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Case Report

Unique Presentation of Squamous Cell Carcinoma as Giant Cutaneous Horn

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Cutaneous horn is a conical, dense, and hyperkeratotic protrusion that often appears similar to the horn of an animal. Giant cutaneous horns are rare; no incidence or prevalence has been reported. The significance of cutaneous horns is that they occur in association with, or as a response to, a wide variety of underlying benign, premalignant, and malignant cutaneous diseases. Herein we report a unique case of a 60-year-old male with a giant cutaneous horn (size: 10 cm × 2 cm) projecting from the left angle of mouth, which is extremely rare. Wide local excision of the growth was done. Histopathologic examination showed verrucous carcinoma with negative margin. There is no recurrence after follow-up of 2 years.

Key words: Squamous cell carcinoma – Cutaneous horn – Hyperkeratosis – Cornu cutaneum – Giant cutaneous horn

A cutaneous horn is a conical projection of hard hyperkeratotic excrescence of cohesive keratin projecting over skin. Although it grossly resembles an animal horn, it lacks a bony core.[1] Whereas there are multiple reports of cutaneous horns, giant cutaneous horns are much rarer.

On review of the literature, 9 cases in the past have been reported to have cutaneous horn over the lip and 3 of these had an associated squamous cell carcinoma at its base.[2] Cutaneous horns are thought to result from underlying benign, premalignant, or malignant tumor in 61.1%, 23.2%, and 15.7% of cases, respectively.[3]

To the best of our knowledge such a giant cutaneous horn presenting as squamous cell carcinoma has never been described in the literature so far.

Case Report

A 60-year-old male presented with a conical lesion measuring 10 cm × 2 cm, a painless growth from the left angle of mouth present for 6 months. The lesion was slowly growing and gradually progressive in size. There was no history of itching or bleeding. The patient had a history of a similar lesion 8 months prior to this presentation for which he had undergone local excision in a private hospital 6 months earlier. There was no history of trauma at that site in the past. A history of cigarette smoking and tobacco chewing for the past 40 years was present. Patient was hypertensive on regular treatment. None of his family members was affected by a similar condition.

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Fig. 1 Cutaneous horn at the angle of left mouth.

On examination, a hard, gray-colored, horn-like conical keratinized lesion measuring 10 cm × 2 cm was present over the left angle of mouth (Fig. 1).

Oral examination showed a 2 cm × 2 cm ulcerative growth over the left buccal mucosa extending posteriorly from the left oral commissure (Fig. 2).

Neck examination showed no lymphadenopathy. Systemic examination was normal. Preoperative work-up included routine blood investigations, urine examination, ECG, echocardiography, and chest X-ray, all of which were within normal limits.

Under local anesthesia, the patient underwent wide local excision of the buccal mucosa growth, taking a 1-cm margin along with excision of the conical cutaneous lesion (Fig. 3). Primary closure of the defect was done in 3 layers. Postoperative period was uneventful and the patient was discharged on the fourth postoperative day.

Fig. 2 Ulcer over the left buccal mucosa.

Fig. 3 Specimen after wide local excision.

Histopathologic examination of the surgical specimen showed features consistent with verrucous carcinoma of buccal mucosa with negative margins, with hyperkeratosis underlying the horn (Fig. 4). No clinical relapses were detected after 2 years of follow-up.

Discussion

The term "cutaneous horn" is a morphologic designation referring to unusually cohesive keratinized material and it is not a true pathologic

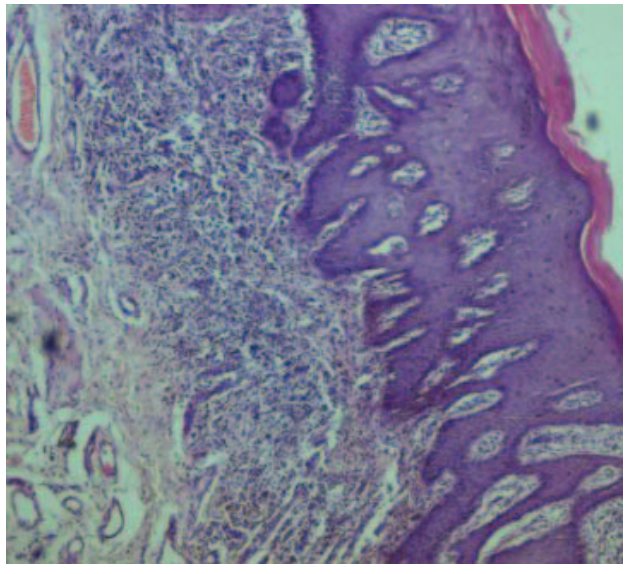

Fig. 4 Histopathogic slide showing verrucous carcinoma.

