Eccrine Hidrocystoma of Eyelid Masquerading as Epidermal Inclusion Cyst: A Rare Case Report with Review of Literature

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Abstract: Eccrine hidrocystomas are rare, benign cystic lesions that usually affect the scalp, cheeks, and eyelids. They are thought to originate from the sweat glands. These lesions can be single or many in nature and frequently worsen in the summer from increased perspiration. They are caused by dilated ducts of eccrine sweat glands. Clinically, they seem like small, transparent cystic lesions that are painless, and they usually affect middle-aged or older people. However, a histological study is necessary to make a final diagnosis. We present a case of a 35-year-old woman who had an epidermal inclusion cyst first identified as a single, painless cystic growth on her right lower eyelid.

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Introduction

Eccrine hidrocystomas are uncommon benign cystic lesions originating from the sweat glands that typically affect the eyelids and also occur on the face and scalp. Occurs mainly due to dilated ducts of eccrine sweat glands (Sarabi and Khachemoune, 2006; Kumar et al., 2021).

Hidrocystomas may occur singly or can present as multiple lesions (Singh et al., 2005). The lesions of eccrine hidrocytomas have a chronic course with periodic flares in summer months, associated with exacerbation in sweating (Alfadley et al., 2001).

The typical clinical presentation includes a painless, small-sized, translucent cystic lesion on the face, especially on the eyelid commonly affecting middle-aged or elderly persons. However, histopathological examination is needed to rule out other differential diagnosis.

We present a case of lower eyelid enlargement in a 35-year-old female diagnosed with eccrine hidrocystoma on histopathology.

Case report

A 35-year-old female presented to the Department of Ophthalmology with a complaint of solitary, painless, 5×4 mm sized cystic swelling over her right lower eyelid for 2 months (Figure 1A). She has no other systemic complaints, no relevant family or personal history or any history of trauma. Based on clinical

