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Cutaneous horn overlying verrucous carcinoma on face and its dermoscopic characterization

Sir,

Cutaneous horns, also known as cornu cutaneum, are conical protrusions composed of cornified material derived from the basal keratinocytes. They are generally solitary and have predilection for sun-exposed areas like face, scalp, eyelids, neck and forearms.¹ The underlying pathology could be benign (41 to 60% cases), premalignant or malignant. The associated lesions at the base include squamous cell carcinoma, viral warts, actinic keratosis, keratoacanthoma, Bowen's disease, seborrheic keratosis, basal-cell carcinoma and Kaposi sarcoma. Other less common lesions are epidermal nevus, ichthyosis hystrix, verruca vulgaris, actinic keratosis, other precancerous keratosis, seborrheic keratosis, molluscum contagiosum, trichilemmal cysts or epidermoid cysts.^{2,3} Malignant transformation into squamous cell carcinoma has been reported to occur in around 20 to 25% of cases.³ The diagnosis is clinical but histopathology is important to identify the underlying lesion. Dermoscopy is a noninvasive office procedure with ever-expanding indications in dermatology in the diagnosis of both pigmented and nonpigmented lesions. Dermoscopic features of cutaneous horn with varying underlying lesions have not been studied enough. We hereby present a case of cutaneous horn with underlying rare pathology of verrucous carcinoma and describe its dermoscopic findings.

A 65-year-old woman presented to the dermatology outpatients of UCMS and GTB hospital, Delhi, with solitary, tender,



Figure 1: Cornified lesion of cutaneous horn on right cheek

slowly progressive, hyperkeratotic lesion of 2 × 2 cm size on the right cheek of 3 years duration. The lesion was composed of multiple, closely set whitish hard projections arising from an erythematous, indurated crateriform base [Figure 1]. There

How to cite this article: Singal A, Agrawal S, Gogoi P. Cutaneous horn overlying verrucous carcinoma on face and its dermoscopic characterization. *Indian J Dermatol Venereol Leprol* 2021;87:388-90.

Received: April, 2020 Accepted: July, 2020. Published: April, 2021

DOI: 10.25259/IJDVL_512_20 **PMID:** 33666037

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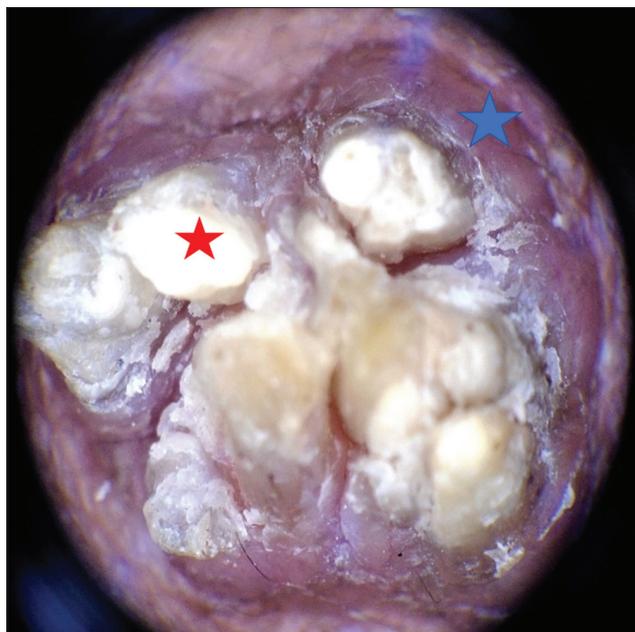


Figure 2a: Multiple closely set off-white colored structures (red star) over a dull red colored background (blue star)

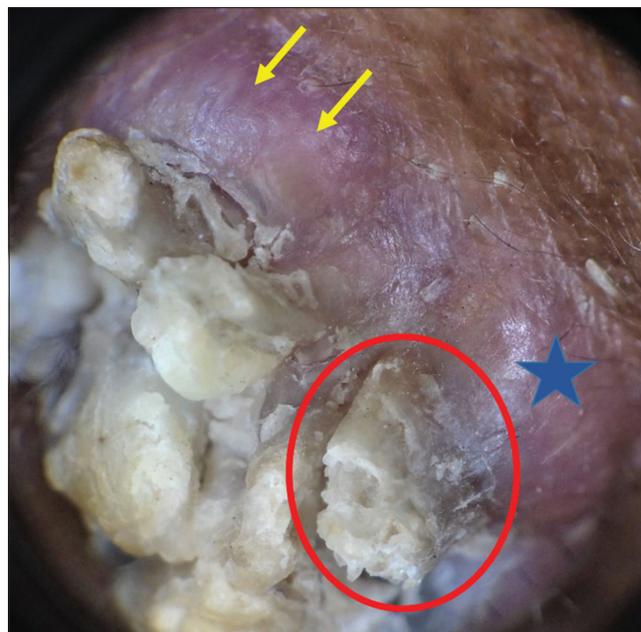


Figure 2b: Side view of the horn (in red circle) showing the absence of structural horizontal contours (absent terrace phenomenon) and no specific vascular morphology and pattern in the background (blue star). Also, note the follicular scales (yellow arrow) (polarizing dermoscopy $\times 10$)

was no regional lymphadenopathy. She was thin built but her physical examination otherwise was within normal limits. Her routine hematological and biochemical investigations revealed no abnormality. Polarizing dermoscopy (DermLite DL3; 10X) showed [Figures 2a and b] multiple, closely set off-white colored structures (conical projections) over a dull red colored background; the height of the conical projections was less than that of the base. Dermoscopy on the periphery of lesion showed an absence of structural horizontal contours (i.e., absent terrace phenomenon). This dull red colored background did not reveal any specific vascular morphology and pattern. Follicular scales were visible at the periphery of the lesion. These dermoscopic findings pointed towards an underlying malignant lesion. With this background, an excision biopsy with a 5-mm margin was performed with the clinical diagnosis of cutaneous horn probably with underlying malignant lesion. The biopsy on hematoxylin and eosin stained sections revealed mounds of parakeratosis, acanthosis with koilocytosis and papillomatous rete ridges suggestive of human papilloma virus (HPV) infection and downward papillomatous growth of the rete ridges surrounded by dense collection of lymphocytes, indicating an invasive pathology of verrucous carcinoma [Figure 3]. The margins of the excised specimen were free of carcinoma. The cosmetic outcome was very good.

