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Case Report

Sweat gland tumor: A rare diagnosis of eyelid mass- A case report

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ABSTRACT

Eccrine acrospiroma or Nodular hidradenomas are extremely rare sweat gland tumors of eyelid that arise as intradermal nodules from eccrine sweat glands. This case reports documents evaluation of a nodular mass of upper eyelid and its adequate management. Clinical examination followed by wide local excision and histopathologic evaluation of mass was done. Clinically, the mass was diagnosed as sebaceous cell carcinoma of eyelid. Post-operative histopathologic evaluation of the mass was suggestive of benign acrospiroma. Sweat gland tumors constitute of a very small proportion of eyelid tumors which often mimic other malignant tumors of eyelid.

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1. Introduction

Eccrine acrospiroma also known as Nodular hidradenomas are extremely rare sweat gland tumors of eyelid that develop as intradermal nodules emerging from eccrine sweat glands.^{1,2} The tumor typically occurs as solitary lesion. Nevertheless, instances of multiple lesions have been infrequently documented.¹ Ultrastructural and enzyme histochemical investigations indicate their characteristics to fall between those of eccrine poroma and eccrine spiradenoma.³ The diameter of the intradermal nodules ranges from 5 to 20 mm, though they can occasionally exceed this size. Typically, they are concealed beneath intact skin, although certain tumors may exhibit surface ulceration and discharge serous fluid.¹ The histological features of a malignant hidradenoma bear resemblance to those of its benign counterpart. Tumors affecting the sweat glands on the eyelid are extremely rare; however, they should be considered among the potential diagnoses when assessing eyelid tumors.

2. Case Report

A 60-year-old man visited our hospital's outpatient department, reporting a painless, nodular mass on the right upper eyelid that had developed over the course of 12 months. The patient had observed that the mass grew in. Throughout this duration, the patient has not reported any preceding trauma or infection. He had a history of chalazion surgery done 1 year back. Physical examination demonstrated a solitary mass 20 mm x 17 mm in size located at lid margin of the right upper eyelid. It displayed a firm to hard consistency, with no associated pain, and extended into the deeper underlying tissues and posterior lamella (tarsoconjunctiva). The mass exhibited a highly irregular shape and was surrounded by an intact skin. A clinical diagnosis of sebaceous cell carcinoma was made [Figure 1]. The nodular mass was surgically removed with a thorough excision that included a 3 mm margin of healthy surrounding tissue (wide local excision). The upper lid was reconstructed using a full thickness graft from lower lid sparing the lid margin (Cutler-Beard flap). Both the lids were sutured together to promote vascularisation of the flap and left for 6 weeks. The excised mass was sent for histopathology. The pathology

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clinic identified a benign acrospiroma [Figure 2].

A second surgery was performed to reconstruct the palpebral aperture after 6 weeks [Figure 3].



Figure 1: Pre- operative image of right lid mass



Figure 2: Post-operative image at day 1 and day 7 after stage I surgery

2.1. Gross appearance

Single globular soft tissue piece of size 2.5x2x1.5 cm with attached skin flap and hair. A multiloculated cavity separated with thin fibrous septa and filled with mucinous and dirty creamish material, with soft to firm base in consistency.

2.2. Microscopic appearance

The mass shows a hyperkeratotic, acanthotic stratified squamous epithelium lining with adnexal structure,

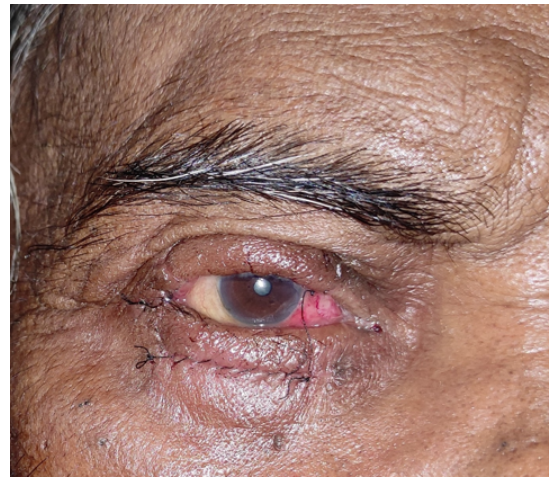


Figure 3: One week post-operative image after stage II lid reconstruction surgery

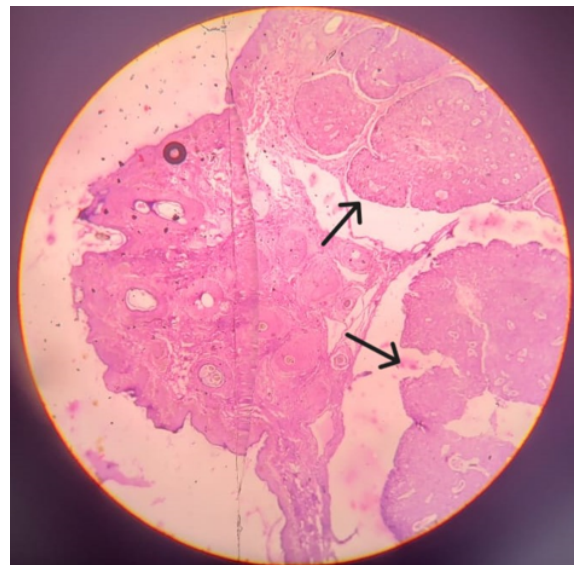


Figure 4: Histopathology slide image of the mass depicting nest and lobules of tumor cells filled with eosinophilic material and separated by fibrocollagenous septa.

underlying dermis shows tumor tissue disposed in nests and lobules filled with eosinophilic material and separated by fibrocollagenous septa. Two types of cell population were observed, small dark basaloid cells intermixed with large pale cells showing eccentric nucleus. Intervening stroma is loose and edematous shows numerous muscle fragments and scattered lymphocytes [Figure 4].

3. Discussion

Sweat glands come in two varieties: eccrine and apocrine. While eccrine glands are distributed across the skin, they are particularly plentiful in areas like the palms, soles, and

axillae. Eccrine glands are situated at the lid margin of the eyelid and within the surface dermis. Apocrine glands are less prevalent and are predominantly situated in regions like the axillae, around the nipples, and in the anogenital area. A small number of these glands have been reported on the abdomen and chest.⁴ Gland of moll present at the lid margin are also apocrine glands. Eccrine acrospiroma may occur at any age!¹. Nodular hidradenoma of the eyelid is exceedingly rare benign tumor of eyelid, and few cases have been reported.^{3,5} Following an incomplete excision, approximately 20% of cases experience recurrence.^{6,7} It may present clinically as a nodular mass, an indurated lesion or an ulcerated lesion mimicking basal cell carcinoma. Reported immunohistochemical reactivity includes keratin, epithelial membrane antigen, carcinoembryonic antigen, S-100 protein, and vimentin.⁸ The consideration of sweat gland tumors in the spectrum of possible diagnoses for eyelid tumors is crucial to facilitate early detection. The management entails the complete excision of the lesion. During the latest visit, 2 months post-excision, there was no sign of lesion recurrence.

4. Conclusion

When encountering a mass on the eyelid, it's crucial to consider a wide range of differential diagnoses, including less common conditions like sweat gland tumors. Although rare, these tumors can present with unique clinical features that may mimic other more common eyelid lesions. Therefore, a comprehensive evaluation, including histopathological examination, is essential for accurate diagnosis and appropriate management. By remaining vigilant and considering all possibilities, we can ensure timely and effective treatment for their patients, ultimately improving outcomes and quality of life.

5. Source of Funding

None.

6. Conflict of Interest

None.


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