

Case Study

Calcinosis cutis of the eyelid.

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 case reports in the ophthalmic literature. They need to be recognised and differentiated from a more sinister metastatic and dystrophic varieties as simple excision suffices in the idiopathic type of calcinosis cutis.

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 (Pic 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 aspect of left eyelid. The surface was irregular with scabs with underlying ulceration. It was freely mobile over the orbicularis muscle. On eversion of the eyelid the tarsal plate and the conjunctiva was seen to be spared from the mass. The rest of the eye examination was normal with a UCVA of 6/6 and anterior and posterior segment 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 was done by the dermatologist and the 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(Pic 2) of the left upper lid mass and the excision biopsy (Fig 3) also showed calcinosis cutis with transepidermal infiltration and showed no remnants of any ocular adnexal tumor.

Discussion: There have been very few reports in the ophthalmic history of clacinosis 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.

38 The pathogenesis of calcinosis cutis is unclear and hence diagnosis of the condition mandates
 39 exclusion of metastatic and dystrophic variants

40 The diagnosis of calcinosis cutis is done primarily by histopathology and clinically it mimics various
 41 conditions such as molluscum contagiosum⁷, keratoacanthoma, pilomatrixoma, juvenile
 42 xanthogranuloma. The clinical picture is described as small, firm verrucous nodule but requires a
 43 high index of suspicion in diagnosing the condition.

44 Histopathologically⁸, the condition is characterized by intensely basophilic subepithelial calcific
 45 deposits beneath acanthotic, papillomatous epidermis on hematoxylin-eosin-stained preparations.
 46 The deposits stain with von Kossa stain for calcium. Foreign body giant cell reaction and
 47 transepidermal elimination of calcium granules can be observed
 48 The treatment involves elliptical excision and this has been shown to have good results with no
 49 recurrences reported. Intralesional steroids have also been tried but with questionable effectiveness.

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

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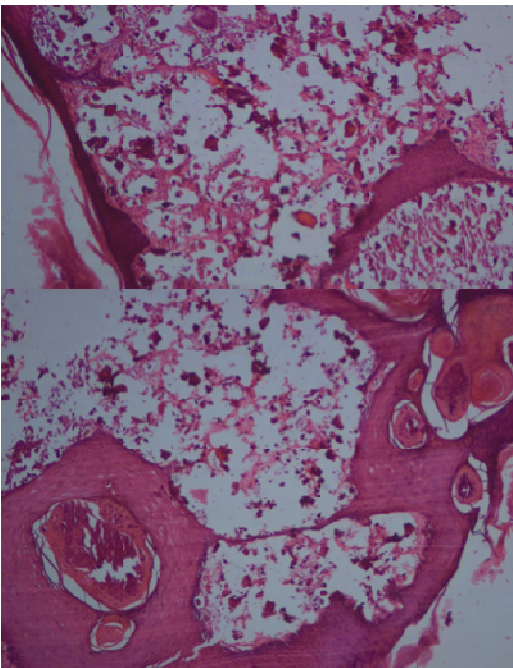
74 Fig 1: picture shows the raised lesion in the left eyelid and on eversion the tarsal plate is free
75 of the lesion

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78 Fig 2: Intra operative pictures showing excision in toto with underlying surface smooth and
79 the elliptical mass measuring 5 mm by 4 mm in size.



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