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CASE REPORT

ECCRINE HIDROCYSTOMA OF THE LEFT UPPER EYELID: A CASE REPORT

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Abstract: *Eccrine Hidrocystomas Are Rare Benign Cystic Tumors Arising From Eccrine Sweat Glands. Herein, A 70-Year-Old Man With A 7x6 Mm Eccrine Hidrocystoma On The Upper Left Eyelid Is Described. The Lesion Elicted Upper Eyelid Ptosis, Distichiasis, And Corneal Abrasion, And Resulted In Decreased Vision. The Hidrocystoma Was Successfully Removed Surgically, And Resulted In Complete Improvement Of Symptoms. Early Identification And Treatment Of Such Lesions Are Crucial To Avoid Complications.*

Background: *Eccrine hidrocystomas are benign cystic tumors that originate from the eccrine sweat glands. They usually manifest as single, clear, dome-shaped nodules on the eyelids or periorbital area. Although typically unassociated with any symptoms, larger cysts may result in functional problems, including ptosis, corneal irritation, and decreased vision. Surgical removal and early diagnosis are still the standard of care for symptomatic hidrocystomas.*

Case Presentation: *A 70-year-old man presented with painless swelling of the left upper eyelid of six months duration. The lesion gradually grew, producing mechanical ptosis and distichiasis, resulting in corneal irritation and abrasion. On examination, a single, translucent, dome-shaped cystic growth of 7x6 mm was found on the left upper eyelid. Visual acuity was impaired due to corneal abrasion.*

Investigation: *Slit-lamp examination showed corneal abrasion as a complication of distichiasis and mechanical irritation due to the hidrocystoma. Ultrasonography established a well-circumscribed, anechoic cystic structure typical of an eccrine hydrocystoma*

Discussion: *Eccrine hidrocystomas are uncommon and occur because of ductal blockade of eccrine sweat glands resulting in cystic dilatation. Though commonly asymptomatic, large lesions have the potential for severe ocular morbidity such as ptosis, corneal irritation, and reduced vision, as presented in this case. Surgical resection in total is the best treatment option, with superior outcomes.*

Conclusion: *Eccrine hidrocystomas, though uncommon, are to be included in the differential diagnosis of eyelid lesions. Early detection and proper surgical treatment are critical to avo id complications and restore normal function.*

Keywords: Eccrine hidrocystoma, eyelid cyst, ptosis, corneal abrasion, surgical excision

1. Introduction

Eccrine hidrocystomas are rare benign tumors that arise from eccrine sweat glands that are distributed in skin areas, being most common in face, scalp, and upper extremities [1]. These lesions are retention cysts that occur on account of a blockage at the eccrine duct, leading to accumulation of fluid in the cystic lesion [2]. Although the precise etiology of eccrine hidrocystomas is unknown, some causative factors have been put forward including increased sweating, humidity, and blockage of the glandular ducts.

Clinically, eccrine hidrocystomas are mostly seen as solitary, small, dome-like, translucent, dome-like nodules on eyelids. Most of them do not cause any symptoms and grow slowly; however, there are cases where they become large enough to

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obstruct normal eyelid function, causing mechanical ptosis, irritation, and visual disturbances [3]. The most important point of differentiation is in their clear or bluish tone due to their fluid content, as compared to their different eyelid counterparts like chalazion, sebaceous cysts, and epidermal inclusion cysts.

Even though eccrine hidrocystomas are benign and non-malignant, they might be a cause of considerable inconvenience and cosmetic worry for the patients [4]. When large, they tend to impinge on surrounding structures, including the cornea, and result in irritation, abrasion of the cornea, and secondary manifestations such as recurring infections or chronic inflammation [5]. In such a case, early treatment and diagnosis are indicated to prevent complications and to attain the restoration of normal function of the eyelid.

Clinical diagnosis is the mainstay, but imaging methods like slit-lamp and ultrasonography can be utilized to evaluate the cystic character and establish the diagnosis [6]. Histopathological evaluation following surgical excision shows a cystic structure lined by a double layer of cuboidal epithelial cells with no sebaceous differentiation, confirming its eccrine origin.

