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Rare classification of a lower eyelid lesion as tubular apocrine adenoma

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A 56-year-old female presented with a 6-month history of a slowly enlarging lesion on her left lower eyelid. A shave biopsy performed at an outside facility revealed an atypical glandular neoplasm extending to the deep margin, raising concern for metastatic adenocarcinoma. Subsequent evaluation by an outside oncologist, including whole body PET-CT scan and MRI brain, was negative for malignant or metastases. The patient was then referred to the oculoplastics clinic for further evaluation.

On presentation approximately two months after initial biopsy, the patient's visual acuity was 20/20 OU with normal intraocular pressures, full extraocular movements, and no afferent pupillary defect. Examination revealed a well-circumscribed, skin-colored, non-ulcerated mass measuring 7 × 4.5 mm on the lateral lower eyelid margin, accompanied by madarosis and mild erythema of the surrounding eyelid skin (Fig. 1).

Excisional biopsy was performed and histopathological evaluation revealed neoplastic cells forming tubular structures with small cysts and epithelial proliferation (Fig. 2). The cells exhibited eosinophilic cytoplasm, characteristic of apocrine differentiation.[1] Immunohistochemical (IHC) staining was positive for BerEP4, epithelial membrane antigen (EMA), and carcinoembryonic antigen (CEA), indicating the diagnosis of a tubular apocrine adenoma (TAA).[2,3] After biopsy, Mohs surgery was performed, followed by reconstruction of the defect. Postoperative follow-up for seven months revealed no recurrence of the lesion.

Tubular apocrine adenomas (TAA) are uncommon benign neoplasms that typically arise on the scalp, with fewer than ten documented cases involving the eyelid.[1–3] These lesions usually present as painless, slow-growing, non-ulcerated nodules, making diagnosis challenging due to their nonspecific appearance, which can mimic other neoplasms such as eccrine adenomas and apocrine adenocarcinomas.[1,2] Biopsy is essential, revealing characteristic tubular structures lined by a bilayer of epithelial cells.[1–3] Immunohistochemistry (IHC) aids in differentiation, with markers such as EMA, CEA, and cytokeratin 7 supporting a benign apocrine origin, although no single marker is definitive.[1,3] Management requires complete surgical excision, as incomplete removal has been associated with recurrence years later.[2,3] Reconstruction may be necessary for larger defects, as seen in this case. Limited data exist regarding malignant transformation or recurrence following complete excision, highlighting the benefit of long-term follow-up.[2]

This case contributes to the limited understanding of eyelid TAA. Histopathology and IHC are invaluable in diagnosis and distinguishing TAA from similarly presenting malignancies. Mohs surgery may be necessary to ensure adequate margins and to prevent recurrence. Recognizing its atypical presentation and thorough surgical management are essential for preventing recurrence and achieving favorable patient outcomes.

CRediT authorship contribution statement

Nishita T. Sheth: Writing – review & editing, Writing – original draft, Investigation, Formal analysis, Data curation, Conceptualization. **Christopher Stamey:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Christopher R. Dermarkarian:** Writing – review & editing, Writing – original draft, Supervision, Investigation, Formal analysis, Data curation, Conceptualization.

Patient consent

Consent to publish this case has been obtained from the patient in writing.

Authorship

All authors attest that they meet the current ICMJE criteria for Authorship.

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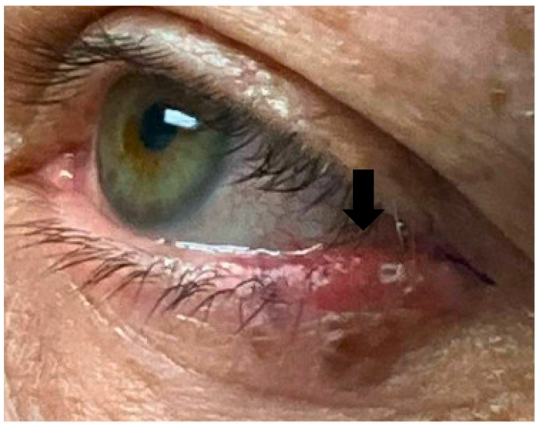

Fig. 1. Tubular apocrine adenoma presenting on left lower eyelid.

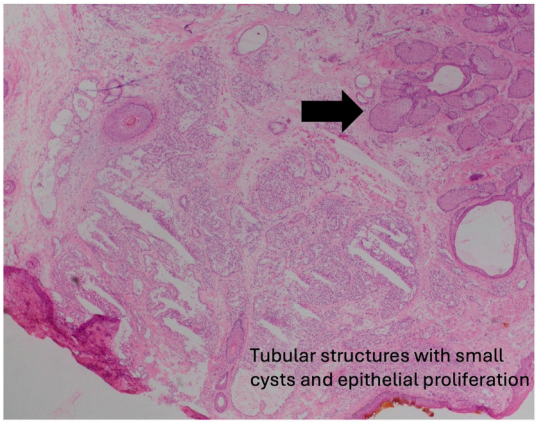

Fig. 2. Tubular structures with small cysts and epithelial proliferation indicative of tubular apocrine adenoma.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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