

# Cutaneous Horn: A devil not only in appearance

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**BACKGROUND:** The pathology of most cutaneous horns are benign although malignancy potential has been reported in around 20 to 30 percent and not only the appearance of these lesions are a source of distress but also the fact that they can be associated with malignant transformations. The purpose of this article is to keep the clinician in constant vigil of this uncommon benign but potentially malignant lesions.

**OBJECTIVE:** To evaluate the association of Cutaneous horn with malignant change

**METHODS:** The six patients with cutaneous horn presented in our outpatient department of Plastic and Reconstructive surgery from 1st January 2014 to

30th November 2015 were evaluated and managed with wide local excision and reconstruction considering the principals of the reconstructive ladder. Histopathological reports of the specimen were collected and data was tabulated. The followup clinical examination was done every week.

**RESULTS:** In our study most of the lesions occurred on the scalp and the remaining were found on the perineum and malignancy was confirmed on histopathology in half of these scalp lesions, whereas none of the perineal lesions in our study showed any malignant change.

**CONCLUSIONS:** Cutaneous horn although an uncommon condition and usually neglected by the patient should be kept under high suspicion by the treating Surgeon and definitive management with wide local excision with adequate margins should always be explained to the patient.

**Key Words:** Cutaneous horn; Squamous cell carcinoma; Wide local excision

## INTRODUCTION

Cutaneous horn (cornu cutaneum) although a rare condition has none the less always captured the fascination of the medical and the mythological observer, one of the most well-known being “the widow Dimanche” a favourite illustration of Hamilton Bailey and McNeill Love’s, “Short Practice of surgery” textbooks.

Cutaneous horn (cornu cutaneum) has been historically associated with many mythological and fantastic stories of the devil and magic and has always fascinated observers and people with large cutaneous horns were either persecuted fearing to be the “devil” or kept in road side shows as attractions. Cutaneous horns are conical projection of dense hyperkeratotic material that resembles the horn of an animal but do not have a central bony core like that of animals (1). Although 80% of the lesions are associated with benign lesions at the base of the horn like verruca or seborrheic keratosis, 20-30% may be associated with malignancies, most common of which being squamous cell carcinomas (2-5). Although the exact etiology is not known it usually occurs in sun exposed areas of the skin with hyperkeratosis over the surface of the hyperproliferative lesions. Hence not only the appearance of these lesions are a source of distress but also the fact that they can be associated with malignant transformations therefore wide local excision with reconstruction is the standard management.

The epidemiological shift of CMV infection, requiring repeated and prolonged treatment courses, creates an increasing need for novel antiviral drugs. This review article will provide an update on the therapeutic options for the treatment of CMV in HSCT recipients. The focus will be on new pharmacologic agents, as well as the emerging concept of cellular therapies.

## MATERIALS AND METHODS

The six patients with cutaneous horns who presented to our outpatient department of Plastic and Reconstructive surgery from 1st January 2014 to 30th November 2015, were evaluated and managed with wide local excision and reconstruction considering the principals of the reconstructive ladder. Wide local excision with 1 cm margins were planned for all the six patients. After wide local excision reconstruction with primary closure and local flaps was done. The specimens were sent for histopathological examination after proper markings. Three layer dressings were done and the wound was examined on the 5th post-operative day for flap viability. All patients were discharged after second dressing on the 8th post-operative day. On first follow up visit the patients were reexamined and histopathological reports of the specimen were reviewed. Patients were followed weekly for any recurrence upto 3 months after discharge. The followup clinical examination was

done every week. The clinical and histopathological data was recorded and tabulated for statistical analysis using GraphPad Instat (3) statistical software tool.

## RESULTS

Six patients with cutaneous horn were evaluated from our outpatient department with lesions over different parts of the body. The epidemiological, clinical, and pathological data was tabulated and is summarized in Table 1.

**TABLE 1**  
**Summary of epidemiological and clinicopathological profile**

Case Number	Age (years)	Sex	Location of lesion	Size of the lesion (cm)	Procedure	Histopathology	Recurrence
1	60	Female	Fronto parietal scalp	3 x 4 x 4	O-Z flap	Well differentiated squamous cell carcinoma	Nil
2	55	Male	Occipital scalp	3 x 3 x 3	Rotation flap	Well differentiated squamous cell carcinoma	Nil
3	24	Male	Uro genital triangle perineum	1.5 x 1.5 x 1	Primary closure	Benign keratin wart	Nil
4	55	Female	Right temporal scalp	2 x 2 x 1.5	Rotation flap	Actinic keratosis	Nil
5	58	Male	Right temoro frontal scalp	4 x 5 x 2	Trans-position flap	Well differentiated squamous cell carcinoma	Nil
6	18	Male	Uro-genital perineum	1 x 1 x 1.5	Primary closure	Keratoacanthoma	Nil

The age of patients ranged from 18-60 years with mean age of 45 ± 7.66 years. The male to female ratio was 2:1 and most of the lesions in our study were found on the scalp (4 out of 6, Figures 1 and 2) and the remaining lesions were found on the perineum (Figures 3a and 3b), malignancy was confirmed on histopathology in half of these lesions (3 out of 6, Figure 4).

