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Radiology

Fluid-Filled Cyst of the Medial Canthus: Radiological Diagnosis of a Hidrocystoma

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Abstract **Case Report**

Apocrine hidrocystomas are rare, benign tumors originating from sweat glands, typically either eccrine or apocrine. We present the case of a 52-year-old woman with no notable medical history, who experienced recurrent dacryocystitis. Imaging of the orbit revealed a well-defined, fluid-filled cystic lesion located at the medial canthus. Over time, the lesion led to significant disruption of lacrimal drainage function. This case highlights the clinical, etiological, and histopathological aspects of apocrine hidrocystomas, and reviews available management strategies, with surgical excision being the mainstay of treatment. Its unusual presentation, size, and impact on tear drainage make this case particularly noteworthy.

Keywords: Apocrine Hidrocystoma, Medial Canthus, Orbital Imaging, Lacrimal System, Dacryocystitis.

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INTRODUCTION

Apocrine hidrocystomas are rare, benign cystic tumors arising from the secretory portion of apocrine sweat glands, typically located in the periorbital or facial region. While usually small and asymptomatic, these lesions can occasionally present in atypical forms, posing diagnostic and therapeutic challenges. The medial canthus, a site rich in lacrimal and adnexal structures, is an uncommon location for such tumors and may lead to functional complications when affected.

In this report, we present an unusual case of a large apocrine hidrocystoma involving the medial canthus in a middle-aged woman. The lesion was revealed following recurrent episodes of dacryocystitis and was associated with progressive impairment of lacrimal drainage. Through this case, we aim to highlight the clinical presentation, imaging findings, histopathological features, and optimal surgical management of this rare adnexal tumor.

OBSERVATION

A 52-year-old woman, with no significant past medical history, presented with a history of recurrent swelling and discomfort at the inner corner of the left eye, evolving over several months. The episodes were frequently associated with tearing and signs of local inflammation, suggestive of recurrent dacryocystitis. Clinical examination revealed a soft, non-pulsatile, and well-demarcated mass at the medial canthus, measuring approximately 15 mm in diameter. The overlying skin was intact, with no signs of ulceration or discoloration.

Ocular examination showed preserved visual acuity and normal intraocular pressure. However, there was a partial obstruction of the lacrimal drainage system, as evidenced by a positive dye disappearance test and resistance on lacrimal irrigation.

Orbital imaging by MRI and CT scan revealed a well-circumscribed, fluid-filled cystic lesion located at the medial canthus, closely abutting the lacrimal sac but without evidence of bony erosion or orbital extension.

Surgical excision of the mass was performed via a medial canthal approach. Intraoperatively, the lesion appeared encapsulated and was carefully dissected from surrounding structures, including the lacrimal sac.

Histopathological analysis confirmed the diagnosis of an apocrine hidrocystoma, characterized by a cystic cavity lined with a double layer of cuboidal epithelial cells showing decapitation secretion.

Postoperative recovery was uneventful, with resolution of tearing and no recurrence observed at the 6-month follow-up.

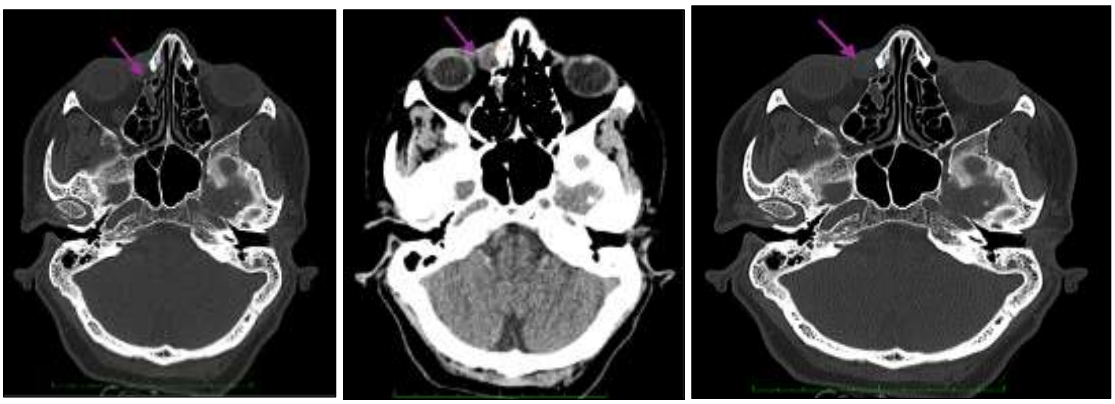

Figure 1: Abdominal angioscan in axial and coronal sections with MIP acquisition:

- Figures b, c,d : Nodular saccular formation opposite the pancreatic head (yellow arrow), arising from the common hepatic artery (red arrow) with a similar enhancement to that of the aorta in relation to a pseudoaneurysm of the gastroduodenal artery and comes into intimate contact with the duodenal wall of D1.
- Figure a: Multiple heterogeneous collections visible perigastrically and peripancreatically (star), associated with infiltration of neighbouring mesenteric fat.

- Identification of a well-defined lesion in the medial canthus, with fluid density measured at 27 HU, measuring 10 x 11 mm.
- No evidence of bony erosion.
- No calcifications observed along the lacrimonasal pathways.
- No opacification of the lacrimal ducts.
- No passage of contrast medium into the nasal cavities or nasopharynx.

DISCUSSION

Apocrine hidrocystomas are uncommon benign cystic tumors originating from the secretory portion of apocrine sweat glands. Although they predominantly occur in the periorbital and facial regions, their presence at the medial canthus remains rare, making diagnosis and management particularly challenging.

The clinical presentation often involves a slow-growing, painless cystic mass, which may remain asymptomatic for long periods. However, when located near critical structures such as the lacrimal apparatus, as in our case, these tumors can cause functional disturbances. Recurrent dacryocystitis and lacrimal drainage obstruction are uncommon but notable complications linked to mechanical compression or inflammation induced by the cyst.

Imaging studies, including magnetic resonance imaging (MRI) and computed tomography (CT), play a crucial role in defining the lesion's extent, its cystic nature, and relationships with adjacent structures. In our patient, imaging allowed for precise localization at the medial canthus and helped exclude more aggressive or invasive pathologies.

Histopathologically, apocrine hidrocystomas are characterized by a cystic cavity lined with a double layer of epithelial cells exhibiting decapitation secretion, a hallmark of apocrine differentiation. This feature is essential to differentiate hidrocystomas from other cystic lesions of the eyelid, such as eccrine hidrocystomas or epidermoid cysts.

The mainstay of treatment remains complete surgical excision. This approach is generally curative and allows both diagnosis confirmation and symptom resolution. Incomplete removal can lead to recurrence, emphasizing the importance of careful dissection, especially when the lesion is located near delicate lacrimal structures.

Our case underscores the importance of considering apocrine hidrocystoma in the differential diagnosis of cystic medial canthal masses, particularly in patients presenting with lacrimal drainage symptoms. Early recognition and appropriate surgical management can prevent complications and preserve lacrimal function.

CONCLUSION

Apocrine hidrocystomas are uncommon cystic tumors that can affect lacrimal function when located at the medial canthus. Accurate diagnosis relies on imaging and histopathology, while surgical removal offers effective treatment and symptom resolution.

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