This report brings to the fore a case of symptomatic eccrine hidrocystoma with corneal abrasion and blindness and underscores the need for timely diagnosis and surgical treatment. Recognition of the clinical presentation and management of this unusual lesion is required in order to avoid complications and maximize patient outcomes.

2. Case Presentation

A 70-year-old man was seen with increasingly enlarging swelling of the left upper eyelid of six months' duration. The swelling was painless but had begun to cause him some irritation and mechanical ptosis [7]. He reported intermittent blurring of vision, which he blamed on the swelling. He had no history of trauma, systemic disease, or previous ocular surgery, however. He did not have any chronic skin infections, infection, or other conditions that would have made him susceptible to the development of the cystic lesion in his history [8].

On clinical examination, a single dome-shaped, translucent cystic lesion was found on the upper left eyelid. The lesion was about 7x6 mm in size and was located close to the margin of the eyelid [9]. The lesion was fluctuant but not painful with no evidence of erythema, heat, or discharge. The lesion was positioned in a manner that it was causing mechanical interference with the normal movement of the eyelid and resulting in ptosis. Slit-lamp examination was done and showed that the patient was having corneal abrasion. The corneal abrasion was probably caused by distichiasis, where there are extra eyelashes growing in an abnormal position and rubbing against the corneal surface, again aggravating the visual symptoms of the patient [10].

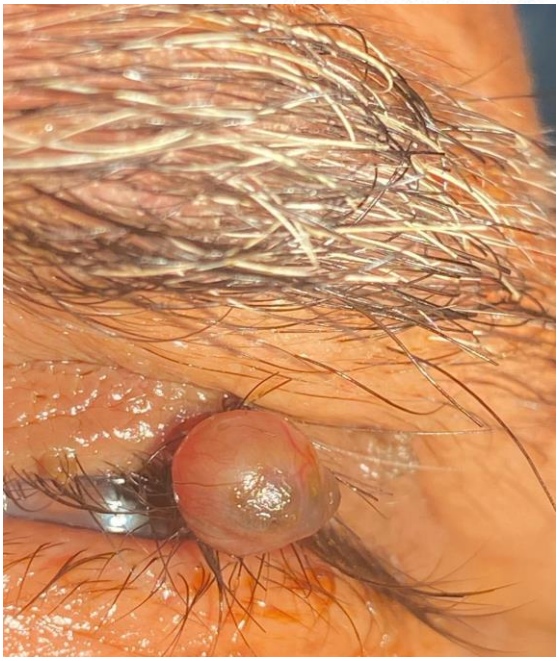

Fig 1: Preoperative image showing the hidrocystoma on the left upper eyelid.

Additionally to confirm the lesion and make the diagnosis, additional investigations were performed. Slit-lamp examination provided excellent visualization of the corneal abrasion, which was ensuring mechanical irritation from the lesion and distichiasis was responsible for the patient's symptoms [11]. Ultrasonography of the eyelid was also performed, which revealed a well-defined, anechoic cystic lesion. The findings were consistent with an eccrine hidrocystoma, a benign cystic lesion originating from eccrine sweat glands.

In view of the functional impairment and secondary corneal irritation, surgical excision of the lesion was opted for. The operation was carried out under local anesthesia in order to avoid causing discomfort to the patient. Ameticulous excision was performed with the view of enucleating the whole cystic mass to prevent recurrence [12]. The postoperative course for the patient was uneventful. There was significant improvement in eyelid function, and the mechanical ptosis was corrected. Also, the corneal abrasion resolved completely, and visual disturbances were resolved. The patient was followed up regularly, and no recurrence or postoperative complications were seen. The successful excision of the hidrocystoma provided great relief from symptoms and restoration of normal eyelid function.

3. Discussion

Eccrine hidrocystomas arise due to ductal occlusion within the eccrine sweat glands, resulting in cystic dilatation and retention of clear fluid [13]. Cystic lesions are most commonly found in highly populated sweat gland areas, such as the face and periorbital area. Although the precise pathophysiology of ductal obstruction is not yet clear, it is thought that excessive sweating, humid climate, and chronic irritation are possible causes for the development of these cysts. Eccrine hidrocystomas are histologically different from apocrine hidrocystomas, which are

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derived from apocrine glands and possess a different cellular structure [14]. The lining in eccrine hidrocystomas is two cuboidal epithelial cell layers in thickness, while apocrine hidrocystomas are usually columnar epithelial-lined with decapitation secretion, differentiating the two based on histopathological examination.

