4.1% (9/222) of the lesions which included seborrheic keratosis (n = 3), pilomatrixoma, steatocystoma, hemangioendothelioma, juvenile xanthogranuloma, calcinosis cutis, and syringocystadenoma papilliferum. No malignant lesion was labeled as benign.

We found that in 9 cases histopathological diagnosis was different from clinical diagnosis. It was found to be pilomatrixoma in 2 cases, steatocystoma in 2, hemangioendothelioma in 1, seborrheic keratosis in 3 and juvenile xanthogranuloma in 1 case. Different lesions affecting the eyelid, mostly are benign but some have malignant potentials or frank malignant features. The incidence of such lesions has been widely reported by different previous studies.[11]

Basal cell carcinoma represents the most common type of malignant eyelid lesions and accounts for over 90 percent of eyelid malignancies. The most common periorbital site for basal cell carcinoma is the lower eyelid margin, followed by the inner corner of the eyelid margin (the medial canthus), the upper eyelid, and the outer corner of the eyelid margin (the lateral canthus).

Squamous cell carcinoma of the eyelid is the second most common type of eyelid malignacy, albeit much less common in prevalence (five to 10 percent of all eyelid malignancies) when compared to basal cell carcinoma.[12]

Sebaceous carcinoma usually arises from the sebaceous (oil) meibomian glands around the eyelid margin, but can also arise from sebaceous glands of skin, the caruncle, or conjunctival surface. Sebaceous carcinoma of eyelid is rare but can be highly malignant, potentially lethal, and with the potential for nodal metastasis and recurrence. The prevalence of primary eyelid melanoma is rare. It accounts for <0.1 percent of all eyelid malignancies.[13]

Paestine et al[14] reported a case of benign pigmented lesion of eyelid associated with acquired ocular melanosis. Acquired ocular melanosis is a pigmentary disorder of the bulbar or palpebral conjunctiva. Recognition of acquired ocular melanosis is important because of the possibility of malignant transformation. The shortcoming of the study is small sample size.

## 5. CONCLUSION

Authors found that common lid lesions were chalazion, sweat gland hidrocystoma , skin tag and wart and epidermal and epidermal inclusion cyst. Most common malignant lesion was squamous cell carcinoma.

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