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INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/21256
DOI URL: http://dx.doi.org/10.21474/IJAR01/21256

RESEARCH ARTICLE

APOCRINE HIDROCYSTOMA OF THE EYELID: A RARE CASE REPORT

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Manuscript Info

Manuscript History
Received: 18 April 2025
Final Accepted: 21 May 2025
Published: June 2025

Key words:-
Apocrine Hidrocystoma, Eyelid Tumor, Benign Adnexal Lesion, Periorbital Cyst, Histopathological Diagnosis, Surgical Excision

Abstract

Introduction: Apocrine hidrocystomas are rare, benign cystic tumors arising from apocrine sweat glands, commonly found in the head and neck region. They may present in the periorbital area, including eyelids, canthi, and eyebrows. Although benign, histopathological confirmation is essential to rule out malignancy.

Case Report: A 20-year-old male presented with a one-month history of swelling below the left medial canthus. Examination revealed a solitary, firm, dome-shaped, translucent, mobile nodule measuring 2 × 1 cm on the left lower eyelid. CT orbit showed a well-defined 1.3 × 1.2 cm hypodense lesion (25 HU) in the inferomedial extraconal space, abutting the medial rectus. Surgical excision was performed.
Histopathological analysis showed fibrocollagenous tissue lined by flattened to cuboidal epithelium, confirming apocrine hidrocystoma.

Conclusion: Apocrine hidrocystomas carry an excellent prognosis with surgical excision. Histological evaluation is crucial to exclude malignan cy and ensure accurate diagnosis and treatment.

Introduction:-

Apocrine hidrocystomas are rare, benign adenomatous cystic tumors originating from apocrine sweat glands, typically found in the head and neck region[1]. Ophthalmologically, they may present on the eyelids, eyebrows, canthi, or periorbital area[2]. Despite their benign nature, definitive diagnosis can be difficult without histopathological confirmation[3]. Therefore, all excised lesions should be submitted for pathological evaluation to exclude malignancy[1].

Case Presentation:

A 20-year-old male presented to our outpatient department with a one-month history of a gradually enlarging swelling located just below the medial canthus of the left lower eyelid. The lesion had an insidious onset and showed slow progression. Clinical examination revealed a solitary, firm, round, translucent, and mobile nodule measuring approximately 2 × 1 cm over the medial aspect of the left lower eyelid, without any signs of inflammation. Ocular examination of both eyes was unremarkable. Ocular ultrasonography demonstrated a well-circumscribed, anechoic cystic lesion measuring 1.2 × 1 cm at the site of the swelling, with no evidence of surrounding inflammatory changes.

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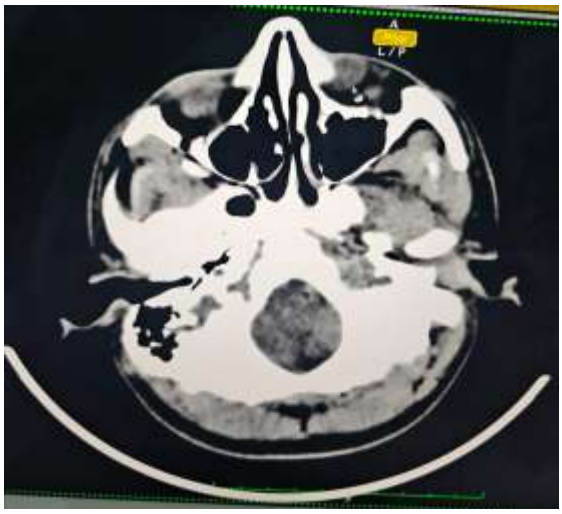
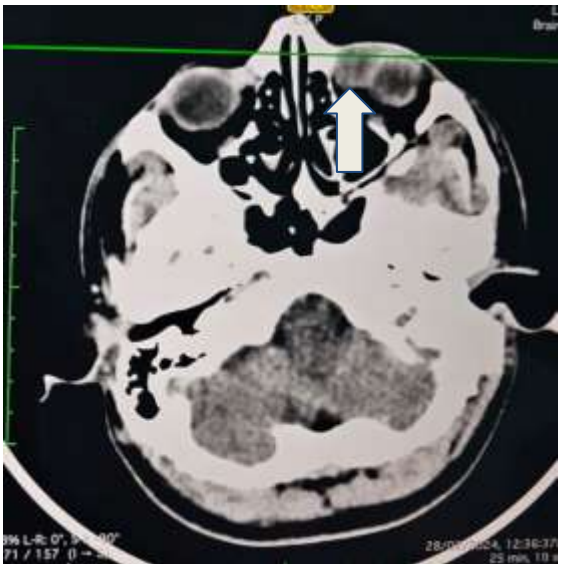
Figure 1:- Pre-operative swelling noted over the left lower eyelid, just inferior to the medial canthus.