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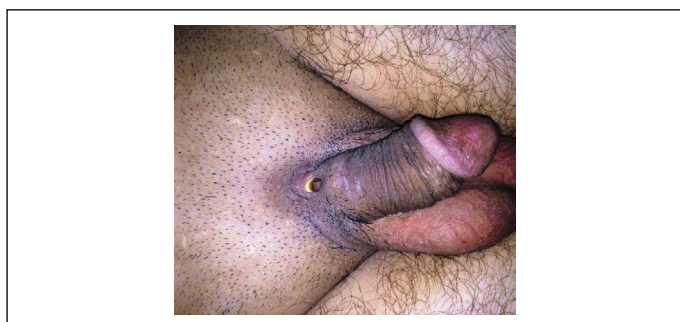
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**Figure 1)** Frontoparietal scalp cutaneous horn



**Figure 2)** Occipital scalp cutaneous horn



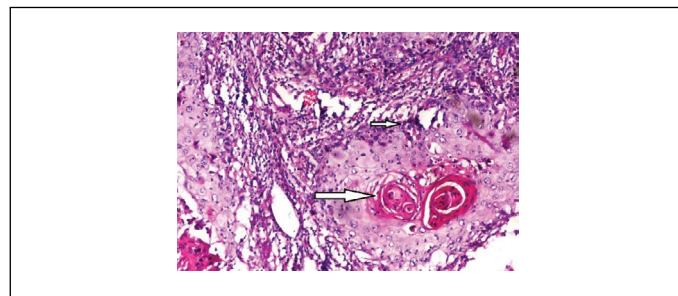
**Figure 3a)** Cutaneous horn on urogenital triangle



**Figure3b)** Intraoperative findings of cutaneous horn

## REFERENCES

1. Korkut T, Tan NB, Oztan Y. Giant cutaneous horn: a patient report. *Ann Plast Surg* 1997;39:654-55.
2. Kumar S, Bijalwan P, Saini SK. Carcinoma buccal mucosa underlying a giant cutaneous horn: a case report and review of the literature. *Case Rep Oncol Med* 2014;2014:518-72.
3. Zhou Y, Tang Y, Tang J, et al. Progression of penile cutaneous horn to squamous cell carcinoma: A case report. *Oncol Lett* 2014;8:1211-13.
4. Fatani MI, Hussain WM, Baltow B, et al. Cutaneous horn arising from an area of discoid lupus erythematosus on the scalp. *BMJ Case Rep* 2014;3:2014.
5. Jhuang JY, Liao SL, Tsai JH, et al. Extraocular well-differentiated sebaceous



**Figure 4)** Microphotograph showing keratin pearls (large arrow) and abnormal mitosis (small arrow)

None of the perineal lesions were having malignant changes whereas most (3 out of 4,) of scalp lesions were found to have malignant changes. None of our patients had wound dehiscence, flap necrosis or donor site graft loss. We have not found any recurrence in our cases over the period of 3 months of follow up examination.

## DISCUSSION

Historically, London surgeon Everard Home was credited with the earliest descriptions of cutaneous horns in 1791. However, cases from as early as the 16th and 17th centuries have been described in the medical literature. Most notable among these was by the Danish anatomist Thomas Bartholin in 1670 (6). Cutaneous horns occur mostly on sun-exposed areas of the body, particularly on the face, scalp, pinna, nose, forearms, and dorsal hands as is true in our series of cases. Thirty percent of cases have been seen to arise on the scalp and upper face (7,8). Mostly occurring as a solitary lesion. Cutaneous horns may arise from a wide range of epidermal lesions, which may include benign lesions such as verruca vulgaris, basal cell papillomas, viral warts, keratoacanthomas, angiokeratoma, dermatofibroma solar keratosis, actinic keratoses, and premalignant or frankly malignant lesions such as adenoacanthoma, basal cell carcinoma, sebaceous carcinoma, Bowen's disease, and squamous cell carcinoma (9,10). 20-30% chances of malignancy have been reported in the base of the lesions, the most common of which being squamous cell carcinomas (2-5). However, in our series we found 50% chance occurrence of malignancy and 75% of them in head and neck region. The reason for our higher chance percentage may be because of the smaller sample size. The higher occurrence of malignant changes in the region of head and neck in our cases may be attributed to the actinic changes because of exposure to ultraviolet radiation (7,8). The wide local excision with reconstruction and histopathological examination is the standard of care (11,12). We too recommend the wide local excision in these lesions with high index of suspicion of malignancy as the standard of care.

## CONCLUSION

Cutaneous horn although an uncommon condition and usually neglected by the patient should be kept under high suspicion by the treating surgeon and definitive management with wide local excision with adequate margins should always be explained to the patient.

tumors with overlying cutaneous horns: four tumors in three patients. *J Cutan Pathol* 2014;41:650-56.

6. Bondeson J, Home E, Hunter J, et al. Cutaneous horns: A historical review. *Am J Dermatopathol* 2001;23:362-69.
7. Mencia-Gutierrez E, Gutierrez-Diaz E, Redondo-Marcos I, et al. Cutaneous horns of the eyelid: a clinicopathological study of 48 cases. *J Cutan Pathol* 2004;31:539-43.
8. Vano-Galvan S, Marques A, Munoz-Zato E, et al. A facial cutaneous horn. *Cleve Clin J Med* 2009;76:92-95.
9. Yu R, Pryce D, Macfarlane A, et al. A histopathological study of 643 cutaneous horns. *Br J Dermatol* 1991;124:449-52.
10. Stavroulaki P, Mal R. Squamous cell carcinoma presenting as a cutaneous horn. *Auris Nasus Larynx* 2000;27:277-99.
11. Skoulakis C, Stavroulaki P, Papadakis C, et al. Bifurcate horn on the tip of the nose. *Otolaryngol Head Neck Surg* 2007;136:311-12.
12. Schosser R, Hodge S, Gaba C, et al. Cutaneous horns: a histopathologic study. *South Med J* 1979;72:1129-31.