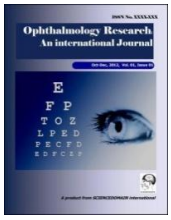

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Calcinosis Cutis of the Eyelid

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Authors' contributions

This work was carried out in collaboration between all authors. Author TGP designed the study, wrote the protocol, and wrote the first draft of the manuscript. Author PK managed the literature searches, and author BL carried out microbiological studies. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

We report a case of calcinosis cutis presenting in the upper eyelid. These cases can mimic various conditions of the eyelid and diagnosis is usually done histopathologically. Though they are common occurrence for dermatologists, there are very few cases reported in the ophthalmic literature. They need to be recognised and differentiated from a more dangerous metastatic and dystrophic varieties as simple excision is adequate in the idiopathic type of calcinosis cutis.

Keywords: Lid tumor; calcinosis cutis; lid mass.

1. CASE REPORT

A 18 year old male patient presented with a painless swelling over the left upper eyelid since one year. The swelling was initially small in size and gradually increased in proportion to reach the present size (Fig. 1). There was no history of pain, discharge or trauma. Patient had noticed a discoloration on the right upper lid since 2 months. On examination he had a 10mm X 8 mm raised swelling on the lateral part of left eyelid. The surface was irregular with scabs. On removal of the scab the underlying area showed ulceration. The mass was freely mobile over the orbicularis muscle. On eversion of the eyelid the tarsal plate and the conjunctiva were seen to be

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spared from the mass. The rest of the eye examination was normal with a visual acuity of 6/6 and anterior and posterior segments were normal. Differential diagnosis included keratoacanthoma and *Molluscum contagiosum*. The right upper eyelid showed a flat yellowish lesion 4mm X 4 mm in size on the medial aspect of the upper lid, the surface was smooth and the rest of the ocular examination was normal. The diagnosis of xanthogranuloma was made.

A punch biopsy of the left eyelid mass was done by the dermatologist and the histopathological examination (HPE) revealed - epithelium with acanthosis and hyperkeratosis and extension of calcific material to the epidermis, the dermis showed amorphous calcium deposits with areas of necrosis. A diagnosis of calcinosis cutis was made.

His serum calcium and phosphorous levels were normal, HIV, HBS Ag negative.

The patient underwent an elliptical incision (Fig. 2) of the left upper lid mass and a complete excision biopsy (Fig. 3) also showed calcinosis cutis with transepidermal infiltration and showed no remnants of any ocular adnexal tumor.

Fig. 1. Picture shows the raised lesion in the left eyelid and on eversion the tarsal plate is free of the lesion

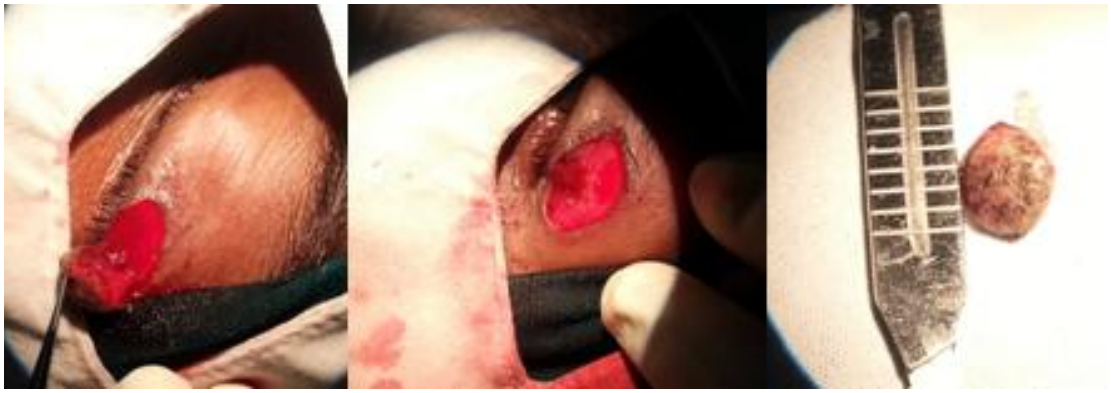

Fig. 2. Intra operative pictures showing excision in toto with underlying surface smooth and the elliptical mass measuring 10 mm by 8 mm in size