Table 1 Comparison of our case with previous cutaneous horns

Name of journal	Number of cases studied	Results
World Journal of Surgical Oncology[10]	11	Scc −2 Bcc −1 Benign −8
Indian Journal of Dermatology Venereology and Leprology[11]	1–Lower lip	SCC
Indian Journal of Dermatology[12]	1–Left leg	Seborrheic keratosis
Dermatology Online Journal[13]	1–Lower lip	SCC
Case Reports in Oncological Medicine[4]	1	Verrucous carcinoma
Our case	1–Left angle of mouth	Verrucous carcinoma

diagnosis. Cutaneous horns, though grossly similar to horns in animals, are histologically quite different from them. The animal horns are composed of superficial hyperkeratotic epidermis, dermis, and centrally positioned bone. No such axially positioned well-formed bone is observed in the gigantic human horns. On the other hand, no cystic structures lined by trichilemmal-type epithelium are seen in those of the true animal horns.[4]

The earliest documented case of cutaneous horn was that of an elderly Welsh woman in London who was displayed commercially as an anomaly of nature in 1588. There were several other accounts of cutaneous horns in the 16th and 17th centuries, including those described by Danish anatomist Thomas Bartholin in 1670. The London surgeons Everard Home and his brother-in-law John Hunter are generally credited with the characterization of cutaneous horns as a medical disorder in the late 18th century.[4]

Like other noninfective skin lesions, they are common in the Caucasian and Asian races but reportedly rare in people of African descent.[5] This racial predilection can be attributed to the relative protection the pigmented skin enjoys from ultraviolet sun rays. This also correlates with the racial distribution of other skin lesions that are related to actinic damage. The relative anatomic distribution of the lesions similarly is also remarkably related to the relative exposure of different parts of the human body to sun rays. Over 30% of these lesions are seen in the head and neck region.[5]

Majority of the cases occur on areas that are exposed to sunlight. Forearm, cartilaginous portion of the ear, leg, and back of hands may also be involved.[4,5] Cases over the areas not exposed to sunlight, such as the penis and nasal vestibule, have also been reported.[5] The angle of mouth is a comparatively rare site for cutaneous horn. Giant cutaneous horns of lip are comparatively rarer and malignancies associated with them are even more uncommon.[4]

On review of the literature, 9 cases in the past have been reported to have cutaneous horn over the lip and 3 of these had an associated squamous cell carcinoma at its base.[2] The important issue is not the horn itself, which is dead keratin, but rather the underlying condition, which may be benign (seborrheic keratosis, viral warts, histiocytoma, inverted follicular keratosis, verrucous epidermal nevus, and molluscum contagiosum), premalignant (solar keratosis, and Bowen's disease), or malignant (squamous cell carcinoma, rarely, basal cell carcinoma, metastatic renal carcinoma, granular cell tumor, sebaceous carcinoma, or Kaposi's sarcoma).[6]

Actinic keratoses have been reported as the most common horn base entity (37.4%) in a study of 230 horns.[7] Malignancy has been described in 16% to 20% of cases, with squamous cell carcinoma being the most common type.[3] In a study involving 643 cutaneous horns reported by Yu *et al*, 39% of cutaneous horns were derived from malignant or premalignant epidermal malignancy.[8]

The age group in which cutaneous horn is most prevailing is above 50 years of age, for both sexes and the average age for the occurrence of lesions in patients with premalignant and malignant lesions is around six years more than that of patients with benign alterations.[8]

In our case an elderly patient presented with a giant cutaneous horn arising from left angle of mouth. Wide local excision was done. Histopathology revealed verrucous carcinoma. Comparison of our case with other giant cutaneous horn is summarized in Table 1.

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.[9]

Features associated with malignant or premalignant histopathology at the base of a cutaneous horn include advanced age, male gender, sun exposed lesion site, and geometry of the lesion. Lesions with a wide base or a low height-to-base ratio are more likely to show malignant base pathology.[4]

Though cutaneous horn can be removed by simple detachment and cauterization of the base, a full-thickness wide local excision with an adequate margin should be obtained for histopathologic analysis, keeping in mind the frequent association of malignant/premalignant changes at the base.[4]

Conclusion

A cutaneous horn is a conical, keratinized protrusion that often appears similar to the horn of an animal. A giant cutaneous horn from angle of mouth is an extremely rare condition. Although cutaneous horns are predominantly benign lesions, the possibility that nearly one-third of them may harbor malignant or premalignant skin lesions should be kept in mind.

Recurrence of the lesion underscores the importance of wide local excision for cutaneous horn with verrucous carcinoma. Wide local excision with negative margins should be the treatment of choice to enable detailed pathologic examination of the underlying tissue.

We are reporting this case mainly to highlight the unique presentation of squamous cell carcinoma. To the best of our knowledge such a giant cutaneous horn with verrucous carcinoma has never before been described in the literature.

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