

SHORT COMMUNICATION

Verruca Actinic Keratosis vs. Verruca Vulgaris – Importance of Communication, Adequate Specimen Excision and Tissue Orientation

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INTRODUCTION

Hyperkeratotic eyelid lesions are challenging due to overlapping clinical appearances and limited tissue at this anatomic site. Here, we report two recent excisional biopsies to illustrate this challenge. Two patients, both in their early 70s, presented with large clinically similar “cutaneous horns” emanating from their eyelids. Although clinically comparable, the underlying pathogenesis was very different, requiring tailored clinical management.

CASE PRESENTATIONS

Patient 1

A 72-yo woman had a lesion on her left lower eyelid. Histologically, the lesion was characterized by acanthosis, papillomatosis, hyperkeratosis, and vertical tears of parakeratosis (**Figure 1 A and C**). Foci of vacuolated cells consistent with koilocytosis were present. These cells were in the upper Stratum Malpighii and possessed small,

round, deeply basic nuclei, surrounded by a halo with pale staining cytoplasm. Dermis was included in most areas of the specimen.

Patient 2

A 74-yo man had a lesion involving his right upper eyelid. The sections were in good cross-sectional orientation, but the underlying dermis was not represented (**Figure 1 B and D**). The sections demonstrated marked hyperkeratosis with acanthosis, focal dyskeratosis, moderate papillomatosis and areas of para- and orthokeratosis without cytologic inclusions or koilocytes. The epithelium showed irregular downward proliferations with areas of crowding, cytological atypia, and occasional mitotic figures. These areas of dysplasia extended to the inked deep surgical margin. As no dermis was present, it could not be determined if solar elastosis was present. Furthermore, as the cellular atypia extended to the deep margin, an invasive component could not be ruled out.

