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Case Report

A Case of Epidermoid Cyst of Eyelid

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ABSTRACT

Epidermoid cysts / Epidermal inclusion cysts are most common cutaneous cysts and they constitute 18% of eyelid masses. It is frequently seen on the upper eyelid either on the conjunctiva or skin surface. It is seen specifically on the face, neck and trunk and ranges from 1-4 cm in size, more common in males, either in 2nd and 3rd decade. It is usually asymptomatic and mostly presents as a slowly growing painless mass. It is most commonly confused with sebaceous cysts and dermoid cyst but histopathological and radiological examination provide the final diagnosis. Histopathology of the mass reveals a cyst lined by squamous epithelium filled with keratin. Here we present a case report of a 69 years old male, with an epidermoid cyst near medial canthus of left lower eyelid, which was treated surgically. In this case, there is proper clinico-radiological and clinico-pathological correlation which makes it unique.

Keywords: Epidermoid cyst, Epidermal inclusion cyst, Eyelid, Squamous epithelium filled with keratin.

INTRODUCTION

Cystic lesion is one of the presentations of tarsal-related pathology. After chalazion and sebaceous cell carcinoma, tarsal-related cysts are considered the 3rd major cause of tarsal swelling.[1] Epidermal inclusion cysts are slow growing, round, firm and freely movable unless they are fixed to the tarsus.[1] It is incorporation of ectodermal elements within the cyst. It is classified as primary and secondary type or congenital and acquired variety. In primary or congenital type, there is incorporation of ectodermal elements at the time of closure of the neural groove or epithelial lines. But secondary or acquired epidermoid cysts are usually present in those areas which are more prone to repeated trauma. As a result, there is incorporation of surface epithelium beneath the skin and gradually it transforms into a cyst.[2]

Case History

A 69 years old male patient presented to Ophthalmology Department of a teaching hospital of western Gujarat with left eye lower eyelid mass near medial canthus since last 5 years which was of pea size initially and of grape size on presentation. The swelling was painless, mobile, and was gradually increasing in size. Patient had no history of any trauma or injury to left eye. Patient was known case of Diabetes Mellitus type-II and was on regular treatment. He didn't have any habit of smoking/tobacco chewing/alcohol and had no known drug/diet allergy. His best corrected visual acuity was 6/9 in both eyes. On inspection by torch light, approximately 12 mm x 7 mm size swelling near medial canthus of left eyelid (Figure-1) was observed. On palpation, a 15 mm x 9 mm size ovoid swelling was noted in left eye lower eyelid near medial canthus. The swelling had clearly defined margins, smooth surface, was non-tender, mobile, soft in consistency, negative fluctuation test, normal in temperature, non-reducible, non-compressible and was free from skin, subcutaneous tissue, deep fascia and bone. Transillumination test was negative. Slit lamp examination showed ovoid swelling near medial canthus of left eye. Fundus examination of both eyes was normal.
For further diagnostic purpose, USG local part was done which showed well-defined hypoechoic lesion 15 mm x 9 mm size without doppler perceptible vascularity in medial aspect of left eye lower lid (Figure-2), likely to represent benign etiology - sebaceous cyst likely.

Figure-1: Approximately 12 mm x 7 mm ovoid swelling near medial canthus of left lower eyelid

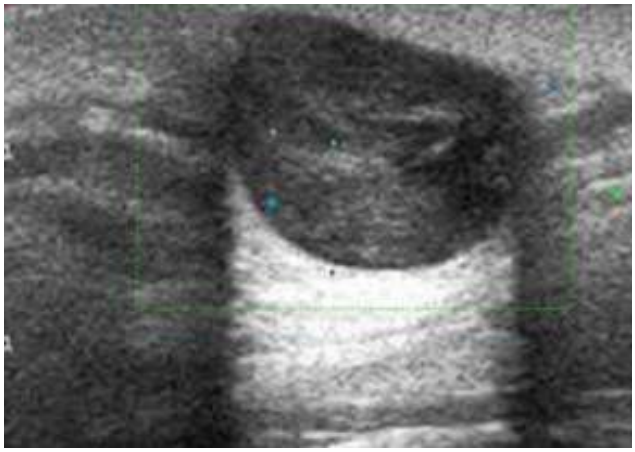

Figure-2: USG showing hypoechoic lesion of benign etiology (likely sebaceous cyst)

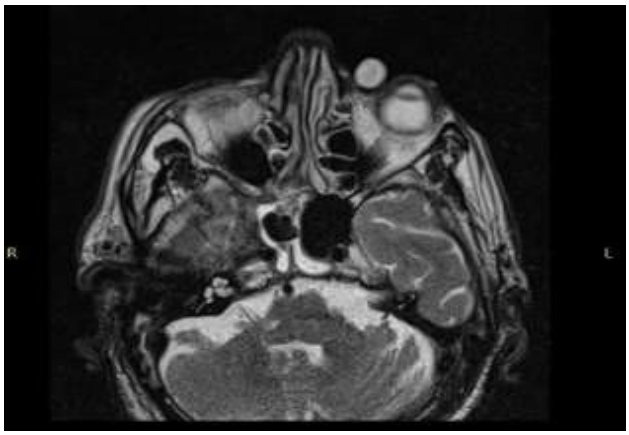

Figure-3: T2WI of MRI orbit showing altered signal intensity lesion in pre-septal location of left eye near medial canthus without surrounding fat stranding (likely epidermoid cyst)