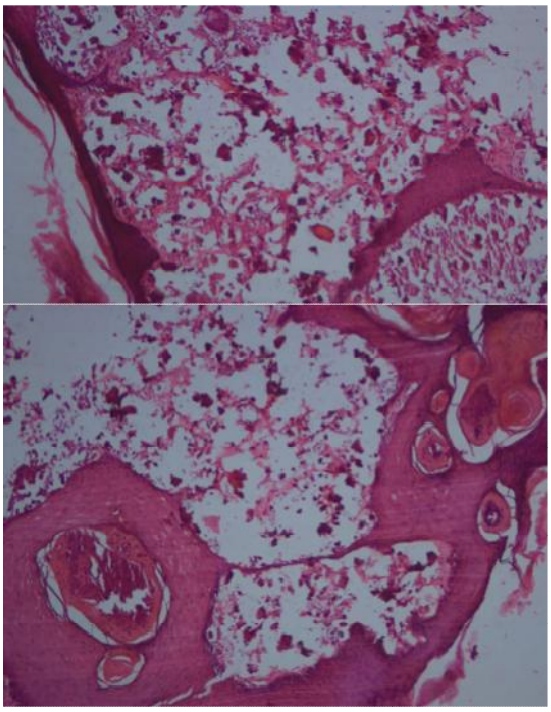

Fig. 3. HPE showing lesion covered by thinned out epidermis. The lesion shows necrotic debris and extensive calcification

2. DISCUSSION

There have been very few reports in the ophthalmic history of calcinosis cutis [1,2,3,4,5,6,7,8] involving the eyelids. Calcinosis cutis is a common presentation for the dermatologists and pathologists but for the ophthalmologists it still presents to be a rare diagnosis.

Calcinosis cutis can be of four types- metastatic, dystrophic, iatrogenic and idiopathic. Metastatic is usually associated with high serum calcium and phosphorous levels and needs a strict vigilance to rule out any such systemic association as it would require a multidisciplinary approach in managing these patients. Calcinosis cutis could be seen as a dystrophic change in pre-existing tumors or cysts and hence theses cases also require a HPE to rule out underlying tumors which might be the primary concern in the treatment. Idiopathic cases are identified after ruling out the other variants of the condition and is seen as the most common presentation and no cause can be identified and no history of trauma can also be elucidated from these patients.

The pathogenesis of calcinosis cutis is not known and hence diagnosis of the condition mandates exclusion of metastatic and dystrophic variants.

The diagnosis of calcinosis cutis is done primarily by histopathology and clinically it mimics various conditions such as molluscum contagiosum [7], keratoacanthoma, pilomatrixoma, juvenile xanthogranuloma. The clinical picture is described as small, firm verruccous nodule but requires a high index of suspicion in diagnosing the condition.

Histopathologically [8], on hemotoxylin- eosin stained preparations it shows acanthotic, papillomatous epidermis, the subepidermal region is characterized by intensely basophilic calcific deposits which is the hallmark of this condition. The deposits stain with von Kossa stain for calcium. Foreign body giant cell reaction and transepidermal elimination of calcium granules can be observed.

The treatment involves complete excision and this has been shown to have good results with no recurrences reported. Intralesional steroids have also been tried but with questionable effectiviness.

3. CONCLUSION

The diagnosis of calcinosis cutis has to be considered in any nodule involving the ocular adnexal skin and the ophthalmologist must be aware of the condition and must elicit history and also request appropriate laboratory tests to rule out the more threatening metastatic and dystrophic variants as the idiopathic variety is benign and a simple excision would suffice in these cases.

CONSENT

All authors declare that ‘written informed consent was obtained from the patient (or other approved parties) for publication of this case report and accompanying images.

ETHICAL APPROVAL

Not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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