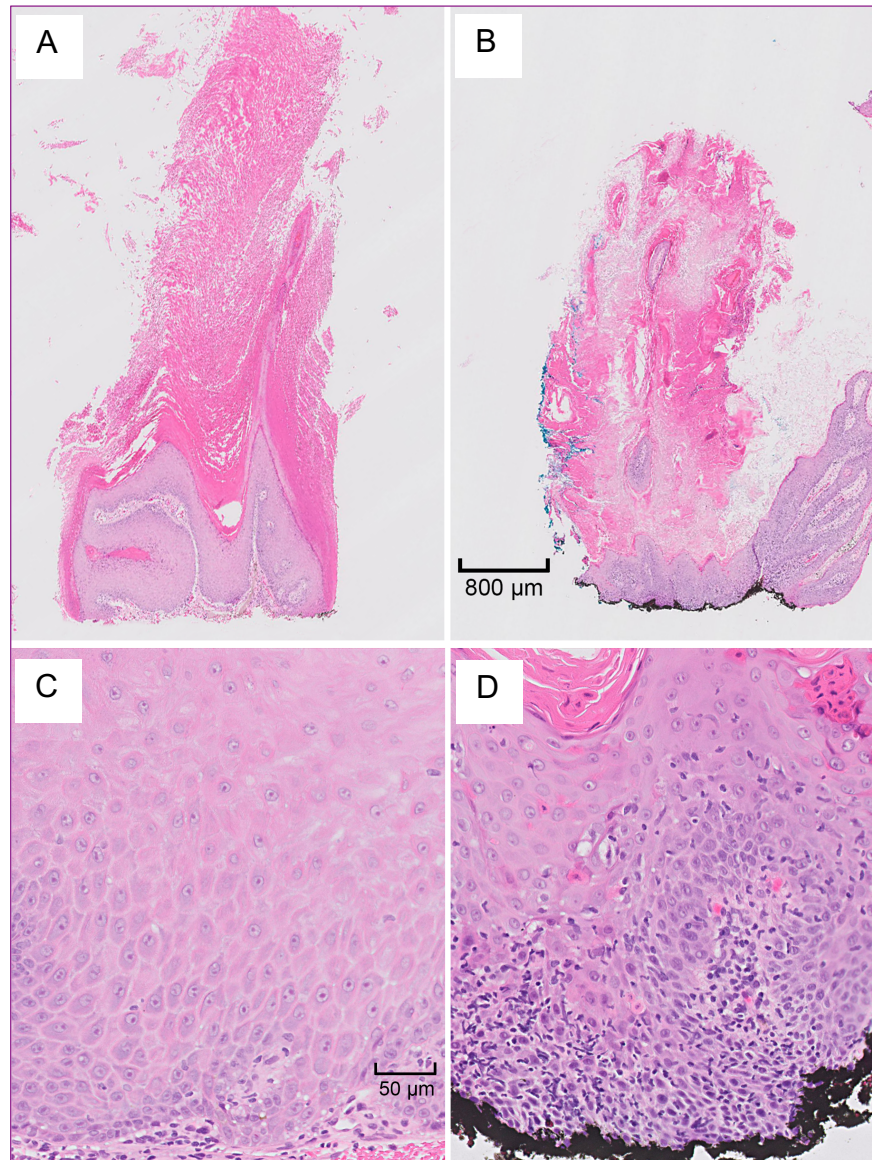


Figure 1. Photomicrographs of excisional biopsies from Patient 1 (A,C) and Patient 2 (B,D). At low magnification, both cutaneous horns similarly show piling up of relatively acellular eosinophilic keratin. At high magnification, acanthotic epithelium lacking dysplasia, which is consistent with verrucous vulgaris, extends up to the underlying dermis (C). In contrast, the base of the second specimen shows dysplasia and involvement of the surgical margin (black ink). Although, the findings in the second case have features of actinic (solar) keratosis, the involvement of the surgical margin precludes definitive diagnosis and requires close clinical monitoring. The sections were stained with hematoxylin & eosin; magnification bars are shown for the low and high photomicrographs within (B) and (C), respectively.

DISCUSSION

Cutaneous horns (*cornu cutaneum*) are not clinically uncommon. However, diagnosis of

the underlying skin pathology requires an excisional biopsy permitting adequate microscopic evaluation of the lesion.⁶ The eyelid introduces a particular challenge,

where limited space for tissue retrieval hinders obtaining complete surgical margins.

Our cases were complicated by the overlapping features of verrucous vulgaris (Patient 1) and verrucous solar keratosis (Patient 2).¹ Verrucae behave in a benign fashion, whereas solar keratoses are carcinoma *in situ*. If untreated, solar keratoses can cause local destruction or, in rare cases, metastasize.³ A cutaneous horn can be associated with actinic keratosis (25%), squamous cell carcinoma (19%), seborrheic keratosis (19%-20%), or verruca

vulgaris (18%).² Although the biopsy from Patient 2 was consistent with verrucous solar (actinic) keratosis, due to the absence of dermis, we could not ascertain that the lesion was completely excised or rule out the existence of an invasive component. Therefore, close clinical follow-up was recommended for this patient. The cases illustrate that adequate orientation of the lesion with respect to the surgical margin and careful histopathological study can distinguish such look-alike lesions to manage the patient appropriately.

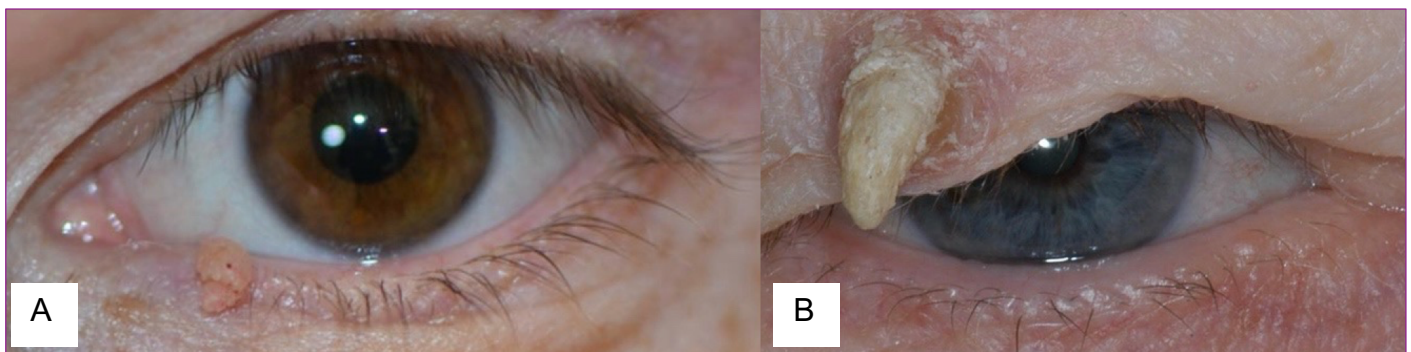


Figure 2. Examples of eyelid cutaneous horns reproduced here with permission from EyeRounds.org University of Iowa. (A) Verruca vulgaris involving the left medial lower eyelid.⁴ (B) Verruca actinic keratosis involving the right upper eyelid.⁵ Histopathologic evaluation of such lesions at this anatomic site is challenging due to the limited normal eyelid tissue that can be practically included with the excision. Communication with the surgeon and careful orientation of the specimen at the paraffin embedding stage are critical in accurate histopathological evaluation

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