For further evaluation, MRI Orbit was done that showed a well-defined altered signal intensity lesion in superficial and subcutaneous plane at the medial canthus of left eye in pre-septal location without evidence of intracranial or intra-orbital extension and without any surrounding fat stranding (Figure-3). MRI findings were suggestive of epidermal inclusion cyst/epidermoid cyst. Based on clinical and radiological evaluation, left eye lower eyelid (near medial canthus) cyst excision with histopathological examination under local anesthesia was planned. Pre-operative blood investigations were within normal limits. After written and informed consent, patient underwent surgery and in toto cyst (Figure-4) was excised and was sent for histopathological examination in 10% formalin filled container. Histopathology examination (HPE) showed cyst wall lined with stratified squamous epithelium with congested blood vessels and underlying loose keratin flakes (Figure-5). HPE features were consistent with benign epidermoid cyst. Per-operative period was uneventful (Figure-6).

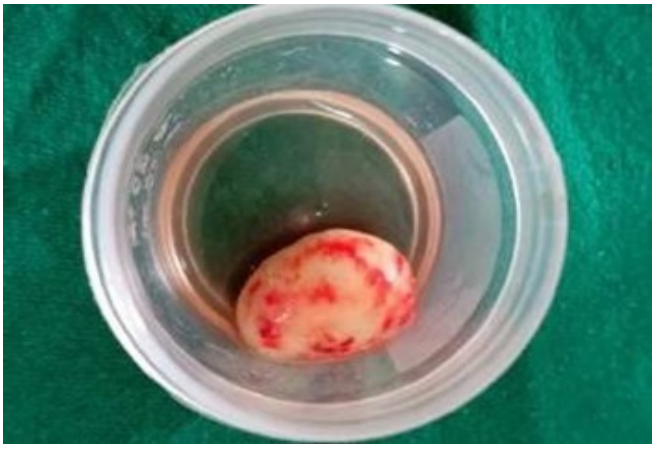

Figure-4: In-toto excised cyst in sterile container for histopathological examination

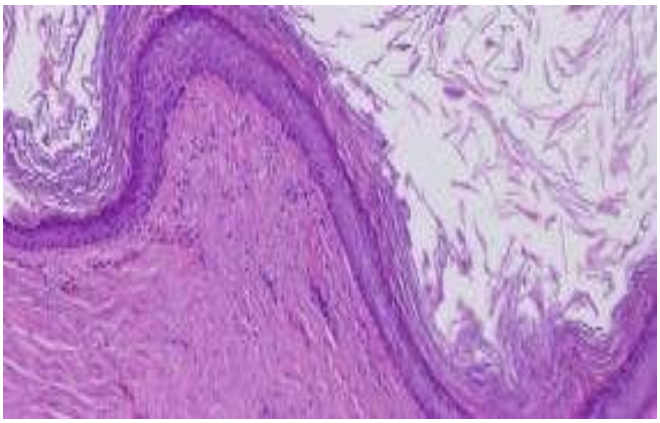

Figure-5: Histopathology examination showing cyst wall lined by stratified squamous epithelium with loose keratin flakes

Figure-6: Post-operative picture of the patient with healthy suture line

DISCUSSION

There are several proposed mechanisms for epidermoid cyst formation. 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 along the incision lines. They can originate from hair follicles or invagination of surface epidermis.[3] The most common site for the sebaceous or epidermoid cysts is the meibomian glands of the upper tarsus due to retention of meibomian gland material.[3] Histology shows cyst lined by squamous epithelium and cheesy material (keratin). Complications associated with epidermoid cysts include infection, malignant transformation, and rupture. Malignant transformation of epidermal cyst into cutaneous squamous cell carcinoma is 0.011 % to 0.045 %. In our case, clinical signs of infection were not present.

Differential diagnosis includes sebaceous cyst, lipoma and dermoid cysts.[4] Sebaceous cyst is a common benign cyst beneath the skin in areas with multiple hair follicles. There is blockage of pilosebaceous duct on the skin in cases of sebaceous cysts. Cysts arising from infundibulum of hair follicles are either epidermoid cysts or dermoid cysts. In dermoid cysts dermal appendages are present which are lacking in epidermoid cyst.[4]

The treatment of choice is the excision of the cyst encapsulated with the cyst wall, as otherwise the cyst wall can lead to a recurrence of the cyst, and spillage of the cyst material in the surrounding tissue causes an inflammatory and a foreign body reaction.[4] Neoplastic conditions were excluded since lesion was benign without nodal involvement. Importantly, there are reports in the literature of malignant changes in epidermoid cysts. In our case, the specimen was submitted to histopathology analysis showed no malignancy.[5]

CONCLUSIONS

Epidermoid cyst of eyelid is a benign swelling that can be diagnosed by clinical and radiological evaluation. In-toto surgical excision prevents recurrence. Malignant transformation is rare.

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