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Case Report

Cutaneous horn arising from a basal cell carcinoma of forehead: a case report

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ABSTRACT

The term cutaneous horn or “cornu cutaneum” is used to describe a well circumscribed usually conical hyperkeratotic mass arising from another cutaneous lesion. Several lesions have been reported to occur at the base of the keratin mass. Here we report a rare case of cutaneous horn arising from a basal cell carcinoma (BCC) over the forehead of a 52 year old female patient.

Keywords: Cutaneous horn, Basal cell carcinoma

INTRODUCTION

Cutaneous horns are circumscribed projections composed of hard keratin with a height of at least half the diameter of its base.[1] The layers of keratin usually arise from an underlying hyperkeratotic lesion which is more often benign than malignant. They can arise anywhere on the body but has a predilection to occur on exposed areas such as the face, ears and a hand, indicating that exposure to UV radiation plays a role in its pathogenesis. Among the malignancies, squamous cell carcinoma is the most common malignancy that can give rise to a horn.[2] Here we report a rare occurrence of cutaneous horn arising from a BCC, in a female.

CASE REPORT

A 52-year-old female came with complaints of a mass over her forehead. It started as a small papule which showed gradual progression, until about 2 months ago when she noticed a relatively rapid increase in its size. Though initially asymptomatic, she later developed itching and occasional burning sensation over the lesion. She gave a positive history of bleeding on touch and discharge from the lesion. She denied excessive sun exposure. On examination a pigmented plaque measuring 4×4 cm was noted over the forehead (Figure 1). A friable mass was seen over the lesion along with areas of crusting and ulceration. Removal of the mass and crusts revealed an ulcer at the base.

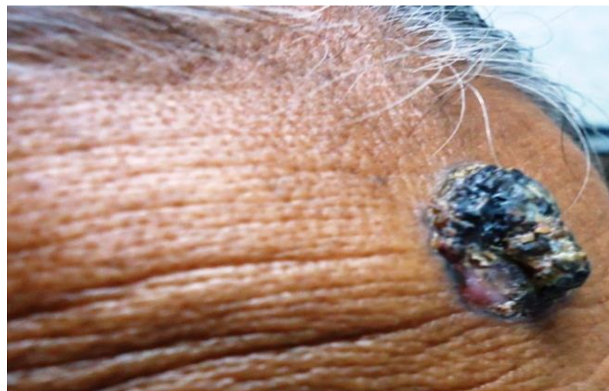

Figure 1: Clinical photograph showing cutaneous horn over a Basal cell carcinoma on the forhead. Note the rolled out border.

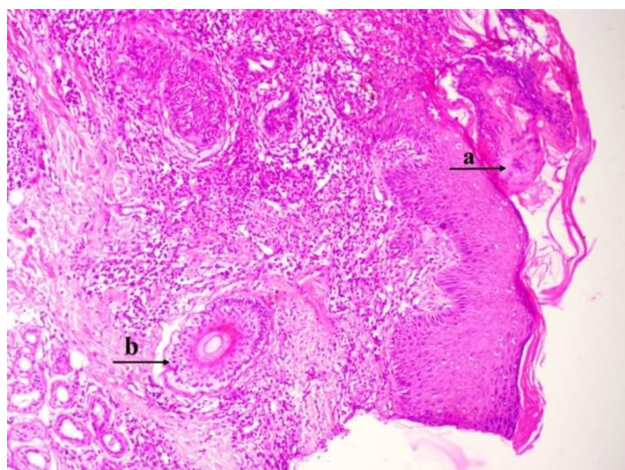

Figure 2: Photomicrograph of the biopsy specimen under H&E at 5X magnification. The arrows indicate: (a) Hyperkeratosis indicate presence of cutaneous horn, (b) Basaloid cells, pallisade arrangement, retraction cleft (artifact) around basaloid cells.

The histopathological study of the lesion showed massive hyperkeratosis indicating the presence of cutaneous horn and multiple nests of basaloid cells extending into the dermis, arranged in a palisade pattern with a retraction artifact around it. The features were consistent with basal cell carcinoma (Figure 2).

DISCUSSION

Cutaneous horn is a descriptive term and not a specific lesion. The compact layers of hard keratin are a reaction pattern to the underlying cutaneous lesion from which it arises. The lesions commonly associated with a cutaneous horn are benign conditions like verruca, seborrheic keratosis, trichilemmal cyst, epidermal nevus etc and premalignant lesions including actinic keratosis, keratoacanthoma and Bowen's disease.[2] Cutaneous squamous cell carcinomas are the most common malignancies presenting with a cutaneous horn; however other malignancies have been rarely reported with its association. The histopathology of a cutaneous horn shows massive hyperkeratosis as a common feature which is mainly governed by the underlying lesion.[3] Our patient had a noduloulcerative type of BCC. Basal cell carcinomas are the most common cutaneous malignancies encountered. The most common predisposing environmental factor is chronic UV radiation exposure. Other risk factors include increasing age, repeated or high dose ionizing radiation exposure, chronic arsenical exposure, previous scars and immunosuppressed states. Inherited gene defects play a role in early occurrence of BCC as a part of several clinical syndromes like Bazex, Gorlin and Rombo syndromes. Several clinical and histological types of BCC exist. The histopathological features common to most types is the presence of nests of basaloid cells showing cellular atypia arranged in a palisading pattern around a core of degenerated cells with poorly defined membranes forming a symplasmic mass. A retraction artifact may be seen in some forms of BCC. Basal cell carcinoma carries a favorable prognosis due to its low malignant potential and is amenable to treatment. The most common treatment modalities include surgical excision, Moh's micrographic surgery, cryotherapy, photodynamic therapy, etc. Topical applications of imiquimod and 5-Flurouracil can be tried for small and minimally invasive lesions.

CONCLUSION

Cutaneous horn has generally been associated with hyperkeratotic lesions which may be benign or malignant. This case has been reported due to its rarity, as to our best knowledge this is only the second report of a cutaneous horn arising from a basal cell carcinoma.[4]

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