

## A Case of Eyelid Epidermoid Cyst

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**Abstract:** Epidermoid cysts are slow growing, benign tumors that result from proliferation of epidermal cells within a confined space. Eyelid is one of the unusual locations for epidermoid cyst. Previously, they were often diagnosed as sebaceous cyst but they contain keratin, not sebaceous material. A 65 year old woman presented with a painless, right upper eyelid mass. The patient was aware of the lesion for the past 4 years, but it had been enlarging for the last 1 year, interfering with the superior field of vision. She denied a history of prior trauma, surgery, or eyelid inflammation. Examination revealed a firm, globular mass that was not mobile but fixed, resulting in mechanical ptosis. The patient underwent excisional biopsy through an upper eyelid incision. Histopathologic sections demonstrated a cyst lined by squamous epithelium containing laminated keratin consistent with a diagnosis of an epidermoid cyst. Intratarsal epidermal inclusion cysts share some clinical features with chalazia. Lack of inflammation lack of fluctuation in size, gradual continued slow growth, and delayed onset of recurrence may help to differentiate epidermoid cyst from recurrent chalazion. Incision and curettage, however, is not effective long-term treatment for this entity. Total excision of the cyst including full-thickness excision of tarsus at the cysts base of origin is suggested for definitive treatment.

**Keywords:** Epidermoid cyst, squamous epithelium.

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### INTRODUCTION

Epidermoid cysts are slow growing, benign tumors that result from proliferation of epidermal cells within a confined space [1, 3]. They differ from dermoid cysts only in that dermal appendages are lacking. Both cyst types are composed of a true epidermal lining and typically contain laminated keratinaceous material. Together they comprise the most common orbital tumors of childhood [2]. Eyelid is one of the unusual locations for epidermoid cyst. Previously, they were often diagnosed as sebaceous cyst but they contain keratin, not sebaceous material. Epidermoid cysts of the eyelid typically present during adolescence through adulthood as a solitary, elevated, round, freely mobile subcutaneous mass with smooth overlying skin [3]. A central pore tethers the tumor to the overlying skin creating a firm connection that can be usually observed at the time of surgical removal.

### CASE REPORT

A 65 year old woman presented with a painless, right upper eyelid mass. The patient was aware of the lesion for the past 4 years, but it had been enlarging for the last 1 year, interfering with the superior field of vision. She denied a history of prior trauma, surgery, or eyelid inflammation. Examination revealed a firm, globular mass that was not mobile but

fixed, resulting in mechanical ptosis. Eversion of the eyelid did not demonstrate any abnormal findings.

### ON OCULAR EXAMINATION

1. Visual acuity was 6/9, not improving with pin hole in both eyes.
2. Cystic lesion 3cm x 4cm attached to right upper eyelid.
3. Ocular movements were normal.
4. Conjunctiva and cornea were within normal limits.
5. Anterior segment was within normal limit,
6. Pupil Circular and reacting to light.
7. Lens appeared normal.
8. Fundus examination was within normal limits.

### SURGERY

The patient underwent excisional biopsy through an upper eyelid incision. Dissection revealed no epidermal attachments. Upon separation, leakage of a cheesy, malodorous material occurred. Care was taken to excise the entire cyst lining.

### INVESTIGATION

- Routine Investigations were within normal limits. X-ray orbit was within normal limits.

- Excisional biopsy (histopathological examination) revealed epidermoid cyst.

## RESULT

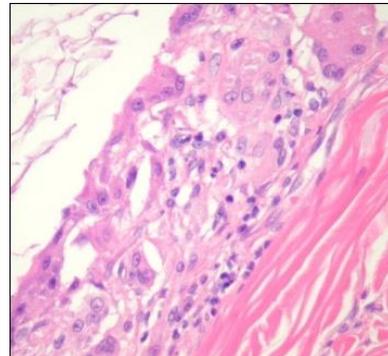
Histopathologic sections demonstrated a cyst lined by squamous epithelium containing laminated keratin consistent with a diagnosis of an epidermoid cyst. The patient has remained without recurrence with 3 months of follow-up.



**Fig-1: Before Surgery**



**Fig-2: After Surgery**



**Fig-3: Histopathology of the epidermoid cyst**

## DISCUSSION

There are several proposed mechanisms for epidermoid cyst formation [1, 3]. These include sequestration of epidermal rests along fusion planes during embryonic development, epidermal proliferation of the infundibulum of the hair follicle with occlusion of the pilosebaceous unit, or implantation of epidermal elements as a result of trauma or surgery. Recently, human papilloma virus has also been implicated and is more commonly seen with epidermoid cysts of plantar surfaces [4]. In the present case, cyst formation likely originated at the time of eyelid development. Eyelid morphogenesis begins with rapid surface ectodermal proliferation across the cornea followed by migration of mesoderm between the epidermises such that the external skin surface is divided from the conjunctival surface [5]. Alternatively, meibomian cysts of the tarsus have a different composition, being filled with fibrinous coagulum and granular debris [6]. Because the present lesion was composed of squamous epithelium filled with laminated keratin the diagnosis of an epidermoid cyst is more likely.

## CONCLUSION

Intratarsal epidermal inclusion cysts share some clinical features with chalazia, Lack of inflammation, lack of fluctuation in size, gradual

continued slow growth, and delayed onset of recurrence may help to differentiate epidermoid cyst from recurrent chalazion. Incision and curettage, however, is not effective long-term treatment for this entity. Total excision of the cyst including Full-thickness excision of tarsus at the cysts base of origin is suggested for definitive treatment.

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