The present case unfolded the presence of verrucous carcinoma at the base of a cutaneous horn. Verrucous carcinoma (Ackerman's tumor) is a well-differentiated warty variant of squamous cell carcinoma with low malignant potential. It typically involves the oral cavity, esophagus, larynx, genitalia and plantar surface of foot. Face is not a

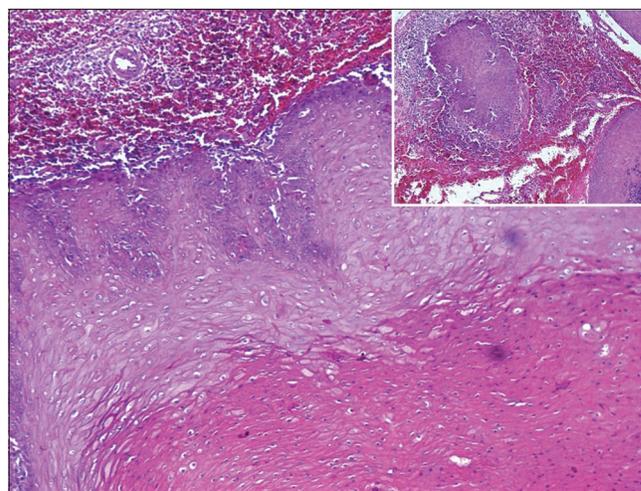


Figure 3: The epidermis showing mounds of parakeratosis, acanthosis with koilocytosis and papillomatous rete ridges suggestive of invasive pathology (H&E, $\times 100$). Inset shows dense lymphocytic infiltrate around the bulbous rete ridges

Table 1: Dermoscopic and clinical difference between benign and malignant horn

Feature	Benign horn	Malignant horn
Horn height: diameter of base	Horn height more than the diameter of base	Horn height less than base diameter
Terrace morphology	Present	Absent
Base erythema	Less	More
Pain on palpation	Less	More

common site.⁴ Strong association with tobacco and betel nut chewing and HPV infection has been documented. There is a single study by Pyne *et al.* evaluating the dermoscopic

features of cutaneous horn in 163 consecutive patients.⁵ The authors concluded that few dermoscopic features are significantly associated with underlying invasive SCC namely low height-to-base ratio, absence of terrace morphology and presence of base erythema and tenderness. They recorded lower height of the horn as compared to the diameter of the base in 67% cases of invasive squamous cell carcinoma. On the contrary, height of the horn was greater than base diameter in benign keratosis. All these features were seen in our patient. Terrace morphology is a feature presenting as structural horizontal contours on the side of the horn. On histopathology, it appears as ortho-hyperkeratosis with horizontal parallel lamellae of dead keratin. Base erythema is characterized by presence of red area within 5 mm of horn base that may be attributed to the increased perfusion. The close dermoscopic differentials include actinic keratosis, benign keratosis and SCC *in situ*. The differentiating dermoscopic features of cutaneous horn with underlying benign and malignant etiology have been tabulated in Table 1.

Thus, cutaneous horns could be a harbinger of malignancy as seen in our case. Though histopathology remains the diagnostic gold standard, dermoscopy can offer a clue to the underlying malignant etiology and affect the decision of therapeutic and diagnostic surgical excision.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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Subcutaneous dirofilariasis in a Tunisian patient

Sir,

Human subcutaneous dirofilariasis is a rare helminthic infection caused by filarial worms of the genus *Dirofilaria* species, common in the southern USA. Its diagnosis is always challenging, especially in nonendemic regions, where most cases are diagnosed retrospectively.

A 19-year-old girl, a dog owner from East Central Tunisia, presented with two-month history of asymptomatic swelling of the lumbar area. There was no history of trauma, insect bite or foreign body. Examination revealed a single, soft, mobile, skin-colored subcutaneous nodule of 1 cm large size in the

right lumbar region, simulating lipoma. She had no other skin or systemic abnormalities. Hematological findings were within normal range, with no evidence of eosinophilia or hepatocellular dysfunction. An ultrasound scan showed a well-defined complex cystic structure containing an echogenic continuously moving structure, highly suggestive of a living worm [Figure 1]. By local excision under anesthesia, the encapsulated nodule was removed [Figure 2]. A thin, cylindrical, white worm, about 20 mm in length was found embedded in the subcutaneous fatty tissue. Parasitological examination identified a thick laminated cuticle with prominent longitudinal ridges, fitting with a filarial worm of the species *Dirofilaria repens* [Figure 3]. After the

How to cite this article: Idoudi S, Youssef M, Soua Y, Achour A, Babba H, Zili J. Subcutaneous dirofilariasis in a Tunisia patient. *Indian J Dermatol Venereol Leprol* 2021;87:390-2.

Received: November, 2019 Accepted: August, 2020 Published: April, 2021

DOI: 10.25259/IJDVL_995_19 PMID: *****

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