

## Case Report

# Cornu cutaneum at an unusual site

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### ABSTRACT

Cutaneous horn (cornu cutaneum) is a clinical diagnosis referring to a conical projection above the surface of the skin that resembles a miniature horn. The base of the horn may be flat, nodular or crateriform. The horn is composed of compacted keratin. Various histologic lesions have been documented at the base of the keratin mound and histological confirmation is often necessary to rule out malignant changes. Tenderness at the base of the lesion and lesions of larger size favour malignancy. Malignancy is present in 16-20% of the cases with squamous cell carcinoma being the most common type. We report a young male patient with a keratin horn on the right index finger tip.

### KEY WORDS

Cornu cutaneum, cutaneous horn, keratin horn

### INTRODUCTION

**C**ornu cutaneum is a clinical description of a hyperproliferation of compact keratin in response to a wide array of underlying benign and malignant pathological changes.<sup>[1]</sup> It is a morphological designation for a protuberant mass of keratin that resembles the horn of an animal, usually seen in elderly persons.<sup>[2]</sup> We report a young male patient with an unusually large size horn at the tip of the right index finger.

### CASE REPORT

A 25 year-old - male presented with a history of horny growth on the tip of the right index finger for 5 years. It was insidious in onset and slowly progressed to attain the present size. Patient had pain on the tip of the right index finger for 5 days. General physical examination was normal. Local examination revealed, a firm, horny growth of 2.5 cm in length and 0.5 cm in width at the base, located on the tip of the right index finger [Figure

1]. The fingertip surrounding its base was inflamed and there was purulent discharge from it. The growth was mobile, free from the nail and distal phalanx. A week's course of antibiotics was given. Excision of the growth with an elliptical incision in conical fashion and primary closure of the defect was done under digital block [Figure 2]. The patient recovered well and after 13 months follow up, he is asymptomatic with an well-healed almost negligible incision scar [Figure 3]. Histopathological examination revealed hyperplastic skin with hyperkeratosis and parakeratosis. The epidermis showed irregular acanthosis, elongated rete ridges and papillomatosis. The dermis was composed of fibrocollagenous material and proliferating, dilated blood vessels. There was sparse chronic inflammatory cells infiltration in the dermis. Features were suggestive of a keratin horn [Figure 4].

### DISCUSSION

Cutaneous horns are elongated, keratinous projections



**Figure 1:** Photograph showing an unusually large keratin horn on the fingertip



**Figure 3:** Postoperative photograph of the patient on 13 months follow up showing a well-healed almost negligible incision scar



**Figure 2:** Excised specimen of keratin horn



**Figure 4:** Photo micrograph of keratin horn

from the skin, ranging in size from a few millimeters to many centimeters that resembles a miniature horn. The base of the horn may be flat, nodular or crateriform. The horn is composed of compacted keratin. Because they are suggestive of underlying anaplasia, biopsy examination is warranted.<sup>[3]</sup> They may be (1) sebaceous horns, (2) wart or corn horns; (3) cicatrix horns and (4) nail horns.<sup>[4]</sup>

The distribution of cutaneous horns usually is in sun-exposed areas, particularly the face, pinna, nose, forearms and dorsal hands. Usually a cutaneous horn is several millimeters long. Malignancy is present in 16-20% of cases, with squamous cell carcinoma the most common type.<sup>[3]</sup> The incidence of squamous cell carcinoma increases to 33% when the cutaneous horn is present on the penis.<sup>[3,5]</sup> Tenderness at the base of the lesion and lesions of larger size favour malignancy. Most

cutaneous horns arise from actinic keratoses but they may also result from seborrheic keratoses, warts, keratoacanthomas, squamous cell carcinomas and basal cell carcinomas. Histologically, there is a greatly thickened stratum corneum with scattered areas of parakeratosis. The horn at the base will display features characteristic of the pathologic process responsible for the development of the horn.<sup>[1-3]</sup>

Excision biopsy of the lesion and histopathological examination to rule out malignancy is recommended. Malignancies should be excised with appropriate margins and evaluated for metastasis. A careful physical examination of the lymph nodes draining the area of lesion often is adequate. Local destruction with cryosurgery is first-line treatment for verruca vulgaris, actinic keratosis and molluscum contagiosum. Benign lesions do not require any further therapy after the

diagnostic biopsy.<sup>[3]</sup>

Mencia-Gutierrez *et al*<sup>[2]</sup> have done a retrospective analysis of 48 cutaneous horns of the eye lid treated by surgery between 1992 and 2002. Histologically they found 77.1% horns associated with benign pathology at the base of the specimen, 14.6% were pre-malignant and 8.3% were caused by malignant skin tumours. The most common lesion was seborrheic keratosis among the benign lesions, actinic keratosis among the pre-malignant lesions and basal cell carcinoma and squamous cell carcinoma among the malignant lesions. Gould JW, Brodell RT<sup>[1]</sup> have reported a giant cutaneous horn associated with verruca vulgaris. Solivan *et al*<sup>[5]</sup> reported a cutaneous horn of the penis associated with squamous cell carcinoma and HPV - 16 infections.

## CONCLUSION

Cutaneous horns usually appear on exposed skin areas

in elderly persons. Although the horns are usually benign, the important issue in this condition is not the horn itself, which is just dead keratin, but rather the nature of the underlying disease. This case of cutaneous horn is unusually large, arises from an uncommon site and found in a young male patient.

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