A CT scan of the orbit was performed to evaluate the extent of the swelling, revealing a well-defined hypodense lesion measuring 1.3 × 1.2 cm (25 HU) located in the inferomedial quadrant of the left extraconal space, adjacent to the medial rectus muscle at the myotendinous junction.





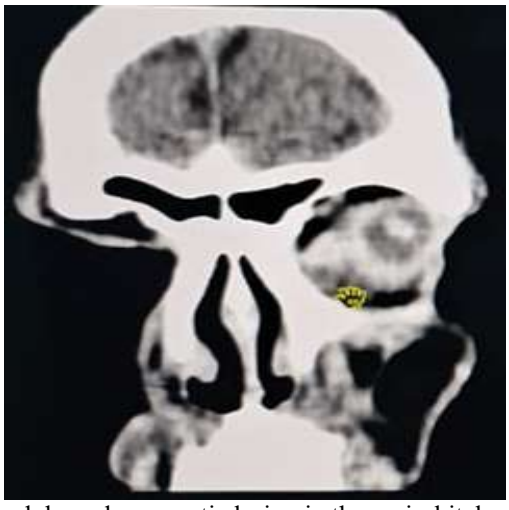


Figure 2,3,4:- A well-circumscribed, hypodense cystic lesion in the periorbital region may be visualized on orbital CT imaging.

Surgical excision was advised and subsequently carried out under local anesthesia without complications. The excised lesion was sent for histopathological evaluation to the pathology department.

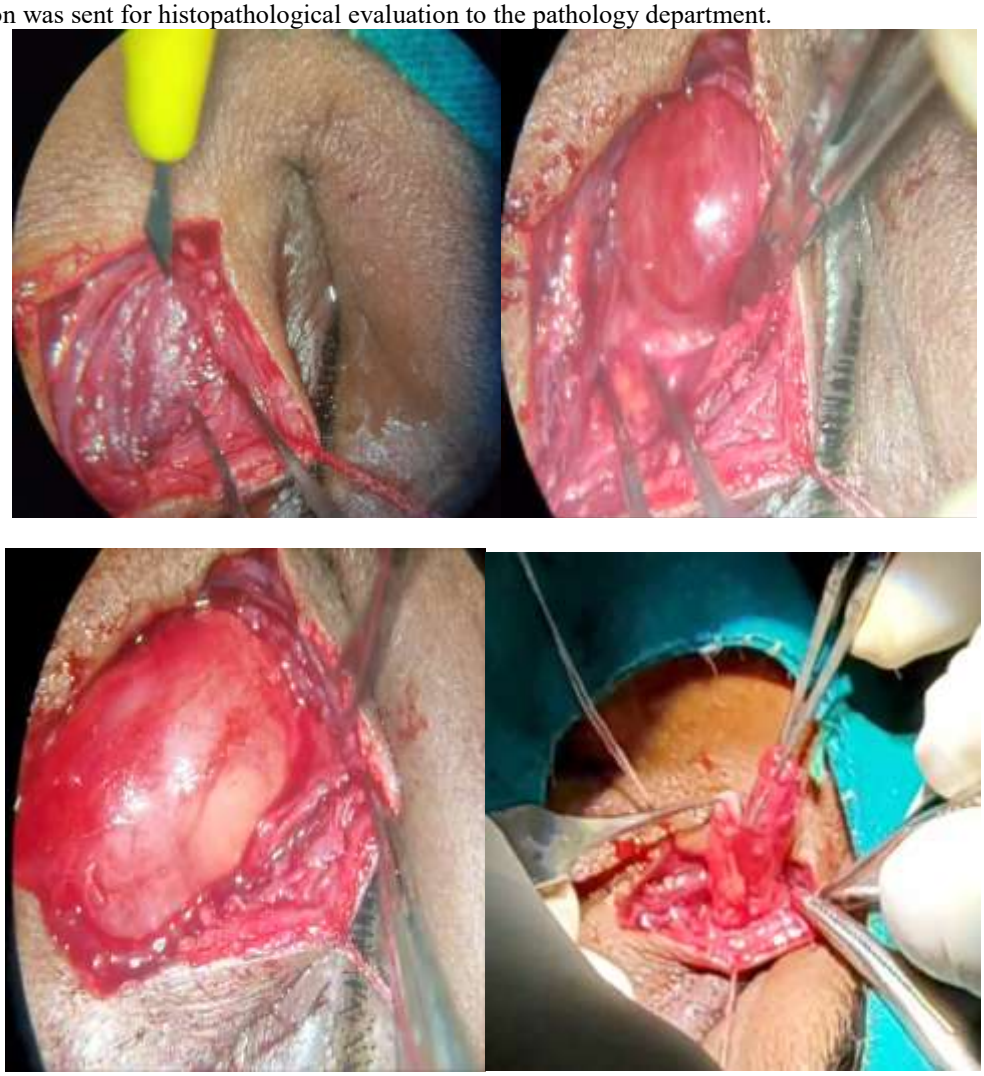


Figure 5,6,7,8:- Intraoperative excision of the cystic tumor.

