

Trichilemmal Horn

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Abstract

A trichilemmal horn is a rare benign follicular lesion with trichilemmal differentiation. This is a case report of a 73-year-old female who presented with a large growing cutaneous horn over her left zygoma. The histopathology of the excised lesion revealed a trichilemmal horn. Various theories have been formulated to explain this condition. A diagnosis of a trichilemmal horn should be considered when a cutaneous horn shows trichilemmal keratinisation in the absence of dermal inflammation.

Keywords: Trichilemmal horn, keratosis, keratinisation, acanthosis, follicular tumour

INTRODUCTION

Cutaneous horns are protrusions from the skin consisting of cornified material, which can be straight or curved, and lacking a bony core.¹ Trichilemmal horn is a rare benign follicular lesion with trichilemmal differentiation.² It is usually seen on photo-exposed areas of elderly individuals with fair skin.³

CASE PRESENTATION

A 73-year-old female with vitiligo presented with an asymptomatic protruding, rapidly growing lesion over the left zygoma. It had been present for 5 months. It was a cutaneous horn measuring 10x5 cm (Figure 1). There was no evidence of cervical lymphadenopathy. Dermatological examination revealed hypopigmented patches in a non-dermatomal pattern. Systemic examination was within normal limits. The lesion was excised totally. Histopathology revealed mild acanthosis and hyperkeratosis. The dermis showed a proliferation of epithelial cells having abundant eosinophilic cytoplasm and vesicular nuclei exhibiting abrupt keratinisation without a granular layer. The base of the lesion showed palisading of the basal layer and trichilemmal keratinisation (Figure 2). A diagnosis of trichilemmal horn was made.



Figure 1. Trichilemmal horn over the left zygoma.

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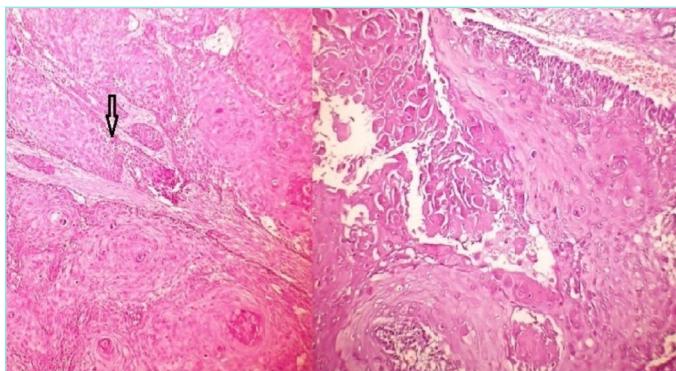


Figure 2. Photomicrograph showing, A) sheets of epithelial cells with palisading of basal cell layers (Arrow) (H&E, x100), B) Trichilemmal cells showing keratinisation without granular layer (H&E, x400).

H&E: Hematoxylin and eosin stain

DISCUSSION

The follicular tumour was first described by Headington in 1976 as trichilemmal keratosis and the term trichilemmal horn was coined by Brownstein in 1979. Trichilemmal horn presents as an exophytic keratotic lesion usually between 1 and 2 cm in diameter, mostly on the head or extremities in elderly patients. Histologically, the lesion shows a squamous cell epithelium composed of a row of palisading cuboidal cells. There is abrupt keratinisation of the epithelium without a granular cell layer forming a dense eosinophilic keratin.² Cutaneous horns may be associated with keratosis, verruca, trichilemma, Bowen's disease, epidermoid carcinoma, malignant melanoma or basal cell carcinoma.⁴ Skin malignancies also have association with Xeroderma Pigmentosum. The reported case had no history of excessive sun exposure. There was no evidence of malignancy in the sections obtained from the base of the lesion.

Various theories have been put forth to explain the pathogenesis of trichilemmal keratosis. It is considered to originate from the outer root sheath of the hair follicles. CD 34 is a specific marker for the external root sheath epithelium of hair follicles and tumours derived from or differentiated towards this type of epithelium. Positive CD 34 immunostaining has been seen in cases of trichilemmal keratosis.⁵ It is postulated that Human Papilloma Virus (HPV) may be involved in the pathogenesis of this tumour because intra-nuclear inclusion bodies, morphologically similar to HPV, have been identified in electron microscopy studies.⁶ The relationship between the development of trichilemmal keratosis and trichilemmal cyst has also been cited.⁵ The lesion may also represent a phenotypic change of the epidermal keratinocytes.⁷

MAIN POINTS

- The reported case gives details regarding a rare lesion of a large trichilemmal horn.
- Complete excision of the base of the lesion is essential to establish a diagnosis.
- The diagnosis of a trichilemmal horn should be considered when a cutaneous horn shows trichilemmal keratinisation in the absence of dermal inflammation.

ETHICS

Informed Consent: Written informed consent was obtained from the patient for the publication of this case report.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Concept: S.P.D., Design: S.P.D., Data Collection and/or Processing: R.S.D., Analysis and/or Interpretation: S.P.D., Literature Search: R.S.D., Writing: R.S.D., Critical Review: S.P.D.

DISCLOSURES

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