Case Report

Trichoblastoma of the Upper Eyelid

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Abstract

Purpose: To describe a case of trichoblsatoma on the eyelid.
Case Report: A 45-year-old woman presented with a recurring mass on her upper right eyelid. Histopathological examination revealed well-circumscribed tissue composed of an aggregation of basaloid cells. Immunohistochemistry showed positive staining for CD34 and CD10. The patient underwent total excision of the recurrent mass.
Conclusion: Although rare, trichoblastoma should be considered in differential diagnosis of skin masses of the eyelids.

Keywords: Eyelid Tumors; Recurrent Mass; Trichoblastoma

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INTRODUCTION

Initially introduced by Headington[1] in 1970 and further defined by Ackerman et al[2] in 1993, trichoblastoma (TBL) is a rare, benign neoplasm that is mainly constituted of germinative cells. The clinical and histological diagnosis can often be mistaken for basal cell carcinoma, a malignant epidermal skin tumor. The head and neck are the most frequent sites of occurrence of TBLs, where it appears as superficial plaques, nodules, or papular lesions. To the best of our knowledge, only three cases of this tumor have been reported on the eyelid.[3-5] We report here another case of this rare tumor on the eyelid of a 45-year-old woman.

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CASE REPORT

A 45-year-old woman visited our clinic with a recurring mass on her upper right eyelid. The lesion had first been noted by the patient approximately one year prior to consult, and had gradually increased in size. The lesion was excised and repaired with a local full-skin rotational flap by another physician. The surgical details and pathological findings were not documented for that procedure. A clinical examination revealed an elevated, ulcerated, skin colored to erythematous nodular mass measuring, approximately 10 mm in diameter, situated at the outer third of the upper right eyelid [Figure 1]. The best corrected visual acuity of the right eye was 20/20 and other ocular examinations were unremarkable.

An incisional biopsy was performed with a provisional diagnosis of basal cell carcinoma (BCC). Histopathological examination revealed a well-circumscribed tissue composed of an aggregation of basaloid cells with dispersed chromatin, a high nucleus/cytoplasm

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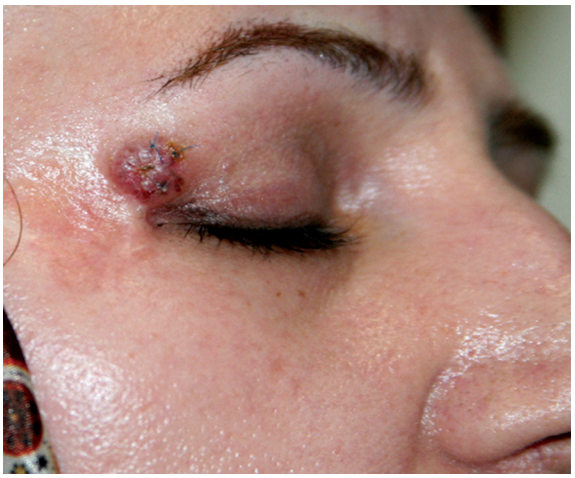

Figure 1. Photograph showing a recurrent mass in the outer third of the upper right eyelid of a 45-year-old woman.

ratio, and small elliptical nucleoli. Aggregation of epithelial cells typically showed peripheral palisading and several foci of rudimentary follicular papilla, surrounded by a variable sclerotic and hyalinized stroma. Immunohistochemistry exhibited positive peritumoral stromal staining for CD34 and CD10. These findings were compatible with TBL [Figure 2]. Therefore, the tumor was considered to be a low-grade neoplasm, and the patient underwent total excision of the recurrent mass. The tumor was removed with a 2mm safety margin and repaired by a rotational flap.

DISCUSSION

Trichoblastomas are benign well-marginated skin neoplasms of follicular germinative cells.[2] These tumors are typically sporadic, symmetric, solitary, small (often < 2 cm), arise from the hair follicle and grow slowly. TBLs are most common in middle-aged adults with no sex predilection. Although TBLs are commonly situated on the face and neck, they seldom occur in the region of the eyelids.

The reported cases of TBL on the eyelid include two women[3,4] and one man[5] with ages ranging from 50 to 79 years. The sizes of these documented masses varies from 5 to 12 mm and they all appeared to be well-circumscribed. Similar to our patient, the lesion described by Mencía-Gutiérrez et al,[3] was on the upper right eyelid, whereas the location of the lesions reported by Johnson et al[4] and Wladis et al,[5] were on the medial canthus and the lower eyelid regions. Recurrence of TBL has been observed by Johnson et al and Wladis et al.

Histologically, TBLs are well-defined dermal or dermal-subcutaneous islands of basaloid epithelial cells, follicular papillae, and germinative cells. These basaloid islands show peripheral palisading without an epidermal connection and are separated by fibrous stroma arranged in cords, sheets, or lobules.

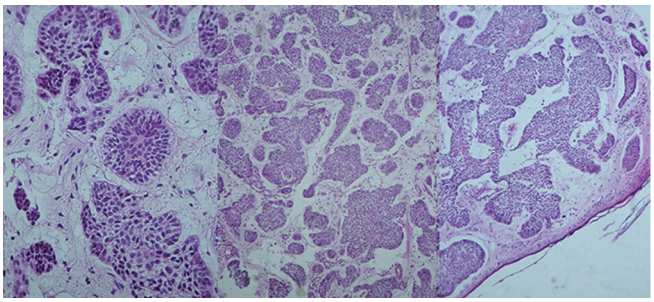

Figure 2. Histology of trichoblastoma. The tumor is composed of islands of basaloid cells within a fibrous stroma (hematoxylin-eosin stain).

The principle histopathological differential diagnosis of TBL is from BCC which can be much more irregular, invasive and destructive than TBL. In BCC, there are clefts between the epithelium and stroma, whereas the clefts in TBL are within the periepithelial stroma and the surrounding dermal collagen. Mitoses, apoptotic bodies, mucinous storma or amyloid deposits are typically present in BCC. In contrast to BCC, papillary mesenchymal bodies are characteristically present in TBL. Mitoses and apoptotic bodies are rare in TBL. Moreover, TBL has a more pronounced stroma and does not show retraction artifacts compared to BCC. Certain stromal changes such as stromal mucin are uncommon in TBL.[6]

Immunohistochemistry may provide better insight when diagnosis is challenging. Expression patterns of Bcl-2, CD34 and CD10 can be useful in distinguishing between TBL and BCC. Bcl-2 expression in TBL is limited to the basaloid keratinocytes in the outermost layer, but BCC shows diffusive staining.[7] In TBL, CD34 and CD10 are expressed only in the peritumoral stromal cells, while in BCC intraepithelial staining is observed.[7,8] CK20-positive Merkel cells may be abundantly found in TBL but not in BCC.[9] Recently, expression of PHLDA1,[10] a marker of follicular stem cells, has been reported in TBL but is absent in BCC.

Complete excision with adequate safe margins is generally required to minimize the likelihood of recurrence of TBL. Malignant alteration and aggressive features in TBLs can lead to BCC or trichoblastic carcinoma,[11] but this is rare. Trichoblastic carcinoma lesions are deeply infiltrative, demonstrate necrosis, show cytologic atypia or mitotic activity and may result in systemic metastasis.

In summary, TBL is an uncommon eyelid tumor that is often misdiagnosed as BCC. Therefore, clinicians should be familiar with the clinical signs and the histopathalogical differences between these two types of tumors. To reduce the chance of recurrence or malignant transformation, complete surgical excision is necessary.

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Conflicts of Interest

There are no conflicts of interest.

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