The histopathological findings revealed fibrocollagenous tissue with flattened and cuboidal epithelium, showing atypical structures consistent with a diagnosis of **apocrine hidrocystoma**.

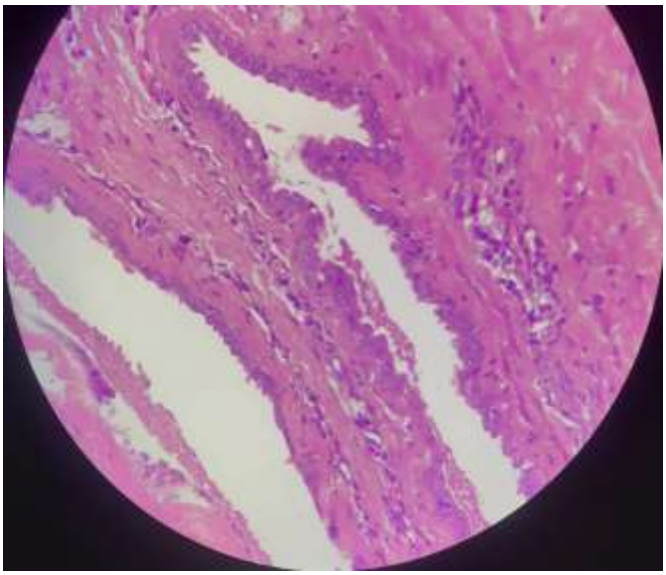


Figure 9:- Histopathological examination revealed a cyst lined by an inner layer of columnar epithelial cells.

The patient was reviewed on postoperative day 1, at one week, and again at one month. The postoperative course was uneventful, with no signs of recurrence observed during follow-up

Discussion:-

Due to the rich diversity of adnexal structures, the eyelid is a frequent site for a range of benign and malignant tumors, including hidrocystomas. These lesions are classified into two types based on their secretory origin: eccrine and apocrine[4]. Both variants represent non-proliferative retention cysts. In the periorbital area, hidrocystomas commonly affect the eyelids and inner canthus, where they tend to appear as solitary, larger, and often pigmented lesions[5].

Although most frequently located in the periorbital region, hidrocystomas may also occur sporadically on the neck, trunk, axillae, penis, or perianal region[6]. Apocrine hidrocystomas typically present in adults as solitary, soft, dome-shaped, translucent nodules or papules, especially around the eyes[7]. In contrast, eccrine hidrocystomas usually appear as asymptomatic, dome-shaped, bluish or clear cystic lesions on the face, scalp, or trunk, and may enlarge withhigher temperatures, represent cystic dilatation of dermal eccrine sweat glands.

The differential diagnosis includes basal cell carcinoma, blue nevus, cutaneous melanoma, eccrine cystadenoma, milia, follicular cyst, and syringoma. Histopathological analysis is essential for definitive diagnosis, as it distinguishes between the two variants. Eccrine hidrocystomas generally feature a cyst wall lined by two layers of cuboidal cells, while apocrine hidrocystomas are lined by tall columnar epithelium with underlying elongated myoepithelial cells. Characteristically, apocrine types may exhibit decapitation secretion and papillary infoldings, which are absent in eccrine types[5].

Immunohistochemistry can aid in differentiation, with S100 protein staining found only in the secretory portions of eccrine glands[8]. Electron microscopy further distinguishes the types: eccrine hidrocystomas show prominent luminal microvilli, whereas apocrine variants contain abundant secretory granules.

Surgical excision remains the treatment of choice, especially for solitary lesions, as it allows both definitive diagnosis and complete removal. Given their benign nature, excisions are usually performed with narrow margins, and recurrence is rare. Alternative treatments include needle aspiration[9], hypertonic glucose sclerotherapy[10] (which has a higher recurrence rate), trichloroacetic acid injections with aspiration[11], and in some cases, botulinum toxin A, which has shown promising results.

Conclusion:-

Apocrine hidrocystomas are benign cystic lesions with no metastatic potential and generally carry an excellent prognosis following complete surgical excision, with a low likelihood of recurrence. However, due to their clinical similarity to malignant lesions, misdiagnosis remains a concern. Thus, surgical removal followed by histopathological evaluation is crucial for accurate diagnosis and appropriate management.

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