Fig 2: Postoperative image of the excised cyst.

The majority of eccrine hidrocystomas are small and asymptomatic, usually found incidentally on routine dermatological or ophthalmological examination. In a few instances, they can become large and have mechanical effects on adjacent structures [15]. When they occur on the eyelid, they can cause interference with normal eyelid function, resulting in ptosis, irritation, and even visual impairment. Large lesions could exert pressure upon the cornea, leading to secondary complications in the form of corneal abrasion, recurrent infections, or chronic ocular pain. In this current case, the patient's lesion resulted in mechanical ptosis and corneal irritation from distichiasis, highlighting the possible functional role of these benign cysts [16].

Differential diagnosis of eccrine hidrocystomas is also other cystic lesions like chalazion, sebaceous cysts, and epidermal inclusion cysts. Chalazion is an eyelid inflammatory lesion seen in most individuals that arises due to the occlusion of meibomian glands and is usually a firm, non-clear nodule [17]. Sebaceous cysts are filled with keratinous content and have a central punctum and are dissimilar to the clear fluid-filled nature of eccrine hidrocystomas. Epidermal inclusion cysts are also histologically diagnostic, containing laminated keratin and lining stratified squamous epithelium. Proper diagnosis is essential to provide appropriate management, and imaging modalities like ultrasonography can be helpful in discriminating among these cystic lesions [18]. The ultrasonographic appearance of eccrine hidrocystomas is representative of well-defined anechoic cysts with absence of internal vascularity, useful in diagnosis and planning management.

Treatment of eccrine hidrocystomas depends on the size and accompanying symptoms of the lesion [19]. Symptomatic or larger cysts or symptomatic lesions must be treated, whereas small asymptomatic lesions do not require treatment. The standard treatment is still surgical excision, with complete resolution and a low risk of recurrence. Local anesthesia is the preferred method for the procedure, and careful dissection achieves removal of the cystic structure with preservation of the surrounding tissues [20]. Other treatment modalities like laser therapy or electrosurgical ablation have been tried, but surgical removal is the most dependable method, especially when the lesion is functionally impairing. In our patient, the lesion was successfully excised with complete relief of symptoms and normal eyelid function restored. There was no recurrence on postoperative follow-up, demonstrating the effectiveness of surgery in the management of eccrine hidrocystomas.

4. Conclusion

Eccrine hidrocystomas, though rare, need to be part of the differential diagnosis of cystic eyelid lesions, particularly in patients with slowly growing, translucent, dome-shaped nodules. While such lesions are generally asymptomatic, larger cysts can lead to mechanical ptosis, corneal irritation, and visual impairment, significantly impairing a patient's quality of life. Being of benign pathophysiology, they are devoid of malignancy risk but at the same time, their danger of causing pain and functional handicap cannot be dismissed and therefore need timely intervention. Timely diagnosis with proper history and imaging facilities like ultrasonography is desirable in early separation of these cysts from others like chalazion, sebaceous cyst, and epidermal inclusion cyst. Histopathologic confirmation subsequent to surgical resection remains the criterion standard of definite diagnosis.

Surgical excision is the preferred treatment with complete resolution of symptoms and minimal recurrence. The procedure is tolerated well and may be performed under local anesthesia with minimal postoperative complications. Laser ablation and electrosurgery have been attempted as other treatments, but surgical excision is the most successful. Early treatment will prevent complications and restore normal eyelid function. Subsequent research needs to be focused on making less invasive treatments more streamlined while maintaining the efficacy of conventional surgical procedures in order to provide better patient care.

Acknowledgement

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Declaration

The authors of this case report affirm that they have no conflicts of interest. The patient provided written informed consent for the publication of this case report and the photos that go with it. There was no outside support for this research. This case report

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did not require ethical review because it complies with accepted medical and ethical standards for patient care and reporting.

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