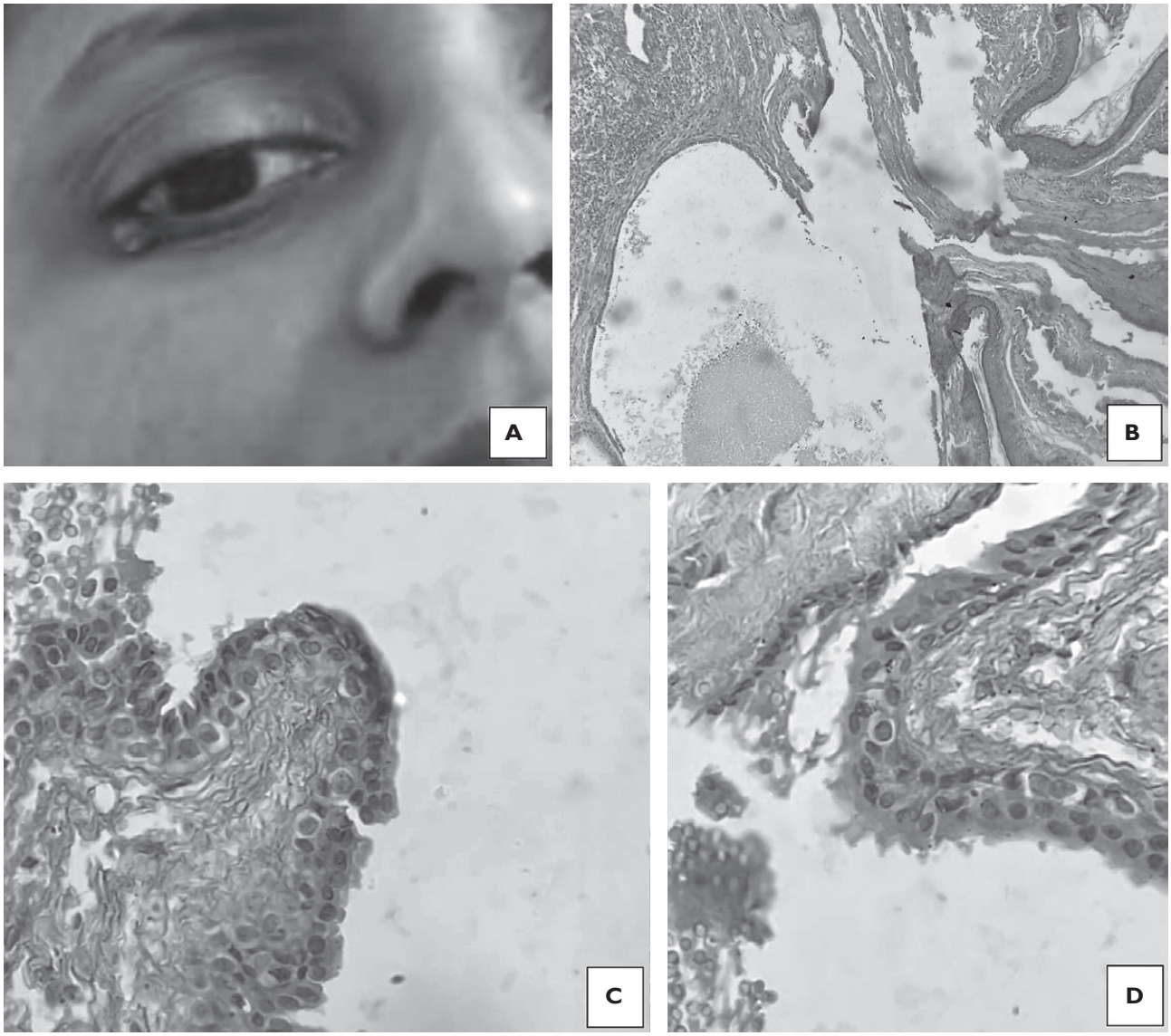

Figure 1: (A) The photographic image shows a 5×4 mm sized cystic swelling over right lower eyelid. (B) Shows stratified squamous epithelium with presence of a cystic structure underneath it and filled with secretions (hematoxylin [H] and eosin [E] stain, 10×). (C and D) The cyst was lined by a double layer lining epithelium; outer flattened myoepithelial and inner cuboidal cells layer with eosinophilic cytoplasm (H and E stain, 40×).

findings a diagnosis of epidermal inclusion cyst was made. Excision of the cyst was done and sent for histopathology. While excision straw coloured fluid came out from the cyst.

Histopathological examination of the tissue was done which revealed squamous lining epithelium, underneath which there is a cystic structure lined by double lining epithelium; the outer layer is lined by flattened myoepithelial cells, inner layer has cuboidal epithelial cells with eosinophilic cytoplasm and round to oval bland nuclei. There were no papillary projections or significant decapitation. Intraluminal secretions are also present in cysts. There is also the presence of chronic inflammatory cells comprised of lymphocytes in the surrounding stroma. These features favoured the diagnosis of eccrine hidrocystoma (Figure 1B–D).

Discussion

Benign lesions of the eyelids are much more frequent than the malignant lesions. The differential diagnosis of eccrine hidrocystoma clinically includes follicular-derived cysts, epidermal inclusion cysts, haemangioma, lymphangioma, apocrine hidrocystoma, and nodular basal cell carcinoma in the early stages (Jaifi et al., 2024). Hence it is important to do histological analysis of all lesions removed from the palpebral region.

The eccrine hidrocystoma must be differentiated from its apocrine variant, which is considered its close differential diagnosis. The eccrine hidrocystoma usually does not involve the margin of eyelid, unlike apocrine hidrocystoma because the eccrine sweat glands are distributed throughout the eyelid skin and are not confined to the eyelid margin unlike the apocrine glands (Rodallec et al., 2006). However, histopathology is the only way to confirm the diagnosis and differentiate between these two entities.

On histopathological examination eccrine hidrocystoma consist of a cystic structure lined by a double-lining epithelium, with outer flattened myoepithelial layer and inner cuboidal cell layer with eosinophilic cytoplasm, but without papillary projections or characteristic decapitation secretions is present (Adenis et al., 1998).

Apocrine hidrocystoma also had a double layer lining epithelium. The outer layer consisting of myoepithelial cells and an inner layer composed of secretory columnar cells with eosinophilic cytoplasm and a characteristic apical decapitation secretions with papillary protrusions in lumen (Adenis et al., 1998; Armstrong et al., 1998).

Schöpf-Schulz-Passarge syndrome (SSPS), a rare kind of ectodermal dysplasia, is a collection of genetic illnesses characterised by developmental anomalies in two or more of the following structures: hair, teeth, nails, sweat glands, and other ectodermal-derived structures. SSPS is an autosomal recessive syndrome characterised by palmoplantar keratoderma, hypodontia, hypotrichosis, nail dystrophy, and numerous periocular and eyelid apocrine hidrocystomas (Schöpf et al., 1971; Hampton et al., 2005).

Hidrocystoma is generally treated surgically, especially in the case of single lesions that are large and cause functional damage. Eccrine hidrocystomas, present no risk of malignant transformation, but a risk of recurrence is observed in 2.3% of cases when there is incomplete excision or cyst rupture while excision with residual cyst wall (Schöpf et al., 1971; Adenis et al., 1998).

Conclusion

Eccrine and apocrine hidrocystomas are rare cystic benign lesions of the sweat glands occurring on the face, especially over the eyelid. Histopathological examination plays an important role as the entity can mimic other lesions of the eyelids which also include malignant lesions. Chances of recurrence are comparatively high if the object is not completely removed on excision.

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